International Journal of Business and Management

CCSE

Canadian Center of Science and Education

Editorial Board

Contents

Contents

The Impact of the Marketing Activities of Family Owned Businesses on Consumer Purchase Intentions

Sam C. Okoroafo (Corresponding author)

College of Business Administration, The University of Toledo

2801 W. Bancroft Street

Toledo, Ohio 43606-3390, USA

Tel: 419-530-4398   E-mail: sam.okoroafo@utoledo.edu

Anthony Koh

College of Business Administration, The University of Toledo

2801 W. Bancroft Street

Toledo, Ohio 43606-3390, USA

Tel: 419-530-2287   E-mail: Anthony.koh@utoledo.edu

Abstract

It has been suggested that family owned businesses are unique. Having been perceived as trustworthy and customer focused, consumers should view their strategies differently, perhaps positively. It then follows that consumers will respond favorably to the marketing activities of family owned businesses. This paper examines the impact of family businesses' marketing activities on consumers' purchase intention. Respondents to a mail survey indicated their degree of willingness to respond to sixteen marketing stimuli presentations of family businesses. The original sixteen items were then reduced to six variables (one dependent and five independent) using Factor analysis. Five activities-customer service, product creation, communication, delivery, and exchange were regressed against the dependent variable-purchase intention. The results showed that customer service, communication, and delivery significantly affected purchase intention. Managerial implications were then drawn from the findings.

Keywords: Purchase intention, Marketing, Customer service, Exchange, Delivery, Communication

1. Introduction

Models of consumer buying behavior (e.g., hierarchy of effects, AIDA) have shown that before consumers actually buy a product, they would have positive attitudes towards the brand and/or company (Pope and Voges 2000). These positive attitudes must translate to "purchase intentions," before the actual exchange (sale) takes place (Whitelark, et. al. 1994). In other words, purchase intention is the last step in consumers buying process. So, many studies (e.g., Landon Jr. 1974; Woodside and Taylor 1978) have tried to determine stimulants of purchase intentions, as separate from the actual sales. Despite the surplus of research on purchase intentions, its applicability to family businesses has not been explored.

Yet, family businesses are unique (Ibrahim, et. al. 2008; Prabhakar 2008). Studies have shown that their uniqueness can translate to a competitive advantage (Ward 1997; Miller, et. al. 2008; Cooper, et. al. 2005). For instance, Carrigan and Buckley 2008 tag it as "familiness." Marketing departments in family owned businesses (hereafter referred to as 'FOB'), as in other firms seek to create, capture, communicate, and deliver value to their customers (Dashew 1996). In return, they expect certain responses from their customers in terms of sales, purchase, and patronage (Srinivasan and Hanssens 2009). Consensus is developing that being a family business elicits some advantages in the marketplace (Sundaramurthy and Kreiner 2008). While studies are demonstrating differential customer response to the stimuli of family versus non-family businesses, few have actually linked it to patronage. For instance, Orth and Green (2009) showed that consumers evaluate family business better in terms of service, frontline employee benevolence, and

problem solving orientation. But they fall short of indicating whether such evaluation actually leads to purchase intention, an antecedent step to actual performance measures such as sales and profits. So this study brings together the two schools- purchase intention and family businesses together. The purpose of this research is to determine whether consumer perceptions of the marketing activities of FOBs translated to purchase intentions (willingness to buy).

This paper first provides a brief overview of our theoretical and conceptual foundations related to this issue and uses them to present the research hypothesis. In the second section, the research methodology is provided and rationalized. Next, the data analysis methods are discussed. Then, the results are presented. Finally, the managerial implications and conclusions are provided.

2. Conceptual Origins and Hypothesis

Researchers have always been interested in consumer reactions and responses to firms' efforts (see, McDonald and Oates 2006). Understanding the effect of marketing activities on consumer purchase intention is important (Verhoef and Leeflang 2009). If the impact is positive, it buttresses other streams of research that show that certain activities influence performance. For instance, many studies have shown the product quality improves profitability (Kimes 2001; Lin and Germain 2003; Agus 2005).

2.1 Communication and Purchase Intention

Advertising affect is an important determinant in the formation of attitude (Teng and Laroche 2007) which could ultimately influence sales (Wang et. al. 2009; Requena-Silvente and Walker 2007; Kim 2005)). Burke et. al. (1990) looked at the influence of product related announcements on consumer purchase intentions in the microcomputers industry and found some significant relationships. Daneshvary and Schwer (2000) examined the impact of association membership on purchase intention. Because advertising is often maligned, Daugherty, et. al. (2000) sought to determine how consumers perceive it. They found that the more consumers think of advertising as a valuable force to society and the economy, the more positive their attitude towards it as an institution. Liu's (2007) finding of the effect of loyalty programs on consumer purchase behavior is interesting (also, see Chu and Liu 2008). They found that consumers that are slow to participate become more loyal customers of a store franchise in the long term.

Promoting via video direct mail has a positive effect on consumer purchase intentions (Tripp et. al. 1993). Cornwell and Coote (2005) established a positive relationship between consumers' identification with a nonprofit organization and their intentions to purchase sponsors' product. Message presenters (e.g., entertainers and athletes) have been known to influence adolescent purchase intentions (Martin and Bush 2000). Positively framed messages are more persuasive than negatively framed messages when coupled with informational evidence (Dardis and Fuyuan 2005). Bae and Lee (2005) found that using 'scarcity' message was more effective than a 'non-scarcity' message in eliciting purchase intention. Conclusively, these studies established a direct linkage between promotion and communication activities to consumer purchase intention.

2.2 Product Creation and Purchase Intention

Purchase intentions can be influenced by feelings of trust towards the brand. Early studies of purchase intentions have correlated it with brand quality (Woodside and Taylor 1978). Later, Teng and Laroche (2007) showed that brand cognitions impact brand attitudes and confidence that ultimately affects purchase intentions. Another study shows that product quality has an indirect link to financial performance (Lakhal and Pasin 2008). Alternatively, a subset of studies has focused on the purchase intentions pertaining to specific products. For instance, Xu et. al. (2004) found that personality trait and social acceptance (among other variables) influenced purchase intention for a controversial product-American alligators (also, see Summers, et. al. 2006). Amyx et. al. (2007) focused on certifications and credentials and found that they influenced purchase intention. Overall, the few studies cited above suggest a positive link between product creation activities and consumer purchase intention.

2.3 Price, Exchange, and Purchase Intention

Price represents value to customers. So perceptions of value can affect purchase intention (Chang and Wildt 2004). Besides the price, adjustments to that price can be significant purchase motivators. For instance, Cai and Suri (2007) showed that double discounts caused consumers to overestimate savings and thus increases their propensity to purchase. Another tool used by marketers is pricing thresholds (Lambert 1978; Suri, et. al. 2008). To conclude, we anticipate a direct relationship between purchase intention and this marketing activity.

2.4 Customer Characteristics, Service and Purchase Intention

Focusing on customer service can be beneficial to business performance (Chen and Quester 2009). Similarly, fostering a marketing orientation can be rewarding (Gonzalez-Benito, et. al. 2009). Studies have shown that consumers expect better service from family businesses relative to non-family businesses (Orth and Green 2009). In the retailing industry, Taylor and Baker (1994) found that customer satisfaction was a moderating variable to purchase intention. Consumer characteristics influence purchase intention. Moon, et. al. (2008) found that individualism influences purchase intention.

Luo, et. al. (2008) found that consumers' perception of subjective characteristics (e.g., ease of use) is a good predictor of purchase preferences. In the case of Indian consumers, a need for uniqueness led to a positive attitude towards US brands quality (Prabhakar 2008).

2.5 Place and Purchase Intention

Firms benefit from providing greater access and platforms for consumers to acquire their offerings (Yan and Pei 2009). Pioch, et. al. (2009) investigated the relationship between salient patronage norms, patronage behavior, and market position. In the online environment, brand trust is influenced by interrelationships between complex components- e.g., security, privacy, etc. (Hong-Youl 2004). Later Hong-Youl and Perks (2005) suggest that brand trust is achieved through brand experience, familiarity, and customer satisfaction. An interesting study, Chu et. al. (2005) looked at the interaction effects of online versus manufacturer brand reputation on purchase intention. They found that a well known online retailer brand increases purchase intention for a weak manufacturer brand. Having a web site 'personality' is can influence web site quality and purchase intention (Poddar, et. al. 2009).

2.6 Other Variables and Purchase Intention

A research stream has assumed that consumers would respond to a marketing stimuli based on the reputation of the provider. This has been the focus of many FOB studies (Orth and Green 2009; Craig, et. al 2008). Regarding other organizations, Ou and Abratt (2007) found that corporate reputation does not have a significant impact on shopping expenditure, time traveled, and patronage frequencies. Marketing presentations by organization (e.g., religious) can be perceived positively or negatively in correlation with perceptions of the organization (Attaway, et. al 1995). Kumar et. al. (2009) showed that purchase intention can be influenced by country of origin, while Summers et. al (2006) focused on purchase intentions pertain to a controversial luxury apparel. Based on the literature analysis, the activities discovered earlier will increase the likelihood of customer patronage. So the tested hypotheses are;

H1: *The promotion and communication activities of FOBs will be positively related to customer purchase intention.*

H2: *The distribution and delivery activities of FOBs will be positively related to customer purchase intention.*

H3: *The product creation activities of FOBs will be positively related to customer purchase intention.*

H4: *The pricing and exchange activities of FOBs will be positively related to customer purchase intention.*

H5: *The customer service activities of FOBs will be positively related to customer purchase intention.*

H6: *The communication, delivery, exchange, product creation, and customer service activities of FOBs will be positively related to customer purchase intention.*

3. Research Methodology

3.1 Sample

A random sample of 450 consumers from the midwestern United States was conducted. This area was chosen because its characteristics represent mirror the typical US consumer. The sample was randomly selected from Ameritech's telephone directory "White" pages. Data was collected via a mail survey. It was considered appropriate to address research on family business issues (Handler 1989). Mail survey was considered superior to other formats such as web survey because of external validity concerns.

3.2 Characteristics of Respondents

In addition to obtaining their views, the characteristics of consumers were obtained. Slightly more than half of the respondents were males (53%) versus 45.5% that were female. The age distribution was as follows; 15-25 years (2.7%), 26-35years (17.6%), 36-45years (24.3%), 46-55years (28.4%), 56-65years (10.8%), 66-75years (13.5%), and over 75 years (2.7%). Another demographic description of the respondents is annual income. The highest percentage distribution was 38% ($11,000-$14,000) and 36.6% ($41,000-$80,000). In terms of ethnic identity, most identified themselves as European Americans (86.5%) followed by African American (5.4%). The final demographic reported was 'years of formal education.' Majority had 13-17 years of formal education (56%), followed by 'more than 18 years' (24%). To conclude, the typical respondent was a white male or female, 26 to 35 years old, earning $11,000 to $80,000 dollars a year, with 13 to 17 years of formal education.

3.3 Questionnaire

A questionnaire was designed to capture the key decisions made by marketers. The key decision as identified in many marketing textbooks (e.g., Armstrong and Kotler 2009; Grewal and Levy 2010) were considered. Sixteen items related to product, promotion, distribution, target market, and pricing activities (see, Table1) were developed and tested. Again, the items were selected to be representative of the main marketing tasks involving creating, communicating, delivering, and exchanging offerings (Armstrong and Kotler 2009). For instance, "coupon redemption" was used because it would be the sales promotion tool recognizable to consumers. The question was "if the product or service provider is a Family

Owned Business, I will be more likely to…" Responses were collected using Likert's five point scale… strongly disagree (SD) to strongly agree (SA).

3.4 Data Collection

A pre-test sample of ten (10) respondents indicated that there were no major problems in understanding and constructing the questionnaire. The initial mass mailing was sent and a follow-up mailing two months thereafter. Seventy-five usable responses were received from both mailings achieving a response rate of about 16 percent. So the number of valid cases used for analysis was effectively sixty-four (64). However, this number of usable responses and rate of response is typical of consumer studies. For instance, McDonald and Oates (2006) used 78 consumers to report their findings.

3.5 Data Analysis

We wanted to determine the relationship between marketing activities and purchase intention. First, the initial sixteen items were combined by judgment to create new variables (Table 2) -consumer purchase intention, customer service, product creation, communication, delivery, and exchange. The posited relationship was as follows;

> ***Purchase intention = f (customer service, product creation, communication, delivery, exchange)***

Please note that a factor analysis determined combination of the items resulted in a weaker model. A simple regression was then run with purchase intention as the dependent variable and the proposed determinants- customer service, product creation, communication, delivery, and exchange as independent variables in the regression model. In addition to the regression results (Table 3), correlations of the variables were produced. All analysis was done used SPSS, version 15.0 software (SPSS 2006).

4. Results

Based on the Pearson correlation coefficients results, none of the created variables was highly and insignificantly correlated to each other (Table 2). The regression analysis shows that three of the activities (customer service, communication, and delivery) were positively and significantly related to purchase intention (Table 3). So hypothesis H1 (customer service), H3 (communication), and H4 (delivery) were supported. Hypothesis H2 (product creation), and H5 (exchange) were not supported. However, the overall model hypothesis (H6) was significant. The model was significant in explaining the variance of the dependent variable ($p<0.000$; $R^2=.638$).

4.1 Independent Variables

As stated above, customer service provided by family owned businesses (beta=.492; $p<0.003$) appears to influence consumers purchase behavior positively. This composite variable included the item "likely to expect better customer service." On this item 90.7% of respondents either agreed or strongly agreed versus only 0% that disagree or strongly disagreed. This is a very convincing difference. Another item comprising this variable was "likely to obtain information from the FOBs website." About 37.3% of respondents agreed and strongly agreed versus 18.6% disagreeing and strongly disagreeing. The last item making up this variable was "visiting the company website." In their response, 33.4% were agreeable, while 18.7% in disagreement. So our results go further than studies (e.g., Orth and Green 2009; Sundaramurthy and Kreiner 2008) that show favorable consumer ratings for FOBs to indicate that such ratings can translate to purchase intention.

Another independent variable that was significant pertained to distribution decisions (beta=1.204; $p<0.007$). Consumers by 42.7% agreed to "rely on the company distribution systems." Only 12% disagreed. The third significant variable focusing on promotion decisions was the final significant variable (beta=0.462; $p<0.043$). This variable comprised three items. Respondents were willing to believe FOB's advertising (65.4%) compared to those distrusting it (8%). And in terms of 'believing company sales representatives,' 66.7% were agreeable compared to 5.3% that disagreed. Willingness to utilize its coupons was favorable by 64% (for) to 6.7% (against).

5. Discussion of Findings

Some of the theoretical specificities of FOBs that yield this findings include the fact that they are trusted (Orth and Green 2009) and uniquely positioned to care about their clients (Craig et. al. 2008). Besides the theoretical underpinnings, the results point to some significant implications for marketing managers. If their main objective is to get consumers to buy their products, it appears that they should focus on their communications, customer service, and delivery operations. Obviously it cannot be done to the detriment of their offerings.

5.1 Customer service focused operations

Customer service operations provide time, place, and possession utility to the customer. These operations can occur before the customer purchases the product (front end) or after the purchase (back end). Today many approaches to offering long term customer retention have been presented such as relationship building (e.g., Hanley and Leahy 2008), and customer relations management (e.g., Cooper, et. al. 2005). The methods and techniques used in those approaches can be relevant to the managers of family businesses. Deriving from this study, we suggest the increased use of websites marketing. Our study shows that customers do visit company websites and obtain information there from. It appears that creating an attractive website that can be easily assessed (e.g., through search engines) is rewarding. In addition to creating websites, the sites should provide information to the customers. The kind of information desired by customers was not determined from our study. But such information should serve to create trust in consumer, as this is critical to web users.

5.2 Promotion

Promotion efforts designed to inform customers about a firm's marketing offering is important to purchase intentions. Marketing managers should create advertising that is believable to customers. What makes an advertisement believable? Again, this issue was not obtained from our research; however it has been addressed in the marketing literature. The typical suggestion is that believable advertisements are those that credibility either via the reputation of the presenter or factual demonstrations. Most importantly, the advertisements should use cues and themes that encode to family ownership. Personal selling is another tool used to inform and obtain patronage. Our finding that the salespersons of FOBs are more believable suggests not only that using salespersons can be effective, but their sales technique should include the notion of family business. For instance, the sales person in their presentation should seek to emphasize the 'family owned' characteristic of their business and offerings. If the salespersons wear company uniforms, the uniforms should include badges announcing their FOB characteristics. Identity cards used by salespersons should also show this identification. Coupon usage is associated with this variable. This tool primarily heightens quick sales, not long term patronage. If the managers goal is to stimulate short terms sales by moving merchandise out of the door, then couponing becomes appropriate. Our study suggests that the coupon management process (creation, execution, and redemption) will be more effective if it is tied to the 'familiness' of the organization. For instance, the FOB could issue special 'family owned discount' coupons periodically.

5.3 Delivery strategies

The results suggest that managers of FOBs should pay greater attention to their distribution systems. Consumers rely on their distribution systems to obtain value from the company. A carefully designed channel or channels that provide products and services at promised places and times can elevate purchase intention. Since, websites are a channel, it should be utilized since it was represented in the customer service variable that was significant and discussed earlier.

6. Conclusions

This purpose of this research was to examine the impact of family businesses' marketing activities on consumers' purchase intention. Consumers were surveyed and asked to indicate their agreement/disagreement with sixteen questions items. The questions typically read, "If the product or service provider is a Family Owned Business, I will be more likely to purchase its product." The initial sixteen items were then grouped into five variables representing the marketing function. Following a co-linearity check, the five variables or activities-customer service, product creation, communication, delivery, and exchange were then subjected to a regression analysis to determine significance and variance explained. The results showed that customer service, communication, and delivery significantly affected purchase intention. This finding supports some studies dealing with purchase intention (e.g., Xu et. al. 2004) but refutes others (e.g., Chang and Wildt 1994). Managerial implications were along the lines of developing strategies that maximize the effectiveness of these activities.

References

Agus, A. (2005). The Structural Linkages between TQM, Product Quality Performance, and Business Performance: Preliminary Empirical Study in Electronics Companies. *Singapore Management Review*, 27(1), 87-105.

Amyx, D., Bristw, D., Robb, J., & Johnson, G. (2007). Attorney Ads and Consumer Purchase Intensions: The Effects of Certification Claims and Sex of Source. *Journal of Legal, Ethical & Regulatory Issues*, 10(2), 91-108.

Armstrong, G. & Kotler, P. (2009). *Principles of Marketing*, 9th edition, Upper Saddle River, NJ: Pearson-Prentice Hall.

Attaway, J., Boles, J. & Singley, R. (1995). Exploring Consumers' Attitudes Toward Advertising by Religious Organizations. *Journal of Marketing Management*, 5(2), 71-83.

Bae, Y., & Lee, S. (2005). The Effect of Scarcity Message on Consumer's Purchased Intention in the Internet Shopping Mall. *Advances in Consumer Research*-Asia-Pacific Conference Proceedings, 6, 252-258.

Burke, R., Cho, J. , DeSarbo, W. & Mahajan, V. (1990). The Impact of Product Related Announcements on Consumer Purchase Intentions. *Advances in Consumer Resear*ch, 17(1), 342-350.

Cai, J. & Suri, R. (2007). The Effect of Multiple Discounts on Consumers' Price Perceptions, *AMA Winter Educators' Conference Proceedings*, 18: 320-321.

Carrigan, M. & Buckley, J. (2008). What's so special about family business? An exploratory study of Irish consumer experiences of family business. *International Journal of Consumer Studies*, 32(6), 656-666.

Chang, T. & Wildt, A. (1994). Price, Product Information, and Purchase Intention: An Empirical Study. *Journal of the Academy of Marketing Science*, 22(1), 16-27.

Chen, S., & Quester, P. (2009). A Value-based Perspective of Market Orientation and Customer Service. *Journal of Retailing & Consumer Services*, 16(3), 197-206.

Chu, H. & Liu, S. (2008). The Impact of Manager Promotion Programs on Store Performance: Evidence from 3C Chain Stores in Taiwan. *Services Industries Journal*, 28(9), 1215-1224.

Chu, W., Choi, B., & Song, M. (2005). The Role of On-line retailer Brand and Infomediary Reputation in Increasing Consumer Purchase Intention. *International Journal of Electronic Commerce,* 9(3), 115-127.

Cornwell, T. & Coote, L. (2005). Corporate Sponsorship of a Cause: The Role of Identification in Purchase Intent. *Journal of Business Research*, 58(3), 268-276.

Cooper, M.J. and Upton, N, & Seaman, S. (2005). Customer Relationship management: A Comparative Analysis of Family and Non-family Business Practices. *Journal of Small Business Management*, 43(3), 242-256.

Craig, J., Dibrell, C. & Davis, P. (2008). Leveraging Family-based Brand Identity to Enhance Firm Competitiveness and Performance in Family Businesses. *Journal of Small Business Management,* 46(3), 351-371.

Daneshvary, R. & Schwer, K. (2000). The Association Endorsement and Consumers' Intention to Purchase. *Journal of Consumer Marketing*, 17(2/3), 203-211.

Dardis, F. & Fuyuan, S. (2005). Message framing and Brand Evaluations: The Role of Evidence Type and Product Involvement. *American Academy of Advertising Conference Proceedings*, 78.

Dashew, L. (1996). Marketing to Family Businesses Checklist. *Journal of Accountancy*, 181(5), 10.

Daugherty, T., Logan, K. Chu, S. & Huang, S. (2008). Understanding Consumer Perceptions of Advertising: A Theoretical Framework of Attitude and Confidence. *American Academy of Advertising Conference Proceedings,* 308-312.

Grewal, D. & Levy, M. (2010). *Marketing*, 2nd edition, McGraw-Hill-Irwin.

Gonzalez-Benito, O., Gonzalez-Benito, J. & Munoz-Gallego, P. (2009). Role of Entrepreneurship and Marketing Orientation in Firms' Success. *European Journal of Marketing,* 43(3/4), 500-522.

Handler, W. C. (1989). Methodological Issues and Considerations in Studying Family Businesses. *Family Business Review,* 2(3), 257-276.

Hanley, S. & Leahy, R. (2008). The Effectiveness of Relationship Marketing Strategies in Department Stores. *International Journal of Business and Management*, 3(10), 133-140.

Hong-Youl, H. (2004). Factors influencing Consumer perceptions of brand trust online. *Journal of Product & Brand Management*, 13(5): 329-342.

Hong-Youl, H. & Perks, H. (2005). Effects of consumer perceptions of brand experience on the web: Brand Familiarity, Satisfaction and Brand Trust, *Journal of Consumer Behaviour* , 4(6) (Dec): 438- 452.

Ibrahim, N., Angelidis, J., & Parsa, F. (2008). Strategic Management of Family Businesses: Current Findings and Directions for Future Research. *International Journal of Management,* 25(1), 95-110.

Kim, J. (2005). Investigating the Advertising-Sales Relationship in the Lydia-Pinkham Data" a Bootstrap Approach. *Applied Economics*, 37(3), 347-354

Kimes, S. (2001). How Product Quality Drives Profitability. *Cornell Hotel & Restaurant Administration Quarterly*, 42(3), 25-29.

Kumar, A., Lee, H., & Kim, Y. (2009). Indian Consumers' Purchase Intention toward a United States versus Local Brand. *Journal of Business Research*, 62(5), 521-527.

Lakhal, L. & Pasin, F. (2008). The Direct and Indirect Impact of Product Quality on Financial Performance: A Causal Model. *Total Quality Management & Business Excellence*, 19(10), 1087-1099.

Lambert, Z. (1978). Differential Thresholds in Consumer Perception of Retail Prices. *Journal of Psychology*, 100(1), 139-151.

Landon Jr. L. (1974). Self Concept, Ideal Self Concept, and Consumer Purchase Intentions. *Journal of Consumer Research*, 1(20, 44-51.

Lin, X. & Germain, R. (2003). Product Quality Orientation and its Performance in Chinese Owned State-owned Enterprises. *Journal of International Marketing*, 11(2), 59-78.

Liu, Y. (2007). The Long-Term Impact of Loyalty Programs on Consumer Purchase Behavior and Loyalty. *Journal of Marketing*, 71(4), 19-35.

Luo, L., Kannan, P. & Ratchford, B. (2008). Incorporating Subjective Characteristics in Product Design and Evaluations. *Journal of Marketing Research*, 45(2), 182-194.

Martin, C. & Bush, A. (2000). Do Role Models Influence Teenagers' Purchase Intentions and Behavior?. *Journal of Consumer Marketing*, 17(4/5), 441-455.

McDonald, S., & Oates, C. (2006). Sustainability: Consumer Perceptions and Marketing Strategies. *Business Strategy & the Environment*, 15(3): 157-170.

Miller, D., Le Breton-Miller, I., & Scholnick, B. (2008). Stewardship vs. Stagnation: an Empirical Comparison of Small Family and non-Family Businesses. *Journal of Management Studies*, 45:51-78.

Moon, J., Chadee, D. & Tikoo, S. (2008). Culture, Product Type, and Price Influences on Consumer Purchase Intention to Buy Personalized Products Online. *Journal of Business Research,* 61(1), 31-39.

Orth, U. & Green, M. (2009). Consumer Loyalty to Family versus non-Family Business: The Role of Trust, Store Image, Trust and Satisfaction. *Journal of Retailing & Consumer Services*, 16(4), 248-259.

Ou, W. & Abratt, R. (2007). Diagnosing the Relationship between Corporate Reputation and Retail Patronage. *Corporate Reputation Review*, 9(4), 243-257.

Pioch, E., Gerhard, U., Fernie, J., and Arnold, S. (2009). Consumer Acceptance and Market Success: Wal-mart in the UK and Germany. *International Journal of Retailing and Distribution Management*, 37(3), 205-225.

Poddar, A., Donthu, N., & Wei, Y. (2009). Web Site Customer Orientations, Web Site Quality, and Purchase Intentions: The Role of Web Site Personality. *Journal of Business Research*, 62(4), 441-450.

Pope, N., & Voges, K. (2000). The Impact of Sport Sponsorship Activities, Corporate Image, and Prior Use on Consumer Purchase Intention. *Sport Marketing Quarterly*, 9(2), 96-103.

Prabhakar, G. P. (2008). Haldiram's: India's Entrepreneurial Answer to the McDonald's and Pizza Huts. *International Journal of Business and Management*, (May), 95-99.

Requena-Silvente, F. & Walker, J. (2007). Investigating Sales and Advertising Rivalry in the UK Multipurpose Vehicle Market-1995-2002. *Journal of Economics & Business*, 59(2), 163-180.

SPSS, Inc. (2006). *Statistical Package for the Social Sciences.* [Online] Available: http://www.spss.com

Srinivasan, S. & Hanssens, D. (2009). Marketing Firm Value: Metrics, Methods, Findings, and Future Directions. *Journal of Marketing Research*, 46(3), 293-312.

Summers, T, Belleau, B., & Xu, Y. (2006). Predicting Purchase Intention of a Controversial Luxury Apparel Product. *Journal of Fashion Marketing & Management,* 10(4), 405-419.

Sundaramurthy, C. & Kreiner, G. (2008). Governing by Managing Identity Boundaries: The Case of Family Businesses. *Entrepreneurship: Theory & Practice*, 32(3), 415-436.

Suri, R., Chandrashekaran, R., & Grewal, D. (2008). Effects of Spatial Location of Price Information on Consumer Perception of Prices and Products. *Advances in Consumer Research-North American Conference Proceedings,* 35, 929-930.

Taylor, S. & Baker, T. (1994). An Assessment of the Relationship between Service Quality and Customer Satisfaction. *Journal of Retailing*, 70(2), 163-179.

Teng, L., & Laroche, M. (2007). Building and Testing Models of Consumer Purchase Intention in Competitive and Multicultural Environments. *Journal of Business Research*, 60(3), 260-268.

Tripp, C., Clow, K., & Freeman, B. (1993). The Use of Video Direct mail by retail Mangers: Implications for Store Image and Consumer Purchase. *Journal of Marketing Management,* 3(1), 57-65.

Verhoef, P.C. & Leeflang, P.S. (2009). Understanding the Marketing Department's influence within the Firm. *Journal of Marketing*, 73(2), 14-37.

Wang, C.L., Hult, T., Ketchen, D., & Ahmed, P. (2009). Knowledge Management Orientation, Marketing Orientation, and Firm performance: an Integration and Empirical Examination, *Journal of Strategic Marketing*, 17(2), 99-122.

Ward, J. (1997). Growing the Family Business: Special Challenges and Best Practices. *Family Business Review*, 10: 42.

Whitelark, D., Swenson, M. & Geurts, M. (1994). Forecasting Sales using Self-Reported Consumer Purchase Intentions. *AMA Winter Educator's Conference Proceedings*, 5, 57-60.

Woodside, A., & Taylor, J. (1978). Consumer Purchase Intentions of Product Quality and National Advertising. *Journal of Advertising*, 7(1), 48-51.

Xu, Y., Summers, T., & Belleau, B. (2004). Who Buys American Alligator? Predicting Purchase Intention of a Controversial Product. *Journal of Business Research*, 57(10), 1189-1198.

Yan, R. & Pei, Z. (2009). Retail Services and Firm Profit in a Dual-Channel market. *Journal of Retailing & Consumer Services*, 16(4), 306-314.

Table 1. Identification on variables and items

Type	Composite Variable	Items	# of Items
Dependent	Purchase Intention	*** Purchase its product;** patronize its services; *** travel farther to purchase its product**, order products from its website, *** try its new product;** and repeat my purchase	6
Independent	Communication/Promotion**	*** Believe its advertising;** believe its salesperson; **use it coupons**	3
Independent	Exchange/Price	*Expect cheaper prices*	1
Independent	Delivery/distribution**	**Rely on its distribution system**	1
Independent	Product creation	*Expect better product quality;* **expect better warrantee offers**	2
Independent	Customer Service**	*Expect better customer service*; **visit its website;** *obtain information from its website*	3

*"*If the product or service provider is a Family Owned Business**, I will be more likely to…*

** *Significant at $p < 0.05$*

Table 2. Pearson Correlations (n=66)

Type	Variables	Purchase Intention	Promotion and Communica- tion	Pricing and Exchange	Distribution and Delivery	Product Creation	Customer Service
Dependent	Purchase Intention	1.00(000)@					
Independent	Promotion and Communication	.698(.003)	1.000	.			
Independent	Pricing and Exchange	.340(.000)	.273(.013)	1.000			
Independent	Distribution and Delivery	.635(.000)	.608(.000)	.240(.026)**	1.000		
Independent	Product Creation	.522(.000)	.589(.000)	.455(.000)	.439(.000)	1.000	
Independent	Customer Service	.599(.000)	.555(.000)	.194(.059)**	.393(.000)	.226(.34)**	1.000

@   Decimals in parenthesis indicate level of significance (1 tailed)

   ** Not significant; all others are significant at the .05 or .01 levels.

Table 3a. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.					Collinearity Statistics	
	Beta	Std. Error	Beta	Lower Bound	Upper Bound			Tolerance	VIF	B	Std. Error
(Constant)	2.881	1.984		1.452	.152						
Promo* (sig)	.462	.224	.255	2.064	.043	.698	.257	.160	.397	2.519	
Price	.347	.384	.079	.903	.370	.340	.116	.070	.780	1.282	
Dist (sig)	1.204	.428	.279	2.813	.007	.635	.341	.219	.612	1.633	
Product	.385	.282	.145	1.364	.178	.522	.173	.106	.534	1.874	
Cuserv (sig)	.492	.157	.300	3.133	.003	.599	.375	.244	.660	1.515	

i.   Predictors: (Constant), cuserv, price, dist, product, promo

ii.   Dependent variable: purchase intention

*promo=promotion and communication; price=pricing and exchange; dist=distribution and delivery;
 cuser=customer service

Table 3b. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
	R Square Change	F Change	df1	df2	Sig. F Change	R Square Change	F Change	df1	df2	Sig. F Change
	.798	.638	.607	2.59656	.638	21.104	5	60	.000	1.840

i.   Predictors: (Constant), cuserv, price, dist, product, promo

ii.   Dependent variable: purchase intention

Table 3c. Anova Results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	711.412	5	142.282	21.104	.000(a)
Residual	404.527	60	6.742		
Total	1115.939	65			

i   Predictors: (Constant), cuserv, price, dist, product, promo

ii.   Dependent variable: purchase intention
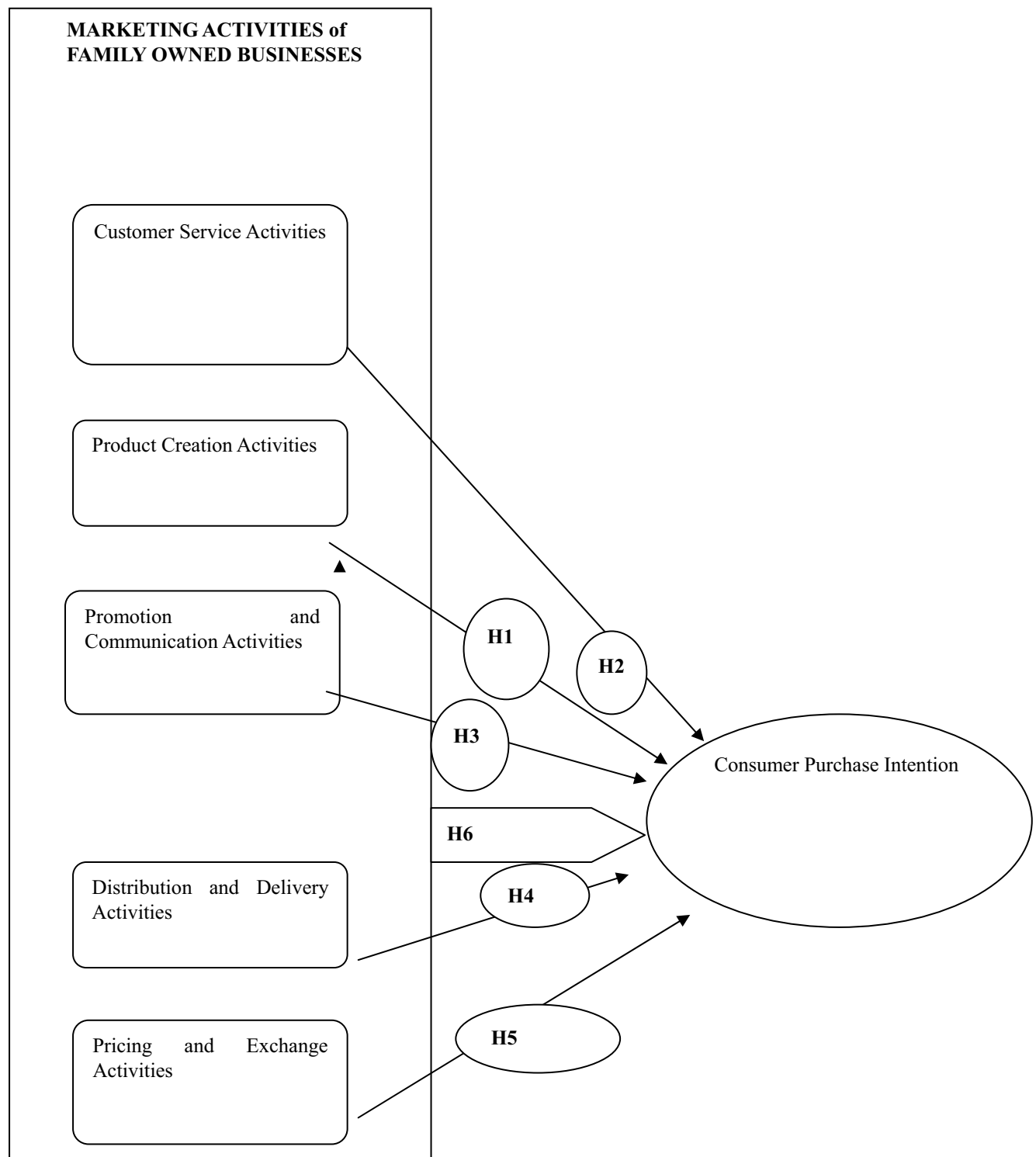
Figure 1. Conceptual Model showing Hypothesized Relations

The Review of Empirical Researches on IT Investment Announcements

on the Market Value of Firms

Lu Zhang & Jinghua Huang

School of Economics and Management, Tsinghua University

Beijing 100084, China

Tel: 86-10-5153-4734   E-mail: zhangl2.03@sem.tsinghua.edu.cn

Abstract

With the advent of the information age, the importance of IT investment becomes more and more obvious for the survival and development of enterprise, and IT has been the important part of enterprise management, so it is very important to understand the impact of IT investment on the performance of enterprise. Through reviewing and analyzing foreign and domestic empirical research literatures about the influences of the IT investment announcements on the enterprise market value, the influencing factors of IT investment value were divided into IT investment character, organization factor and exterior environment, and the limitations of existing research and future research directions about each factor were studied in the article. Aiming at the disputes about the impact of IT investment on enterprise risk and the methodology, the limitations about existing risk factors and methodology were summarized. This article is an attempt to help scholars to further understand the status and limitations of relative researches. Especially, the status of foreign researches was completely explained in the article, and Chinese scholars could further study Chinese sample data aiming at the limitations of existing researches based on the advantages of foreign researches.

Keywords: IT investment, Value of IT investment, Market value of firms, Event study

1. Introduction

With the advent of the information age, the importance of IT investment becomes more and more obvious for the survival and development of enterprise (Bharadwaj, 2000, P.169-197), and it is very important to understand the impact of IT investment on enterprise performance (Hayes D C, 2001, P.3-18). Up to now, there are many researches to try to establish the relationship between IT investment and enterprise performance (Im K S, 2001, P.103-117). The recent research results indicate that when IT investment with specific attention enters at the proper opportunity and can acquire better management and proper mutually complementary investment, it will produce more business values (Barua A, 2000, P.65-84). Many research methods can be used in relative studies, and event study methodology is one of mature methods (Richardson V J, 2002). The method of event study has been widely used in accounting and financial domain to calculate the impact of specific event on the enterprise market value (Ball R, 1968, P.159-178 & Brown S J, 1985, P.3-31). In the research domain of IS, the event specially means the IT investment announcement (Richardson V J, 2002). These researches about IT investment return focus on two problems, i.e. (1) whether the IT investment can acquire returns? (2) What conditions the IT investment can acquire the maximum returns (Richardson V J, 2002 & Dehning B, 2003, P.637-656 & Oh W, 2006, P.19-44)? In these research literatures, the enterprise market value is used as the index of the IT investment return. For the first question, the conclusions of former researches are not consistent, and some research conclusions showed that the IT investment and the enterprise market value had the positively correlative relationship (Im K S, 2001, P.103-117 & Richardson V J, 2002 & Dos Santos B L, 1993, P.1-23 & Hayes D C, 2000, P.109-125 & Meng Z L, 2007, P.737-745), but other research conclusions found that there was no significant relationship between them (Hayes D C, 2001, P.3-18 & Oh W, 2006, P.19-44 & Meng Z L, 2007, P.737-745 & Chatterjee D, 2002, P.7-42 & Dardan S, 2006, P.100-111 & Dewan S, 2007, P.370-394 & Lee H G, 2002, P.41-56 & Oh W, 2006, P.271-303 & Ranganathan C, 2006, P.145-161 & Subramani M, 2001, P.135-154). The second research problem tried to explain the source of inconsistent impact of IT investment and answer when IT investment was efficient.

Aiming at these two problems, relative literatures in recent years were reviewed in the article, and the intention of this article is to help scholars to further understand the status and limitations of relative researches. Especially, the status of foreign researches was completely explained in the article, and Chinese scholars could further study Chinese sample data aiming at the limitations of existing researches based on the advantages of foreign researches.

Or the collection of literatures, the "information technology" or "information systems" or "E-commerce" or "E-business" and "announcement" were used as the keywords to search all databases in ISI Web of Knowledge, and 206 relative article were found, and 24 articles in them were selected by checking and eliminating improper articles. Because the embodying starting times of SCI-Expanded and SSCI in ISI Web of Knowledge were the year of 1994 and the year of 1998, and for the literatures before 1998, the existing reference literatures were elected, and 25 relative literatures from 1993 to 2007 were chose finally.

In the article, the theoretical bases of these literatures will be reviewed systematically, which will help scholars to more understand relative theories in these articles and establish the base for better applying these theories and analyzing the IT investment. The research range and research conclusions of existing literatures can be more clearly understood, and the limitations of existing literatures about the influence of IT investment value can be summarized more clearly though analyzing these literatures from the view of research object. By comparing and analyzing the research methods in these literatures, the limitations of the methodology in existing researches can be deeply understood, which can help relative scholars to further improve the methodology.

2. Theoretical bases

Many theories were used to study the impact of IT investment on enterprise value by researchers, and they are introduced as follows.

2.1 Efficient market hypothesis

The research of the efficient market *hypothesis* can be traced to the year of 1889, and economist Gibson described the basic idea of this hypothesis in the book of "Stock Markets in London, Paris and New York". Fama was the expert of this theory, and he made excellent contributions to form and perfect this theory. Fama systematically summarize past researches about the efficient market hypothesis, and put forward a complete theoretical frame to study the efficient market hypothesis (Fama E F, 1970, P.383-417). After that, the efficient market hypothesis developed quickly, and its connotation was continually deepened and its extension was continually expanded, and it finally became one of major theories in modern financial economics. According to the efficient market *hypothesis*, in the efficient market, there are many rational investors pursuing maximum benefit, and the interior values of stocks will be embodied by their market prices. After Fama implemented large numbers of empirical analysis to the financial market, he proposed three forms of the efficient market. (1) The weak-form efficient market. It integrates all historical information. (2) The semi-strong efficient market. It could not only reflect the past information, but reflect all existing information in the public. (3) The strong efficient market. It includes the contents of the weak-form efficient market and the semi-strong efficient market, and the insider information. Here, investors can not dominate and influence the formation of price, but make their behavior choice according to appointed prices.

According to the semi-strong efficient market hypothesis, the market price can reflect all public information (Fama E F, 1970, P.383-417 & Fama E F, 1976 & Jenson M, 1978, P.95-101 & Watts R, 1986). Therefore, if one important event such as the IT investment announcement contains the information which can be defined as the signal to change investors' anticipation (Watts R, 1986 & Holthausen R W, 1990, P.191-208 & Ziebart D A, 1990, P.477-488), and this event is non-predictable, the abnormal stock price fluctuation relative to this even can be observed. And if the IT investment of the enterprise will impact future incomes, so the stock price will react to the issuance of the IT investment announcement.

2.2 Resources-based view of the firm

The resources-based view came of the strategic management domain in the middle of 1980s. Traditional strategic researchers thought that the competition advantage of enterprise roots in the industry and the competitive orientation, so the mode of "structure-strategy-performance" generated in the long-term researches. The resources-based view transferred the view of the enterprise competitive advantage from the exterior of enterprise to the interior of enterprise, and emphasized the effect of interior resources on the competitive advantage in the enterprise. The resources-based view ascribes the difference of enterprise performances to various valuable and heterogeneous enterprise resources and resource combinations (Barney J B, 1991, P.99-120 & Peteraf M, 1993, P.179-191). Wade and Hulland defined the resource as the asset or capacity which helped to find and respond the market opportunity or threat (Wade M and Hulland J, 2004, P.107-142). According to the resources-based view, the core competitive force of the enterprise is the source of the sustainable competitive advantage, and the core competitive force roots in the core resource of the enterprise. The resources which can continually produce competitive advantage must possess four attributes including value, scarcity, inimitability and non-substitutability (Melville N, 2004, P.283-313). These attributes of the resource

compose the layers of the competitive advantage. If the resource is valuable and scarce, the enterprise with the resource can acquire the benefits bringing by the resource, the resource can provide short-term competitive advantage for the enterprise. If the resource is inimitable and non-substitutable, the enterprise can avoid that the competitive opponents imitate and copy the resource, so the advantage of the resource is sustainable (Wade M and Hulland J, 2004, P.107-142).

According to the resources-based view, the valuable, scarce, inimitable and non-substitutable IT resources can create continually competitive advantages for the enterprise. So the differences of IT investment attributes in four dimensions in the IT investment announcement issued by the enterprise will induce that the investors have different anticipations to the continually competitive advantage, and the enterprise has different financial performances and different enterprise market values.

2.3 Process theory

The process theory thought that IT would influence the middle business process of the enterprise and be reflected on the financial performance and other performances (Melville N, 2004, P.283-313 & Barua A, 1995, P.3-23 & Mooney J G, 1996, P.68-81 & Radhakrishnana A, 2008, P.1105-1125 & Soh C, 1995, P.29-41). The so-called enterprise process means the activities performed by the enterprise to achieve the organizational objective, so the enterprise process can be regarded as the activity or route to complete certain task for the enterprise (Nelson R R, 1982 & Porter M E, 1991, P.95-117), such as the process that the enterprise obtains the raw materials and supplies, the process that the enterprise produces products or provide services, the process that the enterprise transfer the products and services to consumers, and the process that the enterprise provides after services (Porter M E, 1985). The process innovation and the enterprise flow theory (Davenport T H, 1993 & Hammer M, 1993) provide theoretical references for the association between the middle process and the enterprise performance.

Therefore, on the layer of enterprise, the function of IT to the performance roots in the profits of IT on the layer of operation process. The profits on these process layers include the operation profit (such as the cost savings and the enhancement of interior efficiency) and the strategic profit (such as the improvement of product/service, the further understanding to customers and suppliers) (Mukhopadhyay T, 2002, P.1301-1313 & Subramani M, 2004, P.45-75). Barua used the process-based method to study the effect of IT on the strategic business unit or the profit center performance, and he thought that the relationship between IT investment and performance decreased with the increase of the middle process, and he also researched the adjustable function of the middle process to the IT-performance relationship in the theoretical model (Barua A, 1995, P.3-23). Soh and Markus put forward the comprehensive process model, i.e. the IT investment produces IT assets (IT transform process) and IT assets produce IT effect (IT use process), and IT effect produces the enhancement of the organizational performance (competitive process) (Soh C, 1995, P.29-41). For the IT investment announcement, investors can anticipate the impact of IT investment on the enterprise business, even on the enterprise performance, which will finally be reflected on the changes of the enterprise market value.

2.4 Transaction cost theory

The transaction cost theory was proposed by Coase in 1937, and its essential consists in the explanation of the essential of the enterprise (Coase R H, 1937, P.386-405). Williamson further studied the transaction costs and divided them into two sorts including the before-event cost and the after-event cost (Williamson O E, 1985). Dahlman classified the contents of the transaction activities (Dahlman C J, 1979, P.141-162). The reasons of the transaction cost come from three characters of the transaction, i.e. the specificity of the transaction or the asset, the uncertainty and the transaction frequency, and they compose three layers to impact the transaction cost (Williamson O E, 1985).

According to the transaction cost theory, the assets with strong specific attribute will possess strong dependence on cooperative fellows (including suppliers and consumers), so if any one cooperative fellow only pursue his own maximum profit, the enterprise will produce high transaction cost (Williamson O E, 1979, P.233-261). Domsetz also pointed out that when the supplier's asset fulfilled the special requirement of the enterprise and the loss to terminate the contract was higher than the profit, the supplier would always perform the behavior to maximize his own benefit (Domsetz H, 1988, P.141-161). And the specific attribute of the asset is the important attribute of IT, because most IT resources are private, i.e. they are developed to fulfill the special requirement of the enterprise (Ang S, 1997, P.235-256). The asset with strongly specific attribute is difficult to be used in other intentions. From the view of transaction cost, when the enterprise invests to the IT resource with strongly special attribute, the enterprise will face larger transaction risk, and investors' anticipation to future cash flow will be reduced, and most IT investment projects are uncertain, so it is obvious that the IT investment with high uncertainty will bring larger transaction risk and reduce investors' anticipations to the enterprise.

2.5 Resource dependence theory

In 1949, Selznick's classical research to the authorities of the Tennessee Valley offered strong base for the resource dependence theory (Selznick P, 1949). In 1958, Thompson and McEwen confirmed three types of the cooperative relationship among organizations, i.e. the alliance (including alliances such as the joint venture), the consultation

(including the contract negotiation) and the common choice (Selznick defined it as attracting potential interfering factors to enter into the decision institution of one organization) (Selznick P, 1949 & Thompson J D, 1958, P.23-31). In 1967, Thompson put forward the power of the comprehensive organization, i.e. the dependence mode (Thompson J D, 1967). Pfeffer and Salancik were the experts of the resource dependence theory, and they thought that the dependence degree of one organization to another organization was decided by three decisive factors, i.e. the important of resource to the organizational survival, the degree that the interior of the organization or one exterior special group obtained or disposed the use of resource, and the existence degree of the replaceable resource source (Pfeffer J, Salancik G, 1978). If one organization needs one kind of special knowledge in the extreme and this kind of knowledge is very rare in the organization and the replaceable knowledge source doesn't exist, the organization will highly depend on other organizations with this kind of knowledge.

Based on the resource dependence theory, the enterprise will exchange resources to maintain the competitive force and reduce the uncertainty (Pfeffer J, Salancik G, 1978). Kern and Kreijger thought that the dependence of resource is the function about the resource value of the enterprise, the selective supplier amount and the conversion cost (Kern T, 2002, P.3-19). Different IT investment projects possess different resource values, selective supplier amounts and conversion costs, so they will have different dependences to the suppliers, and with the increase of the dependence to suppliers, the supervision to the suppliers will be reduced, and the cost of IT investment project may increase and the achievement degree of the anticipative objective will decrease, so the long-term performance and the enterprise market value will be influenced finally. Therefore, the IT investment with higher resource dependence will possess weaker positive impact on the enterprise market value.

2.6 Real option theory

The concept of the real option was first proposed by Mysers in MIT, and he pointed out that the traditional discounted cash flow method had its interior limitations when it was used to evaluate the investment opportunity with management flexibility and strategic function, and he applied the concept of option in the real assets, and used the financial option pricing theory to evaluate this kind of investment opportunity (Myers S C, 1977, P.147-176). Keste discussed the strategy and the competitive function of the growth opportunity (Kester W C, 1984, P.153-160). Trigeorgis and Mason pointed out that the evaluation method based on the option pricing theory was the proper method to evaluate the management flexibility and the strategic function for the enterprise (Trigeorgis L, 1987, P.14-21). Trigeorgis, Brealey, Myers and Kulatilaka & Marcus discussed other general concepts about the real option (Brealey R A, 1991& Kulatilaka N, 1988, P.183-200 & Kulatilaka N, 1992, P.92-100 & Trigeorgis L, 1988, P.145-167).

The management academe has been disputing to use the real option to deal with the uncertain investment of new technology for many years (Dixit A K, 1994 & Trigeorgis L, 1993, P.1-20). In these researches, the similarity of the real asset option and the option created by the technology-oriented investment was found (McGrath R G, 1997, P.974-996). The technology-oriented investment means the right of the profit created by further developing and implementing the technology. It doesn't mean the obligation, which is similar with the real option. The enterprise implementing this kind of investment keeps the right to enter into higher technology, and if the technology can be proved to be profitable, it can be further actualized, and if the technology can be proved to be non-profitable, the enterprise can limit the loss in the cost of the oriented investment. Some information system researchers thought that part of IT investments could produce values as a kind of digital option, for example, the investment to construct IT platform can expand the organizational flow range by integrating the activities and information flows of the function units, sub-companies and exterior companies (Sambamurthy V, 2003, P.237-263). The investment to the ERP system will create corresponding opportunities for the future E-business or other electric supply chain (Taudes A, 2000, P.227-244). Therefore, as a kind of digital option, some IT investments may produce values, influence the future performance of the enterprise and enhance the enterprise market value by creating opportunities for the future growth of the enterprise.

Except for that, there are other theories which can be used to explain the impact of IT investment on the enterprise market value. Dos Santos et al introduced the concept of "First Mover Advantage", and pointed out that the innovational investment of IT would produce larger profits than the following investments (Dos Santos B L, 1993, P.1-23). Before the competitive opponent imitates, investors can use innovational IT investment to obtain excess return. Starting form the competitive Agility, Chatterjee et al studied and found that the IT infrastructure investments could bring larger investment values than the IT application investments (Chatterjee D, 2002, P.7-42). Based on the theory of the herding effect (Banerjee A, 1992, P.797-817) and Lee's explanations about two concepts including the information follow and the information collapse (Lee I H, 1998, P.741-759), Dehning et al studied the influence of the E-business investment announcement to the enterprise market value in the period of forming and breaking the network bubble (Dehning B, 2003, P.637-656). Sabherwal R and Sabherwal S used the contingency theory, the organizational learning theory and the knowledge-based enterprise theory to find that the abnormal return of the enterprise were significantly associated with the scale of the enterprise, ROS, the cooperation between the enterprise validity and the knowledge management process, the stability of the enterprise, and the diversification of the enterprise (Sabherwal R, 2005,

P.531-567). Oh et al used the agency theory to explain the agent risk in the IT outsourcing, and explored the influences of IT outsourcing projects on the enterprise market value (Oh W, 2006, P.271-303). Starting from the organizational integration, Ranganathan and Brown studied and found that the ERP with bigger physical scope could produce larger performance (Ranganathan C, 2006, P.145-161). In the researches about the influences of IT investment among countries on the enterprise market value, Meng and Lee introduced the catch-up theory to explain different influences of the IT investments in the developing country and the developed country on the enterprise market value (Meng Z L, 2007, P.737-745). Dewan and Ren used the organizational learning theory to explain the differences of the influences of the expansive E-business investment and exploring E-business investment on the enterprise market value (Dewan S, 2007, P.370-394). Sabherwal R and Sabherwal S used the contingency theory, the strategic cooperation theory and the knowledge sharing theory to study the influence of the cooperation between the knowledge management announcement and the enterprise knowledge management strategy to the excess return (Sabherwal R, 2007, P.409-422). Lin et al studied the impact of the E-business service announcement on the enterprise market value based on the strategy and marketing theory (Lin J C, 2007, P.224-245).

After the relative theories referred in literatures are introduced, the empirical researches in these literatures will be reviewed as follows.

3. Review of literatures

In this part, the research literatures about IT investment announcement will be reviewed, and the contents, conclusions and methodologies of the empirical researches will be introduced as follows.

3.1 Introduction of empirical researches

To understand and compare these literatures, these literatures are divided into six sorts according to the research objects. The first sort means the investment announcements about IT, and it generally refers to all investment announcements about IT. The second sort means the E-business announcements, and it mainly includes the announcements that the enterprise develops the E-business activities or expresses its intent to develop the E-business activities. The third sort means the enterprise system announcements, and it mainly includes ERP (Enterprise Resource Planning Systems), CRM (Customer Relationship Management Systems), SCM (Supply Chain Management Systems) and DSS (Decision Support Systems). The fourth sort means the announcements about knowledge management, and it includes the announcements about knowledge sharing and knowledge management systems. The fifth sort means the announcement of IT outsourcing, and it includes the outsourcing announcements of IT/ E-business. The sixth sort means the announcements about IT personnel, and it mainly includes the announcement about IT personnel, managers and CIO. Some empirical researches about these sorts will be respectively introduced as follows.

3.1.1 Investment announcements about IT

Researchers used IT, IS (Information systems) and other keywords to search for the investment announcements about IT, and the research conclusions of the investment announcements about IT are inconsistent.

Dos Santos et al used the event study methodology to measure the direct and indirect values of IT investment by test the reactions of the stock market to IT investment announcement. In 97 samples in the manufacturing and finance industry from 1981 to 1988, they had not found any excess return. In cross section analysis, they found that the evaluation to the innovational IT investment in the market was higher than the evaluation to the following IT investment (Dos Santos B L, 1993, P.1-23).

Based on Dos Santos' researches, Im et al used more and new IT investment announcement samples (1981-1996, 238) to test the share price effect of the announcement and the change of trading volume (Im K S, 2001, P.103-117). The result of the total samples was similar with Dos Santos' research, which indicated that investors had not positively evaluated IT investment announcement. The change of trading volume was not significant too. They also tested the influences of the industry, the enterprise scale and the announcement time on the share price.

Chatterjee et al studied 112 groups of IT investment announcement data from 1992 to 1995 and found that at the day that the event happened, the stocks always had significantly abnormal return (Chatterjee D, 2002, P.7-42). They also found that the IT infrastructure investment announcement could bring larger excess return comparing with IT application investments.

Based on Dos Santos, Im and Chatterjee's researches, Dehning et al tested the impact of IT strategic role (Dehning B, 2003, P.637-656). They also found that when the enterprise implemented transform IT investment, it would always obtain significant excessreturn.

Dardan et al analyzed the influences of IT investment about clients on the customer satisfaction and the enterprise market value (Dardan S, 2006, P.100-111). Based on 57 samples of 17 enterprises from 1996 to 2001, they found that IT investment about clients could enhance the customer satisfaction and bring significantly abnormal return. Oh et al studied 430 IT investment announcement samples from 1985 to 1999, and found that IT investment announcement

could bring significantly positive abnormal return for the enterprise. Except for that, they also found that the growth opportunity, uncertainty, IT strategic role, disclosing party, the interaction of uncertainty and strategic role and the interaction of uncertainty and special attribute of asset would all significantly influence the abnormal return of the enterprise (Oh W, 2006, P.19-44).

Meng and Lee studied the data in the US and Chinese Markets from 1999 to 2002, and found that Chinese IT investment announcement had significant abnormal return, but US IT investment announcement was not so (Meng Z L, 2007, P.737-745). They also tested 3 factors which might possibly impact the IT investment value, i.e. the industry, the enterprise scale and the enterprise type.

3.1.2 E-business

Researchers mainly collected the announcements of the enterprises which had developed the E-business activities or wanted to develop the E-business activities, and studied the impact of these announcements on the enterprise market value.

Subramani and Walden used the event study methodology and adopted US samples (1998.10.1-1998.12.31, 251) to study the change of the market value of the enterprises which issued E-business announcements (Subramani M, 2001, P.135-154). They found that the cumulative abnormal return(CAR) of E-business announcement was positive, and the CAR of traditional enterprises and networking enterprises were almost the same, and the CAR of B2B and B2C were significantly different, and the CAR of digital products and tangible products were significantly different.

Using Subramani and Walden's research results for references, Lee et al used Korea samples and combined with the concrete situation of the Korea to implement similar researches (Lee H G, 2002, P.41-56). In these researches, the type of the E-business announcement and the type of the E-business enterprise was expanded, and the E-business announcements were analyzed in two different capital markets (KOSDAQ and KSE). The empirical conclusion indicated that the reaction of the capital market to the enterprise E-business announcement was positive.

Dehning et al found that the traditional event study methodology was not applicable to the period with large fluctuation in the stock market (Dehning B, 2004, P.55-82). They put forward a new method, and used this method to study and find that 251 E-business announcements in the fourth quarter in 1998 could bring significant abnormal return, but 542 E-business announcements in the fourth quarter in 2000 could not significantly influence the stocks. They also found that there were differences between tangible products and digital products, B2B and B2C, traditional announcement and networking announcement for the E-business announcements.

Ferguson et al studied 232 E-business investment announcements in the Australian listed enterprises from 1988 to 2001 and found that the E-business investment announcement would positively influence the market value of the enterprise. In the cross section analysis, they found that non-innovational E-business investment announcements would bring larger abnormal return for the enterprise (Ferguson C, 2005, P.5-29).

Dewan and Ren comprehensively tested the influences of the E-business announcements from 1996 to 2002 on the return and risks of firms(Dewan S, 2007, P.370-394). When the risk change could be controlled, the influences of these announcements on the share price were not significant. In 1998 and 2000, the total risk and non-systematic risk of the enterprise rose significantly, but the systematic risks in 1996 and 2002 reduced. They also found that the enterprise scale, the risk before the enterprise event window, the return before the event window, the product type evolved in the E-business and the time all were significantly correlative with the systematical risk change of the enterprise. The non-systematic risk change of the enterprise was significantly associated with the enterprise scale, the risk before the event window, and the time.

Lin et al studied 179 E-service announcement samples from 1999 to 2002, and found that the enterprise would obtain significantly abnormal return going with the E-service announcements (Lin J C, 2007, P.224-245). They also found that the enterprise scale and the market scale were negatively correlative with the investment value, and the experiences of the enterprise were positively correlative with the market value of the enterprise.

3.1.3 Enterprise system

These researches mainly mean the empirical researches about ERP, CRM, SCM and DSS announcements.

Hayes et al studied the reaction of the market to the IT investment with special type, i.e. the ERP system (Hayes D C, 2001, P.3-18). In total, the market positively evaluated the ERP implementation announcement. They also researched the function of the interaction of the enterprise scale and the healthy degree to the market reaction. Except for that, combining with the characters of ERP, the factor of supplier was introduced in the research. The research result indicated that small fine enterprise would obtain higher return, and the known supplier with large scale would also enhance the return of the enterprise.

Ranganathan and Brown studied 116 ERP investment announcements from 1997 to 2001, and they found that these announcements had significantly positive abnormal return in the event window (Ranganathan C, 2006, P.145-161).

They also used the regression model to test the functional scope and the physical scope of the ERP projects, and the influence of suppliers on the abnormal return, and the conclusion indicated that these the former two variables were positively correlative with the abnormal return.

3.1.4 Knowledge management

This sort of research object mainly includes some announcements about knowledge management, and though the knowledge management is one quit important part of the development for the enterprise, but there are few researches about this aspect.

Sabherwal R and Sabherwal S studied the knowledge management announcement based on IT and found that the abnormal return of the enterprise was significantly associated with the scale of the enterprise, ROS, the cooperation between the enterprise validity and the knowledge management process, the stability of the enterprise, and the diversification of the enterprise (Sabherwal R, 2005, P.531-567).

Based on 103 knowledge management announcements from 1995 to 2002, Sabherwal R and Sabherwal S found that the abnormal return was significantly associated with the enterprise scale, the knowledge management strategy, the cooperation degree of the knowledge management strategy and the knowledge management announcement, but was not significantly associated with the knowledge management process, the knowledge management source and users (Sabherwal R, 2007, P.409-422).

3.1.5 IT outsourcing

This sort of research object mainly includes the outsourcing activities about the IT, IS and E-business, and researches explain the advantages and disadvantages of outsource to the enterprise by studying the effect of outsourcing announcement on the enterprise market value.

Hayes et al surveyed the abnormal market return of the IT outsourcing announcements, and the research conclusions based on 76 IT outsourcing announcement from 1990 to 1997 indicated that the IT outsourcing announcement could not bring excess return (Hayes D C, 2000, P.109-125). They also found that the enterprise scale was significantly negatively correlative with the excess return, and the service industry could obtain higher excess return

Peak et al studied 64 samples from 1988 to 1993 and found that the value of IT/IS outsourcing in big enterprises was zero, but it would change the risk of the enterprise (Peak D A, 2002, P.6-33). The enterprise with low healthy degree would increase the risk, and the enterprise with high healthy degree would reduce the risk.

Oh and Gallivan studied 97 samples from 1998 to 2001 and found that investors thought that IT outsourcing could produce values (Oh W, 2004). They also found that the value created by IT outsourcing was negatively correlative with the special attribute and the control scale of the IT resource.

Based on 96 E-business outsourcing announcement samples from 1999 to 2002, Agrawal et al found that the E-business outsourcing projects achieving quick reaction could obtain abnormal return, and they also found that even the outsourcing project with high complexity could bring significant excess return for the enterprise (Agrawal M, 2006, P.861-873).

Based on 192 samples form 1995 to 2003, Oh et al's researches indicated that the IT outsourcing announcement was significantly associated with the enterprise market value (Oh W, 2006, P.271-303). They also found that the abnormal return of the enterprise was significantly associated with the industry and the scale of the outsourcing contract, the difficulty of the supervision, the special attribute of the asset, and the scale of the supplier.

3.1.6 IT personnel

This sort of research object mainly includes the announcements about IT personnel, managers and CIO. Only for the existing researches, because the information disclosing is only limited in some announcement about the CIO appointment, the existing researches only stayed on the layer of CIO.

Chatterjee et al tested the reaction of the market to the behavior that the enterprise established CIO announcement, and the research result indicated that in the industry with IT strategic transform, to establish the CIO post would significantly enhance the market return for the enterprise (Chatterjee D, 2001, P.43-70).

Khallaf and Skantz studied 461 CIO appointment announcements from 1987 to 2002, and they found that there was not significant difference for the announcement to establish and appoint CIO and for the announcement to appoint CIO (Khallaf A, 2007, P.83-105). They also found that the market would punish the companies which had not obtained potentially strategic advantages of CIO in time, and tested the reaction of the market to the CIO appointments with different qualities.

After empirical researches in recent years were reviewed, the methodology used in these literatures will be introduced as follows.

3.2 Event study methodology

In above literatures, almost all literatures adopted the event study methodology. The event study methodology is used to discuss the impact of the happening of the event on the share price (or the enterprise market value). In foreign countries, the event study methodology was first widely applied in the financial economic domain, and the literatures about the event study methodology occurred in recent years have been the important part of the financial economic literatures. In addition, the event study methodology is also used out of the financial economic domain.

When designing and selecting the model to compute the normal return and evaluating the happening of the event, the abnormal return produced by single stock is the key for the event study methodology. Researchers must first suppose the anticipated return of single stock without the effect of this event, and use the actual income after the event happens to detract the anticipated income. Campbell et al though the models to compute the normal return mainly included the economic model and the statistical model (Campbell John Y, 1997). Based on the statistical hypothesis of the asset return behavior, the statistical model doesn't depend on any economic theories, and the economic model takes the hypothesis about relative investors as the base, and it doesn't depend on the statistical hypothesis.

3.2.1 Statistic model

(1) Constant mean model

The idea of the model is to take the average return of the stock in the estimation window as the normal return of the stock in the event window. Supposed that u_i is the average return of the asset i, so the constant mean model is

$$R_{it} = u_{it} + \xi_{it}$$

(1)

$$E[\xi_{it}] = 0, \quad \mathrm{Var}[\xi_{it}] = \sigma_{\xi_i}^2$$

Where, R_{it} is the t'th return of the stock i, and ξ_{it} is the interfered item. Though the constant mean return model may be the simplest model, but Brown and Warner found that the result from this model was similar with the results from other complex models (Brown S J, 1985, P.3-31 & Brown S J, 1980, P.205-258). In addition, Chen Hanwen and Chen Xiangmin's researches indicated that the mean adjustment model had certain advantage in the Chinese market (Chen H M, 2002, P.40-47).

(2) Market model

The market model is the statistical model which associates the return of certain stock with the combined return of stocks in the market, i.e.

$$R_{it} = \alpha_i + \beta_i \bullet R_{mt} + \xi_{it}$$

(2)

$$E[\xi_{it}] = 0, \quad \mathrm{Var}[\xi_{it}] = \sigma_{\xi_i}^2$$

R_{it} and R_{mt} respectively are the return of the stock i and the return of the market investment combination in the t'th term, and ξ_{it} is the interfered item. The market model is the model based on the improvement of the constant mean return model. It eliminates the return about the change of the return of the market combination and reduces the variance of the abnormal return, so it may strengthen the ability to test the event effect. The selection of this model is mainly decided by R^2 when this model regresses, and R^2 is bigger, the eliminated part of the abnormal return variance is bigger and it is more profitable to select this model, v.v. (MacKinlay C A, 1997, P.137-157). Many other statistical models can also be used in the modeling of the normal return. General statistical models belong to the factor model. The market model is the example of the single factor model, but in many multi-factor models, they can also include the industry index except for this factor. Aiming at the statistical character of the share price, Brown and Warner applied the simulated sampling method to prove the good applicability of the market model to the month data and the day data (Brown S J, 1985, P.3-31 & Brown S J, 1980, P.205-258). They also pointed out that the model should be selected and improved aiming at different periods and markets.

3.2.2 Economic model

The economic model is the normal return model which can offer more restrictions. The typical economic models include the capital asset pricing model (CAPM) and the arbitrage pricing model (APT).

After calculating the abnormal return by the selected model, its significance should be tested. The pioneer parameter test hypothesize share pricing behaviors among samples were independent each other, and considering that the clustering character of events may induced the pertinence among samples, Brown and Warner pointed out that it would underestimated the estimated variance in the test variables and put forward one adjustment method (Brown S J, 1980, P.205-258). Beaver, Kalay, Loewenstein and Boehmer et al's empirical researches indicated the variance of the abnormal return might increase because the event happened, and past parameter test variables always underestimated the variance, and more easily reject the original hypothesis without abnormal return (Beaver W H, 1968, P.67-92 & Kalay A, 1985, P.423-449 & Boehmer E, 1991, P.253-272). Boehmer (1991) et al put forward the standardized cross

section test aiming at this phenomenon (Boehmer E, 1991, P.253-272). The statistic used in the literatures involved in this article is

$$J_1 = \frac{CAR(t_1, \ t_2)}{\left[\sigma^2(t_1, \ t_2)\right]^{\frac{1}{2}}} \sim N(0,1) \tag{3}$$

Where,

$$\sigma^2(t_1, \ t_2) = \sum_{t_1}^{t_2} \sigma^2(AR_t) \tag{4}$$

And

$$J_2 = \left(\frac{N(L_1-4)}{L_1-2}\right)^{\frac{1}{2}} \overline{SCAR}(t_1, \ t_2) \sim N(0,1) \tag{5}$$

Where,

$$\overline{SCAR}(t_1, \ t_2) = \frac{1}{N} \sum_{i=1}^{N} \frac{CAR_i(t_1, \ t_2)}{\left[\sigma_i^2(t_1, \ t_2)\right]^{\frac{1}{2}}} \tag{6}$$

The non-parameter tests which can be used in the event study methodology mainly include the generalized symbol test, the Wilcoxon symbol order test and the Corrado's rank test. The empirical researches indicated that the distribution of the abnormal return was represented as right-skewed and fat-tailed, and Cowan and Sergeant found that the non-parameter test would be better than the parameter test under this situation. Not only the non-parameter test is better than the parameter test under the decline distribution, but it can be used to find the abnormal values in the samples (Cowan A R, 1996, P. 1731-1757).

After reviewing the empirical researches in these literatures, the limitations and future research directions of the existing researches will be introduced as follows.

4. Limitations and future research directions

Though the impact of IT investment on the enterprise market value has been studied from multiple dimensions in existing researches, there are still some limitations. First, the time periods of these samples are too early, so it is further to be validated whether these research results could be applied in present IT investments. Second, certain limitations still exist in following aspects in existing researches.

4.1 IT investment characters

Most researches belong to general researches about IT investment or E-business investment, and there are few researches to study concrete IT investment projects, and when the concrete projects are not limited, the special attribute of these concrete projects is difficult to be concretized to measure their influences on the IT investment values. Therefore, various IT investment projects should be concretized, and the character factors and the weights influencing the enterprise market value should be tested aiming at various concrete investment projects (Hayes D C, 2001, P.3-18 & Im K S, 2001, P.103-117 & Dos Santos B L, 1993, P.1-23), for example, the ERP system mainly offers a uniform information platform for the enterprise, which can enhance the interior efficiency of the enterprise, save the cost and provide opportunities for the applied development, and CRM system is mainly used to better know customers' favors and achieve higher customer satisfaction, and enhance the performance of the enterprise finally. Both strategic intentions, implementation ranges, implementation times, technologies in the implementation, and the processes to produce the values are not same completely, and the factors which will influence the final values in the value production process are also different, so the attributes of ERP and CRM should be discussed respectively to find out the attributes which may influence the final values based on certain theory.

4.2 Organization factor

In the process that the IT investment produces values, the attributes of the enterprise are also very important. Though some empirical researchers introduced the factor of enterprise when measuring the IT investment values, but because of the extensive attributes of IT investment, it is hard to find out which kind of enterprise character will influence which IT investment to the largest extent. When the IT investment type is concrete, the influence of the enterprise character on

the IT investment value should be systematically analyzed based on relative theories and former empirical research results (Oh W, 2006, P.19-44 & Dos Santos B L, 1993, P.1-23). For example, the purchase of IT hardware may be nothing with the healthy development of the enterprise, but in the implementation of many large enterprise systems such as ERP, many uncontrollable factors may largely exceed the budget, and if the healthy degree of the enterprise is too low, the capital chain of the enterprise may be broken, and the project may fail. Other researches also indicated that the IT authority from the senior layer, the IT management ability, IT experience and complementary resource investment all may bring influences to the values generated by IT. For example, the innovational IT investments of WMT and K-mart may produce different market value influences (Oh W, 2006, P.19-44).

4.3 Exterior environment

All activities of the enterprise are in certain exterior environment, so the impact of the exterior environment should be considered. In past researches, the industry is always taken as the control variable, but it is classified coarsely, and there are few researchers to study how the industrial character adjusts the IT investment value. First, the industry with strict competitive environment always adopts the IT investments which intention is to save the costs, and these investments will not obtain sustainable competitive advantage, and because of the competition, the welfare of this part will always be taken by consumers. Therefore, the industry should be defined more accurately to study which IT investment in the industry can produce higher return (Im K S, 2001, P.103-117 & Dos Santos B L, 1993, P.1-23). Second, when the association among enterprises is close, the cooperative fellow can block or promote the implementation of the enterprise information system, so the relationships among organizations will influence the IT investment value. But there are few researches in this aspect, and there are some literatures studying ERP and IT outsourcing to take the supplier as one factor influencing abnormal return. Except for above two factors, the national culture and the infrastructure of the nation all can influence the IT investment value, but there is only one article to study this aspect up to now, and in this article, the author compared the differences of IT investment values in US and China, and the division about the country was only limited in the developing and developed countries, and only one country was selected as the representative, so the commonness of the conclusion needs to be further studied (Meng Z L, 2007, P.737-745).

4.4 Risk factor

In one latest article (Dewan S, 2007, P.370-394), the author had pointed out that when considering the influence of IT investment announcement, it should not only consider the rise of the return, but combine with the change of the risk, and the IT investment could influence the risk of the enterprise (Galbraith J R, 1977 & Gurbaxani V, 1991& Hunter L M, 2004, P.145-154). When the risk is not considered, the deflected result may be obtained. Dewan and Ren's research result indicated that when the system risk and the non-system risk of the enterprise changed, the abnormal return of the enterprise would not be significant (Dewan S, 2007, P.370-394). Therefore, in the future research design, the risk factor should be considered.

4.5 Methodology

The limitations of the methodology adopted in the research literatures include following aspects. First, past researches had pointed out that the occurrence of the event may increase the variance of the abnormal return, so the parameter test variables used in traditional statistical tests would always underestimate the variance to more easily reject the original hypothesis without abnormal return (Beaver W H, 1968, P.67-92 & Kalay A, 1985, P.423-449 & Boehmer E, 1991, P.253-272), but most literatures still adopted traditional statistical test method, and they had not considered the influence of the happening of the event on the variance of the abnormal return. Second, in most researches, the normal return mode was adopted as the market model, but the beta coefficient in the market model was obtained by the estimation window, and after the event happens, the beta coefficient of the enterprise may change, which will also influence the test of the abnormal return. Third, from domestic researches, Chinese financial market is different with the market in the developed country, so it should be serious to select and compare the normal return model, and the foreign market model should not be copied blindly.

4.6 limitations of domestic researches

Though China had introduced the event study method for a long time, the research about IT investment is still blank in China. In addition, as a developing country, China is very different with US about the IT infrastructure, the popularization degree of informationization, the culture and the consumption concept, so it should be further discuss whether the research conclusion in the US market could be applied in China. The IT investment and the informationization process of Chinese enterprises have their own characters, and the foreign research base can be used as references to further study Chinese IT investment.

From above discusses, the existing researches about the IT investment character, the organizational factor and the exterior environment are not sufficient, and there are few researches which can comprehensively consider above factors. In future researches, there are two research directions, and one is the vertical research which can pay attention to the IT investment character or the organizational factor or the exterior environment, and deeply study the influence of the

dimension on IT investment value when controlling the variables in other two dimensions. The other is to comprehensively consider the influences of IT investment character, organizational factor and the exterior environment on the IT investment value in the research model, and the interactive influences among three aspects should not be ignored at the same time (Oh W, 2006, P.19-44). Except for above three aspects, the influences of the system risk and the non-system risk should also be considered when studying the IT investment value. Therefore, adding the risk into the research model as the control variable can more exactly measure the impact of the IT investment on the market value of the enterprise.

5. Conclusions

In this article, the empirical researches in past years about the impact of IT investment announcement on the enterprise market value were reviewed, and the result indicated that the IT investment needed certain environment to bring positive abnormal return. Based on the analysis of existing literatures and relative theoretical bases, these factors influencing the IT investment value can be divided into the IT investment character, the organizational factor and the exterior environment, and the limitations and the future research directions of each factor in existing researches were studied. Aiming at the disputes about the influences of IT investment on the enterprise market value and risk, and the methodology, the risk factors and the limitations in the current methodology were summarized. Through the analysis of these literatures, relative scholars can understand the status of these researches more clearly and develop their future works more favorably. Especially for Chinese scholars, because the status of foreign researches was completely analyzed in the article, they can use the research result in the article for references, and adopt Chinese sample data to develop their further researches aiming at the limitations in the current researches.

References

Agrawal M, Kishore R, & Rao H R. (2006). Market reactions to E-business outsourcing announcements: An event study. *Information & Management,* No. 43(7), P. 861-873.

Ang S, & Cummings L L. (1997). Strategic response to institutional influences on information systems outsourcing. *Organization Science,* No. 8(3), P. 235-256.

Ball R, & Brown P. (1968). An empirical evaluation of accounting income numbers. *Journal of Accounting Research,* No. 6(2), P. 159-178.

Banerjee A. (1992). A simple model of herd behavior. *Quarterly Journal of Economics,* No. 107(3), P. 797-817.

Barney J B. (1991). Firm resources and sustained competitive advantage. *Journal of Management,* No. 17(1), P. 99-120.

Barua A, Kriebel C H, & Mukhopadhyay T. (1995). Information technologies and business value: An analytic and empirical investigation. *Information Systems Research,* No. 6(1), P. 3-23.

Barua A, & Mukhopadhyay T. (2000). Information Technology and Business Performance: Past, Present and Future. *In: Zumd R W(Ed), Framing the Domains of IT Management: Projecting the Future through Past. Pinnaflex Educational Resources, Cincinnnati, OH,* P. 65-84.

Beaver W H. (1968). The information content of annual earnings announcements. *Journal of Accounting Research (supplement),* No. 6, P. 67-92.

Bharadwaj A S. (2000). A resource-based perspective on information technology capability and firm performance: An empirical investigation. *MIS Quarterly,* No. 24(1), P. 169-197.

Boehmer E, Musumeci J, & Poulsen J T. (1991). Event-study methodology under conditions of event-induced variance. *Journal of Financial Economics,* No. 30, P. 253-272.

Brealey R A, & Mysers S C. (1991). *Principles of corporate finance.* 4th ed. McGraw-Hill.

Brown S J, & Warner J B. (1980). Measuring security price performance. *Journal of Financial Economics,* No. 8(3), P. 205-258.

Brown S J, & Warner J B. (1985). Using daily stock returns: The case of event studies. *Journal of Financial Economics,* No.14(1), P. 3-31.

Campbell John Y, Andrew W L, & MacKinlay A C. (1997). *The Econometrics of Financial Markets.* Princeton: Princeton University Press.

Chatterjee D, Pacini C, & Sambamurthy V. (2002). The shareholder-wealth and trading-volume effects of information-technology infrastructure investments. *Journal of Management Information Systems,* No.19(2), P. 7-42.

Chatterjee D, Richardson V J, & Zmud R W. (2001). Examining the shareholder wealth effects of announcements of newly created CIO positions. *MIS Quarterly,* No. 25(1), P. 43-70.

Chen H M, & Chen X M. (2002). Event Response to Securities Price (in Chinese). E*conomic Research Journal,* No.1, P. 40-47.

Coase R H. (1937). The nature of the firm. *Economica,* No. 4(4). P. 386-405.

Cowan A R, & Sergeant A M A. (1996). Trading frequency and event study test specification. *Journal of Banking & Finance,* No. 20, P. 1731-1757.

Dahlman C J. (1979). The problem of Externality. *Journal of Law and Economics,* No. 22(1), P. 141-162.

Dardan S, Stylianou A, & Kumar R. (2006). The impact of custmer-related IT investment on custmer satisfaction and shareholder returns. *Journal of Computer Information Systems,* No. 47(2), P. 100-111.

Davenport T H. (1993). Process Innovation: Reengineering Work through Information Technology. Boston: Harvard Business School Press.

Dehning B, Richardson V J, & Zmud R W. (2003). The value relevance of announcements of transformational information technology investments. *MIS Quarterly,* No. 27(4), P. 637-656.

Dehning B, Richardson V J, Urbaczewski A, & Wells J D. (2004). Reexamining the value relevance of e-commerce initiatives. *Journal of Management Information Systems,* No. 21(1), P. 55-82.

Dewan S, Ren F. (2007). Risk and return of information technology initiatives: Evidence from electronic commerce announcements. *Information Systems Research,* No. 18(4), P. 370-394.

Dixit A K, & Pindyck R S. (1994). *Investment under Uncertainty.* Princeton: Princeton University Press.

Domsetz H. (1988). The theory of the firm revisited. *Journal of Law, Economics & Organization,* No. 4(1), P. 141-161.

Dos Santos B L, Peffers K, & Mauer D C. (1993). The impact of information technology investment announcements on the market value of the firm. *Information Systems Research,* No.4(1), P. 1-23.

Fama E F. (1970). Efficient capital markets: A review of theory and empirical work. *Journal of Finance,* No. 25, P. 383-417.

Fama E F. (1976). *Foundations of Finance.* New York: Basic Books.

Ferguson C, Finn F, & Hall J. (2005). Electronic commerce investments, the resource-based view of the firm and firm market value. *International Journal of Accounting Information Systems,* No. 6(1), P. 5-29.

Galbraith J R. (1977). *Organization Design.* Reading, MA: Addison-Wesley.

Gurbaxani V, & Whang S. (1991). The impact of information systems on organizations and markets. Communications of the ACM. No.34(1).

Hammer M, & Champy J. (1993). *Business Process Reengineering: A Manifesto for Business Revolution.* New York: Harper Business.

Hayes D C, Hunton J E, & Reck J L. (2000). Information systems outsourcing announcement: Investigating the impact on the market value of contract-granting firm. *Journal of Information Systems,* No. 14(2), P. 109-125.

Hayes D C, Hunton J E, & Reck J L. (2001). Market reaction to ERP implementation announcements. *Journal of Information Systems,* No.15(1), P. 3-18.

Holthausen R W, & Verrecchia R E. (1990). The effect of informedness and consensus on price and volume behavior. *Accounting Review,* No. 65(1), P. 191-208.

Hunter L M, Kasoufb C J, Celuch K J, & Curry K A. (2004). A classification of business-to-business buying decisions: Risk importance and probability as a framework for e-business benefits. *Industrial marketing management,* No. 33(2), P. 145-154.

Im K S, Dow K E, Grover V. (2001). Research report: A reexamination of IT investment and the market value of the firm- An event study methodology. *Information Systems Research,* No. 12(1), P.103-117.

Jenson M. (1978). Some anomalous evidence regarding market efficiency. *Journal of Financial Economics,* No. 6, P. 95-101.

Kalay A, & Loewenstein U. (1985). Predictable events and returns: The case of dividend announcements. *Journal of Financial Economics,* No.14, P. 423-449.

Kern T, & Kreijger J. (2002). Exploring relationships in information technology outsourcing: The interaction approach. *European Journal of Information Systems,* No. 11(1), P. 3-19.

Kester W C. (1984). Today's options for tomorrow's growth. *Harvard Business Review,* No. 62(2), P.153-160.

Khallaf A, & Skantz T R. (2007). The effects of information technology expertise on the market value of a firm. *Journal of Information Systems,* No. 21(1), P. 83-105.

Kulatilaka N, & Marcus A J. (1988). A general formulation of corporate real options. *Research in Finance*, No.7, P.183-200.

Kulatilaka N, & Marcus A J. (1992). Project valuation under uncertainty: When does DCF fail. *Journal of Applied Corporate Finance,* No. 5(3), P. 92-100.

Lee H G, Cho D H, & Lee S C. (2002). Impact of e-business initiatives on firm value. *Electronic Commerce Research and Applications,* No.1(1), P. 41-56.

Lee I H. (1998). Market crashes and informational avalanches. *Review of Economic Study,* No. 65(225), P. 741-759.

Lin J C, Jang W Y, & Chen K J. (2007). Assessing the market valuation of e-service initiatives. *International Journal of Service Industry Management,* No.18(3), P. 224-245.

MacKinlay C A. (1997). Event studies in economics and finance. *Journal of Economic Literature,* No. 37(6), P.137-157.

McGrath R G.. (1997). A Real options logic for initiating technology positioning investments. *Academy of Management Review,* No. 22(4), P. 974-996.

Melville N, Kraemer K, & Gurbaxani V. (2004). Review: Information technology and organizational performance: An integrative model of IT business value. *MIS Quarterly,* No. 28(2), P. 283-313.

Meng Z L, & Lee S Y. (2007). The value of IT to firms in a developing country in the catch-up process: An empirical comparison of China and the United States. *Decision Support Systems,* No. 43(3), P. 737-745.

Mooney J G, Gurbaxani V, & Kraemer P L. (1996). A process oriented framework for assessing the business value of information technology. *The Data Base for Advances in Information Systems,* No. 27(2), P. 68-81.

Mukhopadhyay T, & Kekre S. (2002). Strategic and operational benefits of electronic integration in B2B procurement processes. *Management Science,* No. 48(10), P.1301-1313.

Myers S C. (1977). Determinants of corporate borrowing. *Journal of Financial Economics*, No. 5(2), P.147-176.

Nelson R R, & Winter S G.. (1982). *An Evolutionary Theory of Economic Change*. Harvard: Harvard University Press.

Oh W, & Gallivan M J. (2004). An empirical assessment of transaction risks of it outsourcing arrangement: An Event Study. *In: Proceedings of the 37th Hawaii International Conference on System Sciences, 2004.*

Oh W, Gallivan M J, & Kim J W. (2006). The market's perception of the transactional risks of information technology outsourcing announcements. *Journal of Management Information Systems,* No. 22(4), P. 271-303.

Oh W, Kim J W, & Richardson V J. (2006). The moderating effect of context on the market reaction to IT investment. *Journal of Information Systems,* No. 20(1), P. 19-44.

Peak D A, Windsor J C, & Conover J. (2002). Risks and effects of IS/IT outsourcing: A securities market assessment. *Journal of Information Technology Cases and Applications,* No. 4(1), P. 6-33.

Peteraf M. (1993). The cornerstones of competitive advantage: A resource-based view. *Strategic Management Journal,* No. 14(1), P. 179-191.

Pfeffer J, & Salancik G. (1978). *The External Control of Organizations: A Resource Dependence Perspective.* New York: Harper and Row.

Porter M E. (1985). *Competitive Advantage: Creating and Sustaining Superior Performance*. New York: Free Press.

Porter M E. (1991). Toward a dynamic theory of strategy. *Strategic Management Journal,* No.12(1), P. 95-117.

Radhakrishnana A, Zub X, & Groverc V. (2008). A process-oriented perspective on differential business value creation by information technology: An empirical investigation. *The International Journal of Management Science,* No. 36(6), P. 1105-1125.

Ranganathan C, & Brown C V. (2006). ERP investment and the market value of firms: Toward an understanding of influential ERP project variables. *Information Systems Research,* No. 17(2), P. 145-161.

Richardson V J, & Zmud R W. (2002). The Value Relevance of Information Technology Investments Announcements: Incorporating Industry Strategic IT Role. *In Proceedings of the 35th Hawaii International Conference on System Science.* USA, Hawaii: 2002.

Sabherwal R, & Sabherwal S. (2005). Knowledge management using information technology: Determinants of short-term impact on firm value. *Decision Sciences,* No. 36(4), P. 531-567.

Sabherwal R, & Sabherwal S. (2007). How do knowledge management announcements affect firm value? A study of firms pursuing different business strategies. *IEEE Transactions on Engineering Management,* No. 54(3),   P. 409-422.

Sambamurthy V, Bharadwaj A, & Grover V. (2003). Shaping agility through digital options: Reconceptualizing the role of information technology in contemporary firms. *MIS Quarterly,* No. 27(2), P. 237-263.

Selznick P. (1949). *TVA and the Grass Roots: A Study in the Sociology of Formal Organization.* Berkeley: University of California Press.

Soh C, Markus M L. (1995). How IT creates business value: A process theory synthesis. *In: DeGross et al(eds), Proceedings of the 16th International Conference on Information Systems. Amsterdam, The Netherlands.* P. 29-41.

Subramani M, & Walden E. (2001). The impact of e-commerce announcements on the market value of firms. *Information Systems Research,* No. 12(2), P. 135-154.

Subramani M. (2004). How do suppliers benefit from IT use in supply chain relationships. *MIS Quarterly,* No. 28(1), P. 45-75.

Taudes A, Feurstein M, & Mild A. (2000). Options analysis of software platform decisions: A case study. *MIS Quarterly,* No. 24(2), P. 227-244.

Thompson J D, & McEwen W J. (1958). Organizational goals and environment: Goal-setting as an interaction process. *American Sociological Review,* No. 23, P. 23-31.

Thompson J D. (1967). *Organizations in Action.* New York: McGraw-Hill.

Trigeorgis L, & Mason S P. (1987). Valuing managerial flexibility. *Midland Corporate Finance Journal,* No. 5(1), P. 14-21.

Trigeorgis L. (1988). A conceptual options framework for capital budgeting. *Advances in Futures and Options Research,* No. 3, P. 145-167.

Trigeorgis L. (1993). The nature of option interactions and the valuation of investments with multiple real options. *Journal of Financial and quantitative Analysis,* No. 28(l), P. 1-20.

Wade M & Hulland J. (2004). Review: The resource-based view and information systems research: Review, extension, and suggestions for future research. *MIS Quarterly,* No. 28(1), P.107-142.

Watts R, Zimmerman J. (1986). *Positive Accounting Theory.* Englewood Cliffs: Prentice Hall.

Williamson O E. (1979). Transaction cost economics: The governance of contractual relations. *Journal of Law and Economics,* No.22, P. 233-261.

Williamson O E. (1985). T*he Economic Institutions of Capitalism: Firms, Markets, Relational Contracting.* New York: Free Press.

Ziebart D A. (1990). The association between consensus of beliefs and trading activity surrounding earnings announcements. *Accounting Review,* No. 65, P. 477-488.

The Value Relevance of Book Values, Earnings and Cash Flows: Evidence from Korea

Gee-Jung, Kwon (Corresponding author)

Department of Taxation and Accounting, Silla University

San 1-1, Gwaebop-Dong, Sasang-Gu, Busan, Republic of Korea

Tel: 82-51-999-5438   E-mail: geejung@silla.ac.kr

Abstract

The purpose of this paper is to investigate the relative and incremental value relevance of book value, earnings and cash flows in security prices. The study basically uses Myers (1977), Ohlson (1995) and Feltham and Ohlson (1995) valuation model and the paper performs analyses for all samples divided into profit/loss firms and earnings managed/non-earnings managed firms to observe changes in value relevance over the periods of 1994-2005 in Korean stock markets(4,865 firm-year observations).

The empirical results of the paper indicate that book value is the most value relevant variable and cash flows have more value relevance than earnings in all samples, subsamples and periods. The results also show that combined value relevance of book value and cash flows is more value relevant than that of book value and earnings, suggesting that cash flows can be a substitute for earnings in equity valuation model. The important contribution of the study is documenting the deteriorated value relevance of earnings and the increased value relevance of cash flows in equity valuation. This may be just limited to the period of 1994-2005 in Korean stock markets, or this could be the true pattern in which earnings play no significant role in security prices.

Keywords: Korean, Cash flows, Book value, Earnings, Value relevance

1. Introduction

The paper reinvestigates the value relevance of book value, earnings and cash flows in security prices from 1994 to 2005 in Korean stock market. The study is motivated by recent empirical literatures on value relevance including Biddle et al. (1995), Ohlson(1995), Fetham and Ohlson(1995), Hayn(1995), Amir and Lev(1996), Burgstahler and Dichev(1997), Collins et al. (1997) , Hand and Lansman(1999), Yee (2000), Jang et al. (2002), Choi et al. (2006) and among others.

According to Statement of Financial Accounting Concepts (SFAS) No. 1 (FASB 1983) "Objectives of Financial Reporting by Business Enterprises," mainly focuses on accrual earnings not cash flows because accrual earnings provide more value relevant information than cash flows in predicting an enterprise's future cash flows.

But many literatures have raised questions about information contents and value relevance of accrual earnings (Lev 1989; Hayn 1995; Amir and Lev 1996; Collins et al. 1997; Jang et al. 2002). For example, Hayn (1995) finds a much weaker information contents of earnings for loss firms (those reporting negative earnings in financial statements) than profit firms (those reporting positive earnings in financial statements). And Collins et al. (1997) finds that value relevance of 'bottom line' earnings has declined.

In Korea, Jang et al. (2002) report that the incremental explanatory power of book values increase, while that of earnings decrease from 1981 to 2000. Choi et al. (2006) report that accrual earnings are more value relevant factor than cash flows in the growth stage, but in the decline stage, cash flows are more value relevant than earnings.

Since cash flows are also primary information factor in financial statements, this study basically assumes that cash flows may provide incremental information content and have additional explanatory power in stock prices like earnings and book value. The paper investigates following research questions:

First, what is the most value relevant variable among book value, earnings and cash flows in firms' valuation model? Second, has the value relevance of book values, earnings and cash flows increased or decreased? Third, when firms do earnings management and earnings manipulation to avoid reporting losses and profits decreases, what is the most value relevant variable among book value, earnings and cash flows? Forth, when firms have negative earnings, what is the

most value relevant factor among book value, earnings and cash flows? Finally, can cash flows take the place of earnings in firms' valuation model?

To this end, the paper investigates the relative and incremental value relevance of book value, earnings and cash flows for firms listed in Korean stock markets over the period of 1994-2005. For this test the study basically uses Myers (1977), Ohlson (1995) and Feltham and Ohlson (1995) valuation model.

The paper uses multiple regression models of equity value and book value/earnings/cash flows to investigate relative and incremental value-relevance among book value, earnings and cash flows. The paper performs analyses for all samples divided into profit firms (those reporting positive earnings (profits) in financial statements) /loss firms (those reporting negative earnings (losses) in financial statements) and earnings managed firms (those manipulating earnings in financial statements) /non-earnings managed firms (those reporting earnings honestly without earnings management in financial statements) to observe changes in value relevance over the periods of 1994-2005. The methodology of testing the value relevance of book value, earnings and cash flows is mainly based on cross-sectional regressions of security prices on the value estimates.

The empirical results of the paper indicate that book value is the most value relevant variable and cash flows have more value relevance than earnings in all samples, subsamples and periods. The results also show that combined value relevance of book value and cash flows is more value relevant than that of book value and earnings, suggesting that cash flows can be a substitute for earnings in equity valuation model .

The rest of the paper proceeds as follows. Section 2 outlines previous related literatures that examine the value-relevance of book value, earnings and cash flows. Section 3 discusses the hypothesis and empirical models used in the study. Section 4 discusses the empirical results of the study regarding the value relevance of book value, earnings and cash flows from 1994 to 2005; While Section 5 concludes the study.

2. Literature Review

Since Ball and Brown (1968), and Beaver (1986) many literatures have examined the value relevance of book value, earnings and cash flows. Many studies report that book values and earnings have significant information content in equity valuation (Lev 1989; Ou and Penman 1989; Barth 1991; Easton and Harris 1991; Penman 1991; Easton, Harris and Ohlson (1992); Ou and Penman 1993; Dechow 1994; Ohlson 1995; Feltham and Ohlson 1995; Penman 1996; Barth and Kallapur 1996; Easton 1999 et.al.).

Especially, prior studies such as Rayburn (1986), Bernard and Stober (1989), Bowen et al. (1986, 1987), Livnat and Zarowin (1990), Wilson (1986, 1987), Dechow (1994), Biddle et al. (1995), Sloan (1996), Dechow et al. (1998) and Landsman and Maydew(2002) report that earnings have a higher value relevance and information content than cash flows since accrual accounting system provides a better expectation about future cash flows than does prediction about current cash receipts and payments.

For example, Livnat and Zarowin(1990) report that disaggregation of net income into operating cash flows and accruals does not have significant contributions to the stock returns beyond that of earnings. Dechow (1994) document that earnings have more ability to reflect firm performance than cash flows. Dechow et al. (1998) also finds that earnings predict expected future cash flows better than operating cash flows and the difference varies with the operating cycle. Landsman and Maydew(2002) document that the information content of earnings has not declined by examining the abnormal trading volume and abnormal return volatility.

Nevertheless, compelling literatures find that the value relevance of earnings has declined because of the sudden change in the world economic environment and firm specific characteristics (Lev 1989; Hayn 1995; Amir and Lev 1996; Basu 1997; Elliot and Hanna (1996); Collins et al. 1997; Francis and Schipper (1999); Jang et al. 2002).

Lev (1989) finds that the correlation between earnings and stock returns is very low and instable over time. Hayn (1995) finds that a much weaker relationship exists between stock returns and earnings for loss firms than for profit firms because of liquation (abandonment) options.

Basu (1997) reports that negative earnings are less persistent than positive earnings and earnings response coefficients (ERCs) are much greater for positive earnings than for negative earnings. Collins et al. (1997) also reports that much of the shift in value-relevance from earnings to book values caused by negative earnings, one-time items and changes in firm size and intangible assets across the previous forty years.

Francis and Schipper (1999) find that the value relevance of earnings has decreased over the sample period, while that of book value has increased. In Korea, Jang et al. (2002) find that although overall value relevance of book value and earnings increased over the period 1981-2000, the incremental explanatory power of earnings decrease.

Similarly, some studies indicate that earnings management to avoid losses and earnings decreases causes the deterioration of the value relevance of earnings (Degeorge Pataei, Zeckhauser 1999; Burgstahler and Dichev 1997; Marquardt and Wiedman 2004**).**

Furthermore, other studies document that cash flows are more value relevant than accrual earnings in predicting future cash flows because of conservative accounting effects (Wilson 1986; Bowen and Burgstahler 1986, 1987; Cheng, Liu, and Schaefer, 1997; Barth et al. 1999).

Wilson (1986) finds that cash flows and total accruals have incremental information content beyond earnings and that the total accruals has incremental information content beyond the cash flows.

Bowen and Burgstahler (1986, 1987) report that cash flow have incremental information content relative and in addition to that of earnings. Cheng, Liu, and Schaefer (1997) also show that estimated operating cash flows have incremental value relevance beyond earnings. Barth et al. (1999) find that accruals and cash flows provide a prediction about future abnormal earnings and book value.

3. Hypothesis and Research Design

3.1 Study Hypothesis

Although most prior literatures (Rayburn 1986; Bernard and Stober 1989; Bowen et al. 1986, 1987; Livnat and Zarowin 1990; Wilson 1986, 1987; Dechow 1994; Biddle et al. 1995; Sloan 1996; Dechow et al. 1998; Landsman and Maydew 2002) document that earnings are more value relevant than cash flows, the results are not conclusive.

On the contrary, some researches raise questions about the value relevance of earnings (Amir and Lev 1996; Basu 1997; Elliot and Hanna (1996); Francis and Schipper (1999); Jang et al. 2002). These studies document that the value relevance of earnings declined, while that of book value increased.

Similarly, other studies also indicate that earnings management and negative earnings can cause the deterioration of the value relevance of earnings (Lev 1989; Hayn 1995; Burgstahler and Dichev 1997; Collins Collins et al. 1997; Degeorge et al. 1999; Marquardt and Wiedman 2004**).**

Furthermore, such as Wilson (1986), Bowen and Burgstahler (1986, 1987), Cheng, Liu, and Schaefer (1997), Barth et al. (1999) find that cash flows have incremental information content consistent with earnings. Thus, following main research hypotheses emerge from the proceeding discussions of the paper.

Hypothesis 1 (H1): Book value is more value relevant than earnings and cash flows.

Hypothesis 2 (H2): The value relevance of book value, earnings and cash flows has declined.

(H2-1): When firms have negative earnings and earnings management, the value relevance of earnings decline, while that of book value and cash flows increase.

Hypothesis 3 (H3): The combined value relevance of book value and earnings decline, while that of book value and cash flows increase.

(H3-1): When firms have negative earnings and earnings management the combined value relevance of earnings and book value decline, while that of book value and cash flows increase.

The first set of hypothesis is to investigate the most value relevant factor among primary accounting variables. The second hypothesis is an extension of the first. The results of prior studies are not conclusive. Many papers (Collins et al. 1977; Lansman and Maydew, 2001) report that the value relevance of book value and earnings have not declined over time, but other studies (Francis and Schipper, 1999) document that the value relevance of earnings has declined. The last hypothesis is to examine the combined value relevance of accounting variables. Prior researches have shown that the combined value relevance of book value and earnings has declined when firms have negative earnings and earnings management (Hayn, 1995; Elliot and Hanna, 1996; Basu, 1997; Collins et al. 1997; Maydew, 1997).

3.2 Empirical Model

In order to examine research questions of how the book value, earnings and cash flows relate to equity value, this paper basically use a generalized version of the Ohlson (1995) model. This paper adds cash flows to the Ohlson (1995) model because the paper predicts cash flow may provide additional information about firm's equity value.

The paper test hypothesis(H1-H3) using following equations (I , II , III , IV , V), replicating the results of Mayers (1977), Jan and Ou (1994), Ohlson (1995), and Collins et al. (1999) with Korean samples over the period 1994-2005.

The sample is segregated into several subgroups: earnings managed/ non-earnings managed firms and profit/loss firms. Several empirical literatures divide firms into profit (those reporting profits) and loss (those reporting losses) groups to investigate the reason for the shift in value relevance from earnings to book value (Hayn 1995; Collins et al. 1997; 1999; Jang et al. 2002; Kim 2003). Other papers also document that CEO's opportunistic behavior (earnings management and manipulation) may be the reason for the deterioration of accounting information's credibility and value relevance in Korean financial markets (Yoon 1998; Paek 2000; Lee and Sohn 2007). For example, Yoon (1998) documents that earnings managed firms usually have different signs of earnings and operating cash flows (the reversal signs from positive earnings to negative cash flows) in Korean financial markets. The paper replicates the result of Yoon (1998) in

splitting total samples into earnings managed and non-earnings managed firms.

Additionally, consistent with prior studies (Kothari and Zimmerman 1995; Green, Stark and Thomas 1996; Rees 1997; Stark and Thomas 1998; Dechow, Hutton and Sloan 1999; among others), all variables are deflated total number of shares outstanding (S) to control for heteroscedasticity. Test models are presented below along with a definition of the components:

$$P_t = b_1 + b_2 BV_{t-1}/S_t + \varepsilon_t \qquad (\text{I})$$

$$P_t = b_1 + b_2 E_t/S_t + \varepsilon_t \qquad (\text{II})$$

$$P_t = b_1 + b_2 CF_t/S_t + \varepsilon_t \qquad (\text{III})$$

$$P_t = b_1 + b_2 E_t/S_t + b_3 BV_{t-1}/S_t + \varepsilon_t \qquad (\text{IV})$$

$$P_t = b_1 + b_2 CF_t/S_t + b_3 BV_{t-1}/S_t + \varepsilon_t \qquad (\text{V})$$

Where:

P_t: Stock price 3 months after the end of fiscal year t, where year t is the event year.

BV_{t-1}: Book value at the end of year t-1

E_t: Earnings in period t

CF_t: Operating Cash Flows in period t

S_t: Total number of shares outstanding in year t.

ε_t: a normally distributed error term

4. Empirical Results

4.1 Sample Selection and Data Source

The paper obtains all necessary data from the KIS-FAS (Korea Investors Service-Financial Analysis System) and KISRI (Korea Securities Research Institute) stock databases. These data sets span the 12-year period from 1994 to 2005. During the process of sample selection, the study includes firms with stock prices, book values, earnings, cash flows and other financial data sufficient for empirical analysis, but the paper excludes financial banking business firms and impairment of capital firms due to administrative issues. Prior to the tests the paper eliminates outliers with Cook's Distance greater than 0.5 and absolute value of studentized residuals greater than 1. <Table 1> describes the sample selection and data sources.

Insert <Table 1> about here

4.2 Relationships among Earnings per Share, Book Value per Share, and Stock Prices

4.2.1 Descriptive Statistics

<Table 2> presents descriptive statistics for the sample of stock prices per share earnings per share, book value per share, and cash flows per share. The paper identifies 7,020 firm-year observations for the period 1994–2005. Total means of (P_t) is 22,566, and its highest value is 3,600,000. Total means of (E_t/S_t) is 9,747; its highest value is 5,957,381. Total means of (BV_{t-1}/S_t) is 28,366; its highest value is 1,615,159. Total means of (CF_t/S_t) is 4,382; its highest value is 403,751.

Insert <Table 2> about here

Table 3 presents the results of the correlation analysis. P_t, BV_{t-1}/S_t and CF_t/S_t are positively correlated at the 1% level, while P_t, BV_{t-1}/S_t and E_t/S_t are not significantly correlated. These correlations suggest that BV_{t-1}/S_t and CF_t/S_t is related to P_t, but E_t/S_t is not. These results are not consistent with empirical results shown in previous literatures (Hayn, 1995; Elliot and Hanna, 1996; Basu, 1997; Collins et al. 1997; Maydew, 1997; Lansman and Maydew, 2001).

Insert <Table 3> about here

4.2.2 Test for the Value Relevance of Book Value, Earnings and Cash Flows: Simple Linear Regression

The paper estimates the five valuation models separately for the profit/loss firms and earnings managed/non-earnings managed firms in all year regressions. <Table 4> shows the value relevance of book value, earnings and cash flows using a simple linear regression models. The coefficients of BV_{t-1} and CF_t are positively significant at a level of 1% while that of earnings are not significant in all individual year regressions. The average coefficients of BV_{t-1}, E_t and CF_t are about 0.37, 0.00 and 0.98, and the average adjusted R^2 for the book value, cash flows and earnings model are about 0.37, 0.24 and 0.00, respectively. These results show that book value and cash flows are significant value-relevant variables while earnings do not exhibit significant value relevance. The results also indicate that book value is the

dominant value relevant factor with respect to either earnings or cash flows.

Insert <Table 4> about here

The paper examines the value relevance of book value, earnings and operating cash flows by focusing on earnings quality (profit firms vs. loss firms) of Korean firms. Table 5 shows the value relevance of book values by dividing total samples into profit/loss firms. The coefficients of BV_{t-1} are positively significant at a level of 1% both in profit and loss firms in all individual year regressions. The average coefficients of BV_{t-1} are about 0.38 and 0.34, and the average adjusted R^2 are about 0.37 and 0.35 in profit/loss firms respectively. The results indicate that both in profit and loss firms, book values are significant variables of value-relevance. These results support those of Hayn (1995), Collins et al. (1997) and Han (1998), Burgstahler and Dichev (1997), Zhang (2000), who reports that the value relevance of book value.

Insert <Table 5> about here

Table 6 reports the value relevance of earnings by dividing total samples into profit/loss firms. The coefficients of $E_t/S_t(b_2)$ are not significant both in profit and loss firms in all individual year regressions. The average coefficients of $E_t/S_t(b_2)$ are about 0.00 and 0.00 in profit and loss firms respectively. The results show all individual and average adjusted R^2 are nearly equal to 0.00 both in profit and loss firms. These results indicate that earnings are not significant variable of value relevance both in profit and loss firms. The results are not consistent with prior literatures report that value relevance of earnings (Sloan 1996; Collins et al. 1997; Dechow et al. 1998; Landsman and Maydew 2002)

Insert <Table 6> about here

Table 7 shows the value relevance of operating cash flows by dividing total samples into profit/loss firms. The coefficients of $CF_t/S_t (b_2)$ are significant at a level of 1% both in profit and loss firms in all individual year regressions. The average coefficients of $CF_t/S_t (b_2)$ in profit firms (1.04) are higher than that of loss firms (0.86). The results show average adjusted R^2 in profit firms (0.26) are higher than that of loss firms (0.21). These results report operating cash flows are significant variable of value relevance both in profit and loss firms. Furthermore, the results suggest operating cash flows are more value relevant factor in profit firms than loss firms. These results are consistent with most recent valuation model literatures test the value relevance of cash flows (Wilson 1986; Bowen and Burgstahler 1986; 1987; Cheng, Liu, and Schaefer 1997; Barth et al. 1999).

Insert <Table 7> about here

The paper examines the value relevance of book value, earnings and operating cash flows by focusing on opportunistic behavior (earnings managed firms vs. non-earnings managed firms) of Korean firms.

The paper basically recognizes operating cash flows as non-managed earnings and defines earnings managed groups as firms with different signs of earnings and operating cash flows (the reversal signs from positive earnings to negative cash flows). Table 8 reports the value relevance of book values by splitting the samples into earnings managed and non-earnings managed firms. The coefficients of BV_{t-1}/S_t are significant at a level of 1% both in earnings managed firms and non-earnings managed firms in all year regressions. The average coefficients of $BV_{t-1}/S_t (b_2)$ are 0.35 in earnings managed firms and 0.37 in innocent firms respectively. The average adjusted R^2 exhibit almost the same values in both groups (0.38 vs. 0.36). The results suggest book values are significant value relevant factor regardless of opportunistic behaviors of Korean firms.

Insert <Table 8> about here

Table 9 reports the value relevance of earnings by dividing the samples into earnings managed and non earnings managed firms. The coefficients of $E_t/S_t (b_2)$ are not significant in all year regressions. The average coefficients of $E_t/S_t (b_2)$ are 0.00 in both groups and the average adjusted R^2 exhibit almost the same values in both groups (0.00). The results suggest that earnings are not value relevant indicator both in earnings managed and non-earnings managed firms.

Insert <Table 9> about here

Table 10 shows the value relevance of operating cash flows by splitting the samples into earnings managed and non-earnings managed firms. The coefficients of CF_t/S_t are significant at a level of 1% only in earnings managed firms. The average coefficients of $CF_t/S_t (b_2)$ are 1.09 in earnings managed firms and 0.00 in innocent firms respectively. The average adjusted R^2 in earnings managed firms are much higher than that in innocent firms (0.29>0.00). The results suggest operating cash flows are significant value relevant factor both in earnings managed and non-earnings managed firms.

Insert <Table 10> about here

4.2.3 Test for the Value Relevance of Book Value, Earnings and Cash Flows: Multiple Linear Regression

The paper examines further incremental value relevance of main variables by combining book value, earnings and cash flows. Table 11 shows the combined value relevance of book value/earnings and book value/cash flows. In panel A of

table 11, book values are the dominant valuation variable, while earnings are not significant in all individual year regressions. The average coefficients of BV_{t-1}/S_t and CF_t/S_t are about 0.37 and 0.00 with adjusted R^2 of 0.44. Panel B of table 11 shows both book value and operating cash flows are the dominant valuation variables in all individual year regressions. The average coefficients of BV_{t-1}/S_t and CF_t/S_t are about 0.30 and 0.60 respectively with R^2 value of 0.56. By comparison, the average R^2 values of the book value-cash flows model are higher than that of the book value-earnings model (0.56 vs. 0.44). The results suggest the combined value relevance of book value and cash flows are more value relevant than that of book value and earnings model.

Insert <Table 11> about here

Table 12 shows the combined value relevance of book value/earnings and book value/cash flows by dividing total samples into profit and loss firms. In panel A of table 12, book values are the dominant valuation variable both in profit and loss firms, while earnings are not significant valuation factor in both groups in individual year regressions. The average coefficients of BV_{t-1}/S_t and E_t/S_t are about 0.39 and 0.00 in profit firms with adjusted R^2 value of 0.42 and about 0.00 and 0.34 in loss firms with adjusted R^2 value of 0.49. By comparison, the average R^2 values in loss firms are higher than that in profit firms (0.49 vs. 0.42). The results indicate that earnings have no value relevance in the combined value relevance of book value and earnings model while book value exhibit dominant value relevance regardless of earnings quality.

Insert <Table 12> about here

Table 13 shows the combined value relevance of book value and cash flows by dividing total samples into profit and loss firms. In panel A of table 13, the average coefficients of CF_t/S_t (b_2) are higher than that of BV_{t-1}/S_t (b_3) with adjusted R2 value of 0.62 in profit firms (0.63 vs. 0.30). Panel B of table 13 shows the average coefficients of CF_t/S_t (b_2) are higher than that of BV_{t-1}/S_t (b_3) with adjusted R^2 value of 0.33 in loss firms. These results report the combined value relevance of book value and cash flows are more value relevant in profit firms than that in loss firms. Furthermore, cash flows have more value relevance than book value in combined value relevance of book value and cash flows model regardless of earnings quality.

Insert <Table 13> about here

Table 14 shows the combined value relevance of book value and earnings by splitting total samples into earnings managed and non-earnings managed firms. In panel A of table 14 shows book value is more value relevant than that of earnings (0.35 vs. 0.01) with adjusted R^2 value of 0.52. In panel B of table 14, earnings have more value relevance than that of book value (0.61 vs. 0.30) with adjusted R^2 value of 0.60.

Insert <Table 14> about here

These results show that book values are dominant value relevant factor in earnings managed firms, while earnings exhibit more value relevance than that of book value in innocent firms. The results also indicate that the explanatory power of combined value relevance model of earnings and book values in earnings managed firms are higher than that in non-earnings managed firms.

Table 15 shows the combined value relevance of cash flows and book value by dividing total samples into earnings managed and non-earnings managed firms. In panel A of table 15 reports cash flows is more value relevant factor than that of book values (0.55 vs. 0.27) with adjusted R^2 value of 0.37. In panel B of table 15, cash flows are more value relevant factor than that of book value (0.61 vs. 0.30) with adjusted R^2 value of 0.60. By comparison, the average adjusted R^2 value of the book value-cash flows model shows the explanatory power of book value-cash flows are higher in innocent firms than that in earnings managed firms. These results suggest the combined valuation model of cash flows and book value have significant value relevance regardless of opportunistic behavior of firms.

Insert <Table 15> about here

5. Conclusions

This paper investigates the value relevance of book value, earnings and cash flows in the Korean stock market. This paper tests three hypotheses. First, Book value is more value relevant than earnings and cash flows. Second, the value relevance of book value, earnings and cash flows has declined. To test this hypothesis precisely, this paper examines the subhypothesis that when firms have negative earnings and earnings management, the value relevance of earnings decline, while that of book value and cash flows increase. Third, the combined value relevance of book value and earnings decline, while that of book value and cash flows increase. To examine this hypothesis, the paper test the subhypothesis that when firms have negative earnings and earnings management the combined value relevance of earnings and book value decline, while that of book value and cash flows increase.

The paper shows supportive evidence for hypothesis 1 and 3, but no supportive evidence for hypothesis 2. This results show that book value have more value relevance than cash flows and earnings, and the combined value relevance of book value and cash flows has increased over the period 1994-2005. On the other hand, earnings show no value

relevance, while cash flows do. Moreover, the combined value relevance of book value/cash flows has more information content beyond that of earnings/book value.

The important contribution of the study is reinvestigating the value relevance and incremental information contents of book value, earnings and cash flows. Especially the paper documents the deteriorated value relevance of earnings and the increased value relevance of cash flows in equity valuation. The results of this study are very interesting, because many prior literatures report earnings have more value relevance and incremental information content than that of cash flows. This may be just limited to the period of 1994-2005 in Korean stock markets, or this could be the true pattern in which earnings play no significant role in security prices. A following up study should extend sample period to investigate this extraordinary phenomenon of this paper.

References

Amir, E., Lev, B. (1996). Value-relevance of nonfinancial information: The wireless communications Industry. *Journal of Accounting and Economics, 22*, 2-30.

Ball, R. & P. Brown. (1968). An empirical evaluation of accounting income numbers. *Journal of Accounting Research, 6*, 159–178.

Barth, M. (1991). Relative measurement errors among alternative pension assets and liability measures. *The Accounting Review*, 69, 1-25.

Barth, M.E. & Kallapur, S. (1996). Effects of cross-sectional scale differences on regression results in empirical accounting research. *Contemporary Accounting Research, 13*, 527–567.

Basu, S. (1997). The conservatism principle and the asymmetric timeless of earnings. *Journal of Accounting and Economics, 24*, 3-37.

Beaver, W. H. (1968). The information content of annual earnings announcements. *Journal of Accounting Research, 6*, 67-92.

Bernard, V. L., & Stober, T. (1989). The nature and amount of information in cash flows and accruals. *The Accounting Review, 64*, 624-652.

Biddle, G., Seow, G., & Siegel, A. (1995). Relative versus incremental information content. *Contemporary Accounting Research, 12*, 1-23.

Bowen, R., Burgstahler, D., & Daley, L. (1986). Evidence on the relationships between earnings and various measures of cash flow. *The Accounting Review*, 61, 713-725.

Bowen, R., Burgstahler, D., & Daley, L. (1987). The incremental information content of accrual versus cash flows. *The Accounting Review,* 62, 723-747.

Burgstahler, D., & Dichev, I. (1997). Earnings management to avoid earnings decreases and losses. *Journal of Accounting and Economics, 24*, 99-126.

Choi, H. S., J. I. Jang, S. C. S. (2006). The relative value-relevance of earnings and cash flow measures in each life-cycle stage. *Korean Management Review, 35* (5), 1339-1360, printed in Korean.

Cheng, C. S. A., Liu, C. S., & Schaefer, T. F. (1997). The value relevance of SFAS no. 95 cash flows from operations as assessed by security market effect. *Accounting Horizon, 11*, 1–15.

Collins, D. W., Maydew, E., L., & Weiss, I. S. (1997). Changes in the value-relevance of earnings and book values over the past forty years, *Journal of Accounting and Economics, 24* (1), 39-67.

Dechow, P. M. (1994). Accounting earnings and cash flows as measures of firm performance: the role of accounting accruals. *Journal of Accounting and Economics, 18*, 3-42.

Dechow, P. M., Kothari, S. P., & Watts, R. L. (1998). The relation between earnings and cash flows. *Journal of Accounting and Economics, 25* (2), 133-166.

Dechow, P. M. A., Hutton, P., & Sloan, R. G. (1999). An empirical assessment of the residual income valuation. Model. *Journal of Accounting and Economics, 26*, 1- 34.

Degeorge, F., Patael, J., & Zeckhauser, R. (1999). Earnings management to exceed thresholds. *Journal of Business, 72*, 1-33.

Easton, P. (1998). Discussion of revalued financial, tangible, and intangible assets: association with share prices and non-market-based value estimates. *Journal of Accounting Research, 36* (supplement), 235-247.

Easton, P. (1999). Security returns and the value relevance of accounting data. *Accounting Horizons, 13*, 399-412.

Easton, P. & Harris, T. (1991). Earnings as an explanatory variable for returns, *Journal of Accounting Research, 29*, 19-36.

Easton, P.D., Harris, T.S., & Ohlson, J. (1992). Aggregate accounting earnings can explain most of security returns. *Journal of Accounting and Economics, 15*, 119-142.

Elliott, J., & Hanna, J. (1996). Repeated accounting write-offs and the information content of earnings. *Journal of Accounting Research, 34* (Supplement), 135-155.

Feltham, G. & Ohlson, J. (1995). Valuation and clean surplus accounting for operating and financial activities. *Contemporary Accounting Research, 11 (2)*, 689-731.

Francis, J., Schipper, K., & Vincent, L. (2002). Expanded disclosures and the increased usefulness of earnings announcements. *Accounting Review, 77* (3), 515-546.

Green, J. P., Stark, A.W., & Thomas, H. M. (1996). U.K. evidence on the market valuation of research & development expenditures. *Journal of Business Finance and Accounting*, 23 (2), 191-216.

Financial Accounting Standards Board. (1983). *Statement of Financial Accounting Concepts No. 1 - Objectives of Financial Reporting by Business Enterprises,* Financial Accounting Standards Board, Stamford, CT.

Han, B. H. (1998). Empirical study on the deterioration of accruals management. *Korean Accounting Research, 23* (4), 53-79, printed in Korean.

Hand, J. & Landsman, W. (1999). *The pricing of dividends in equity valuation*, Working Paper, University of North Carolina, Chapel Hill.

Hayn, C. (1995). The information contents of losses. *Journal of Accounting and Economics, 20* (September), 125–153.

Jang, J. I., Jung, H. J., & Lee, K. J. (2002). The value relevance of accounting earnings and book value,. *Daehan Journal of Business, December*, 513–533, printed in Korean.

Kim, B. H. (2003). Information content of firms losses in korean stock markets: empirical analyses based on the firm liquidation option hypothesis and the earnings mean-reversion hypothesis. *Journal of Korean Securities, 32*, 191–221, printed in Korean

Landsman, W. & Maydew, A. (2002). Has the information content of quarterly earnings Announcements declined in the past three decades? *Journal of Accounting Research, 40* (3), 797-808.

Lee, E. C., Sohn, S. K. (2007). A second look at earning management to avoid loss: based on cross-sectional histogram using discretionary accruals. *Korean Accounting Review, 32* (2), 61-87, printed in Korean.

Lev, B. (1989). On the usefulness of earnings and earnings research: lessons and directions from two decades of empirical research. *Journal of Accounting Research, 27* (Supplement), 153–192.

Barth, M. E., Beaver, J. R. M., Hand, R. M., & Landsman, W. R. (1999). Accruals, cash flows, and equity values. *Review of Accounting Studies, 4,* (3-4), 205-229.

Maydew, E. (1993). Tax-induced earnings management by firms with net operating losses. *Journal of Accounting Research, 35*, 83-96.

Marquardt, C. A., & Christine I. W. (2004). The effect of earnings management on the value relevance of accounting information. *Journal of Business Finance and Accounting*, 31 (3-4), 297-332.

Kothari, S. P. & Zimmerman, J. L. (1995). Price and return models. *Journal of Accounting and Economics*, 20, 155-192.

Livnat, J. & Zarowin, P. (1990). The incremental information content of cash-flow components. *Journal of Accounting and Economics, 13*, 25-46.

Myers. S. C. (1977). Determinants of corporate borrowing. *Journal of financial Economics, 5*, 147-175.

Ohlson, J. A. (1995). Earnings, book values and dividends in equity valuation. *Contemporary Accounting Research, 11*, 661-87.

Ou, J. A. & Penman, S. H. (1993). *Fundamental statement analysis and the evaluation of market-to-book ratio*, Working Paper. Santa Clara, CA: Santa Clara University.

Paek, W, S. (2000). The comparison of discretionary accruals estimates: using modified Jones model. *Korean Accounting Review, 25* (3), 29-55, printed in Korean.

Penman, S. (1991). An evaluation of accounting rate of return. *Journal of Accounting, Auditing and Finance, 2*, 233–256.

Penman, S. (1996). The articulation of price-earnings ratios and market-to-book ratios and the evaluation of growth. *Journal of Accounting Research*, 34, 235-259.

Rayburn, J. (1986). The association of operating cash flow and accruals with security returns. *Journal of Accounting Research*, 24 (Supplement), 112-133.

International Journal of Business and Management

Sloan, R. G. (1996). Do stock prices fully reflect information in accruals and cash flows about future earnings. *The Accounting Review, 71*, 289-316.

Stark, A.W., & Thomas, H. M. (1998). On the empirical relationship between market value and residual income in the U.K. *Management Accounting Research*, 9 (4), 445-460.

Wilson, P. (1986). The relative information content of accruals and cash flows: combined evidence at the earnings announcement and annual report release date. *Journal of Accounting Research, 24* (Supplement), 165-200.

Yee, K. (2000). Opportunities knocking: residual income valuation of an adaptive firm. *Journal of Accounting, Auditing and Finance, 15 (3)*, 225-266.

Yoon, S. S. (1998). Empirical Analysis on Earnings Management According to Operating Cash Flows. *Korean Accounting Review*, 23 (1), 107-126. printed in Korean.

Zhang, G. (2000). Accounting information, capital investment decision, and equity valuation: theory and empirical implications. *Journal of Accounting Research, 38 (2)*, 271-295.

Table 1. Sample selection

Total firm-year observations from 1994 to 2005	7,020
(-) Firms missing annual data from 1994 to 2005	1,950
(-) Impairment of capital firms annually from 1994 to 2005	205
= Total number of analysis data	4,865

Table 2. Descriptive statistics

Variable	Mean	Standard deviation	Minimum	Maximum
P_t	22,566	68,116	75	3,600,000
E_t/S_t	9,747	142,094	-2,447,856	5,957,381
BV_{t-1}/S_t	28,366	66,599	1.4	1,615,159
CF_t/S_t	4,382	20,458	-941,565	403,751

Variable definitions: P_t= Stock price 3 months after the end of fiscal year t, where year t is the event year; BV_{t-1}= Book value at the end of year t-1; E_t= Earnings in period t; CF_t= Operating Cash Flows in period t; S_t= Total number of shares outstanding in year t.

Table 3. Correlation analysis of the variables

		P_t	E_t/S_t	BV_{t-1}/S_t	CF_t/S_t
P_t		1.00	0.00	0.41	0.35
			0.96	<.0001	<.0001
E_t/S_t		0.00	1.00	0.00	0.01
		0.96		0.79	0.30
BV_{t-1}/S_t		0.41	0.00	1.00	0.42
		<.0001	0.79		<.0001
CF_t/S_t		0.35	0.01	0.42	1.00
		<.0001	0.30	<.0001	

Pearson's coefficient of correlation, two-sided test, Variable definitions: refer to <Table 2>

Table 4. Simple Linear Regression of Stock prices on Book Value, Earnings and Cash Flows

Year	(A) $P_t = b_1+b_2BV_{t-1}/S_t+\varepsilon$			(B) $P_t = b_1+b_2E_t/S_t+\varepsilon$			(C) $P_t = b_1+b_2CF_t/S_t+\varepsilon$		
	Adj R^2	b1	b2	Adj R^2	b1	b2	Adj R^2	b1	b2
2005	0.51	3679.49**	0.47**	0	14192**	-0.01	0.49	7447.64**	2.84**
2004	0.42	3436.18**	0.31**	0	10608**	-0.01	0.72	4542.80**	2.29**
2003	0.49	2635.48**	0.22**	0	7745.55**	0	0.65	2839.13**	1.78**
2002	0.39	6660.78**	0.28**	0	12912**	0	0.12	10262**	0.70**
2001	0.49	3727.82**	0.19**	0.01	8057.10**	0	0.19	6013.49**	0.65**
2000	0.21	9081.36**	0.22**	0.01	11991**	0	0.61	7400.17**	2.49**
1999	0.37	9815.07**	0.27**	0	13922**	0	0.78	9873.52**	1.31**
1998	0.52	1146.70**	0.69**	0	13356**	0	0.8	10188**	1.01**
1997	0.81	7371.21**	0.79**	0	22405**	0.04	0.36	20389**	1.34**
1996	0.59	6168.80**	0.74**	0.01	19318**	0.04	0.42	15965**	1.64**
1995	0.62	7521.85**	1.00**	0	25052**	0.02	0.35	22204**	1.62**
1994	0.61	9475.39**	0.66**	0	20405**	0.01	0.46	17514**	1.26**
1994-2005	0.37	8231.84**	0.37**	0	14770**	0	0.24	13339**	0.98**

Variable definitions: refer to <Table 2>, * (**): Significant at the .05 (.01) level.

Table 5. Simple Linear Regression of Stock prices on Book Value for Profit firms and Loss firms, Respectively

Year	$P_t = b_1+b_2BV_{t-1}/S_t+\varepsilon$					
	(A) Profit Firms			(B) Loss Firms		
	Adj R^2	b1	b2	Adj R^2	b1	b2
2005	0.51	3908.40**	0.46**	0.52	2733.9	0.50**
2004	0.47	3167.83**	0.31**	0.29	4493.01*	0.32**
2003	0.49	2694.52**	0.22**	0.52	2360.29**	0.22**
2002	0.36	6637.54**	0.26**	0.45	7207.95**	0.31**
2001	0.44	3806.15**	0.18**	0.58	3640.33**	0.21**
2000	0.19	8968.40**	0.21**	0.27	9384.73**	0.22**
1999	0.42	8514.48**	0.31**	0.29	12733**	0.20**
1998	0.52	1141.14	0.70**	0.52	1145.1	0.68**
1997	0.87	6526.54**	0.79**	0.45	8753.74**	0.80**
1996	0.58	6650.23**	0.72**	0.62	5008.56**	0.81**
1995	0.56	7782.42**	0.98**	0.76	7069.61**	1.02**
1994	0.6	9808.07**	0.65**	0.64	8478.70**	0.68**
1994-2005	0.37	7649.43**	0.38**	0.35	9813.33**	0.34**

Variable definitions: refer to <Table 2>, * (**): Significant at the .05 (.01) level.

Table 6. Simple Linear Regression of Stock prices on Earnings for Profit firms and Loss firms, Respectively

| Year | $P_t = b_1 + b_2 E_t / S_t + \varepsilon$ | | | | | |
| | (A)   Profit Firms | | | (B)   Loss Firms | | |
	Adj R^2	b1	b2	Adj R^2	b1	b2
2005	0	14169**	-0.01	0	13520**	-0.23
2004	0	10062**	-0.01	-0.01	13353**	0.12
2003	0	7620.31**	0	-0.02	8491.65**	0.01
2002	0	12624**	0.01	-0.01	13738**	0
2001	0.03	7356.34**	0.01**	0.01	9523.10**	-0.01
2000	0.01	11157**	0.00*	-0.01	14646**	0.01
1999	0	13690**	-0.01	0.01	16114**	0.01
1998	0	12742**	0.01	-0.01	14674**	0.01
1997	0.02	21413**	0.11*	-0.01	23602**	0
1996	0.01	19124**	0.06	-0.01	19263**	0.02
1995	0.01	24333**	0.05	0	27245**	-0.06
1994	0	20298**	0.01	-0.02	20416**	-0.04
1994-2005	0	14360**	0.00*	0	16314	0

Variable definitions: refer to <Table 2>, * (**): Significant at the .05 (.01) level.

Table 7. Simple Linear Regression of Stock prices on Cash Flows for Profit Firms and Loss Firms, Respectively

| Year | $P_t = b_1 + b_2 CF_t / S_t + \varepsilon$ | | | | | |
| | (A)   Profit Firms | | | (B)   Loss Firms | | |
	Adj R^2	b1	b2	Adj R^2	b1	b2
2005	0.42	7856.48**	2.58**	0.67	6272.72**	3.47**
2004	0.75	4659.19**	2.33**	0.39	5001.91**	1.87**
2003	0.67	2740.04**	1.79**	0.4	3375.92**	1.66**
2002	0.16	9776.38**	0.81**	0.05	11811**	0.44*
2001	0.19	5883.42**	0.62**	0.2	6217.78**	0.78**
2000	0.68	6673.99**	2.68**	0.08	13427**	0.81**
1999	0.83	9241.43**	1.33**	0.22	13273**	0.91**
1998	0.87	9956.70**	1.04**	0.42	11394**	0.76**
1997	0.36	20184**	1.28**	0.36	20681**	1.48**
1996	0.45	15742**	1.72**	0.33	16424**	1.44**
1995	0.31	22170**	1.47**	0.47	22593**	1.98**
1994	0.51	17658**	1.33**	0.27	17149**	0.94**
1994-2005	0.26	12763**	1.04**	0.21	14907**	0.86**

Variable definitions: refer to <Table 2>, * (**): Significant at the .05 (.01) level.

Table 8. Simple Linear Regression of Stock prices on Book Value for Earnings Managed Firms and Non-Earnings Managed Firms, Respectively

Year	$P_t = b_1 + b_2 BV_{t-1}/S_t + \varepsilon$					
	(A) Earnings Managed Firms			(B) Non-Earnings Managed Firms		
	Adj R^2	b1	b2	Adj R^2	b1	b2
2005	0.56	1,065.21	0.64**	0.51	4000.79**	0.44**
2004	0.28	5395.58*	0.34**	0.46	3054.43**	0.31**
2003	0.38	1,675.92	0.28**	0.51	2648.65**	0.21**
2002	0.45	7595.77**	0.31**	0.36	6584.26**	0.26**
2001	0.58	3957.55**	0.20**	0.45	3707.27**	0.18**
2000	0.27	9983.29**	0.22**	0.19	8889.43**	0.21**
1999	0.33	12922**	0.20**	0.4	8652.93**	0.31**
1998	0.52	1,765.06	0.68**	0.52	936.77	0.69**
1997	0.49	8742.70**	0.85**	0.85	6691.28**	0.79**
1996	0.69	4461.05**	0.86**	0.56	6607.58**	0.71**
1995	0.8	7705.66**	1.03**	0.55	7728.28**	0.97**
1994	0.68	8379.24**	0.70**	0.59	9726.84**	0.64**
1994-2005	0.38	9895.83**	0.35**	0.36	7833.31**	0.37**

Variable definitions: refer to <Table 2>, * (**): Significant at the .05 (.01) level.

Table 9. Simple Linear Regression of Stock prices on Earnings for Earnings Managed firms and Non-Earnings managed firms, Respectively

Year	$P_t = b_1 + b_2 E_t/S_t + \varepsilon$					
	(A) Earnings Managed Firms			(B) Non-Earnings Managed Firms		
	Adj R^2	b1	b2	Adj R^2	b1	b2
2005	-0.02	15796**	0.12	0	14005**	-0.01
2004	-0.01	15262**	0.15	0	9840.92**	-0.01
2003	-0.01	7927.64**	-0.06	0	7685.29**	0
2002	-0.02	14652**	0	0	12517**	0.01
2001	-0.01	9820.70**	-0.01	0.02	7561.56**	0.01*
2000	-0.01	15763**	0	0.01	11204**	0.00*
1999	0	16650**	0.01	0	13510**	0
1998	-0.01	16340**	0.01	0	12406**	0.02
1997	-0.01	25769**	0.03	0.01	21622**	0.08
1996	0	20152**	0.02	0.01	18973**	0.06*
1995	-0.03	27931**	-0.13	0	24631**	0.03
1994	-0.03	20761**	-0.04	0	20280**	0.02
1994-2005	0	17090**	0	0	14347**	0.00*

Variable definitions: refer to <Table 2>, * (**): Significant at the .05 (.01) level.

Table 10. Simple Linear Regression of Stock prices on Cash Flows for Earnings Managed firms and Non-Earnings Managed firms, Respectively

Year	(A) Earnings Managed Firms			(B) Non-Earnings Managed Firms		
	Adj R^2	b1	b2	Adj R^2	b1	b2
2005	0.71	4770.99*	3.64**	0	14005**	-0.01
2004	0.36	5073.04**	1.88**	0	9840.92**	-0.01
2003	0.45	2185.96*	2.03**	0	7685.29**	0
2002	0.04	12356**	0.42*	0	12517**	0.01
2001	0.21	5363.70**	0.91**	0.02	7561.56**	0.00*
2000	0.08	12439**	0.96**	0.01	11204**	0.00*
1999	0.27	10124**	1.24**	0	13510**	0
1998	0.48	9337.85**	0.90**	0	12406**	0.02
1997	0.42	16771**	1.98**	0.01	21622**	0.08
1996	0.46	10653**	2.46**	0.01	18973**	0.06*
1995	0.54	18860**	2.51**	0	24631**	0.03
1994	0.24	15725**	1.17**	0	20280**	0.02
1994-2005	0.29	12510**	1.09**	0	14347**	0.00*

Variable definitions: refer to <Table 2>, * (**): Significant at the .05 (.01) level.

Table 11. Multiple Linear Regression of Stock prices on Earnings/Book Value and Cash Flows/Book Value

Year	(A) $P_t = b_1+b_2E_t/S_t+b3BV_{t-1}/S_t+\varepsilon_t$			(B) $P_t = b_1+b_2CF_t/S_t+b3BV_{t-1}/S_t+\varepsilon_t$		
	Adj R^2	b1	b2	b3	Adj R^2	b1	b2	b3
2005	0.52	3917.50**	-0.03*	0.47**	0.72	2368.84**	1.33**	0.40**
2004	0.43	3498.63**	-0.01	0.31**	0.75	2524.27**	1.54**	0.17**
2003	0.5	2675.14**	0	0.22**	0.69	1936.94**	1.42**	0.085**
2002	0.4	6507.30**	0	0.28**	0.43	5950.33**	0.38**	0.26**
2001	0.52	3688.71**	0	0.19**	0.5	3637.46**	0.15**	0.17**
2000	0.52	5793.81**	0	0.25**	0.66	4239.49**	1.69**	0.22**
1999	0.46	8405.98**	0.00*	0.26**	0.39	9109.86**	0.61**	0.169**
1998	0.48	2397.48**	0.02	0.61**	0.56	2646.72**	0.38**	0.51**
1997	0.57	8212.14**	-0.01	0.70**	0.62	11659**	0.84**	0.48**
1996	0.72	5309.68**	0	0.71**	0.72	7219.54**	0.95**	0.51**
1995	0.7	7048.85**	-0.02	0.99**	0.67	7027.38**	0.80**	0.95**
1994	0.73	8684.89**	0.01*	0.70**	0.68	10195**	0.58**	0.55**
1994-2005	0.44	6658.46**	0	0.37**	0.56	7868.27**	0.60**	0.30**

Variable definitions: refer to <Table 2>, * (**): Significant at the .05 (.01) level.

Table 12. Multiple Linear Regression of Stock prices on Earnings/Book Value for Profit firms and Loss firms, Respectively

Year	$P_t = b_1+b_2E_t/S_t+b3BV_{t-1}/S_t+\varepsilon_t$						
	(A) Profit Firms			(B) Loss Firms			
	Adj R^2	b1	b2	b3	Adj R^2	b1	b2	b3
2005	0.51	4296.36**	(-)0.04*	0.46**	0.58	2618.94**	0.36	0.55**
2004	0.47	3327.58**	-0.01	0.31**	0.32	4949.79*	0.37	0.34**
2003	0.49	2719.69**	0	0.22**	0.54	2548.92*	0.03	0.22**
2002	0.36	6491.18**	0.01	0.26**	0.51	6751.40**	0	0.31**
2001	0.47	3642.21**	0.01**	0.18**	0.66	3585.86**	(-)0.01*	0.20**
2000	0.46	5895.18**	0	0.23**	0.64	6532.28**	0.02	0.27**
1999	0.47	7663.17**	0	0.27**	0.44	11355**	0.01	0.21**
1998	0.39	3076.98**	0.04*	0.55**	0.61	1,288.41	0	0.67**
1997	0.61	7690.03**	0.06	0.68**	0.49	7310.69**	-0.06	0.78**
1996	0.71	5612.33**	0.02	0.68**	0.76	4029.66**	-0.01	0.79**
1995	0.63	6752.51**	0.03	0.98**	0.86	6817.70**	(-)0.09*	1.02**
1994	0.72	8823.37**	0.01*	0.69**	0.78	7133.54**	-0.07	0.73**
1994-2005	0.42	6271.74**	0	0.39**	0.49	7812.98**	0	0.34**

Variable definitions: refer to <Table 2>, * (**): Significant at the .05 (.01) level.

Table 13. Multiple Linear Regression of Stock prices on Cash Flows/Book Value for Profit firms and Loss firms, Respectively

Year	$P_t = b_1+b_2CF_t/S_t+b3BV_{t-1}/S_t+\varepsilon_t$						
	(A) Profit Firms			(B) Loss Firms			
	Adj R^2	b1	b2	b3	Adj R^2	b1	b2	b3
2005	0.74	2499.83**	1.31**	0.39**	0.6	1,029.10	1.57**	0.45**
2004	0.8	2328.54**	1.53**	0.19**	0.34	4785.06**	1.21**	0.10**
2003	0.72	1864.89**	1.43**	0.08**	0.44	1986.79*	1.33**	0.11**
2002	0.42	5809.94**	0.57**	0.23**	0.45	6842.51**	0.12	0.30**
2001	0.47	3564.27**	0.03**	0.18**	0.59	3185.57**	0.48**	0.16**
2000	0.71	4166.09**	1.93**	0.20**	0.27	8919.35**	0.26	0.21**
1999	0.38	8308.43**	0.59**	0.19**	0.39	10785**	0.59**	0.15**
1998	0.56	3297.08**	0.41**	0.46**	0.57	1,351.34	0.35**	0.58**
1997	0.65	11857**	0.90**	0.45**	0.56	11065**	0.69**	0.56**
1996	0.7	7566.93**	0.97**	0.49**	0.75	6732.42**	0.96**	0.54**
1995	0.64	6896.11**	0.79**	0.95**	0.74	7557.17**	0.81**	0.92**
1994	0.65	10797**	0.58**	0.52**	0.75	8436.52**	0.59**	0.60**
1994-2005	0.62	7423.09**	0.63**	0.30**	0.33	9869.51**	0.46**	0.26**

Variable definitions: refer to <Table 2>, * (**): Significant at the .05 (.01) level.

Table 14. Multiple Linear Regression of Stock prices on Earnings/Book Value for Earnings Managed firms and Non-Earnings Managed firms, Respectively

Year	(A) Earnings Managed Firms				(B) Non-Earnings Managed Firms			
	Adj R^2	b1	b2	b3	Adj R^2	b1	b2	b3
2005	0.62	673.66	0.32	0.68**	0.75	2437.25**	1.29952**	0.40**
2004	0.31	5801.51**	0.57	0.37**	0.8	2259.53**	1.49**	0.20**
2003	0.43	1,246.33	0.04	0.31**	0.71	1934.21**	1.40**	0.09**
2002	0.51	7005.80**	0	0.31**	0.42	5846.15**	0.55**	0.23**
2001	0.66	4088.93**	0	0.20**	0.47	3724.68**	0.12*	0.16**
2000	0.71	6197.91**	0.02	0.28**	0.7	4956.79**	1.82**	0.22**
1999	0.48	11691**	0.01	0.21**	0.36	8848.15**	0.59**	0.17**
1998	0.62	1,865.71	0.01	0.68**	0.56	3221.90**	0.36**	0.48**
1997	0.54	6247.15*	-0.03	0.86**	0.63	12311**	0.84**	0.46**
1996	0.81	4182.55**	-0.01	0.82**	0.7	8016.69**	0.93**	0.48**
1995	0.87	6,131.37	-0.34	1.03	0.65	7165.64**	0.77**	0.94**
1994	0.79	6896.37**	-0.07	0.73**	0.66	10714**	0.58**	0.53**
1994-2005	0.52	7890.25**	0.01	0.35**	0.6	7807.65**	0.61**	0.30**

Variable definitions: refer to <Table 2>, * (**): Significant at the .05 (.01) level.

Table 15. Multiple Linear Regression of Stock prices on Cash Flows/Book Value for Earnings Managed firms and Non-Earnings Managed firms, Respectively

Year	$P_t = b_1 + b_2 CF_t/S_t + b3 BV_{t-1}/S_t + \varepsilon_t$							
	(A) Earnings Managed Firms				(B) Non-Earnings Managed Firms			
	Adj R^2	b1	b2	b3	Adj R^2	b1	b2	b3
2005	0.56	960.46	1.73**	0.43**	0.75	2437.25**	1.30**	0.40**
2004	0.33	5032.69**	1.47**	0.05	0.8	2259.53**	1.49**	0.20**
2003	0.45	1,717.73	1.82**	0.05	0.71	1934.21**	1.40**	0.09**
2002	0.44	7142.52**	0.12	0.30**	0.42	5846.15**	0.55**	0.23**
2001	0.59	3013.32**	0.33*	0.19**	0.47	3724.68**	0.12*	0.16**
2000	0.26	8900.72**	0.28	0.21**	0.7	4956.79**	1.82**	0.22**
1999	0.4	9857.94**	0.67**	0.16**	0.36	8848.15**	0.59**	0.17**
1998	0.56	652.56	0.42**	0.57**	0.56	3221.90**	0.36**	0.48**
1997	0.58	8977.13**	0.91**	0.56**	0.63	12311**	0.84**	0.46**
1996	0.78	4154.97**	1.21**	0.58**	0.7	8016.69**	0.93**	0.48**
1995	0.74	6111.98*	0.85**	0.97**	0.65	7165.64**	0.77**	0.94**
1994	0.74	7776.93**	0.62**	0.61**	0.66	10714**	0.58**	0.53**
1994-2005	0.37	8664.83**	0.55**	0.27**	0.6	7807.65**	0.61**	0.30**

Variable definitions: refer to <Table 2>, * (**): Significant at the .05 (.01) level.

The Distinguishing Background, the Path and the Pattern

--Analysis on China's Economic Growth

Path in the Recent 60 Years

Min Liu

School of Economics and Trade, Hunan University

Changsha 410082, Hunan, China

E-mail: debby0305@163.com

Jinming Wu

School of Business, South central University

Changsha, Hunan, China

Abstract

China's economic growth characteristics are featured in three respects over the past 60 years: the first one is the distinguishing transition background based on the "second best" and characterized by "surpassing", "homing " option; the Second one is the step-by-step typical growth path which is from the "learning style" to "combination of learning and innovation"; the third one is the characteristic growth pattern from the obvious resource dependence, technology dependence to self-innovation.

Keywords: Typical growth path, Economy in transition, Way dependence, Development pattern, China

1. The distinguishing reforming economy background from "supassing"to"homing"

Reforming is transformed from one kind of socio-economic system or shape to another kind of socio-economic system or shape. It follows the order from the lower to the senior of the law of conversion, which includes two aspects: first, the possession relations of individual labor in production relations—"the relationship between ownership" and the derived transformation of human society; on the other hand, relations of production of individual labor relations and social work might the relationship between the individual and society, that is, "the relationship between the economic performance" and the resulting derived conversion of human society. For the former, in 1859, Marx in the "Critique of Political Economy Preamble" (added by Lenin and Stalin and others later) proposed the development of human society the famous "five-form theory" - followed through primitive society, slave society, feudal society, capitalist society, communist society (the initial stage of socialist society) the five stages of development. For the latter, Marx in 1857-1858, "Economic Manuscripts" in relations from the perspective of the economy, illustrate the development of human society more generally, but also more importantly, the law of the three forms, namely, "to rely on the relationship between people (natural economy), the dependence of material (commodity economy) and the human personality and freedom to complete the liberation of the (time the economy) "(Marx, 1858) three stages. For a long time, the five-form theory of Marxism not only has been seen as forms of social division of the orthodox theory, but as the only theory. In fact, however, the development of human society in the above-mentioned two forms theory, the theory based on ownership relations of "Five Forms" followed by the replacement class relations attach importance to class relations of production-oriented and socio-political nature, which reflecting the general laws of the world historical development.

However, this does not exclude the possibility that some law of the country and the nation, due to special historical conditions of emergence of the exceptional circumstances in which a social formation transforms to another change in the process, can also be able to go beyond one or a few social formation, to achieve "leap of turnover." For example, in the immediate post-liberation China, the Tibetan, Yi and other ethnic minorities, but also in the social forms of slavery, the Northeast and even in Olunchun tribe is still in the primitive commune period, later than the direct access to several

social form of socialist society (Liu youcheng, 1987; Zhao jiaxiang, 1985). It is this "jump" in leaps and bounds turnover or choice has brought nations and regions, ethnic and national differences between the fundamental, the world and the so-called national characteristics and the "conditions" are the source of the emergence of this. While dependence relationship between people, dependence relationship between substance and the theory of freedom of personality "three forms" followed by the replacement pay more attention of economic relations of production-oriented and human nature, what is has reflected is not only general laws of the world economic development, but also the special laws of development of the national economy in different countries, and especially the middle of the three forms of economy - commodity economy is the insurmountable stage of human society development. Any country and nation are no exception, or else they will face the punishment of the law and pay a high price. This law reveals the nature and the main line of the process of socio-economic development of mankind. From the above sense, the former may be called the conversion theory of social forms. The later may be called the conversion theory economic forms. Therefore, socio-economic transformation, not only including the social patterns, but also the economic patterns; it can be both uniform and one-sided. In general, however, it is carried out between the two intertwined.

However, from the existing practice of conversion, in less than 80 years of the 20th century, the conversion options which does not correspond to the theory expectation has twice appeared in the process of the development of human society : First, after the First World War and the Second World War, former Soviet Union, Eastern Europe and China's social development has emerged not only the "well-being" choice of society form based on ownership system, but also the "Beyond" option of the economic form between the relationship of economic performance. That is, at the same time of the conversion from feudal or capitalist society to socialism society, socio-economic patterns skip stages of development of commodity economy to a direct stage of product economy from a natural economy stage. Second, in the late 20th century, the development of human society has emerged in the form that can be referred to as "localized" and "temporary" "homing" option, that is typical in the Soviet Union in Eastern Europe for economic operation of ownership and the relationship between the "double back" option, can also be called a comprehensive reverse from socialism society to capitalism society. China has the different nature compared to them but presents the "re-"homing" of a" choice between the economic performance relationship. It means choose from the product economy stage back to the stage of the commodity economy to develop the socialism market economy. China's economic growth is accompanied by the "super-surpassing" style transformation and generated, and reformed based on the "homing"type transition. China's social and economic conversion characterized by this kind of "super-surpassing", "homing"choice and the "friction" in the conversion is the profound context of China's economic growth.

The transformation of Private ownership of Chinese society from the last change to a more advanced public ownership society, has neither the typical "characteristics in order to "surpassing"" nor the typical meaning of "jump" change of features. But something in between, that is, from the semi-feudal, semi-capitalist social forms of the duality of social change to public ownership. It means, from the "compatible" private ownership social change to socialist society. Although historians generally believe that the capitalism has emerged in its infancy in late Ming and early Qing China, but due to a strong suppression of the feudal forces, capitalist development has been quite slow. The process had been broken by the invasion of Western capitalist before it was not independently form the transition to a capitalist society. After The Opium War in 1840, especially after 1960s, foreign capitalists opened factories in China, cultivated the imperialist comprador bureaucratic capitalism in China, formed a bureaucratic monopoly stage assets. This was gradually reduced Chinese to the semi-feudal and Semi-colonial society. On its side for the semi-feudal, old China belongs to the feudal social formation, on the side of a semi-colonial, the old China is a capitalist social formation, because old China is a colonial of the capitalist countries, colonialism did develop capitalism in China. If we study the above findings combining with the geographic distribution of China, we will find: China's vast rural areas is a direct transition from a feudal society to a socialist society, while the basic and medium-sized cities may be regarded as the transition from capitalist society to socialist society. In short, the process from urban and rural differences in the duality or "compatibility" private ownership social transition to public ownership socialist society is one of the basic features of China's socio-economic transformation choice. In addition, the majority of China's western regions, including Xinjiang, Tibet, Qinghai, Ningxia, Inner Mongolia, Guizhou and the like, the overwhelming area's had been still in the slave society before 1949, the Olunchun in Northeast had been still in the primitive society. These areas crossed a number of direct access to a socialist society with depth of the socialist transformation shortly after the nation foundation.

Along with the social forms of the above conversion, the conversion of Chinese economy reveals the complex select characteristics of ""super-surpassing". That is, on the one hand, the old China's economy pattern has a clear duality before the conversion: the dominant nature economy in vast rural areas, its corresponding "person dependence", low-level commodity economy in the subordination of the large and medium-sized cities and the corresponding "substance dependence" co-exist. In the long river of the world economy history, natural economy includes four basic forms: commune economy, the ancient city-state economy, China's small-scale peasant economy and the host economy, the Western European medieval manor lords economy. As a typical example of natural economy China's small-scale peasant economy and the host economy has the longest continuation history. It was the prevalence of the former vast

rural areas until the establishment of New China. In such a closed natural economy where lineage and blood is the premise while production and consumption are in a unity, the person dependence relationship is the performance of people's dependence on land, on the natural environment and on the relationship between the village groups. At the same time, in the large and medium-sized cities along the southeast coast which centers Shanghai, Tianjin and Guangzhou, as well as the cities along the Yangtze River, Nanjing, Wuhan and other cities which was forced to open. In the Westernization Movement, Xinhai Revolution and the history of the policy process of the Kuomintang regime in Nanjing, along with the establishment and development of industrial and commercial as well as the formation of bureaucratic capital and state monopoly capitalism, commodity economy obtained a certain extent development, substance dependence relations had immerged increasingly. Due to the level of productive forces and the shackles of war, however, capitalism and the development of commodity economy is very slow, especially after entering the War of Resistance Against Japan in 1937, and basically in a hover, cochlear status of ant step. Therefore Capitalism and the commodity economy had been in the low level of development. On the other hand, the conversion on the basis of compatibility of the duality of urban and rural economic structure had a significant "Beyond" characteristics. That is, China's vast rural economy should be transformed from the natural form to the commodity economy in the history premise of insurmountable commodity economy. The city should be conversed from low-level stage of the commodity economy to a high level of the commodity economy. To sum up, China's economy should be a natural economic transition to a commodity economy. However, the choice of practice does not match theoretical expectations, but skip the development stage of the commodity economy, with direct transition to the "product economy" which is similar to Marx's "time economy". Marx and others' idea of "time economy", is based on the premise of the highly development of the commodity economy while the reality of China is very backward and on the economic base of compatibility with the dual nature. Thus the Sharp conflicts between the ideal model and the reality level of productivity came into being. A new economic form, in the premise of the absence of the productivity on which it depends, its operation is bound to be distorted. On China's view, "time economy" by innovator of scientific communism has been distorted as product economy with Chinese characteristics. The economy has a typical "shortage economy" characteristics and "the copied natural economy" characteristics, which can be regarded as a "abnormal type" or "distorted type" of "time economy".

As the leading and core economic micro-foundation of product economy, our country's state-owned enterprises, rural people's commune, and production brigade, etc., has generated during the above ""surpassing" "surpassing"-" option of social and economic patterns with the dictatorship regime as well as its forces and the implementation of a mandatory approach (or revolution). It is this mandatory that has made our country established socialist public economy system which places in the state-owned economy as main status while the collective economy as the auxiliary system in less than a decade (1949-1958). However, an agriculture country dominated by natural economy typically wants to establish in the near future a wide range of state-owned industrial enterprises system, it not only is bound by the shortage of resources, but also is lack of appropriate organizational and management experience, at the same time withstand a comprehensive test of the blockade of the whole capitalist world (or commodity economic society). Therefore, "super-industrial development strategy" of Soviet-style, "paternalism" state-owned enterprises and their planned economy models, have been the choice of the new China historically.

In fact, socio-economic transformation is a typical "surpassing"–"surpassing" conversion since the end of 1957 after the completion of socialist transformation. It means the social forms is transited from semi-feudal and Semi-colonial society to socialism society in sequence, the economy patterns, resource allocation methods as well as micro-economic fundamentals achieved exceeding conversion options in varying degrees. Obviously, the resource allocation choices of the "planned economy" corresponding to the product economy and its state-owned enterprises---the micro-foundation are also an exceeding choice. That means it is a pure planned way which is on the foundation of the original spontaneous manner, skips the market and the planned manner compatible with the market, chooses directly to adapt "time economy" patterns. If we say that the social forms in the ""surpassing"–"surpassing"" basic choice suits China's national conditions, however, the exceeding choice in the other three aspects of conversion and its relationship with the social forms of the "wrong" type combination obviously goes far beyond the level of development of productive forces and isn't in line with the China's national conditions.

This is a profound background and the fundamental driving forces of our country's economy transition and economic reform since 1980s.When China's social and economic form presents the above "choice of super-"surpassing"" and "wrong combination", the social practice will be as follows: making every effort to promote a low level of social productive forces and the backward social production approaching to product economy and its resources plan and configuration. In particular, the "spoil things by excessive enthusiasm" in the "pull" and "on" has a clear political mandatory. It is obvious, during 20 years from 1958 to 1978 , at least 13 years (mainly refers to a three-year "Great Leap Forward", ten years the "Cultural Revolution"),China involved into a very complex "political friction", and Politicization of micro-economic. To sum up, the Strategic arrangements which set political and class struggle as the focus of the party and government's work will inevitably watered down and distorted of the theme of economy development so as to cast a strong color for the product economy of the its resources plan and allocation. A country or a

nation's economy will inevitably collapse when the overwhelming majority of the people and micro-economic foundation are transformed into politics' slavery and fooled by politics. China's economy has not really stepped into taking economic construction as the core of the rail of planned economic development since it has been basically completed socialism transformation at the end of the year of 1957. In the next 20 years, non-economic social and political movement has made Chinese economy be on the verge of collapse. Until 1978, Chinese party convened the Third Plenary Session of the Eleventh, China has actually entered a new development orbit.

In 1978, Chinese party convened the Third Plenary Session of the Eleventh, the party's work focus was converted into economic construction. China has actually entered a development orbit of taking economic construction as the core task. China's socio-economic patterns began to emerge the "homing"of economic performance surface in production relations----the second round of economy conversion of new China. Chinese economy's "back" options began in 1979 includes the following three aspects: First, the economy patterns transferred from the economy product to the planned commodity economy, and then to a commodity economy. This regression has the following two characteristics: (1)It occurred accompanying with the leap and breakthrough of people's awareness. People's understanding of socialism has broken through the limitations of pure ownership, can not only accurately locate and grasp, from the national conditions, the primary stage of socialism of the pattern of Chinese society, but also recognize that the commodity economy is the insurmountable stage of development of human society, thereby "homing" to a more than 20 years of absence of the commodity economy stage which the Chinese economy patterns should be on. This shows that the "homing"mentioned in the above was carried out along with the correction of traditional error after understanding Marxist conversion theory of the socio-economic patterns in an accurate, science, and a comprehensive way. (2) It changed along with a shortage nature of China's economy. Before 1984, China's economy is a typical "triple shortage" economy which focuses on" number shortage "and includes the structure, the quality of the shortage. The economy pattern corresponding to the "triple shortage" economy is a typical product economy, the performance for the economy is production constraints, a seller's market and the number regulation of non-price, which featured by characteristics of a shortfall economy described by Kohl, the kind of non-Sandoval Las balance. After 1984, China's economy started moving forward to the quality and structure-based "double shortage "economy. In the end of 90's, China's economy has evolved into a typical "dual shortage" economy which centered "shortage of quality" as the core and included the shortage of structure. That means viewing it from the absolute number, the supply and demand keep basic balance, but the inadequate effective supply "high-quality low-cost" and its induced product problem of "leave, run, false, bad" has become a social focal point. Therefore the economy which adapted to this kind of "double shortage "economy is bound to change, converting from product economy to commodity economy, from the quantity or extensive growth to quality or intensive growth. With the traits of demand constraint different from product economy clearly, a buyer's market quality and price-control, it had the beginning of market equilibrium approximation. Second, the resource allocation shifted from planned economy to plan and market combination and then to market economy. This "regression" since 1979 has been carried out for three phases: the plan configuration from 1979 to 1984; the planned economy with a combination of market regulation (that is, the "dual track") stage from 1985 to 1992; the market economy-oriented stage from 1992 to now. Third, the micro-economic basis transformed from public ownership of state-owned and public-oriented form to a variety of ownerships forms and coexistence of a variety of economic sectors. The "homing" has been carried out mainly through several ways such as developing the private economy, promoting the reform of state-owned enterprises, growing the "three-capital enterprises" and township enterprises, etc.

Integrated, the above-mentioned three aspects of the transition by our economy, attributed to the fact "homing". That is "regression to amend " for "Beyond Choice" which is not in conformity with China's national conditions and "wrong combination" and "homing" to selection and combination of levels suitable for the development of productive forces. However, this "homing" is definitely not a simple "homing". Institutional Change has induced and mandatory one, it is clear that ""surpassing" "surpassing"-choice" and "wrong combination" of China's social and economic patterns from 1957 to 1978 is a typical result of political changes in mandatory; while China's economy's transition from 1979 till now is a typical induced result. The former is a complete revolution, with a simple, brutal character; the latter is a kind of reform, with a complexity of features such as progressive. If we further enlarge the above discussion, we can get analysis paradigm of our country's characteristic transition economy. As shown in Figure 1, if we only consider the two indicators dimension: the domain of resources allocation and time. China's economy growth can be divided into three phases till the mid-21st century: the phase of a planned economy, transition economy and market economy. Since 1978 China's social and economic development has been in the planning stage, as mandatory arrangements of the system, the scope of the visible hand or the area of government intervention is obviously greater than that of the invisible hand; the reform and opening-up and development of years from 1979 to 2020 is in transition economic period, the scope of the visible hand will become increasingly in terms of that of invisible hand, while the scope of the invisible hand and market allocation will be bigger and bigger.

Insert Figure 1 here

Insert Figure 2 here

At present, the curve of allocation of resources of the visible hand and invisible hand are becoming the domain near the point of intersection, the government and the market are at the equal status in the right to allocation of resources. After 2020, China will completely enter the market economy phase, government intervention has still played a role, but its scope will be even smaller. Therefore, the transformation of the economy with Chinese characteristics is in the process of formation accompanied by a constant growth of invisible hand, the continued narrow of the visible hand and the respective increase and reduction. But what should be drawn attention to is that we can neither always be negative to visible hand, nor can always praise the invisible hand, both areas have their advantages and failures, need to be made up by the other side. We should focus on "second-best" institutional arrangements and the order of the transition; should be stressed the environment's political or social support for reform; should pay attention to the role of history, also the path-dependence.

2. The characteristic growth path from "learning style" to "a combination of learning and creating style"

In the view of Schumpeter and Freeman, technological innovation ultimately obtain maximize profits being based on market demand including the course of the study, new product development and trial, production process and commercial processes. In essence, the concept not only includes technological innovation, but also surpasses technological innovation that has been related to technological innovation, management innovation, system innovation and market innovation, etc. It is innovative chain formed by a series of organic integration. If the innovation process is amplified, the internal logic of economy growth of a country or region can be got (Jin-Ming Wu, 2001). If economy growth is subject to the following basic functional analysis, namely:

$$Y = f (P, T, M, L, K, E, \quad) \qquad (0)$$

Y is on behalf of economic growth; L: labor; K: capital; E: land; T: technological innovation; M: management innovation; P: institutional innovation. As shown in Figure 2, mechanism of economic growth under the conditions of the elements in the whole are: the system of innovation (P) is "engine 1", institutional innovation induced thinking of the liberation of (or "Renaissance") and cultural innovation, resulting in the Scientific Revolution and induced technological innovation (T), we call T as "engine 2"of economic growth; technological innovation transformed into industrial revolution or the industrial structure in the arrangements of "upper market" and system after innovation, we call it as first-class "accelerator ' 'and " expansion "of economic growth. While the industrial revolution or the industrial structure conversion is bound to trigger a change of industrial organization, which leads to management revolution (M), we call it as second-class "accelerator" and "expander "; therefore management revolution bring about the rational flow and combination with the restructuring of basic economic factors (L, K, E), resulting in property rights, elements and the three major of market structure change and products and causes changes in the economy structure, optimization and upgrading, we call the third-class "accelerator" and "expansion", so as to promote economic growth; and in turn, economic growth promotes the improvement and change of the system and enter the next round of cycle. If this cycle goes smoothly, there is no interruption of "logic chain", the chain of economic growth is the longest at this time. Launched after the two engines, speeded up cycled with the "expansion" of three "accelerator", its multiplier effect is the larges. Economic growth steps into healthy, stable, efficient and sustainable development. However, if there is any discontinuity of "logic chain" in economic growth, the different consequences will occur depending on the link and length. If there is a long period interruption in "Engine 1" and a missing in "system foundation and innovation", in a closed economic system, it will lead to the generation difficulties and the weak role of ③, ④, ⑤ three "accelerators" and "expansion". Economic growth will be in the state of or stagnation and natural growth, the whole economic growth steps as a cochlear line ant; if a long period discontinuity is in "Engine 2"with lack of "technical progress and innovation". Therefore, in a closed economic operation, it would be difficult to form the first-class "accelerator" and "expander ". The second, three-tier" accelerator "and" expansion "will be in the role of short-term phenomenon and weakening. Economic growth has appeared the fast and slow reduced-type or fluctuations growth. If there is a long period interruption in the first-class "accelerator" and "expansion" and the emergence of the industrial revolution or the stagnation of industrial conversion, then in a closed economy, although with a certain degree of economic growth, it will be difficult to achieve economy development of stability, health, coordination, let alone to grow by leaps and bounds. If there is a long period interruption in "engines2", there is serious economic stagnation and even retrogression in a closed economy and so on.

According to the above logic of economic growth, in the analysis and determination of a country's economic growth, the objective existence of the following conditions is needed to consider: that is, at the global level, or at analysis from the open economic system, the logic of economic growth has never been in a long-term uninterrupted links except the inevitable temporal or space-type (such as the world's first and second economic crisis, etc.).However, specific to a particular country or region, the single or multiple discontinuities from its first ①, ②, ③, ④ links is a common phenomenon. While, in an open economy or global integration process, these countries or regions will study, consciously or unconsciously, transplant or absorb, using others' "engine" ,"accelerator" and "expansion" (of course there is a price) to set up "logic chain" which has been or will be interrupted, , so that the continuity of economic growth

can be kept. Therefore, based on the different sources of "two engines" and the first-class "accelerator" and "expansion", we can divide economic growth into three types: First, the economic growth of self-provided "two-stage engine" and the first-class "accelerator" and "expansion", that is, "original-type growth." The type of function analysis is as following:

$$Y1 = f\ (Li,\ Ki,\ Ei,\ T1,\ M1,\ P1)\ (i = 1,2,\ ...,\ n)\ ... \qquad (1)$$

Y1 stands for originality economic growth; Li: workers; Ki: capital; Ei: land; T1: their technological innovation; M1: their management innovation; P1: the national system of innovation. From (1)-type, such economic growth is a typical original-style economic growth can be seen. It means that the countries and regions grown in accordance with such modes can use not only their own workers, capital and land and other economic factors, but also the tangible colony and intangible means of market competition to allocate other countries' even the world's labor, land and monetary resources. Nevertheless, the systems, technology and management are their original. For example, Britain, in the 19th century, has been able to become the only first country in the world because the institutional innovation and its induced technological revolution at the first time, the industrial revolution and management revolution occurred in the United Kingdom. While the United States in the year after 1890, the 20th century has been able to become a leader in economic growth also because of institutional innovation and the induced second and third technological revolution, which led to the industrial revolution, management by the original United States. Obviously, this economic growth which includes technology, system and management self-innovation is an original type of economic growth. The characteristics of marginal efficiency increase which belongs to technology, management, systems and other factors determined the leading position of the first country. In additional, it determined the development gap between the first countries, the post-developing countries and the developing countries. Second, the economic growth of transplants of the original States "2 engines" in a key part or in whole, that is, "learning-type growth." The type of function analysis is as following:

$$Y2 = f\ (Li,\ Ki,\ Ei,\ T1,\ M1,\ P1)\ ... \qquad (2)$$

Y2 represents economic growth of learning style; Li, Ki, Ei, T1, M1, P1 has the came meaning with (1). However, the post advantages of the developing and post-developing countries are very significant. They can take full advantages of the "spillover" effect of original technical, managerial and institutional factors to promote national economic development. For many post-developing countries as well as developing countries, due to the lack of technology, the original system, they only to reform and open up, introduce, learn, absorb and make use of original technology, management and institution, combining with own national conditions to contribute to economic growth. This is the so-called learning-style growth. Examples of this are the post-war Japan and Asia's "four little dragons" .They all followed the path of learning-style growth: that is through absorbing advanced technology, management and systems of the first country with the organic integration of its own national conditions to enhance their total factor productivity to promote economic development.

Third, own originality of key part of "engine 1", the economic growth learned and introduced from other countries whole or partially, namely the "characteristic growth." The type of function analysis is as following:

$$Y3 = f\ (Li,\ Ki,\ Ei,\ T3 + T1,\ M3 + M1,\ P3 + P1)\ \rightarrow\ f\ [Li,\ Ki,\ Ei,\ g\ (T,\ M,\ P)]\ ... \qquad (3)$$

$$Y_3 = f\ (L_i,\ K_i,\ E_i,\ T_3 + T_1,\ M_3 + M_1,\ P_3 + P_1)\ \rightarrow\ f\ [L_i,\ K_i,\ E_i,\ g\ (T,\ M,\ P)]... \qquad (3)$$

Y3 is on behalf of characteristic economic growth; Li, Ki, Ei, T1, M1, P1 has the came meaning with (1); M3, T3, P3, are respectively on behalf of their technology, management and systems; T3 + T1, M3 + M1, P3 + P1 are each on behalf of their respective countries in terms of technology, management, system of "graft." In the characteristic model of economic growth, the fundamental characteristics are in two aspects:

The first is the "grafting" characteristics of the system, management, technology. To analyze from the level of system and management (ie, "P1 + P3" and "M1 + M3"), for example, China has its own characteristics, originality and the socio-political system dominated by public ownership and so on the fundamental economic system such as system-level (P3), also have their own original ideas and methods of management (M3), such as "The Art of War" and so on. However, after the reform and opening up, China continued to introduce and absorb advanced economic system (P1) of Europe and the United States, such as finance "tax system", the commercial banking system under the control of the central bank, modern property rights system and the enterprise system, the financial accounting system, business system (that is, "WTO"), at the same time to absorb Western management theory, such as "X Theory", "Y Theory ", "Z Theory", "Theory of super-Y", "Contingency Theory" and the modern management methods, etc., China has basically formed the organic integration of fundamental level (P3) and management thinking (M3) with the original system and the characteristics as well as the original and unique aspects of specific economic system (P1) and management theory and method level (M1) of advanced countries. Of course, Instead of way to take full transplant of learning-type growing countries, our country's introduction and absorption in level of system combined the specific economic systems with practice in China, namely, with the biological significance of the "grafting" and "hybrid" characteristics. To examine

from a technical level (that is, "T1 + T3"): China has its own original and unique plant and animal species and species of Culture Technology, as well as wine, tea, cooking, fireworks, ceramics processing, silk textiles, Chinese medicine such as a large number of traditional techniques and technology, there are a number of their own intellectual property rights of the modern industrial manufacturing technology and process. We introduce and absorb advanced technology and complete sets of equipment independently and actively from advanced countries and regions after reform and opening up. According to statistics, during the 20 years from 1979 to 1998, China has imported more than 28,000 technologies from abroad, the contract amounted to 111.379 billion U.S. dollars. Basically formed the organic integration at various levels of their own original traditional technologies (T3) and the modern advanced technology (T1) of advanced countries: their own original technologies-oriented in the first industrial level; the all-state combination of independent technology and the introduction of the technology in the level of second light industry; the introduction of technology-based in the level of second heavy industry; Chinese characteristics technology-based in the level of the third traditional service industries; the West original technologies-directed in the IT services level of tertiary industry.

The second is the transformation characteristics of economic growth which is from "grafting-type" economic growth to the original-style economic growth. Compared with the would-be "grafting" and "grafting-type" economic growth is also a kind of economy transition. For example, China's "socialism market economy with Chinese characteristics" is a kind of transition economy. This is the first round of economic restructuring. The second round of economic restructuring is on this basis and the whole process of growth stepping into the original style. That is the process from function: $Y3 = f (Li, Ki, Ei, T1 + T3, M1 + M3, P1 + P3)$ to function $Y3 = f [Li, Ki, Ei, g (T, M, P)]$. Obviously, in the latter function model, from $(T1 + T3, M1 + M3, P1 + P3)$ to $g (T, M, P)$, it is a summary the introduction of the developing countries in technical, managerial and institutional factors "----grafting "-----the second innovation ----original process. This process also reflects the process of mutual shift and transformation in technology, management and system between developing countries and first countries as well as reflecting the discipline of quality improvement of the economy development.

Third, in the feature-type growth model, the national industrial policies tend to the whole industry chain and all the innovative ways and try all the efforts to promote the organic integration of the three types of technology innovative ways. However, it is under normal circumstances. Due to the more tendency of learning style growth, most of the national industrial policies tend to the related enterprises with industry "supporting links" and the "leading enterprises" as well as the new innovation model of introducing and promoting in large scale innovation and integrated innovation being generally based on the "catch-up, scientific bounds" model of innovation and development. In the latter stage of development, more growths tend to original style,the national industrial policy in general tends to "crucial links" and "leading link" of the industry and to promote original innovation and the integrated innovation of "leading enterprises" of the core enterprises in large scale.

3. The characteristics growth model from the resource dependence, technology dependence to self-innovation

To analyze from the globe, economic growth has three basic types which are dependent growth of resources, technology dependent growth and innovative growth. Of which: (1) resource-dependent growth is mainly distributed in the Gulf region, and its basic features are two fold: First, the entirely dependence on the resources type, quantity and quality provided by the nature, the lack of knowledge, technology and talent, the obviously thinking of self-isolation. Second, a high proportion of resource-based industries, small degree of high processing industrial, industries are commonly in the low-end segments of the industrial chain, low value-added and form the depletion of resources along with resources "industry empty ". The third is the co-existence of high energy consumption, high pollution and high security risks. Take the way of traditional development of the" first contamination and post-treatment" (2) dependent growth of technology are mainly in Latin America countries, and its basic characteristics are three fold: First, there is no national and regional product technology, process technology and tooling equipment. The required innovation is a typical entering-type innovation that is to promote the innovation of its growth by the importation of developed countries and regions, mainly through "transnational corporations". Second, economic growth is in the absence of independence and has a high external dependence because economic growth is promoted mainly through innovation-imported type and the way of combination with its own of resources. Third, being associated with the importation of the means of innovation, it is bound to take all types of risk transfer of the developed countries, regions and enterprises, in particular, to bear in order to carry out malicious injury from developed countries and regions for the interests of own country and region. Therefore, the growth has a high-risk nature. The country that took this model is obviously in the "rope walk." (3) The growth of innovative mainly includes the United States, Britain, Germany, Japan and other 20 countries and regions. The basic features are three fold:

First, the country's strategic resources are generally not the exploitation. The global resources are to be configured mainly by using capital operation and industry transfer mode (in particular the transfer of resource-intensive and labor-intensive industries). Second, economic development and social progress are promoted mainly through self-innovation. Third, the growth is through the control of "crucial industry" and "leading industry" link of high-tech

industries and advanced manufacturing sector. The control capability to the industry brand, intellectual property and standards is very strong and make it the significant core competitiveness in the global industry. In addition to the above basic models, the majority of countries and regions is the basic pattern of these three variants or combination of each two. For example, Chinese economic growth has been the case since New China was established 60 years ago. In the years of 1949-1978, China took the model of combining resources reliance with independent innovation. While in the years of 1979-2005, China took the model of combining resources dependence with technology reliance and fell into the fantasy of "market for technology" for a long period. Chinese has begun to enter the basic mode of the third category of economic growth since the National Congress of the party was convened.

The pattern our country is chosen growing up as said or narrated above is really not one kind of subjective and groundless conclusion result, but is our country shortage economy-based reality and a realistic choice of Hirschman's "non-balanced development model". The Economists Hirschman has brought forward the thought of non-balanced

Insert Figure 3 here

development on the basis of "pressure theory" about development of infrastructure construction. he has thought that economy development should keep stronger active strength, estate building should put imbalance increasing strategy into practice, direct producing branch should be given priority to develop through pooling funds, economy development should make use of direct producing to develop in advance the increased income and "Bottleneck" pressure to expand investment in infrastructure construction, thereby leading to develop infrastructure construction. As shown in Figure 3, vertical axis said the pace of development or growth; horizontal axis represents time, that is, the stage of economic development; bold lines said infrastructure (social overhead capital) of the development curve; thin solid line means the direct productive activities (social direct capital) development curve. According to Hirschman model of non-balanced development and to integrate with the reality of our situation, we can divide economic growth into three stages by following supply and demand characteristics of social goods: the stage of shortage of personal belongings, the stage of shortage of public goods and social goods, the stage of supply and demand balance of social goods. Each stage adapting to the background and the principal contradiction of society has a special mode of economic growth.

1) The union pattern of resource dependence and independent innovation in the year from1952 to 1978. As shown in Figure 3, in the stage of private article shortage of OP line segment, society article supply-demand relations show the following essential features: (1) Three kinds of shortage which are private article supplies shortage, public article supplies shortage and the matching shortage between private articles and public article exist side by side at the same time. (2) However, the main contradiction in social development is the shortage of supply of private goods. Therefore, people are more concerned about the solution to the shortage of personal belongings. (3) In the early phase of the shortage of personal belongings (from 1952 to the mid-80's), the nature of the general performance of the shortage presented as a "triple" shortage in quantity (total) in quality as well as in structure. They refer to the short supply of number, the high-quality and low-cost products as well as the single species of the product structure, the imbalances of geographic distribution and industrial structure. When the "triple" shortage of the personal effects, the image characteristics is two fold: First, "ticket supply" is universal. In order to achieve a relative balance, under the premise of very limited supply of goods, the distribution was made only by "food stamps", "cloth votes", "oil votes" and so on the various types of ticket. Second, even if the ticket was obtained, the "on time or timely supply" could not be achieved because there were the phenomenon of lining up waiting and seeking for alternatives everywhere. It is precisely because of this stage is the main contradiction in the material life of the people's growing need for personal items with the contradiction between supply shortage, the development of directly productive activities take precedence over the development of social overhead capital. However, due to the extreme low level of development of productivity, the poor economy, poor technology infrastructure, the unformed industrial system, the lack of capital formation, we could only rely on the use of resources-based economic growth model. And at that time, China's population was less than 50 million. The volume of resources per capita is more sufficient. The capacity of environment to dilute industry pollution was very great. So it was feasible to take resource-dependent economic growth model. However, taking into account of China's total closure of capitalist world as well as the rupture of relations with the Soviet Union, we had to choose the self-reliant at that time is what we said self-innovation today.

The major innovation achievements caused proud in the world today mainly refers to "two bombs and one satellite" in this period. Therefore, at this stage, China's economic growth and resource dependence model is a combination of self-innovation model. This model is the choice suited to China's national conditions. However, the implementation of this strategy is a departure from the path of the track of the economy and embarked on the road of political campaign replacing the economic movement and class struggle replacing the production struggle. So we paid a heavy price. This is the first should learn.

2) The combination of resources dependence and technology attachment in the years of 1979-2005. From P-to-M it is an important historical period of China's reform and opening up. The basic characteristics in this period are: (1) like the characteristics of OP line, three shortages existed at the same time. The main contradiction of social development was

still the contradiction between the needs of increasing material and cultural the shortage of personal items supplies. (2)As far as the nature of the shortage concerned, the shortage at this period had the performance of "double" shortage. It referred to the basic balance of supply in quantity but there was short supply in quality and structure. The appearance of features at this time is twofold: first, the market flooded with "fake" products. Second, driven by the "fake" products' enter the market, the vicious competition characterized by "price reduction" was from an industry to another one, genuine or high-quality goods was forced into the area of low-profit goods even loss. (3) The total population in China is twice that in 1952, more than one billion people, the volume of per capita resources reduced significantly, China has entered the countries of a very small amount of per capita resources.(4) National industry and national economic system was set up basically. (5) From the start point of reform of alliance and production Contract responsibility system, China pushed forward a comprehensive reform and opening up. Urban reforms, state-owned enterprise reform, education reform, health care reform has been continued to roll out. In general, the most accurate but also the largest characteristics at this stage is the reform and opening up, the biggest achievement is the establishment of the line, principles and policies of the reform and opening up. In addition, a closed China had changed into a fully open country through reform. However, a profound self-examination and lesson to be summed up was left about how to implement the reform and opening-up mode in order to promote the development of the choice we should have. Reason in terms of to enter the countries the resources-dependent economic growth mode could not continue to be used in the country whose per capita resource was extremely poor. AS a result, we not only continued to use but also approached towards extreme in accordance with the policy of" water flow fast together with five wheels", this is one respect of the reason. Second, in the process of reform and opening-up, we can not put hopes in Europe and the United States in particular for a very large scale of the country and the nation. If we put the hopes in others, it will be tantamount to "throwing bun to a dog". Therefore, "market for technology" objectively brought us benefits for economic development especially to the southeast coast area while actually it made our country lose the voice and the initiative. The industry "crucial links" and "leading links" is increasingly being controlled by developed countries or regions, China has been crowded out of the global high-end industry step by step. So we should draw the biggest lesson that the real high-tech market can not be changed with money but rely on our own during this period.

3) The exploration of innovative growth mode in the years of 2006-2030. When the socio-economic development has stepped into the stage of the shortage of public goods (MN in Figure 3 above), its basic characteristics are: (1) the shortage of public goods has risen as the main contradiction in society and has affected social stability and development as well as has caused the concern of the entire society. (2) Personal items of supply and demand are basically balanced, but there are two major issues apparently: first, effective demand of private goods is insufficient affected by shortage of public goods supply. Second, "fake" and shoddy products in private items and its induced vicious competition characterized by "price reduction" has been fundamentally changed and caused the lack of effective supply of personal belongings as well. In the influence of these two areas, private capital though also considering entering the provision field of public goods. It is only the idea and conduct of private enterprise with greater capital strength and will not be extended to all private enterprises. In this case, the state-owned enterprises both as government's the visible and invisible hand will be able to take full advantage of rapid development. (3) The characteristics of this period are four: First, the provision of public goods is of poor quality service and high charges. Second, consumers of public goods are "crowded" state. Third, universal service is difficult to achieve. Fourth, the Government rent-seeking is in general and "commercial bribery" is a serious problem in the field of public goods which leads to "failure of regulation." Therefore, in the stage of the shortage of public goods, despite the provision of private goods can not be very abundant, due to the shortage of public goods has risen to the principal contradiction, so indirectly or the provision of public goods than is far more important than the direct production activities and its items provision. In order to alleviate this contradiction, giving priority to the development of social overhead capital, infrastructure construction has become the preferred strategy. If it is said that the shortage of personal belongings of the most critical stage of innovation is the technological innovation, the shortage of public goods in the stage of innovation is the most important institutional innovation. Therefore, under the guidance of scientific development concept of emancipation of the third round of the debate will start by focusing on innovation of institutional mechanisms and transition of development mode. If the first round of ideological emancipation got rid of the false imprisonment of two "whatevers", and established the ideological line of seeking truth from facts, the second round emancipation would break through the constraints of the name "Society" and "capital", and set the establishment of the basic Program of socialism market economy. In that case, the liberation of the third round of big ideas is the great concept liberation which is beyond the development of traditional thinking. This liberation will be a major ideologicalbreakthroughofrestraintof"resourcedependence"and"technology dependence", the traditional development concept and model of and will fully establish the path of "scientific development, innovation and development". The policy "building an innovation-oriented country" established by the Party's sixteenth National Congress and following the road of independent innovation is a rational choice to adapt to this context. On three types of innovative ways proposed by the national medium and long-term technology development plan, the national level should emphasize on original innovation. As the development of a country or region concerned, taking the road of innovative growth implies necessarily economic development strategy is an independent innovation. Independent innovation strategy refers to innovation strategy which set independent innovation as the basic the goal. It means a technology innovation strategy which can obtain core technology or breakthrough in concept, overcome technology difficulty, rely on their own ability to promote and complete the follow-up aspect of innovation on this basis, market a

new product or take the lead in the use of new technology, complete the commercialization of scientific and technological achievements to achieve competitive advantage and the monopoly profits for the desired goal through their own efforts and explore. At the same time, in the face of the growing supply shortage of resources, we should focus a resource-saving and environment-friendly society construction, shift traditional industrialization and urbanization development model completely, take a path of new industrialization, new urbanization and the new rural development. China is now in this period of transition and practice.

The growth of innovative models which will appears after 2031.When a country or region's social goods enter the stage of the supply and demand balance, the socio-economic development will emerge the following characteristics: (1)principal contradiction of socio-economic development has again transformed into and the resource constraint problem in the socio-economic development. The world, especially China's new round of the shortage has already begun. The three major resources of the supply shortage will persist for a long: First, the shortage of land resources and water resources has not only led to a shortage of supply of agricultural products, but also resulted in shortages of using land and water for urban construction, industrial and commercial. Second, the shortage of strategic energy resources began to lead to supply tension of coal, electricity, oil, gas and transport. Third, the shortage of mineral resources and industrial raw materials has led to its market price rising.

By the impact of the three resources supply shortages, the provision shortage of private goods and public goods will be kept for a long term. Particularly the shortage of personal belongings is a typical type of shortage of resource constraints. Though the supply of education is in shortage, health care, social security and other public goods is a shortage of input constraint. The supply shortage of "food security", network-based infrastructure is still a typical type of shortage of the resource constraints. As a very large scale country, three kinds of resource mentioned above, our country's actual availability of resources is getting smaller and smaller. The world is also bound to take the pressure of quantity-limited and high price in the above-mentioned three resources areas of our country. Therefore, we must recognize clearly that a supply shortage of goods caused by the strategic resources and energy shortage will exist for a long time.   (2) Personal belongings' supply and demand achieved basic balance. The supply of fake and shoddy goods and vicious competition has been in the effective inhibition. (3)The supply and demand of public goods reached basic balance. The general principles of service and lower costs have been effectively carried out. (4) The supply and demand between private goods and public goods achieved the basic balance. A good matching has formed in quantity, structure and quality between each other. In order to achieve this match, the forms and methods of combination of "private and public" featured by public-private partnership as the main features of will become the main mode of infrastructure items' delivery.(5)Infrastructure equipments have been well-developed. The upgrading basic conditions of economic structure have been met. If excess resources continues for the development of social indirect capital, economic efficiency and social significance has been less clear and important than that in the former period. From that point onwards, the community needs more resources to develop direct production activities and achieve high grade structure. At this point, China's economic development will further promote transformation of economic development mode and growth space: First, land-based economic development has basically stepped into the track of scientific development. Second, the economic development has started to enter the co-exist development of the land-based, sea-based and space-based economy. China is a large country to rise, if the vision just stare at the land, it will go fast to the limit. The southeast coastal provinces and regions' focus should be transferred to the marine economy. The first 30 years of reform and opening up, on the industrialization and urbanization of southeast coast has been achieved to some extent. It is undesirable to rely only on their own land-based economic development, especially to hope that the transfer of resources in the central and western regions can maintain its economic development and structural transformation. We should develop marine economy to promote the adjustment of coastal structure, to realize the economy transition of co-exist development of terrene, marine and space. In another word, the focus of scientific development and innovation development will be adjusted to the ocean, land and space. The economic growth will get full access to innovation growth model.

4. Conclusion

China's economic growth characteristics Over the past 60 years appeared in three respects: First, the background of characteristic of transition economy which is based on the "second best" and is featured by" surpassing "and "homing" option, socio-economic patterns in "surpassing" of 1952-1978 and the socio-economic form of "homing"in 1979. Second, the gradual characteristic growth path from the "learning style" to "a combination of learning and innovation". The third one is the characteristic growth model being obvious in phases from resource dependence, technology dependence to self-innovation. The combination model of resources dependence and independent innovation in 1952-1978,the combination pattern of resources dependency, technology dependency   in 1979-2005 and the innovative growth model after the Party's National Congress.

References

Janos • Cole. (1980). The shortage of Economics.

Liu, Youcheng. (1987). *Three patterns of social development*, Zhejiang People's Publishing House, (1).

Marx. (1972). *The Complete Works of Marx and Engels (46 volume on the list)*, People's Publishing House, (1), 104.

Wu, Jinming. (2001). *High-tech economy*, National University of Defense Technology Press, 47-53.

Zhao, Jiaxiang. (1985). *The Marxist theory of the social formation of simple*, Beijing University Press.

Figure 1. The paradigm of Chinese characteristics transition economy

Figure 2. The diagram of evolution of the relationship between economic growth and Shortage nature

show the relationship between promotion and being promoted or between the decision and being decided;

show the reverse of system innovation;

show the role Of promoting or hindering economic growth;

Contain both the meaning of "→" and the stepping into the next cycle;

☐ ① is "Engine 1" ② "Engine 2" ③-⑤are the first, second and third "accelerator" and "expansion" of economic growth;

Figure 3. Temporal logic of economic growth-- the mechanism of elements

Entrepreneurial Intention among Malaysian Undergraduates

Mohammad Ismail

Faculty of Business Management, Universiti Teknologi Mara (UiTM), 02600, Arau, Perlis, Malaysia

Tel: 60-4-9882-000   E-mail: mohammadismail@perlis.uitm.edu.my

Shaiful Annuar Khalid

Faculty of Business Management, Universiti Teknologi Mara (UiTM), 02600, Arau, Perlis, Malaysia

Tel: 60-12-5140-436   E-mail: dr_shaiful@yahoo.com

Mahmod Othman

Faculty of Science Computer and Mathematic, Universiti Teknologi Mara (UiTM), 02600, Arau, Perlis, Malaysia

Tel: 60-4-9882-000   E-mail: mahmod135085@perlis.uitm.edu.my

Hj.Kamaruzaman Jusoff (Corresponding author)

Faculty of ForestryUniversiti Putra Malaysia, 43400, Serdang, Selangor Malaysia
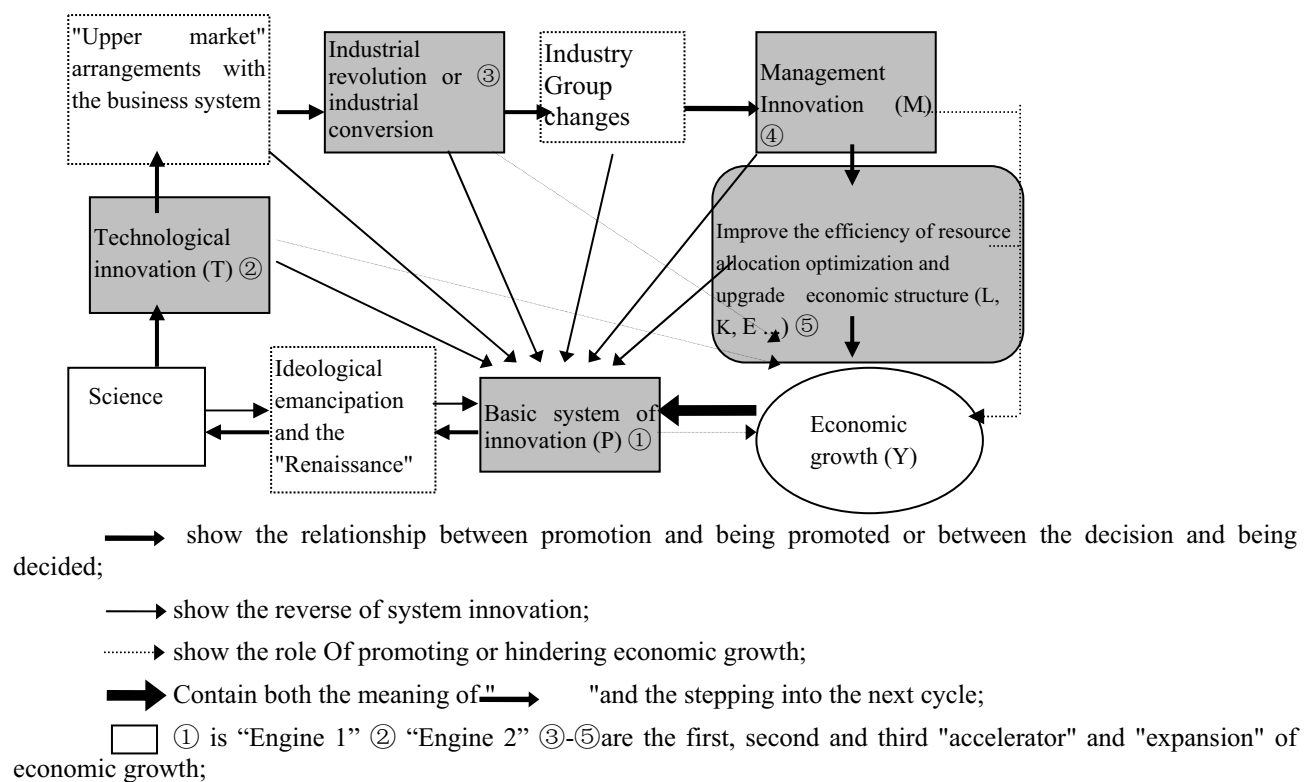
Tel: 60-3-8964-7176   E-mail: kjusoff@yahoo.com

Norshimah Abdul Rahman

Faculty of Business Management, Universiti Teknologi Mara (UiTM), 02600, Arau, Perlis, Malaysia

Tel: 60-4-9882-000   E-mail: shima70@perlis.uitm.edu.my

Kamsol Mohamed Kassim

Faculty of Business Management, Universiti Teknologi Mara (UiTM), 02600, Arau, Perlis, Malaysia

Tel: 60-19-5505-432   E-mail: Kamsol@perlis.uitm.edu.my

Rozihana Shekh Zain

Faculty of Business Management, Universiti Teknologi Mara (UiTM), 02600, Arau, Perlis, Malaysia

Tel: 60-4-9882-000   E-mail: Rozihana@perlis.uitm.edu.my

Abstract

Research in entrepreneurship field has magnetized the interest of many researchers as a tool of development for many countries. The study of the factors that leads people to become entrepreneurs has been a question of many researchers. This study explores the relationship between the Big-Five personality factors, contextual factors and entrepreneurial intention. As such, it fits squarely into the literature on the antecedents of entrepreneurship. Previous research has focused on the need for achievement as well as social psychological characteristics such as attitude and self-efficacy. This study looks at the extraversion, conscientiousness, agreeableness, openness, neuroticism, perceived barriers, perceived support and close support which are determinants of entrepreneurial intention. The data was gathered from 123 undergraduate students at one of the university branch campuses in the northern region of Peninsular Malaysia. Data collection was based on voluntary basis, informed consent, and anonymity. Regression analyses indicate that entrepreneurial intention is positively correlated with extraversion, openness, and close support. In the final section, we discuss these results and discover a future research agenda.

Keywords: Entrepreneurship intention, Big-five personality, Contextual factors

1. Introduction

The entrepreneurship development has been growing steadily in Malaysia. Due to the importance of the entrepreneurial sector, it has become one of the national agendas in many countries. The importance of entrepreneurship to the Malaysian economy is proven by the various supporting mechanisms and policies that exist for entrepreneurs, including funding, physical infrastructure and business advisory services. The establishment of the Ministry of Entrepreneur Development in 1995, clearly indicates the growing importance of the government role on the issue of entrepreneur

development (Ariff & Abu bakar, 2005). Entrepreneurial education at tertiary level has also become an essential component of many curriculums in private and public higher learning institutions. Since future entrepreneurs can be found amongst those who are currently undergoing their educational process at the universities, entrepreneurship education has been used as one of the most effective ways to promote the transition of graduates into the world of entrepreneurship. Empirical research into the field of entrepreneurship has grown enormously in the last two decades especially in the western cultures. The nature of work, connected with self-employment such as self-actualization, independence and greater satisfaction has become more desirable among graduates (Baughn, Cao, Le, Lim, & Neupert, 2006). These have been supported by several empirical studies. Hart and Harrison (1992) for example, investigated the tendency of university students to involve in business in Northern Ireland and found that 47% of the students expressed the intention to run their own business. Similarly, a study by Karr (1985) explains that 46% of colleges students consider own business as a career. However, other research has also documented evidences for a lower entrepreneurial intention. Brenner, Pringle & Greenhaus (1991) reported that although 55% of the respondents preferred business as a career, only 5% of the students specified the willingness to operate their own business. One of the issues that are still questionable from these studies is to determine the factors that discriminate between students with strong entrepreneurship intention and those without strong entrepreneurship intention. There is not many research has been done on personality factors that drive the students' career decision toward self-employment (Luthje & Franke, 2003). Hence, this article attempts to examine personality factors as determinants of students' entrepreneurial intention. The remainder of this paper is divided into three sections. First, the review of related literature is presented and hypotheses are formulated. Next, methods are outlined followed by a presentation of results and discussions.

2. Literature Review

Psychological research claims that intentions are a critical predictor of consequent planned behaviour (Bagozzi, Baumgartner & Yi, 1989). Consequently entrepreneurial intention is an important phenomenon, and has involved substantial cognitive research. Krueger, Reilly & Carsrud (2000) instigate with the presumption that any decision to form a new business venture is planned rather than being a conditioned response. They contrast a model of planned behaviour (Azjen, 1991), in which the potential entrepreneur's assessment of their own competence or self-efficacy. Bandura (1986) predicts the instigation of a new venture, with Shapero's (1982) model of the "entrepreneurial event" in which an event, such as job loss, "displaces" the inertia that dominates human behaviour and choice. Nevertheless in both models a contrast was made between potential for entrepreneurial activity and intention. An individual may have a potential but not make any transition into entrepreneurship because of lack of intention. On a different tack, Birley and Westhead (1994) find evidence to support a range of motivations, which cover instrumental motivations (wealth), the desire for personal development and the need for approval and esteem. Gatewood, Krueger, Reilly & Carsrud (1995), examine cognitive factors which may influence new venture creation, suggest that external perceptions are stronger for men (perception of a market opportunity) than for women, whereas women are more likely to cite internal explanations (such as the desire to be one's own boss).

2.1 Personal Factors and Entrepreneurial Intention

In addition to personality traits, several additional individual difference variables have been found to predict entrepreneurship. Demographic factors affecting entrepreneurship are age, sex, education, work experience and role models. Several individual difference variables have also been found to predict entrepreneurial behaviors. These personal factors include age, gender, and education. Mazzarol, Volery, Doss & Thein (1999) state that females were less likely to be founders of business than male. Kolvereid (1996) also states that those with prior experience in entrepreneurial activities have higher entrepreneurial intention compared to those with no prior experience. Several studies supported the argument that males had significantly higher entrepreneurial intention than females (e.g., Mazzarol et al., 1999; Kolvereid, 1996). Furthermore, Mazzarol et al., (1999) report that previous working experience was also found to affect entrepreneurial intention. Specifically, they found that those with government sector work experience were less likely to start a new business venture as compared to their counterparts with experience in private sector. Kolvereid (1996) also reports that the types of experience also affect entrepreneurial intention. He found that respondents with entrepreneurial experience have higher entrepreneurial intention than those without such experience. Studies have also revealed that people having a parent who is an entrepreneur are more likely to express entrepreneurial intention (Krueger, 1993). Webb, Quince and Wathers (1982) found that students who have taken entrepreneurship courses reported higher entrepreneurship intention than other students. Thus, the following hypothesis is proposed:

Based on the above-mentioned studies and theoretical discussion we can reckon that personal factors such as gender and working experience might have an influence on entrepreneurial intentions.

2.2 Contextual Factors and Entrepreneurial Intention

Contextual factors include a large set of factors that might influence the intention to engage in entrepreneurship activities (Penning & Kimberly, as cited in Luthje & Franke, 2003; Kristiansen, 2001). Among the important contextual factors include perceived support, perceived barriers and close support. There is evidence that business owners tend to

have strong supporters whereby the support from their family seems to be particularly important. Parents, siblings, spouses — all of them have something to say when an individual starts up a venture. Sometimes they can be supportive, and sometimes they can be negative. Support and encouragement from family members, relatives and friends have been shown to be associated with development of entrepreneurs (Davidson & Honig, 2003; Baughn et al., 2006). Support from family and friends are critical particularly in shaping the perceived desirability of a particular business venture as well as providing financial assistance. In terms of perceived support, individuals might be willing to engage in entrepreneurship activities if they perceive that the environment of business is favorable. This is known as a trigger effect. Individuals who perceive the existence of business opportunities (e.g., access to capital, availability of business information) are more likely to make the decision to start a new business. On the other hand, if the individuals have negative perception regarding the environment of the business, they may not decide to start their own business (Luthje & Franke, 2003; Kristiansen & Indarti, 2004). Lacking of knowledge on legal matters, having personal conflicts, lacking knowledge on how to develop a business plan, not having access to finance and lacking support from formal institutions may hinder a person's tendency in becoming an entrepreneur. Based on the above review of related literature, we set the following hypotheses for empirical analyses in this paper.

Given the above, we propose that students' deviance can be predicted as the students' perceived barriers, perceived support and close support.

2.3 The Big Five Personality Traits and Entrepreneurial Intention

One of the approaches in determining potential entrepreneurs is by assessing their personality. Gartner (1988) states that the entrepreneurs are individuals with have a specific set of personality explain a person as an entrepreneur. Personality traits have proven to be predictors of many aspects of entrepreneurship including the intention to start a business, succeed in running a business, and enhance corporate entrepreneurship (Shaver and Scott, 1991). One of the lines of entrepreneurial research concentrates on personality factors. Research on the relationship between entrepreneurship and personality has been a subject to several criticisms.Several personality traits have been investigated by different researchers make it difficult to systematically compare similar studies. Singh and DeNoble (2003) state that more universal measures of personality are required (Singh & DeNoble, 2003). One possibility in this regard is the so-called Big Five personality factors, which are extraversion, agreeableness, consciousness, openness, and neuroticism (Goldberg, 1990). Schneider's (1987) attraction-selection-attrition (ASA) model explains how individual and organizational processes produce mean differences in personality across organizational work environments. Here, this study adapts ASA theory to explain the association between personality and entrepreneurial intention. Individuals with certain personality traits may be more attracted to the entrepreneurial form of employment than others may be. Individuals with certain personality traits may find entrepreneurship activities more satisfying and thus may persist long enough to actually establish the new venture and become an entrepreneur.

In the discussion of the personality traits, this study only focus on the five dimensions of the Big Five which are neuroticism, extraversion, conscientiousness, openness and agreeableness. Neuroticism refers to the degree to which an individual has emotional stability (Singh & DeNoble, 2003). Individuals who have high neuroticism trait tend to experience a number of negative emotions such as anxiety, hostility and depression (Costa & McCrae, 1992). On the other hand, emotionally stable individuals are able to keep their composure under stressful situations and show high level of self-esteem, relaxed and self-confident. These traits appear to be important for entrepreneurs. Extraversion illustrates the extent to which people are assertive, dominant, energetic, active, positive emotions and enthusiastic (Costa & McCrae, 1992). People who score high on extraversion tend to be cheerful, like to be with people and large groups, and seek excitement and stimulation. People who score low on extraversion prefer to spend more time alone and are characterized as reserved, quiet and independent. Entrepreneurs must interact with a diverse range of constituents including venture capitalists, partners, employees and customers. Thus, an argument can be made that extraverted individuals would tend to develop positive views of entrepreneurship. Openness is the tendency to be creative, curios, adventurous and receptive to new experience (Singh & DeNoble, 2003). These characteristics are important components of the entrepreneurial experience. Someone who is low on openness can be characterized as conventional, narrow in interests, and unanalytical. Founding a new venture is likely to require the entrepreneur to explore new ideas, use his or her creativity to solve business problems, and to take innovative business strategies. Agreeableness assesses one's tendency to be compassionate and cooperative rather than suspicious towards others. An agreeable personality may facilitate an entrepreneur to build business networking that is crucial for a new venture. Individuals who are high on agreeableness can be characterized as trusting, forgiving, caring, altruistic and gullible. On the other hand, someone who is at the low end of the agreeableness can be characterized as manipulative, self-centered, suspicious, and ruthless (Digman, 1990; Costa & McCrae, 1992). Conscientiousness indicates an individual's degree of organization, persistence, hard work and motivation in the pursuit of goal accomplishment. Some researchers have viewed this construct as an indicator of preference or the ability to work hard (Barrick & Mount, 1991). A conscientious personality may serve an entrepreneur well in planning and managing the details associated with running a company and interacting with internal and external stakeholders.

Based on the above-mentioned studies and theoretical discussion we can consider that personality factors might have an influence on students' deviance.

3. Methodology

3.1 Sample

The sample of this study comprised of 123 undergraduates enrolled in courses in the campus of an institution of higher learning in Malaysia. The mean age of the respondents is 21.50 years (SD=1.62). Twenty-two percent of them are males while the rest 78% are females.

3.2 Measurement

The study used a self-administered questionnaire to obtain information related to the study topic. The variables under investigation in this study were agreeableness, extraversion, conscientiousness, openness, neuroticism, perceived barriers, perceived support, close support and entrepreneurial intention. Items to measure these concepts were adapted from the literature on entrepreneurial intention at the individual level (e.g., Saucier, 1994; Kolvereid, 1996). The instrument was refined after pre-testing with a small sample. The survey included items about the respondents' background. Gender was dummy coded 0 for female and 1 for male. A dichotomous item asked whether one or both of the respondents' parents currently own their full-time business. Responses were dummy coded 0 for no and 1 for yes. Questions on entrepreneurial experience and whether the students have taken entrepreneurial course were also dummy coded as 1 for yes and 0 for no. Correlation and regression analyses were used to analyze data. Correlation analysis was used to determine the nature of the relationship between the study variables. Regression analysis was used to explore the total effect of the independent variables on the criterion variable.

4. Results

The effects of personal characteristics on subjects' EI were analyzed using the t-test analysis. As shown in Table 1, the results of t-tests proved that there was no significant difference between males and females in term of entrepreneurial intention. In terms of previous experience in businesses, even though students who have experience in business activity reported higher level of EI than those who did not have experience, these differences were not statistically significant. Finally, the results also showed that students with parents or relatives who own a business entity did not report significantly higher level of entrepreneurial intention than students with parents or relative with no business ownership. The t-test also indicated that those students who have taken entrepreneurship course reported significantly higher entrepreneurship intention than other students.

<<Insert Table 1>>

Table 2 presents the overall means, standard deviations, and correlations of the variables in this study. The entrepreneurial intention measure was found to be significantly and moderately correlated to each of the independent variables, though close support (r=.49, p<.01) appeared to show slightly stronger bivariate relationships with the dependent variable. However, perceived barriers and neuroticism were not significantly correlated with entrepreneurial intention.

<<Insert Table 2>>

Table 3 presents the results of hierarchical multiple regression analysis predicting entrepreneurial intention. Given the divergent theories on entrepreneurship, it would be difficult to control all possible antecedents of entrepreneurship. According to Crant (1996) such demographic factors as gender and parental role models are appropriate control variables for a study of individual differences in entrepreneurship intention. As can be seen, together the 3 control variables accounted for 10 percent of the variance in entrepreneurial intention. The contextual factors explained an additional 24 percent of the variance in entrepreneurship intention. However, only close support (Beta = .45, p<.01) significantly predicted the criterion variable. In the third step, personality factors contribute an additional 11 percent of the variance in entrepreneurial intention. However, only extraversion (Beta = .22, p<.05) and openness (Beta = .25, p<.05) significantly predicted the entrepreneurial intention.

<<Insert Table 3>>

5. Discussion and Conclusions

This study provides general support to the relationship between the Big-Five Personality, contextual factors and entrepreneurship intention. Findings on specific personality factors are further discussed below. This study shows that university students' extraversion and openness are invaluable in understanding entrepreneurial intention among students. The findings that openness significantly predicted entrepreneurship intention are consistent with previous literature (e.g., Singh & DeNoble, 2003). Open individuals tend to be curious, imaginative, adventures and receptive to business opportunities. These characteristics are important in becoming successful entrepreneurs. Extraversion is also significantly and positively related to entrepreneurship intention. Extraversion describes the extent to which people are

active, energetic and enthusiastic. The findings of this study are also consistent with previous studies that extraversion is positively related to interest in enterprising occupations (e.g., Costa, McCrae & Holland, 1984). This study has also shown that there is a difference between students who have taken entrepreneurship course and those who do not in terms of entrepreneurial intention. The findings of this study may have policy implications especially for those providing assistance to entrepreneurs and small business owners. It is very likely that experience and knowledge gained by taking entrepreneurship subject have stimulated interest and ambitious in becoming entrepreneurs. Future entrepreneurial activities organized by universities and government agencies need to take this into consideration. Furthermore, entrepreneurship curriculum in Malaysian institutions should include on those characteristics (e.g., adventures, active) as part of the syllabus. Since the graduates of tertiary education are associated with high rates of entrepreneurship activities (Vasiliadis & Poulios, 2007), we believe that by giving more attention into entrepreneurship education could improve the development of graduate entrepreneurship activities. Unfortunately, the reason why neuroticism, agreeableness and conscientiousness are not related to entrepreneurial intention is not obvious. Nevertheless, it is possible to speculate on several potential explanations. The bivariate analysis shows a moderate correlation between these independent variables and the criterion variable. However, this relationship is not strong enough to hold up in the multivariate analysis. Conscientiousness, for example, is associated with diligence, organization, and persistence, which may be appropriate for self-employment. Those same characteristics, however, may push an individual away from self-employment toward a career in a larger organization that would also value such traits. Furthermore, the finding also indicated the role of close support that should not be neglected in nurturing the emergence of entrepreneurs. The impact of support from family and friends on entrepreneurship tendency is more obvious in a collectivist culture like Malaysia that emphasizes on cohesiveness. Support from family and friends are important because graduates startup a business based on family resources and they do not use banking loans (Vasiliadis & Poulios, 2007). The study has also contributed to the Eastern entrepreneurship body of knowledge especially in graduate entrepreneurial intention. However, the findings of this study need to be taken with precaution because of the low percentage of male respondents and is clearly not representative for the general population. Another limitation to this research is the small size of sample that did not permit generalization. Future research should focus on the unanswered questions in terms of what factors help in realizing the intention to do business. Another important question that this study did not attempt to answer is the implication of some variables as moderators. Since research on entrepreneurship is expanding, perhaps there are some variables that may moderate the relationship between the independent variables used in this study and the entrepreneurship intention. These questions are outside the scope of this study; however, future research into these questions would shed light on this important question.

References

Ajzen, I. (1991). Attitudes, traits, and actions: Dispositional prediction of   behavior in social psychology. *Advances in Experimental Social Psychology*, 20, 1-63.

Ajzen, I. (1991). The theory of planned behaviour, *Organizational Behaviour and Human Decision Processes*, 50:179-211.

Ariff, M., & Abubakar, S.Y. (2005). Strengthening Entrepreneurship in Malaysia www.mansfieldfdn.org/programs/program_pdfs/ent_malaysia.pdf

Bagozzi, R., Baumgartner, H., and Yi, Y. (1989). An investigation into the role of intentions as mediators of the attitude-behaviour relationship. *Journal of Economic Psychology,* 10:35-62

Bandura, A. (1986). *Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs: Prentice-Hall.

Barrick, M. R., & Mount, M. K. (1991).   The big five personality dimensions and job performance: A meta-analysis. *Personnel Psychology, 44*, 1-26.

Baughn, C.C., Cao, J. S. R., Le, L. L. M., Lim, V. A., & Neupert, K.E. (2006). Normative, social and cognitive predictors of entrepreneurial interest in China, Vietnam and the Philiphines. *Journal of Developmental Entrepreneurship*, 11 (1), 57-77.

Birley, S. and Westhead, P. (1994). A taxonomy of business start-up reasons and their impact on firm growth and size. *Journal of Business Venturing,* 9:7-31.

Blanchflower, D.G., Oswald, A., and Stutzer, A. (2001). Latent entrepreneurship across nations. *European Economic Review* 45:680-691.

Brenner, O.C., Pringle, C.D. & Greenhaus, J.H. (1991). Perceived fulfillment of organizational employment versus entrepreneurship: Work values and career intentions of business college graduate. *Journal of Small Business Management*, 29(3), 62-74.

Costa, McCrae & Holland. (1984). Personality and vocational interests in an adult sample, *Journal of Applied Psychology*, 69(3), 390-400.

Costa, P. & McCrae, R. (1992). Four ways five factors are basic. *Personality and Individuals Differences,* 13, 653-665.

Crant, M, J. (1996). The proactive personality scale as a predictor of entrepreneurial intentions. *Journal of Small Business Management*, 34(3), 42-49.

Davidson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing*, 18, 301-331.

Digman, J. M. (1990). Personality structure: Emergence of the five-factor model. *Annual Review of Psychology, 41,* 417-440.

Gartner, W. (1988). Who is an entrepreneur? Is the wrong question. *American Journal of Small Business*, 12, 11-32.

Gatewood, E.J., Shaver, K.G. and Gartner, W.B. (1995). A longitudinal study of cognitive factors influencing start-up behaviors and success at venture creation. *Journal of Business Venturing*, Vol. 10, pp. 371-91.

Goldberg, L.R. (1990). An alternative "description personality". The Big-Five factor structure. *Journal of Personality and Social Psychology*, 59, 1216-1229.

Hart, M., & Harrison, R. (1992). Encouraging enterprise in Northern Ireland: Constraints and opportunities. *Irish Business and Administrative Research*, 13, 104-116.

Karr, A.R. (1985). Labor letter. *The Wall Street Journal*, November 1.

Kolvereid, L. (1996). Prediction of employment status choice intention. *Entrepreneurship Theory and Practice*, 21(1), 47-57.

Kristiansen, S. (2001). Promoting African pioneers in business: What makes a context conducive to small-scale entrepreneurship? *Journal of Entrepreneurship*, 10(1), 43-69.

Kristiansen, S., & Indarti, N. (2004). Entrepreneurial intention among Indonesian and Norwegian students. *Journal of Enterprising Culture*, 12(1), 55-78.

Krueger, N., & Brazeal, D. (1994). Entrepreneurial potential & potential entrepreneurs. *Entrepreneurship Theory & Practice, 18*(3), 91-104.

Krueger, N.F. (1993). The impact of prior entrepreneurial exposure on perceptions of new venture desirability and feasibility. *Entrepreneurship Theory and Practice*, 18(1), 5-21.

Krueger, N.F., Reilly, M.D., and Carsrud, A.L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing* 15: 411-432.

Luthje, C., & Franke, N. (2003). The making of an entrepreneur: testing a model of entrepreneurial intention among engineering students at MIT. *R & D Management*, 33(2), 135-147.

Mazzarol, T., Volery, T., Doss, N. & Thein, V. (1999). Factors influencing small business star-ups. *International Journal of Entrepreneurial Behavior and Research*, 5(2), 48-63.

Saucier, G. (1994). Mini-markers: A brief version of Golberg's unipolar big-five markers. *Journal of Personality Assessment*, 63, 506-516.

Schneider, B. (1987). The people make the place. *Personnel Psychology*, 40, 437-453.

Shapero, A. (1982). Social dimension of entrepreneurship. In C. A. Kent et al. (Eds.). *The encyclopedia of entrepreneurship* (pp. 72-89). Englewood Cliffs, NJ: Prentice-Hall.

Shaver, K.G. and Scott, L.R. (1991). Person, process, choice: the psychology of new venture creation. *Entrepreneurship: Theory and Practice*, Vol. 16, No. 2, p. 23.

Singh, G. & De Noble, A. (2003). Views on self-employment and personality: An exploratory study. *Journal of Developmental Entrepreneurship*, 8(3), 265-281.

Vasiliadis, A, & Poulios, T. (2007). Entrepreneurship among graduates: Reality and prospects in tertiary education. *Proceedings of the Academy of Entrepreneurship*, 13(1), 75-82.

Webb, T., Quince, T., Wathers, D. (1982). *Small Business Research, the Development of Entrepreneurs*, Gower, Aldershot.

Table 1. The differences in the entrepreneurial intention by selected demographic factors

Variable		N	Mean	t-value
Gender	Male	27	3.67	1.29
	Female	96	3.65	
Entrepreneurial experience	Yes	60	4.00	1.41
	No	61	3.71	
Entrepreneurial parents	Yes	35	3.69	1.39
	No	88	3.53	
Whether have taken entrepreneurial courses	Yes	92	3.75	2.08*
	No	22	3.35	

Table 2. Intercorrelation among study variables

Variables	Means	SD	1	2	3	4	5	6	7	8	9
1. Perceived barriers	3.25	.77	(.84)								
2. Perceived support	3.53	.64	.09	(.79)							
3. Close support	3.69	.66	.07	.32**	(.77)						
4. Extraversion	3.88	.67	.04	.07	.29**	(.80)					
5. Conscientiousness	3.91	.71	.08	.10	.37**	.20*	(.83)				
6. Agreeableness	3.87	.70	.01	.24**	.42**	.22*	.51**	(.79)			
7. Openness	3.67	.71	.08	.10	.33**	.22*	.43**	.39**	(.82)		
8. Neuroticism	3.56	.65	.04	.07	.10	.03	.29**	.14	.05	(.81)	
9. EI	3.67	.77	.06	.35**	.49**	.26**	.23*	.22*	.27**	.12	(.85)

*p<.05; **p<.01

Alpha reliability in parentheses

Table 3. Results of Hierarchical Regression Analysis

Variables	ΔR2	Overall R2	ß	F value
Control Variables	-	.10		3.11*
Gender			.05	
Entrepreneurship course			.28*	
Entrepreneurial parents			.09	
Contextual Factors	.24	.34		7.21**
Perceived Barriers			.05	
Perceived Support			.18	
Close Support			.45**	
The Big Five Personality	.11	.45		4.69**
Agreeableness			.06	
Extraversion			.22*	
Conscientiousness			.12	
Neuroticism			.02	
Openness			.25*	

*p<.05; **p<.01

Evaluation of Beijing Urban Residents' Resource Worrying Consciousness Based on the Logistic Regression Model

Jiliu Sun

School of Statistics, Capital University of Economics and Business

Beijing 100070, China

Tel: 86-10-6760-7956   E-mail: sunjiliu1956@163.com

Abstract

According to the data in the survey of the urban residents' resource conservation index of Beijing in July of 2008, the binary choice model, i.e. the Logistic regression model, is used to compare and study residents (different sexes and different ages)' worrying degrees about the actuality of resources in China. The result of the quantitative research indicated that Chinese residents had strong resource worrying consciousness, and older residents more worried about the actuality of resources in China, and female worrying degree was higher than male's.

Keywords: Logistic regression model, Resource conservation index

The data used in the article all come from the survey of the urban residents' resource conservation index of Beijing in July of 2008. Because the research objects are residents (with different sexes and ages)' worrying degrees about the actuality of Chinese resources, so other contents in the questionnaires will not be analyzed in the article.

The survey result shows that 71.4% of respondents worried about the actuality of Chinese resources, and they thought Chinese reserves of oil and natural gas were limited, and the water resource and electric resource were deficient, and to continually keep the stable and quick development of macro economy, Chinese governments in all levels face serious challenges.

The attributive variable in the research Q, i.e. residents' worrying degree about the actuality of Chinese resources, is 0-1 variable, and the numerical value of 1 denotes worrying, and 0 denotes not worrying, and the independent variable, *Sex*, is denoted by 1 (male) and 2 (female), and the independent variable, *Age*, includes 9 classes, and 1 denotes "below the age 12", and 2 denotes "the age 12-15", and 3 denotes "the age 15-18", and 4 denotes "the age 18- 23", and 5 denotes "the age 23- 30", and 6 denotes "the age 30 - 40", and 7 denotes "the age 40 - 50", and 8 denotes "the age 50 - 60", and 9 denotes "the age 60 and above", so the numerical value is bigger, the respondent's age is older. It is not feasible to use traditional statistical methods such as the variance analysis or the regression analysis, because they all require that the attributive variables are continuous, so other statistical analysis methods should be considered. The Logistic model can better solve this problem. On the one hand, it requires that the attributive variable is data with 0-1 type, which can overcome the limitation of traditional statistical methods. On the other hand, it is more persuasive than the contingency analysis by quantitatively studying the contribution degree of the independent variable to the attributive variable, so it is a kind of useful statistical method to process the data of questionnaire.

1. Introduction of fundamentals

First, to confirm whether the residents (with different sexes)' worrying degrees about the actuality of Chinese resources are different or not, the crossing frequency table of *Sex* and *Q* (seen in Table 1) is plotted.

Because Table 1 is the dimension of 2×2, so its Chi Square test should adopt the *Fisher* rigorous test and the value of P produced by the *Fisher* rigorous test with the language of R is 0.07866<0.10, and under the confidence level of 90%, there are sufficient reasons to reject the original hypothesis, i.e. different sexual residents' worrying degrees are significantly different.

Second, to confirm whether the residents (with different ages)' worrying degrees about the actuality of Chinese resources are different or not, the box-shape figures about the age under two kinds of worrying degrees are plotted (seen in Figure 1).

From Figure 1, the median of the age box-shape figure under the worrying condition is obviously higher than the median of the age box-shape figure under the condition of not worrying, which indicates that the distributions of age under two kinds of conditions are different.

In above analysis, the residents' worrying degrees about the actuality of Chinese resources are influenced by both sex and age, and the worrying degree belongs to the data of 0-1 type, so the Logistic regression model is adopted to research this problem.

2. Logistic regression model

Usual econometric models all suppose that the attributive variables are continuous, but in real economic decision-makings, many problems about choice are faced. People need to choose in selective limited projects, which is usually opposite with the hypothesis that the explained variable is continuous variable, so the attributive variable only adopts limited discrete values. For example, people's choices about vehicles usually include subway, bus and taxi, and the investment decisions include the stock and real estate. The econometric models which use these decision-making results as the explained variables are called the discrete choice model. In the discrete choice model, the simplest situation is to choose one project in two selective projects, and here the explained variables only include two values, and the model is called as the binary choice model.

In the binary choice model, if the simple linear regression equation is used to fit the 0-1 variable y, the phenomenon of heteroskedasticity will be produced in the residual error sequence of the model, and the fitted value of the model will not be between 0 and 1. Therefore, to solve this problem, the immeasurable hidden variable y^* is introduced to replace the attributive variable y to establish the regression equation with the independent variable.

$$y_i^* = x_i\beta + u_i$$

Where, u_i is the random disturbance term. Then define the relationship expression of the hidden variable y^* and the 0-1 attributive variable y.

$$y_i = \begin{cases} 1 & y_i^* > 0 \\ 0 & y_i^* < 0 \end{cases}$$

So, $E(y_i \mid x_i, \beta) = P(y_i = 1 \mid x_i, \beta) = P(y_i^* > 0) = P(x_i\beta + u_i > 0) = 1 - F(-x_i\beta)$, and F denotes the distribution function of u_i which is required as a continuously monotonic increasing function. Therefore, the original regression model can be regarded as the following regression model of y_i about its conditional mean.

$y_i = 1 - F(-x_i\beta) + u_i$

According to different F in the distribution function, the binary choice model generally includes the Probit model, the Logistic Model and the Extreme model.

For the parameter estimation of the model, the binary choice model generally adopts the maximum likelihood estimation, and the likelihood function is

$$L = \prod_{y_i=0}[1 - F(x_i\beta)]\prod_{y_i=1}F(x_i\beta)$$

The first-order condition of the logarithm likelihood function is

$$\frac{\partial \ln L}{\partial \beta} = \sum_{i=1}^{N}\left[\frac{y_i f_i}{F_i} + (1-y_i)\frac{-f_i}{(1-F_i)}\right]x_i = 0$$

Where, f_i denotes the probability density function of u_i. If the expressions and sample values of the distribution function and the density function of u_i are known, by solving the equation group, the maximum likelihood estimation value of the parameter of the binary choice model can be obtained.

The Logistic regression model is the binary choice model which supposes that the distribution function corresponded with u_i fulfills the logic distribution, i.e. $F = e^x / (1 + e^x)$, so the above method can be used to estimate the Logistic regression model, and the form of the equation is

$$\ln(\frac{p}{1-p}) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \cdots + \beta_p X_p \quad \text{or} \quad p = \frac{1}{1+e^{-(\beta_0+\beta_1 X_1+\beta_2 X_2+\cdots+\beta_p X_p)}}.$$

Where, p denotes the probability when the attributive variable y is 1. Here, the coefficient β of the model estimation can not be explained as the marginal influence to the attributive variable y, and it can be judged from the symbols only, i.e. if the coefficient is positive, it denotes that if the explained variable is bigger, the probability that the attributive variable is 1 is bigger, and contrarily, if the coefficient is negative, it denotes that the corresponding probability is smaller.

3. Data analysis

The *lrm* order in the language R of the Design software package is applied to implement the Logistic regression analysis for the data, and the regression result is

$$\ln(\frac{p}{1-p}) = 0.2175 + 0.0998\,Age + 0.2446(Sex = 2)$$

$$z = (0.78) \quad (2.12) \quad (1.67)$$

$$R^2 = 0.012 \quad\quad L.R. = 7.68$$

From the Logistic regression result, under the confidence level of 90%, the coefficients of the model all pass the Z test, and both the fitting degree R^2 and the total significance test statistics *L.R.* (the maximum likelihood rate) are big, so the fitting effect of the Logistic regression model is good, and it can be used to analyzed and evaluated.

First, the residents (with different ages)' worrying degrees about the actuality of Chinese resources will be analyzed. The coefficient of the age in the Logistic regression model is 0.0998, and it indicates that when the sex is certain and the age is enhanced each unit, the probability P that the respondent worries about the actuality of resources will be higher 0.0998 unit than the probability *1-P* that the respondent doesn't worries about the actuality of resources. In another words, the age is older, the probability worrying about the actuality of resources P is larger.

In the same way, the residents (with different sexes)' worrying degrees about the actuality of Chinese resources will be analyzed. Because the variable of the sex is introduced into the model as the dummy variable, so the model can be regarded as two models, i.e. the Logistic regression model of the age to the worrying degree under the condition of males and the Logistic regression model of the age to the worrying degree under the condition of females. The concrete model is seen as follows.

The model of males: $\ln(\frac{p}{1-p}) = 0.2175 + 0.0998\,Age$

The model of females: $\ln(\frac{p}{1-p}) = 0.4622 + 0.0998\,Age$

In two models, under condition of same age, the female advantage is obviously higher than males, which indicates that the female worrying consciousness about resources is higher than male worrying consciousness about resources.

Thus, the logistic models with two levels about 0-1 in the evaluation of residents' worrying degrees about resources were established, and the influences of different sexes and different ages on the worrying degrees of resources were compared in the article. The analysis result indicates that different sexes and different ages will largely influence residents' worrying degrees about resources, and their influences are all positive, and females' worrying consciousness is stronger than males' worrying consciousness, and the age is older, the residents' worrying consciousnesses about resources are stronger. From the estimation and test results of the model, the application of the Logistic regression model in the evaluation of the residents' worrying consciousness about resources is successful.

References

Gao, Tiemei. (2006). *Econometric Approach and Modeling.* Beijing: Tsinghua University Press, P. 200-204.

Table 1. Crossing frequencies of sexes and worrying degrees

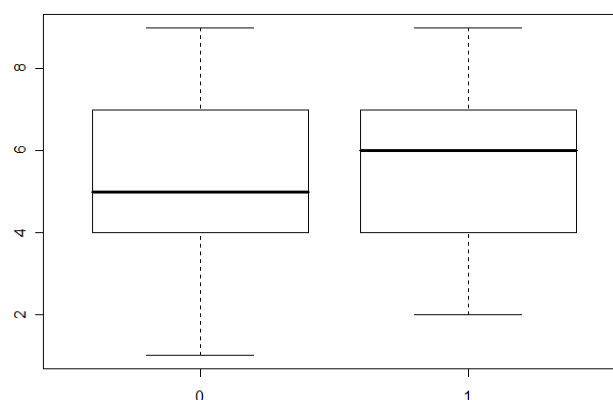|	Not worrying 0	Worrying 1
Male 1	129	278
Female 2	135	377

Figure 1. Box-shape Figure of Age and Worrying Degrees

Toward A Trustful B To B Relationship

Aida Matri Ben Jemaa (Corresponding author)

IAE Nice (France)/ ISG Tunis (Tunisia)

86, cité Hassen Nouri, Sidi Salem

Bizerte 7000, Tunisia

Tel: 216-98-522- 999   E-mail: aidamatri@yahoo.fr

Nadine Tournois

IAE – Université de Nice Sophia Antipolis

Avenue Emile Henriot, 06050 Nice, France

Tel: 33- 492-15-7373   E-mail: tournois@unice.fr

Abstract

Being trusted by the buyer has to be considered as an intangible asset that constitutes a considerable competitive advantage. To enjoy this advantage it becomes ineluctable to determine the trust's antecedents. This survey tents to bring elements of answer for this problematic in an industrial context.

The emphasis has been placed, in one side, on the importance of trust as a condition of successful relationship marketing, in the other side, on its conceptualization.

Finally, and while distinguishing two targets of trust, the seller and his salesperson, an empiric verification close to electronic industrial buyers, indicate that several variables influence trust's development towards the seller firm and its salespersons and that it (trust) can be transferred from the latter to the former.

Keywords: Trust, Buyer, Seller, Salesperson, Relationship marketing

1. Introduction

With markets globalization's, bans elimination, the competitive rivalries between enterprises was intensified motivating them to develop strategic advantages while establishing long-term relationships (Anderson and Weitz, 1989) like partnerships and strategic alliances development. However, all commercial exchange system cannot exist without trust that acts as strength that seals buyer and seller relationship and influence its long-term orientation (Hawes and al, 1989; Ganesan, 1994; Doney and Cannon, 1997). In this context, a better understanding of buyer - seller relationship should facilitate the development and the commercial efficiency between enterprises partners (Bergadaa and al, 1998).

Some authors introduce the enterprise in the process of development of trust (Doney and Cannon, 1997) and they recognize that sellers have an important function to fill to facilitate trust development towards their firms (Swan and Nolan, 1985), other authors wonder if trust is more inter-personal or inter-firm or both. Therefore, our problematic will be as follows:

To which extent trust to a seller firm is influenced by its characteristics as well by buyer-seller relationship features and to which extent trust to a salesperson is influenced by his characteristics as well by buyer-salesperson relationship?

While distinguishing, these two targets of trust (seller firm and salesperson), we will try in the following development to focus on the importance of trust as a condition of successful relationship marketing. Then and through our literature review based on Doney and Cannon (1997) research, we will present the conceptual model that identifies several variables that can influence trust development. Finally, the above model will be the object of empiric verification in a B to B context different to above authors' research field.

2. Trust: Importance and development

2.1 Why should we study the trust's concept?

In organization's relationship, trust is considered as an essential element that guarantee the two relationship parts success (Hawes and al, 1989).When a raised level of trust exists each part is convinced that the other is involved in their

mutual success. This sensation is reinforced by the fact that their successes are often interdependent. A customer with a high level of trust is a customer who has tendency to increase his purchases (Doney and Cannon, 1997). Buttler (1999) stipulates that if customers and sellers trust each other, the degree of complexity of their negotiations would necessarily decrease; it permits them to discuss some important topics for their mutual success rather than small details.

Furthermore, Langfield and Greenwood (1998) think that trust permits the improvement of the seller's performance while changing his slight satisfactory rapports. Indeed, thanks to trust, information becomes fluid, the customer receives a product of better quality, and cost savings will be achieved thanks to a better output as well as less inputs quality control.

In service context, Sidershmukh and al (2002) demonstrated also that the consumer's trust to his seller of service influences positively his fidelity what supposes that the customer commits a process of "word-of mouth" for seller's favour and also that he makes some repetitive purchases.

The aforementioned reasoning permits us to seize the importance of trust in B to B, B to C and customer-products relationships, what brings us to dig more again this concept that in spite of being studied in industrial context remains always a little bit ambiguous**.**

2.2 Defining Trust

The literature treating trust, particularly its definition, is dense and abundant. Nevertheless, this concept remains often vague. Indeed, this concept is, in the majority of cases, defined from the studied domain.

2.2.1 Trust perceived credibility and partner's benevolence

Drawing on literature in social psychology and marketing, Doney and Cannon (1997) define trust as the perceived credibility and benevolence of a target of trust:

- "The first dimension of trust focuses on the objective credibility of an exchange partner, an expectancy that the partner's word or written statement can be relied on" (Lindskold, 1978).

- "The second dimension of trust, benevolence, is the extent to which one partner is genuinely interested in the other partner's welfare and motivated to seek joint gain" (Doney and Cannon, 1997).

This definition of trust is relevant in an industrial buying context. A buying firm facing some degree of risk in a purchase situation turns to a seller or salesperson whom he believes being able to perform effectively and reliably (credible) and is interested in the customer's best interests (benevolent) (Doney and Cannon, 1997).

2.2.2 Towards a wider definition

A wider definition of trust's concept imposes itself. Trusting a partner, means believing he is credible, honest, reliable and benevolent. These trust's key variables are written down in an environment characterized by an uncertainty as for the partner's future behaviours.

The "trustor" sees himself in the obligation to accept to go ahead in a situation of vulnerability and expects what the result will be at his expectancy level. "The trusty" (confidence worthy) must consequently honour his engagements, what results in a certain reputation, a level of expertise and conformity to the behaviour standards (Sahli, 1999).

3. Conceptualization of trust to the seller and salesperson

3.1 Trust toward a seller firm

3.1.1 Characteristics of the seller

o   Seller reputation

The reputation has been defined as the public information concerning "the merit of trust" (trustworthiness) of an actor. In industry domain, the seller's reputation is defined as the extent to which firms and people in the industry believe a seller is honest and concerned about its customers (Doney and Cannon, 1997). The reputation of a society is considered like a key factor to create trust towards organizations, it has been well underlined in several domains, in marketing for example by Doney and Cannon (1997) and Ganesan (1994) and in economy by Williamson (1991).

In marketing literature, firm's reputation has been considered as the assessment aggregated of all firm's aspects, or the perception of the capacity of a firm to satisfy its shareholders expectations. The reputation is as the central element of trust foundation when partners do not know themselves and they want to achieve a transaction. Thanks to its transfer through firms, a favourable reputation puts in value the seller's credibility (Ganesan, 1994) and encourages the establishment of a relation.

While examining all these points of view, we notice that the pomposity is put on the nature of the reputation as an asset that is shared by different relationship parts, because they construct it and can destroy it as well. It is what makes it (reputation) qualified as a "hostage" between purchaser hands, this means that a seller's reputation can be destroyed by a

purchaser who can spill bad information concerning this seller if the last's behaviour is opportunistic (Spremann, 1988). That leads Dwyer and al (1987) to conclude that the opportunistic behaviour reduces trust. Therefore, sellers are reluctant to jeopardize their reputation by acting opportunistically (Telser, 1980).

The aforementioned analysis permits us to formally state our first hypothesis:

H1: Buyer trust is positively related to seller's reputation.

o   Seller Size

The firm size is defined while doing reference to the following indicators: employees' number, annual turnovers and assets (Silem, 1994). To the sense of Doney and Cannon (1997), the seller size encompasses the firm's overall size and its market share position. Seller size provides a signal to the buying firm that the selling firm can be trusted.

A seller's position on a market is an important criterion for partners' choice as well as for the establishment of a relation of trust (Doney and Cannon, 1997). This idea is reinforced by Silem (1994) who stipulates that there is a positive relationship between the firm's size and its financial capacity to make investments. Hence, more the size of a firm increases and more it is unlikely to behave on an untrustworthy manner to keep its market shares. This means that the opportunistic behaviour causes more costs for big firms in comparison to those of smaller sizes (Williamson, 1975).

Overall size and market share indicate that many other businesses trust this seller to do business with him. This suggests that this seller consistently fulfil his promises, otherwise it would not have been able to maintain his position in the industry (Doney and Cannon, 1997).

To confirm previous affirmations Doney and Cannon (1997) proved empirically that more the size of the firm is big more the industrial purchasers consider that it deserves trust. Thus, it appears clear that the firm size can be considered as a trust determinant.

Formally stated:

H2 Buyer trust is positively to seller's size.

3.1.2 Seller and buyer relationship

o   Seller eagerness to make specific investments

According to Williamson (1975), an investment is specific if its use cannot be varied without losing value. By specific asset, this author denotes machines, means of production, production sites, a particular site, and/or a particular expertise. Ganesan (1994) goes beyond this definition; indeed, he describes the specific investments in a relation by a signal that the seller deserves trust.   By this investment he means salespeople training (in his survey it was about retailers) what permits to advance that these investments represent a sign of a strong engagement in the relation.

To the sense of Doney and Cannon (1997), a seller can offer to make, or already made, idiosyncratic investments in his relation with his customer, these investments can either include specialized facilities an adaptation of the production process to cover the purchaser's need. To pursue this reasoning Granovetter (1995) adds the element " time " and stipulate that through time idiosyncratic investments transform an economic exchange to a social relation, this generates a certain dependence that corresponds to the loss generated by a possible dissolution of the relation (Guibert, 1999). In the same context, Buvik and John (2000) demonstrated empirically that purchasers who deals with sellers having made specific capital, reduces their transaction cost and will be more favourable to develop trust. Whereas, Ganesan (1994) demonstrated empirically that the purchaser perception on the seller willingness to make specific investments is positively related to the last benevolence as well as its credibility. In short, Williamson (1985) suggests that it is unlikely that the idiosyncratic investments hire an opportunistic behaviour because this kind of behaviour threatens the continuation of the relation, what generates a substantial value loss of these investments (Anderson and Weitz, 1992).Thus our third hypothesis:

H3: There is positive relationship between the willingness of the seller to make specific investments and the buyer trust.

o   Confidential information sharing

"The confidential information sharing involves the extent to which sellers share private information with the customers. The extent to which this confidential information is shared provides a signal of "good faith" to the buying firm" (Doney and Cannon, 1997).

Purchasers who are convinced that their seller don't deserve trust have tendency to behave on a non deserving trust manner, as for example to pass this information in the industrial surroundings. As result, purchasers can calculate that the cost of non-deserving trust behaviour increases when the seller share some confidential information with them (Doney and Cannon, 1997). For example, since the buyer can reveal this information to his seller's competitor, the cost that this information is used incorrectly can be very high (Kelly and Kerwin, 1993), therefore this sharing gives sign of "good faith". Therefore, sharing of confidential information would generate an economy of costs for the firm, and

therefore an increase of the outcome. However, Pallas and Richard (1999) don't seem to be quite approving advantages of the confidential information sharing on the long term. They stipulates that is necessary to take in account that, on the long run, it exists an involuntary disclosure risk (or voluntary) of some confidential information by the buyer that could generate strong losses for the firm. Thus our fourth hypothesis:

H4: Buyer trust is positively related to confidential information sharing by the seller.

Duration of relationship

This concept designates the duration of the buyer seller relationship without taking into account the experience, nor the social or business interactions between the two parts.

Returns of the relationship duration emerge from three sources that are the development of mutual knowledge, trust and specific relations (Anand and al, 2000). Concerning the second element (the one that interests us), Dwyer and al (1987) as well as Scanzoni (1979) affirm that through time (the duration of the relation), the experience with the seller increases and the couple buyer-seller leave behind shakeout periods. Such periods provide to the two parts a better understanding of each other what encourages the development of trust between them. In the same context, Ganesan (1994) demonstrated that the seller–buyer experience is positively related to the buyer perception of benevolence as well as seller's credibility (the two measurements of trust).This point of view is confirmed once more with the survey of Anderson and Weitz (1989) who found that trust of network members in manufacturers' increases with the duration of the relation.

In short, Doney and Cannon (1997) stipulate that the duration of time represent the investment that the two parts made in the relationship. These same authors affirm that most researchers are unanimous on the fact that trust is developed trough time. It brings us to give out our fifth hypothesis.

H5: Buyer trust is positively related to the duration of time they have been in contact with the seller.

3.2 Trust towards salesperson

3.2.1 The Salesperson

The salesperson plays very important role for trust development. That is, its characteristics are very important in B to B context. In the following, we will concentrate our development on the most common characteristics like expertise and capacity as well as the perceived likeability and perceived similarity by the purchaser. Certainly, some promotional tools could also explain the trust to a certain extent but we will not deal with them in this study because we will concentrate only on seller and salesperson characteristics the most important factors that could explain trust development in B to B context (Doney and Cannon, 1997).

o   Expertise

Expertise can be defined as a perception of the other knowledge and competence (Ghoshes and al, 2001).It can also be defined as the extent to which the interlocutor is discerned to be a reliable source regarding the transmitted message. It includes the expertise of this person as well as his qualification (Bearden and Netemeyer, 1998).

The role that plays salesperson expertise has received consideration from marketing literature. Indeed, several authors found that clients see the salesperson with more expertise to be more trustworthy. In the same context, Dholakia and Strenthal (1977) stipulate that the presumption that a source is more believable if it is more "trustworthy or expert" is not supported by the empirical studies. Contrary to Anderson and Clevenger (1963) who affirm, that expertise is a source of credibility, and also persuasion (Doney and Cannon, 1997).

In the education area, Ghosh and al (2001) demonstrated that more the expertise of a college or training centre is better discerned more it would deserve trust of its potential customers (students). This point of view is supported also by Moorman and al (1993) that proved that expertise of researchers is a founding element of trust. Therefore, experts generate more trust and a positive attitude towards the ideas that they recommend.

In sale's relations, Crosby and al (1990) affirm that consumers count on their assessments of expertise discerned as a significant indicator of trust.   In the industrial area, Michael and al (1987) affirm that to conquer his customer's trust it is imperative that salesperson becomes "customer expert" not only "product expert". Thus the sixth hypothesis.

H6: Buyer trust is positively related to seller's salesperson expertise.

o   Capacity

Salesperson capacity is defined as the buyer belief that the salesperson is capable to fulfil his obligation as well as his ability to provide results that are compliant to his promises (Doney and Cannon, 1997).

The salesperson's capacity to fill his liabilities depends on the nature of the relation he maintains with other actors, and more precisely of systems or networks in which he is inserted, it can be notably very important in the case of research agreements (Zaltman and Moorman, 1988).

Empirically, Moorman and Zaltzman (1992) found that when a researcher's capacity in an organization is raised, researcher's trust would be more important. Doney and Cannon (1997) support this point and affirm that the salesperson's capacity can be considered as a trust antecedent. For example, a salesperson who promises to send an order could be doubted if the buyer believes that this salesperson lacks control needed to fulfil this promise (Doney and Cannon, 1997).Thus the seven's hypothesis.

H7: Buyer trust is positively related to seller's salesperson capacity.

3.2.2 Buyer and seller relationship

o   Likeability

"Salesperson likeability refers to the purchaser's assessment that the salesperson of the seller firm is friendly, nice and pleasant to be around" (Doney and Cannon, 1997), it is also the seller's capacity to adjust his behaviour so that a favourable interpersonal interaction can occur with a big variety of purchaser's personalities.

Researchers in industrial marketing show that the trust sensation towards salespersons is positively joined to his likeability (Doney and Cannon, 1997). This point of view is also supported by Hawes and al (1989) who affirm that purchasers assign a positive trust to a nice representative. Therefore, to win purchaser's trust, a salesperson has to be discerned as being nice or friendly (Swan and al, 1988).

Weitz and al (1986) insisted on the notion of likeability while developing the notion of "adaptive selling" that designates the change of the salesperson behaviour during his interaction with the customer according to the situation of sale. This adaptation permits the development of trust towards these personals.

Finally, Rich and Smith (2000) demonstrated that more the salesperson is reactive (the speed with which a person react to calls as well as stimuli's) (Snyder, 1974) more it will be easy for him to identify the social profile and features of his interlocutor. What will facilitate the communication as well as the adaptation of the seller's behaviour to the buyer's one. These authors go beyond, while demonstrating that the feminine salespersons is more capable to identify profiles or social styles better than the masculine personal and so they have a more elevated adaptation capacity what makes that they are discerned as being nicer. This observation could be a big contribution and could bring us to wonder if it is thus more discriminating to replace all salespersons by feminine personal.

Thus our hypothesis number eight, formally stated,

H8: Buyer trust is positively related to seller's salesperson likeability.

o   Similarity

The similarity can be defined as the resemblance supposed between the source and the receptor of a message.   The similarity is esteemed by the purchaser's conviction that he shares the same interests and values with the salesperson. Common value sharing, belief and objectives encourage the development of trust's feeling (Doney and Cannon, 1997) because the buyers feels more capable to assess salesperson intentions. In other terms, buyers assign benevolence intentions to salespersons that are "Similar to them". Because they believe that they have some shared values. Value sharing corresponds to the extent to which partners have some similar beliefs on the importance and the relevance of some behaviour, certain goals, and some procedures (Guibert, 1999). Johnson and Johnson (1972) stipulate that the similarity can be the motor that allows a part of a relationship to foresee that the other will facilitate the realization of his objectives and will encourage the institution of a relation based on trust.

Dwyer and al (1987) confirmed that the shared values permit trust development; the same case is for Morgan and Hunt (1994). Hence, these last two authors stipulate that when exchange partners shares values, they will have more trust. The difference of objectives and value drives to a hostile atmosphere in a relation and pull up the development of trust (Anderson and Weitz, 1989). This point of view is also supported by Donald and Broch (1997) who proved empirically that less there is similarity between two parts less will be the assessment of trustworthiness. Thus our ninth hypothesis.

H9: *Buyer trust is positively related to seller's salesperson similarity.*

o   Contact frequency with the salesperson

By contact, we designate interaction between seller and buyer, so a frequent contact designates several interactions between these two parts. When the salesperson has frequent contacts with the buyer for a business or social reason, trust can be constructed because the buyer sees the seller in different situations.   What permits to know him more through different reactions this salesperson has (Doney and Cannon, 1997). Therefore, these authors stipulate that the frequent interactions encourage trust while allowing the buyer to understand better the salesperson to the extent to predict this personals future behaviour. According to Hacker and al (1999) trust is build through time throughout frequent interactions between individuals as well as partners.

Empirically, and in insurances area, it has been demonstrated that the frequency of salesperson and customers communication's for business or social reasons is a key determinant for this relationship continuation (Crosby and al,

1990). Although these authors have studied business relationships, they found that a positive relation exists between the frequency of contacts and the trust towards salespersons.

To the sense of Doney and Cannon (1997), the social interactions provide a casual environment that reinforces information's flue and help to construct inter-personal relations and encourage a better mutual understanding and thus the establishment of trust. These authors stipulate that, the social and professional interactions can generate trust, because buyers attribute benevolent intentions to the salesperson with whom they share professional and social ties. Zaltman and Moorman (1988) reinforce more the above reasoning while insisting on the importance of interactions that permits the mutual understanding of the two exchange parts (in their case of survey it was directors and researchers) through experiences. Therefore our tenth and eleventh hypothesis

H10: *Buyer trust is positively related to seller's salesperson frequency of business contact.*

H11: *Buyer trust is positively related to seller's salesperson frequency of social contact.*

o   Duration of relationship

By duration of relationship, we designate the number of years during which the buyer knew the salesperson. The construction of a long-term relation became a strategically important objective (Cravens,1995), and this thanks to advantages generated by this type of relation (long term relationship) as the development of mutual trust as well as added value (Wood ,1995). While supporting these suppositions, Shultzes and Good (2000) demonstrated empirically that salesperson who is more customer oriented will have more tendency to establish long-term relations. These authors affirm that the immediate advantage seek does not encourage the development of a relation based on mutual trust.

In the scientific researches area, Zaltzman and Moorman (1988) demonstrated that the absence of lasting relations between researchers and directors reduces the opportunity to establish an elevated level of trust although a research of good quality can be provided. These same authors affirm that one of the factors that improves the understanding between researchers and directors are the duration of the relation that is reflected by the number of common year of experience. What permits trust development while helping every part to understand constraints and difficulties undergone by the other. Besides, we notice that several empiric studies proposed to study the relation between the workforce stability (rate of salesperson's rotation) as well as trustworthiness (Donald and Brock, 1997) while concluding that it exists a strong negative inter-relationship between the rate of rotation and trust towards this personal.

In the industry area, Doney and Cannon (1997) stipulate that the investment of salesperson in his relation with the buyer increases through time and since this investment will be put in danger following to non-deserving trust behaviour, this personal would then try to be trust worthy. Thus, the duration of buyer-seller relationship should strengthen trust because it provides the insurance that the future behaviour of the salesperson is only a projection of the past (a mirror of past behaviour) (Doney and Cannon, 1997). This reasoning permits us to advance our twelfth hypothesis.

H12: *Buyer trust is positively related to duration of time he has been in contact with seller's salesperson.*

3.3 Trust toward the seller and trust toward the salesperson

"In industrial markets, salesperson behaviour is assigned to the seller firm culture, reward system and the training program). The buyer supposes that the salesperson behaviour reflects values and seller's attitudes" (Doney and Cannon, 1997). Sirdermukh and al (2002) share the same opinion, indeed they affirm that salespersons acts according to roles prescribed by management units and don't seem to be independent since it is policies and managerial practices that seems control and determine the agent's behaviour. Therefore, when the customer has a limited experience with the seller, trust towards this firm can be concluded on the perceptions of salesperson trust deserving behaviour. Therefore, buyer trust towards salesperson is transferred to seller firm (Doney and Cannon, 1997).

In spite of the fact that Doney and Cannon (1997) arrived to prove empirically that trust of salespersons can be transferred to the seller and that seller's trust can be transferred to the salesperson. For this research, we will focus our analysis on the first sense. First, because as we have the constraint to focalize on only one sense due to the statistical analysis and second because this sense seem to be more interesting than the second one (Pallas and Richard, 1999).

While doing reference to the here over development, we propose to verify empirically that trust towards salespersons is transferred to the seller. It will be the object of our thirteenth hypothesis.

H13: *Buyer trust is positively related to buyer trust in the salesperson.*

3.4 Synthesis and conceptual model presentation

This model has been adapted from Doney and Cannon (1997) research. Indeed these researchers tried to conceptualize antecedents as well as consequences of trust in a B to B relationship. Variables of the model are regrouped in four categories as follows:

- Characteristics of the seller firm

- Characteristics of the salesperson

- Characteristics of the seller firm relationship

- Characteristics of the salesperson relationship

Insert Figure 1 here

4. Research methodology

4.1 Variables measure

Used scales have been seized from Doney and Cannon (1997) research. These two authors have generated multi-item scales based on measures used in previous research as well on interviews with the purchase personals from several firms. All variables have been measured while using a Likert on a seven points scale.

4.2 Sample description

The sample frame comprised 65 international high tech firms belonging to the electronic industry (implanted in Europe as well as in America); the entire sample was e-mailed a questionnaire and a letter requesting their participation. A total of 47 questionnaires were returned dully filled (a 72% response rate). Respondents were basically male (78.7%), with an age of 30 to 40 years for 44.7% and a percentage of 36.2% for the interval 40 to 50 years. The level of instruction is a superior level for 78.7%, with an experience more than 5 years in purchases for 59.6% and seniority more than 5 years for 48.9%. Either that shows that an elevated number of purchasers are experienced on the level of their functions or in the firm they are working for.

Firms to which belongs these respondents are generally public companies and make part essentially from automotive (38.3%), followed by Telecom (27.7%) and then electronics industrial sector (17%). This distribution puts the accent on the importance of trust due to the dynamism of these sectors (technological changes, demand fluctuation..).

4.3 Measure scale reliability

The alpha of Cronbach has been calculated for every scale, the gotten values provide a good reliability (between 0.64 and 0.94).

4.4 Hypotheses Validation

Hypotheses developed in this survey imply relations of reason to effect. To verify them we will use the analysis of regression. This method consists in measuring if there is a linear interrelationship between the independent variables and the dependent variables. For this, we used following indicators:

- VIF   : Factor of inflation of the variance

- F   : The test of Fisher

- T   : The test of Student

4.4.1 Characteristics of the seller firm: (H1 and H2)

Results are summarized as follows:

Insert Table 1 here

The regression analysis of the variable "reputation " and the variable " size " (independent variables) as well as the variable "Trust towards the seller " (dependent variable) appears as follows:

The value of VIF provides a reasonable fit for the two variables. What proves that there is not an interrelationship between these independent variables. The value of F =12.828 was statistically significant with Sig =0.000 what provide a reasonable fit. This value permits us to affirm that it exists at least an explanatory variable in the model. Values of T are superior to 1.96 in the two cases with a lower significance to 0.05, this permit to advance that the two variables reputation and size of the seller are explanatory ones. That is, the two first hypotheses are confirmed. So reputation and seller's size are two antecedents of trust towards the last.

4.4.2 Characteristics of the seller firm relationship: (H3, H4 and H5)

Insert Table 2 here

The analysis of regression between the abovementioned variables and the variable "Trust towards the seller " brings us to conclude that "Willingness to customize" as well as "Confidential information sharing" are two variables determining trust whereas the duration of the relation is not.

4.4.3 Characteristics of the salesperson: (H6 andH7)

Insert Table 3 here

The analysis of regression shows that the hypothesis N° 6 is accepted and N°7 is rejected.

4.4.4 Characteristics of the salesperson relationship :(H8, H9, H10, H11 and H12)

Insert Table 4 here

Hypotheses N°8 and N°10 are confirmed whereas hypotheses N°9, N°11 and N°12 are invalidated.

4.4.5 Relationship between trust towards seller and trust towards salesperson: (H13)

Insert Table 5 here

The last hypothesis is confirmed.

4.5 Synthesis

The first result is the importance of reputation as well as the seller's size as determinants of trust. This result goes in the same sense as previous researches.

Regarding seller firm relationship characteristic's, the variables "Willingness to customize" and "Confidential information sharing" interferes like elements permitting trust development, whereas the duration of the relation with the seller has not been kept as trust determinant. Concerning salesperson it has been proved that his expertise, likeability as well as his frequent business contacts are some important elements to conquer purchaser's trust. Whereas his capacity, his similarity, the frequency of his social contacts as well as the duration of his relation with the purchaser don't have an effect on trust towards him. Finally, and concerning the transfer of trust generated by the salesperson to the seller, the result confirms the existence of a positive relationship between the first and the second variable confirming thus previous research results.

Consequently, the final model will be as follows:

Insert Figure 2 here

5. Analysis and results interpretation

5.1 Discussion

The results confirm the importance of the seller's characteristics (size, reputation). These variables appear to be important in different domains as many authors are unanimous on their effect on buyer's trust (Ganesan, 1994; Dasguptas, 1988; Anderson and Weitz, 1989..).It has also been demonstrated that the "Willingness to customize" is also an antecedent of trust. Indeed this kind of behaviour shows that the business seller is sincere what makes that he deserves trust (Ganesan, 1994).

In accordance with the previous researches, confidential information sharing is an important variable in the determination of trust since it gives sign of the good faith and seller's benevolence (Doney and Cannon, 1997).We should also note that this variable can also acquire a high level of value for our sample since it is about " Hi-Tech Firms " where the dimension benevolence presents a crucial importance for trust development (Bell and al, 2002).

Contrary to certain researches but in accordance with the research of Doney and Cannon (1997), the duration of the salesperson and seller relationship appears not to have an effect on the development of trust towards the seller as well as towards his salesperson in the B to B context. This could be explained by the fact that the majority of studies confirming the importance of relation's duration have been elaborated for distribution channel area (Anderson and Weitz, 1989; Ganesan, 1994; Morgan and Hunt, 1994). Indeed and in comparison with distribution channel, the industrial markets have tendency not to accept elevated levels of dependence.

For the salesperson and in accordance with previous research results, it appears that their expertise, their discerned likeability as well as the frequency of their business contacts constitutes keys variables to trust development. Indeed these three variables have been strongly solicited in several areas but the importance of the variable expertise could be in particular underlined in our case of survey since it is about high technology product. Concerning the variable likeability, it shows big importance and found a big theoretical support (Rotter, 1980; Swans and al, 1988; Hawes and al, 1989; Doney and Cannon, 1997). Finally, encouraging a mutual understanding, the business contact frequency between purchaser and salesperson permits the development of trust (Zaltman and Moorman, 1988).

Besides, it has been demonstrated that other variables relative to salesperson as his capacity, his similarity, and frequency of his social contacts don't have an effect on trust development. Indeed researches in B to B didn't insist too much on these variables contrary to those in service areas (Crosby and al, 1990; Zaltman and Moorman, 1988; Moorman and al, 1992) that see that these salespersons play a key role. This explanation could be sustained also by the setting of our research where the industrial purchasers of a high technology product keep always as first objective problem resolution and honesty.

In short, the last statement is the transfer of trust generated by salesperson to the firm. This report is compliant to the survey of Doney and Cannon (that are among the rare researchers to work on two targets of trust), from where the importance to differentiate between these two targets.

5.2 Theoretical implications

The above results go in the sense of a confirmation of the importance to determine trust antecedents in a buyer seller relationship. Some theoretical implications emerge.

A First contribution is expressed by the confirmation of the variation of variables importance determining trust according to the context of survey. Indeed it was proved that the pomposity is put on salesperson's features as variable antecedent trust in the service context, whereas and due to high level of dependence in distribution channel the accent is rather put on the duration of the relation. In short, in B to B context it is rather the firm characteristics.

A second contribution to the theory permit to confirm the adapted model of Doney and Cannon (1997) in a different research context and that trust has several determinants.

5.3 Managerial implications

First, results show that the industrial buyer give a lot of importance to the seller's characteristics (reputation and size), since while doing massive investments, it is strongly unlikely that these sellers behave in an opportunistic manner. It appears thus important that this firm puts in relief these two aspects when meeting its customers (fair or visit), as well as on its advertising supports.

Second, it appears interesting to share confidential information, but with vigilance because it could be a double-edged weapon. In fact, as Pallas and Richard (1999) stipulates, it is important to take in account that with the duration it exists an involuntary (or voluntary) disclosure risk of some confidential information, what could generate strong losses for the firm.

6. Conclusion

This survey aimed to determine trust antecedents for buyer seller relationships in a B to B context, for that the pomposity has been first put on this relationship characteristic, then we put in relief the importance of trust for these relations. Finally and while having reference to our literature, a conceptual model (adapted from Doney and Cannon) has been presented on differentiating between two targets of trust: the firm and its salesperson.

Results showed that seller's characteristics (size and reputation), confidential information sharing, as well as his willingness to make some specific investments, play an important role for trust development towards him. It suggests that to develop and maintain a relation of trust with his customer, the seller must concentrate his efforts this way.

Regarding salesperson expertise, likeability, as well as business contact frequency appeared of great importance, what emphasizes the importance of salesperson training either on behavioural level or on product characteristics.

Results also showed that trust generated by salespersons is transferable to the firm and it (trust) is developed differently towards the two targets. This result is very important because it shows that besides his assets (tangible or intangible), the seller can develop trust through his salesperson.

Illustrative of the formation of the inter firm cooperation, trust is also associated to its success. Mohr and Spekman (1994) show its effect for example on satisfaction and on growth of sales volume in a relation, whereas, Arrow has insisted on the importance of trust in economic relations. Therefore we conclude that beneficing of buyer's trust is to be considered as an intangible asset that constitutes a considerable competitive advantage. To enjoy this advantage, the issue will not be only developing trust but also knowing how to maintain it. Therefore, firms already beneficing of their customers trust are in perpetual research of processes to assure its maintenance. This idea is sustained strongly by Charles Goodman who stipulates that: "***Firms don't do any purchases, they establish relations***"

7. Limitations and further research

This work does not constitute a finished study. On the contrary, it only tries to suggest tracks and axes of improvement for enterprises.

First, the retained explanatory variables are not the only ones to contribute to trust development towards the industrial seller. Indeed, in spite of the integration of several variables determining trust, it is possible to identify other ones, as promotional tools used by the seller. Further research could perhaps study this aspect.

Furthermore, the heterogeneity of our sample (enterprises implanted in Europe as well as in America) doesn't allow to generalize our results in an affirmed manner due to the cultural divergence. It would be thus interesting to underline this aspect while leading a comparative survey to study the impact of culture in the development of a buyer seller relationship based on trust.

In short, we must note the static character of our approach of trust. The choice of a transverse perspective, in spite of its advantages, doesn't permit to give idea about the dynamism of trust development process through time. The overtaking of this one-sided approach could be operated while doing longitudinal studies.

References

Adkins, R.T., & Swan, J.E. (1980). Improving the Public Acceptance of Salesperson Through Professionalism. *Journal of Personal Selling & Sales Mangement,* 2 (Fall/Winter), 32-38.

Andaleeb, S.S. (1992). The Trust Concept: Research issues for Channels of Distribution. *Research in Marketing*, 11, 1-34.

Andaleeb, S.S. (1995). Dependence Relations and the Moderating Role of Trust: Implications for Behavioral Intentions in Marketing Channels. *International journal of research in Marketing*, 12, 157-72.

Andaleeb, S.S. (1996). An experimental investigation of satisfaction and commitment in marketing channels: the role of trust and dependence. *Journal of retailing*, 72, 1, 77-93.

Anderson E., & Weitz, B. (1989). Determinants of continuity in conventional Industrial channels dyads. *Marketing science*, 8, 4, 310-323.

Anderson, E., & Weitz, B. (1982). The use of pledges ti build and sustain commitment in distribution channels. *Journal of marketing Research*, 29, 18-34.

Anderson, J.C, & Narus, J.A. (1984). A model of the Ditributor Perspective of Distributor –Manufacturer Working Partenerships. *Journal of Marketing*, 48, 3, 62-74.

Bagozzi, R.P. (1975). Marketing as Exchange. *Journal of marketing*, 39, 4, 32-9.

Bearden, O.W, & Netemeyer G.H. (1998). Handbook of Marketing Scales, in Second Edition, SAGE Publications.

Bell, G.G., Oppen Heimer, K.J., & Beslien, A. (2002).Trust deterioration in an inter national buyer-supplies relationship. *Journal of Business Ethies*, 36, 1/2,   65-78.

Bergadaa, M., & Darmon, R. (1996). Strategies used by the customer –salesperson dyad within selling context. *25 th Annual conference of the European Marketing Academy (EMAC)*, Budapest, May 14-17.

Bergadaa, M., Graber, S., & Muhlbacher, H. (1998). La confiance dans la relation tripartite Vendeur-Client – Entreprise. *18 ieme Congrès de l'association française de marketing*, Strasbourg, May.

Bergadaa, M., Graber, S., & Muhlbacher, H. (1999). La confiance dans la relation tripartite vendeur- client –entreprise " *27ème   Congrès de l'Association Française de Marketing Strasbourg,* Mai 1999 .

Berry, L.L, & Parasuraman, A. (1991). Marketing services. The free Press 1991.

Berry, L.L. (1983). Relationship Marketing. In Berry, Skostock et Upah (ed) Emerging Perspectives on services Marketing. *American Marketing association*, 25-28.

Blois, K.J. (1999). Trust in business to business relationships – An evaluation of its status. *Journal of Management Studies*, March.

Brown, J.R. (1998). Marketing Channel Management: People, Products, and Programs. *Academy of Marketing Science. Journal*, 26, 3, 250-252.

Buttler, J.K. (1999). Trust Expectations ,Information Sharing ,Climate of trust, and Negociation Effectiveness and Efficiency. *Group and organization Management*, 24, 2, 217-238

Buvik, A., & John, G. (2000). When Does Vertical Coordination Improve Industrial Purchasing Relationship. *The Journal of Marketing*, 64, 4, 52-64.

Chang,   J. (2002). Motivation secrets & revealed. *Sales and Marketing Management*, 154, 10, 38-41.

Chow, P.P., & Reed, H. (1997). Toward and understanding of loyalty: the moderating role of Trust. *Journal of managerial issues*, 9, 3 , 276-298.

Cova, B. (2001). Les Market-places à l'épreuve de la réalité des échanges B to B.   *Décisions marketing*, 24, 67-73.

Cova, B., & Salle, R. (1992). L'évolution de la modélisation du comportement d'achat industriel : Panorama des nouveaux courants de recherches. *Recherche et application en marketing*, 7, 2, 83-106.

Cravens, DW. (1995) . The changing role of sales force. *Marketing Management*, 4, 48-57.

Crosby, L.A., Evans, K.R., & Cowles, D. (1990). Relationship Quality in services Selling: An Interpersonal influence perspective. *Journal of marketing*, 54, 3, 68-81.

Delgado-Ballester, E., & Munuera – Aleman, J. (2001). Brand Trust in the context of consumer loyalty. *European Journal of Marketing,* 35, 11/12, 1238-1258.

Dholakia, R.S. (1977). Highly Credible sources: Persuasive Facilitators or Persuasive Liabilities? *Journal of consumer Research*, 3, 223-232.

Donald, W.B., & Brock, J.S. (1997).The effects of organizational differences and trust on the effectiveness of selling partner relationships. *Journal of Marketing*, 61, 1, 3-21.

Doney, P.M, & Cannon, J.P. (1997). An Examination of the nature of trust in buyer-seller relationships. *Journal of Marketing*, 61, 2, 35-51.

Dwyer, F.R., Schurr, P.H., & Oh, S. (1987). Developing buyer – seller relationships. *Journal of marketing*, 51, 4, 11-27.

Fenneteau, H. (1992). Les caractéristiques de l'acte d'achat . *Recherche et applications Marketing*, 7, 3.

Forrester,W.R., & Jr.Locander,W.B. (1989). Effects of Sales Presentation Topic on Cognitive Reponses in Industrial Buying Groups. *Academy of Marketing Science.Journal*; Greenvale Fall 1989.

Fournier, S. (1998). Consumers and their brands: developing relationships theory in consumer research. *Journal of Consumer Research*, 24, 343-373.

Ganesan, (1994). Determinants of long –term orientation in buyer-seller relationships. *Journal of Marketing*, 58, 2, 1-24.

Ghosh, A.K., Whiple, T.W., & Glenn, A.B. (2001). Student trust and its antecedents in higher education. *The Journal of Higher Education* , 72, 3, 322-340.

Graf, G., Perrien, J., & Ricard, L. (1999). La confiance : Son statut et sa valeur normative. Centre de recherche en gestion Montréal Document 13-98-J- line, 15, 261.

Granovetter, M. (1985). Economic action and social structure: the problem of embeddedness. *American Journal of Sociology* , 91, 3, 451-510.

Grönroos, C. (1994). From marketing mix to relation ship marketing: Towards a pardigm shift in marketing. *Management precision*, 29, 1, 7-13.

Guibert, N. (1998). Relation clients-fournisseur :Portée et limites de la confiance en contexte Français. *La revue Française de Marketing,* numéro spécial marketing interentreprises.

Guibert, N. (1999) . La confiance en marketing : fondement et applications. *Recherche et Applications Marketing*, 14.

Gummesson, E. (1996). Relationship marketing and imaginary organisations: Asynthesis. *European Journal of Marketing*, 30, 2, 33-34.

Hawes, J., Mast, K.E, & Swan, J.E. (1989). Trust Earning Perception of sellers and buyers. *Journal of personality selling and Sales Management*, 9, 1-8.

Heide, J.B., George, J. (1990). Alliances in Industrial Purchasing: The Determinants of Joint Action in Buyer – Supplier Relationships. *Journal of Marketing Research*, 27, 24-36

Hutt, M.D et Speh, T.W. (1998). A Shelegic view of industrial and organisational markets. In (6th edition). Orlando: Dryden Press.

Johnson, D.W, & Johnson, S. (1972). The effects of Attitude Intensity, Expectation of Goal Facilitation,and Actual Goal Facilitation on Interpersonal Attraction. *Journal of Experimental Social Psychology*, 8, 3, 197-206.

Kotler, P., & Dubois, B. (1994). Marketing Management. In Nouveaux Horizons 8ème édition 1994

La Porta, R., et al. (1997). Trust in large organisations. *American Economic review*, 87, 2, 333-338.

Le Blanc, F. (1986). Le marketing industriel. In Librairie Vuibert, 1986 p16.

Lendrevie, J., & Lindon, D. (1997) . Mercator Théorie et pratique du marketing. In 5ieme Edition Dalloz.

Lindskold, S. (1978). Trust Development ,the GRIT proposal and the effects of conciliatory Acts on conflict and cooperation. *Psychological Belletin*, 75, 4, 772-93.

Marion, G. (2001). Le marketing relationnel existe –t-il ?. *Décisions Marketing* , 22, Janvier-Avril,7-16.

Mayer, R.C., Davis, J.H, & Schoorman, F.D, (1995). An Integrative Model of Organizational Trust. *Academy of Management Review*, 20, 3, 709-734.

Michaels, R.G, Day, R.L., & Joachimsthaler, E.A. (1987). Role Stress Among Industrial Buyers: An Integrative Model. *Journal of Marketing*, 51, 28-45.

Milliman, R.E., & Douglas, F. (1988). Using trust transference as a persuasion Technique: An Empirical Field Investigation. *Journal of Personal Selling and Sales Management*, 8, 1-7.

Moorman, C., Zaltman, G., & Deshpande, R. (1992). Relationships Between Providers and users of Market Research : The Dynamics of trust within and between organizations. *Journal of Marketing Research*, 314-328.

Morgan, R.M., & Hunt, S.D. (1994). The Commitment–trust theory of relationship marketing. *Journal of Marketing*, 58, 3, 20-41.

Mowen, J.C, Wien, J.L, & Joag, S. (1987). An information integration anlysis of how trust and expertise combine to influence source credibility and persuasion. *Advances in Consumer Research*, 14, 564-567.

Nevin, J.R. (1995). Relationship Marketing and Distribution Channels: Exploring Some fundamental Issues. *Journal of the academy of Marketing Science*, 23, 4, 327-34.

Perrien, J., Cheron, E.J., & Zins, M. (1986). Recherche en Marketing ,Méthodes et Décisions. In Gaetan Morin, 34-36.

Rich, M.K, & Smith, D.C. (2000). Determining relationship skills of prospective salespeople. *The Journal of Business & Industrial Marketing*, 15, 4, 242-259.

Roussel, Durrieu, Campoy, & El Akremi. (2002). Méthodes d'équations structurelles: Recherche et applications en gestion. In Economica.

Sahli – Abbes, M. (1999). Consommateur Enseigne de distribution: vers une relation de confiance évolutive. Colloque en science de gestion.

Sako, M. (1992). Price, quality and trust, Interfirm Relations in Britain and Japan. *Cambridge University Press*.

Scanzoni, J. (1979). Social Exchange and Behavioral Interdependence. In Social Exchange in Developing Relationships, R.L. Burgess and T.L. Huston, eds New York: Academic Press.

Schultz, T., & Strasheim, C. (1999). Relationship marketing for industrial markets" Southern African Business Review December 1999, 3, n° 2, 7-13.

Shultz, R.J, Good, D.J. (2000). Impact of the consideration of future sale consequences and customer-oriented selling on long-term buyer-seller relationships. *The journal of Business & Industrial Marketing*, 15, 4, 200-215.

Siderhmukh, D., Singh, J., & Sabol, B. (2002). Consumer Trust, Value, and Loyalty in Relational Exchanges. *Journal of Marketing*, 66, 15-37 .

Silem, A. (1994) .Encyclopédie de l'économie et de la gestion. Edition Hachette.

Sirieix, L., & Dubois, P.L. (1999) .Vers un modèle qualité satisfaction intégrant la confiance, *Recherche et Application Marketing*, 14 , 13, 1-21.

Spremann, K. (1988). Reputation , Garantie, Information. Zeitschrift fur Betriebwirtschaft, 58, 613-629.

Strub, P.J., & Priest, T.B. (1976). Two Patters of establishing Trust: The Mrijuana user. *Sociological Focus*, 9, 4, 399-411.

Swan, J.E., & Nolan, J.J. (1985). Gaining Customer Trust: A conceptual guide for the Salesperson. *Journal of Personal Selling & Sales Management* , 5, 2, 39-48.

Swan, J.E., Trawick, I.F., Jr.Rink, D.R, & Roberts, J.J. (1988). Measuring Diemsions of Purchaser Trust of industrial, Sales people. *Journal of personal selling and Management*, 8, 1-3.

Thomas, R.J. (1989). Industrial Market Segmentation on Buying Center Purchase Responsibilities. *Academy of Marketing Science.Journal,* Greenvale, Summer.

Van Veijeren. (1998). Gaining compétitive Advantage in business to business Marketing Trough Plans and Systems (1st edition). *Industrial Marketing,* Cape Town, Juta.

Weinreb, M. (2002). Image makers & breakers: Body language. *Sales and Marketing Management*, 154, 10, 20-21.

Weitz, B.A, Sujan, H., & Sujan, M. (1986). Knowledge, motivation, and adaptative behavior: a framework for improving selling effectiveness. *Journal of Marketing*, 50, 4, 174-91.

Wiener, J.L, & Mowen, J.C. (1986). Source Credibility: On the independent effects of trust and expertise. *Advances in Consumer Research*, 13, 306-310.

Williamson, O.E. (1975). *Markets and Hierarchies: Analysis and Antitrust Implications*, New York, The Free Press.

Williamson, O.E. (1991). Calculativeness, Trust and Economic Organization. *Journal of Law and Economics*, 26 April, 453-86.

Wood, M.F. (1995). Get more for your product or service: develop value added buyers. *Americain Salesman*, 40, April, 3-7.

Young, L.C., & Wilkinson, I.F. (1989). The role of Trust and cooperation in Marketing Channels: A Preliminary Study. *European Journal of Marketing*, 23, 2, 109-22.

Zaheer, A., & Venkatraman, N. (1995). Relational Governance as an Interorganizational Strategy: An Empirical Test of the role of Trust in Economic Exchange. *Strategic Management Journal*, 16, 373-92.

Zaltman, G., & Moorman, C. (1988). The importance of personal trust in the use of research. *Journal of Advertising Research,* October / November, 16-24.

Table 1. Results of the regression characteristics of the seller firm and Trust

F	Sig			
12.828	0.000			
	Coeff B	T	Sig	VIF
Reputation	0.264	2.063	0.045	1.142
Size	0.461	3.603	0.001	1.142

Table 2. Results of the regression characteristics of the seller firm relationship and trust towards it

F	Sig	Coeff B	t	Sig	VIF
5.302	0.003				
Willingness to customize		0.361	2.614	0.012	1.124
Confidential information		0.426	3.248	0.002	1.014
Duration of relationship		$2.989 \ 10^{-2}$	0.338	0.737	1.112

Table 3. Results of the regression characteristics of the salesperson and trust towards him

F	Sig			
3.566	0.037			
	Coeff B	T	Sig	VIF
Expertise	0.321	2.285	0.027	1.009
Capacity	0.164	1.165	0.250	1.009

Table 4. Results of the regression characteristics of the salesperson relationship and trust towards him

F	Sig	Coeff B	t	Sig	VIF
3.452	0.011				
Likeability		0.401	2.664	0.011	1.319
Similarity		$-8.327 \ 10^{-2}$	-0.582	0.564	1.193
Frequent business contact		0.300	2.187	0.034	1.098
Frequent social contact		$7.849 \ 10^{-2}$	0.589	0.559	1.036
Duration of relationship		$2.391 \ 10^{-2}$	0.294	0.770	1.059

Table 5. Results of the regression trust towards the salesperson and trust towards seller

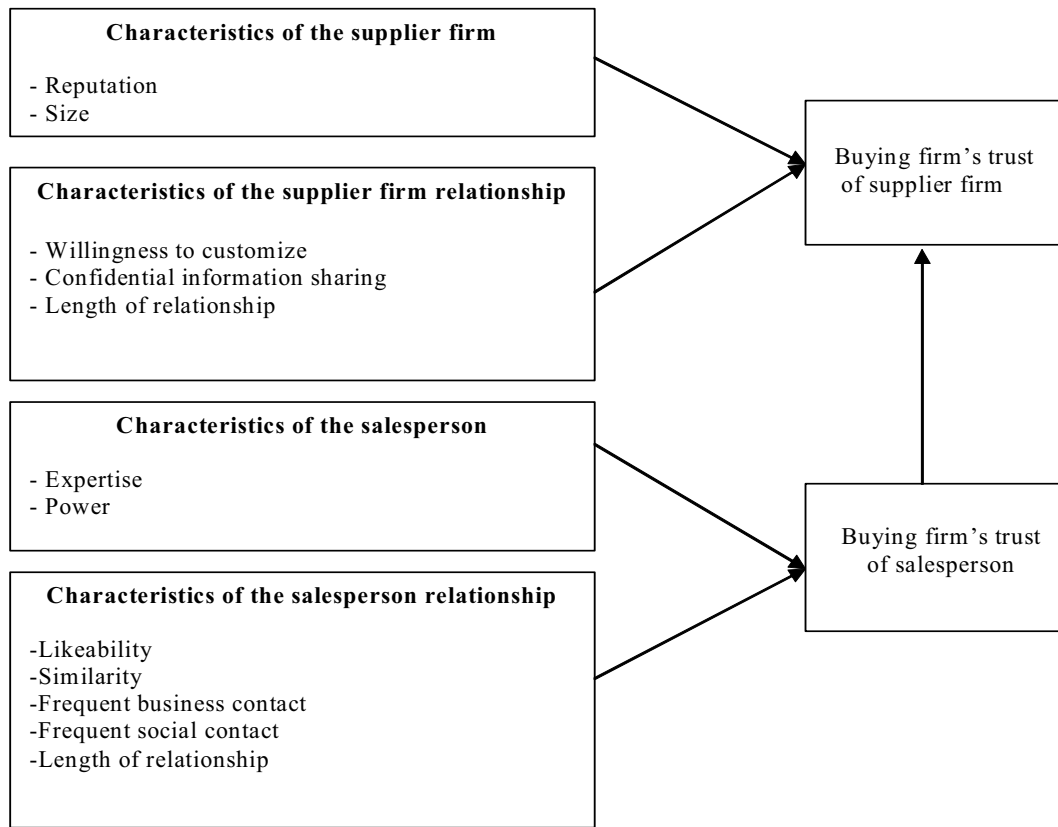| F	Sig	Coeff B	T	Sig
12.018	0.001			
Trust towards the salesperson		0.459	3.467	0.001

Figure 1. Antecedents of trust toward a buyer
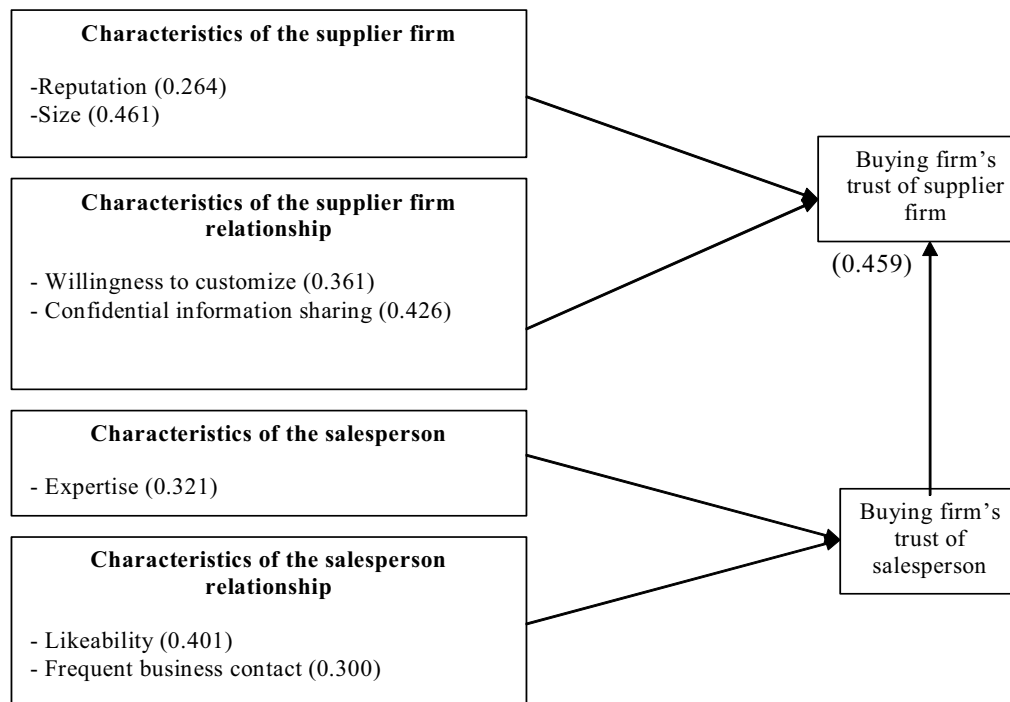
(Adapted from Doney and Cannon, 1997)

Figure 2. Antecedents of trust toward a buyer

Research on the Long-Term Mechanism for

Chinese Commercial Banks' Risk Prevention

Dazhu Yan & Ying Wang

School of Economics and Management, Changchun University of Science and Technology

Changchun 130022, China

E-mail: dingmengchun312@163.com

Abstract

Under the background of global financial crisis, Chinese commercial banks suffer from significant economic losses and negative social influences due to frequently happened risks. To prevent risks tends to be more urgent. This paper starts from risks in front of Chinese commercial banks under the financial crisis, analyzes problems in Chinese commercial banks constructing risk prevention long-term mechanism, and advances countermeasures for expediting the construction of risk prevention long-term mechanism.

Keywords: Financial crisis, Commercial bank, Risk prevention, Long-term mechanism

1. The main risks in front of Chinese commercial banks under the financial crisis

For a long period, Chinese commercial banks face problems of poor assets quality and low assets reorganization rate. Under the background of global financial crisis and China's imperfect financial market, commercial banks do not possess perfect risks management system. More risks exist in both risks evaluation and prevention and internal control.

1.1 Risks of financial innovation

Chinese commercial banks lack of initiatives in product design and pricing and lay less stresses on product development and brands, which leads to a serious product homogenization and an absence of core competitiveness. Therefore, all commercial banks have the problem of financial innovation. Because of restrictions in system, technologies, and macro policies, presently Chinese commercial banks' financial innovation mainly focus on quantities. The type of financial innovation is few and the scale is small. Innovations concern all fields of commercial banks but mostly are introduced from western countries directly. Few are originated from China.

1.2 Risks of financial credit

Some commercial banks fail to follow the principle of matching customers' interests and risk-bearing capabilities as they design financial products. They do not develop products and design portfolio in perspective of asset allocation, or predict the return of financing portfolio by scientific and reasonable measures, or build market risk supervision indexes and effective market risk identification, assessment, supervision, and control system. "Do not perform customer evaluation effectively". Supervision and regulatory institutions find that some commercial banks do not perform customer risk preference evaluation or do it carelessly, do not understand customers' financial conditions, investment goals, investment experiences, risk recognition, and risk bearing capability exactly, do not evaluate whether recommended financing products are suitable for customers or not and inform relevant suggestions to customers.

1.3 Risks of financial operation

At present, due to the loose financial regulation, business globalization, fast financial innovation, and fast development of information technology, commercial banks face growing operational risks. The greatest difficulty for Chinese commercial banks' operational risk management is the personnel management. Because the internal control mechanism in Chinese banks is still imperfect, together with the corruption during the transformation of society, it is time consuming to build the consciousness of operational risks in banking industry. It is well-known that the most frequently happened operational risk is personnel risk. Illegal operations are common.

2. The problems in Chinese commercial banks' risk prevention

2.1 Lagged behind risk management idea

Because Chinese commercial banks' risk management starts later, risk management professionals can not catch up with

the fast developed businesses and constantly changing risk management in the aspect of risk management idea. In specific, it focuses on two points. On one hand, some initial workers usually position risks at the opposite of business development. They can not recognize and evaluate risks properly. They think risk management stops business development. On the other hand, some risk management professionals can not research businesses, markets, and efficiencies. They think that to develop business can control risks. And they pursue business indexes to much and neglect risk management, what cause that valuable business can not develop properly, deceasing banks' capabilities of risk prevention.

2.2 Immature risk prevention technology

Presently, a chief characteristic of risk prevention in world banking industry is to use statistical methods and information technologies to realize quantitative management. In foreign countries, some advanced banks have already completed a set of control system, including risk identification, risk grading, risk supervision, risk pre- warning, and risk avoidance systems. In contrast, China lags far behind in this field. Concerning risk management, Chinese commercial banks emphasize on qualitative analysis and lack of quantitative analysis. Risk identification and evaluation are inexact. The degree of information dig-out is low. And data accumulation starts recently, plus too much and separate branches and workers, some policies and relevant information can not be communicated and collected exactly, rapidly, and comprehensively, what lead to incomplete and inexact basic data. Many foreign mature risk prevention tools still fail to exert effects on Chinese banks' risk prevention now.

2.3 Imperfect internal control of risk management

Internal control is the base of risk management. Although Chinese commercial banks build a set of internal control, the imperfect organizational structure of internal control and incomplete internal control measures cause such a result that internal control merely depends on some functional departments in practical operations. There are no necessary supervisions and restrictions, comprehensive coordination and cooperation, and effective incentive- restriction mechanism between functional departments. The absence of self-restricting mechanism causes that commercial banks can not restrict capital utility by capital sources. As a result, banks issue loans without strict standards, what leads to shortage of capitals, low rate of capital sufficiency, and weak capability of risk prevention.

2.4 Powerless financial supervision and regulatory

Financial liberalization and financial innovation are motives for financial development, which can significantly drive the development of finance and financial market on one hand. On the other hand, they bring about more risks for financial system. That means higher requirements for financial supervision and regulatory. Since the foundation of China Securities Regulatory Commission, China Insurance Regulatory Commission, and China Banking Regulatory Commission, China applies the financial separating management system, what is determined by the present development of finance in China. Under this system, three dominating commission fulfill their commitments. They merely focus on special financial institutions respectively, without sufficient coordination, which leads to repetitive or virtual regulatory. China's present regulatory system can not catch up with the financial globalization due to the poor capability of risk prevention. To strengthen multi-national regulatory cooperation has become more and more important. Therefore, it is necessary to enhance the coordination and cooperation of financial regulatory institutions, forming a comprehensive regulatory system.

3. Strengthen the long-term mechanism for Chinese commercial banks' risk prevention

3.1 Build scientific development view and advanced business idea

The coordinative development of benefit, quality, and scale are basic contents of Chinese commercial banks' scientific development view at present. To insist on the coordinative development of benefit, quality, and scale means t adjust the traditional development mode popularized for years, which pursues for the fast extension of loans. With the precondition of guaranteeing quality, actualize the long-term stable growth of profits by enlarging the scale properly. To build advanced business idea is to recognize and accept western commercial banks' some advanced business ideas: "Banks should survive from risk prevention. Their values are realized by effective risk management." "Interests from loans are not merely deposit-loan interest margin or profit. They are kind of compensation for risks taken by banks because of issuing loans to borrowers." In these ideas, the key concept "risk compensation" is applied to whole credit approval and management process. Meanwhile, in order to deal with the relationship of risk prevention and business development, we should realize that there is no conflict between risk prevention and business development. The risk prevention process is also a value creating process. Any business faces risks. The task of risk prevention is to seek for the risk in business process, evaluate the risk, and prevent risk by adopting positive measures. Create benefits in the process of controlling risks.

3.2 Improve commercial banks' risk management methods

The key for commercial banks controlling risks is to improve the identification and evaluation of market risk, which

depends on theories, complex software system, and powerful database. Chinese commercial banks should completely recognize, exactly assess, continuously supervise, and properly control the market risks in all trades or non-trade businesses, insuring a stable operation under acceptable market risk level. Commercial banks should build a market risk management systems that are suitable for business nature, scale, and complexity, differentiating risks at different levels by designing reasonable credit grades. Commercial banks should appoint a special department that is in charge of market risk management, organically combining all business management activities, including market risks' identification, assessment, supervision, and control, and general strategic program, business decision, and financial budget. Assess risks reasonably by qualitative and quantitative grading methods. Along with changes of global financial environment, commercial banks' risk management concerns not just credit risk. It is necessary to strengthen the supervision on market risk and liquidity risk. According to market changes, adjust tactics in time and avoid risks.

3.3 Strengthen financial institutions' internal control

Financial institutions' internal control is very important for preventing financial risks. Effective internal control is more useful for risk prevention. To strengthen internal control, we can start from these three aspects:

(1) Establish business guidance, and make up work regulations differentiating rights and responsibilities clearly. Financial institutions should establish clear business guidance based on laws, regulations, and rules. All departments and branches can make up relevant work objectives according to business guidance, insuring to actualize the general business benefits. Meanwhile, make up regular position responsibility system, strict operation procedure, and reasonable work standard, endowing each position with relevant responsibilities and functional rights. Build a mutual cooperative and supervising work relationship.

(2) Build effective internal check system. Internal check system is a continuously checking system during the operation of all departments and positions. In other words, as one operation is done, it has checked the former operation at the same time. Effective internal check system can reduce work mistakes, drive mutual supervision between positions, and decrease risks. Meanwhile, all positions should improve the consciousness of prevention, form customer information database, and check borrowers' credits, in case of bad debts.

(3) Build effective pre-warning and prediction system. The pre-warning and prediction system mainly focuses on suggesting internal control for all operations, checking and evaluating all departments' internal control, assessing the execution of internal control, and punishing the departments or individuals who violate the internal control.

3.4 Form an integrated regulatory system and enhance the international cooperation of financial regulatory

(1) Integrate the regulatory system

Along with the opening-up of finance, the integration of finance, and the development of financial holding company, the transformation form a separating regulatory to an integrated regulatory is the ultimate trend. To integrate the regulatory system needs to integrate the regulatory resources of finance, securities, and insurance. Simplify institutions, optimize regulatory organizational structure, build an effective and efficient financial regulatory team, and actualize the general constitution and execution of financial regulatory policies. By this way, it can completely delete problems, such as low efficient regulatory, useless regulatory, and repetitive regulatory, caused by separating regulatory on one hand. On the other hand, it can improve the effectiveness and comprehensiveness of regulatory, driving innovations of finance and the stable development of finance, benefiting the general competitiveness of Chinese finance, and preventing financial risks and financial crisis.

(2) Enhance the international cooperation of financial regulatory

During the key period for the all-round opening-up of finance in China, Chinese financial institutions should enhance the international cooperation and coordination of financial regulatory, preventing world financial risks carefully, strengthening regulatory on multi-national capital flow, and promoting financial opening-up stably. As for the world financial system, it is necessary to build an emergency and aid mechanism for global financial crisis, strengthen the coordination of world financial regulatory, and completely exert the effects of newly-developed market economic body on world financial organizations.

References

Ouyang, Jinqiong & Jiang, Zhihui. (2008). On the construction of Chinese commercial banks' risk prevention mechanism from the "sub-prime crisis". *Management Observer*, No.10.

Rong, Feng. (2008). The research of risk management for commercial bank. *Science Technology and Industry*, No. 4.

Xu, Qinghong. He, Bing & Sun, Conghai. (2009). Bank financing and risks management under the financial crisis. *China Financial and Economic News*. Feb.2.

Zhang, Lunjin & Wei, Yuezong. (2008). Rethinking on sub-prime crisis. *Insurance and Finance*, No. 1.

Zhang, Shujie. (2008). Enhance internal control and prevent financial risk. *Finance and Management*, No.10.

Perception of Financial Distress and Customers' Attitude

toward Banking

Sunday Samson Babalola

Department of Psychology, Faculty of the Social Sciences, University of Ibadan

Ibadan, NIGERIA

E-mail: ss.babalola@mail.ui.edu.ng

Abstract

This study examined the influence of perceived financial distress and customers' attitude towards banking in Nigeria. Two hundred and one bank customers made up of 144 males and 57 females drawn from 27 banks in Lagos participated in the study. The result of the study showed that perceived financial distress and bank account customer had significant main effect on attitude towards banking. The study concluded that perceived financial distress has significant negative influence on attitude toward banking. The banks regulatory authorities and management should give attention to the publics' perception of the banking industry in the interest of the economy; as the economic health of a nation hinge on the efficiency of financial institutions.

Keywords: Financial distress, Patronage, Attitude, Banking

1. Introduction

Banking as a service industry, is fundamentally hinged on trust, sustained by attitude and managed by complex financial management skills and psychology of human relations. The more the customer trusts, the service provider as research indicates, the higher the perceive value of the relationship (Walter, Holzle, & Ritter, 2002). According to Gounaris (2005), the quality of bank service is influenced indirectly by trust. Although, trust is the cornerstone of the banking industry, the perceptual factors influence the customer's choice of bank. Moreover, for development process, banking industry is a catalytic agent (Popoola, 2000), which makes to a healthy banking system a most for a nation's growth while a near or total distress banking industry is injurious a nation. The crisis of confidence experienced by the banking industry in Nigeria has led to the liquidation of some of banks (Brownbridge, 1998). Although, there is a gradual improvement, the design of the present study is to assess the influence of perceived financial distress and customers' attitude towards banking.

The indicators most useful in foretelling banking distress ranges from declining output, an increase and then a decrease in inflation to a fall in the real effective exchange rate. To Hardy and Pazarbasioglu (1998), the primary direct indicator of banking sector soundness and the likelihood of its difficulties is the level of bank capitalization. That is, the amount by which a bank's assets exceed its liabilities. Bank distress according to (Bernanke, 1983; Calomiris & Mason, 2003) is associated not only with bank failures, but with general macroeconomic consequences resulting from the reduced supply of loans and deposits, which can amplify business cycle downturns and spread panic-induced financial distress from banks to the whole economy. In other words, deteriorating loan quality and increase in share of loans that are nonperforming are signal symptom. Similarly, Demirgüç-Kunt and Detragiache (2005) opined that the onset of a banking crisis is assumed to coincide with depositor runs leading to the closure or takeover of such banks, or/and with large-scale government intervention. In another perspective, Calomiris (2007) described bank distress from "fundamentalist" perspectives as it stresses a different direction of causality. That is, bank distress is due to a chain of causation from non-panic-related, observable, exogenous adverse changes in the economic conditions of banks, to intrinsic weakening of bank condition, ultimately leading to bank failure. According to Calomiris and Wilson (2004), fundamental losses to bank borrowers cause losses to banks, which sometimes bankrupt the banks and subsequently weakened the banks to curtail the supplies of loans and deposits as part of a rebalancing of portfolios to limit default risk in a disciplined market. In sum, no indicator, or a set of indicators, is wholly reliable as an instrument of prediction; these factors only provide a clear signal for increasing probability of near-term bank failure. This study is however interested in perceived distress as the country of study had just witnessed actual distress.

Many economies in the World had experienced large-scale bank failures due to economic conditions in the markets (Canbas, Cabuk, & Kilic, 2005) in the last three decades. In Nigeria however, the first major financial distress in the

Nigerian banking system dated back to 1930s when about 21 bank failures were recorded. While another financial crisis started in 1989 with the identification of seven distressed banks and worsened gradually until 1993 when it led to the collapse of the inter-bank market and spread to all segments of the financial system (CBN 2002). According to Ebhodaghe (1996), sixty banks were distressed between 1992 and 1995. The distressed banks accounted for a deposit base of N70.8 billion constituting 33.5 percent of the total industry deposit of N211billion. Additionally, these distressed banks accounted for N44.5 billion or 77 percent of total bad debts of N57.8 billion in the financial system. By 1994, four local banks had gone into liquidation, some others had had their licenses suspended, and then in 1995 the Central Bank of Nigeria took over the management of 13 local banks (Brownbridge, 1998).

Field theory provides the foundation for this study's framework. Field theory (Lewin, 1951) assumes that in any situation there are both driving and restraining forces that influence any change that may occur. The driving forces are those forces that tend to initiate a change and keep it going in terms of earnings and competition. While restraining forces are forces acting to decrease the ability to save money and keep on withdrawing his/her deposit; these lack of motivation are examples of restraining forces. However, equilibrium is reached when the sum of the driving forces equals the sum of the restraining forces. Field theory, according to Kassarjian (1973) is useful in understanding consumers' cognitions, affective reactions, and behaviours. It also helps in explaining the forces that bear upon a bank customer to go for prompt settlement of bills and service cues, as well as ability to deposit and withdraw money. According to Lewin (1946) psychological and/or physical responses ease the tensions created by the transactional forces. From a field theory perspective, financial distress may create psychological tension by blocking customer's quick settlement of bills repayment of loans. Thus, consumers' mood may colour their attitude towards banking.

Attitudes are important in a consumer environment, as research showed that attitude influence thoughts, feelings, and, most importantly, behaviour (Rose, Meuter, & Curran, 2005). Attitude towards banking could therefore be a critical factor in achieving efficiency and effectiveness in the industry. While, evaluation could initiate distortions and inaccuracies into a person's perception process (Casselden & Hampson (1990), distortions may arise from the tendency of forming relatively consistent characteristics with a few pieces of information. According to Klein and Kunda (1992), individuals that are motivated to hold a particular belief about an issue will selectively search for information that will support that belief they want to hold. It means that customers that hold negative bias about a bank are more prone to search for information to confirm their biases about such bank. Perhaps this is why banks account managers view social relationships with their customers as important in facilitating information exchange for developing and maintaining customer relationships (So and Speece, 2000). Parasuraman, Zeithaml, and Berry, (1985) also advocate that firm such as bank, should provide customers with accurate reference points, undertake research to measure customers' expectations, and consistently fulfil these gaps. Bank customers can however be grouped into personal account bank customer and corporate account bank customer. Corporate account bank customers provide the greatest profit opportunities to the bank (Tyler and Stanley, 1999; Zineldin, 1995) than personal account bank customers. However, little or no research has studied the effect of bank account customers' attitude toward banking, which this study will examine.

Financial reporting of banks had led to divergent perceptions and expectations, and had caused the banking public with dissatisfaction. This is because banks do not fully appreciate what the benefits of greater transparency could bring, as most banks current financial reporting model is inadequate for executives and investors (Timewell, 2000). For instance, in Nigeria between 1994 and 1996, when 1914 bank employees got their appointment terminated due to their involvement in fraudulent transactions; the banking publics did not know the reasons for the management decisions against the dismissed employees (NDIC (1996). Consequently, the public inferred that the high staff turnover was an indication of virus called distress. This does, emphasis the need to provide reliable information that will influence positive public perception.

A number of bank watchers are certain that the banking industry may still witness another round of avoidable distress owing to negligence in financial management prudence. This is also confirmed Sanusi's (2002) statement that earlier shortcomings that led to distress are being effectively addressed while the prevention of future reoccurrence remains a challenge to the Central Bank of Nigeria. This study thus assumes that if psychosocial factors associated with financial distress are empirically tested, their result will provide other alternative/additional information in curbing further financial distress by policy makers. This study therefore examines this influence.

Various consumer researchers had found evidence for the negative information, compared to positive information, on consumers' attitudes (e.g., Folkes & Kamins, 1999). For instance, researches in product-evaluation contexts by Folkes & Kamins, 1999 indicated that negative information lead to less favourable evaluation of targets of negative information. Similarly, study by Ahluwalia, Burnkrant, and Unnava (2000) showed that consumers resort to lack of enthusiasm, as it is easier to analyze negative information than positive information especially when there is much negative information. Equally, elaborate positive information is likely to facilitate consumers' opportunity and motivation to engage in more appraisal of that information (Bailey, 2004). Hence it is assumed that inability of

customers to withdraw their money as at when due, may have an adverse impact on customers' banking attitudes.

As trust is a psychological state that makes one willingly accept situational vulnerability (Singh & Sirdeshmukh, 2000), the expectation is that loyal consumers will be relatively unaffected by temporary transactional experiences (Yi & La, 2004). That is, loyal customers (defined as long-term business transaction) will tend to maintain their positive expectations relatively longer than low-loyalty customers (short-time customer) do; thus, they are not likely to adjust expectations based on episodic factors. Trust then acts as the glue that holds the relationship together (Singh & Sirdeshmukh, 2000). Commitment is also an essential ingredient for long-term relationships (Garbarino & Johnson, 1999; Morgan & Hunt, 1994). Customers' commitment provide various benefits to a firm (Pedersen & Nysveen, 2001) such as protecting a firm under service failure, as customers are less situation-sensitive (Krishnamurti & Raj, 1991). From the above reviewed it is hypothesized that:

H1 Corporate bank account customer will have positive attitude towards banking than personal bank account customer.

H2: Long duration of bank patronage will have positive influence on attitude towards banking than short time bank patronage.

H3: High perceived financial distress will have significant negative effect on attitude towards banking.

H3: Corporate bank account customer that have high perceived financial distress and short time bank patronage will report significant negative influence on attitude towards banking than other combination of factors.

Research Methods

2.1 Participants

Out of 350 questionnaires administered in 27 banks, Two hundred and six bank customers voluntarily responded and returned their questionnaires. For this study, 201 fully completed responses were used. They comprised 144 males and 57 females with their age range from 20 years to 54 years, a mean age of 32.73 years and (SD = 6.13). Eighty-one per cent of them were individual account customers while 19 per cent were corporate account customers. Participants' duration of bank patronage ranged from 1 year to 28 years, with mean banking duration of 6.5 years.

2.2 Settings and procedures

Sample selection was restricted to Lagos, being the city with the highest concentrations of financial institutions and density of banking public. A multi-stage purposive non-probability sampling technique was used due to the practical difficulties of employing random sampling techniques in data collection. This involved chosen a willing participant, that is, if the chosen participant is unwilling to participate in the survey, the next immediate available consumer/client is approached. The selection of the bank under study was based on the use of purposive sampling technique: three branches of each of the three of oldest banks, three of older banks and the three of most recent banks respectively. All these added up to make the 27 banks selected. The self-administered questionnaire was given to each of the customers at the banks' premises within the banking opening hours of 8a.m. and 1p.m. The researcher collected the completed questionnaires between February and April 2002.

2.3 Instrument

The questionnaire consisted of two parts. The first part dealt with the socio-economic characteristics of the respondents. Each of the participants responded to questions covering gender, age, duration of bank patronage and bank account customer; these were in nominal form. The second part included the attitude measures of perceived financial distress (PFD) scale and attitude toward banking (ATB) scale, which were developed for the purpose of this study. A review of the relevant literature and the information obtained from experienced bankers at the conference of experts provided the basis for developing the item measures. Employees of six banks that came for a special training at the University of Ibadan were strategically chosen; they comprised the Head corporate planning department, Branch operations manager, Business development officer, Head treasury department, Officer in treasury department and Head internal control and audit. These experts assisted in facilitating the assessment of customers' perception from different perspectives.

The researchers constructed a 21-item PFD scale used to measure perceived financial distress. In generating this, a Likert scale question was used because it allows the respondent to indicate how closely their feelings match the statement on a rating scale. The items were scored on a 5-point Likert-type scale from 'strongly agree' to 'strongly disagree', thus these items help in generating statistical measurements of issues at stake. A pre-test of 54 items pooled from the conference of experts showed 21 useable items after subjecting them to item-total and inter-item correlation. This followed the discarding of item statements with less than $r < 0.35$ and $r < 0.20$ (Bearden, Netemyer, & Mobely, 1993; Nunnally, 1978). The summations of each the item that met the above criteria form the multiple-item scale. A pre-test of the 21 items in a pilot study showed an internal consistency reliability estimate of Cronbach $\alpha = 0.89$.

The construction of a 16-itm self-report attitude toward banking (ATB) scale followed a similar method used in the construction of PFD scale. A pre-test of initial 25 items showed a reduction of items to 16 after using item-total and

inter-item correlation. Item statement with less than r < 0 .35 and r < 0.20 is discarded (Bearden, et al., 1993; Nunnally, 1978). High score on ATB indicates negative attitude while low score means positive attitude. A pre-test of the 16 items in a pilot study produced a Cronbach coefficient α = 0.85. These reliability estimates is far above Nunnally's (1978) criterion of α = 0.70 for acceptable reliability in exploratory research.

3. Analysis Result

A 2x2x2 analysis of variance (ANOVA) was used to test the hypotheses for this study. This inferential statistics was considered more appropriate due to the research design and its data collection method. The mean scores was the dividing point for perceived financial distress into two groups. While duration of bank patronage is classified as short duration meaning those with ≤ 5 years duration of bank patronage and those with > 5 years duration of bank patronage as long duration. The mean scores for the resulting groups are presented in table 1.

=====Insert Table 1 ========

Table 1 shows mean scores on attitude towards banking for respondents low and high on perceived financial distress (48.42 versus 53.84); respondents short duration and long duration (52.15 versus 48.60); and respondents corporate bank account customer and personal bank account customer (54.38 versus 49.92).

=======Insert Table 2 =======

The mean scores on attitude towards banking for respondents on perceived financial distress (F $(1,193)$ = 9.34, $p < 0. 01$) and bank account customer (F $(1,193)$ = 4.73, $p < 0. 05$) show significant main effects. The mean scores for respondents on duration of bank patronage (F $(1,193)$ = 1.88, $p > 0.05$) did not provide significant main effects (see table 2). Of all the possible interactions in the study of attitude towards banking, only three-way interaction of perceived financial distress, bank account customer and duration of bank patronage show significant effect (F $(1,193)$ = 4.97, $P < 0. 05$) (see table 2). Table 3 shows the mean scores on attitudes towards banking for the eight combinations of respondents based on the perceived financial distress, bank account customer and duration of bank patronage.

======== Insert Table 3 ==========

====== Insert Figure 1============

Figure 1 below illustrates the pattern of the interaction effects. Personal bank account customers that perceived financial distress scored higher than other categories while those who perceived low financial distress and have long duration of bank patronage displayed a relatively positive attitude towards banking. Conversely, the corporate bank account customers that perceived high financial distress and long-term bank patronage had higher negative attitudes towards banking followed by those who perceived low financial distress and with short duration of bank patronage while those who perceived low financial distress and with long duration of bank patronage scored the least.

4. Discussion

This study set out to investigate the influence of perceived financial distress, bank account customer and duration of bank patronage on customers' attitude towards banking. The results of the analysis showed that respondents that are high on perceived financial distress scored high on attitude towards banking. This indicates that perception of financial distress by respondent is likely to negatively affect bank service patronage and may in turn affect the bank output. This finding is supported by the field theory (Lewin, 1951) perspective, which states that restraining forces act on individuals to decrease the driving forces. Although, this finding may not provide a full explanation as behavioural attitude depends on the outcome of choice (Miller & Tessa, 1989) as the overriding choice of the customers may depend on a number of external factors. However, if one discounts the external influence, then the result can be useful in the prediction of bank customers' behaviour. As Howard and Sheth (1969) observed, suitably devise attitude measures is often quite successful in predicting how people will act. It is not surprising therefore that the associated negative consequences of distress on the customers' tend to lead to negative attitude towards banking.

The findings on effect of bank account customer on attitude towards banking showed significant effect; with the corporate bank account customers scoring significantly higher on attitude towards banking than personal account bank customers. This is possibly because corporate bank account customers places higher premium on their bankers than personal bank account customers do; as maximization of profit is the driving goal of corporate bank account customers. This may have given them opportunity to analyze the financial statements of banks and their market capitalization more than personal bank account customers that may less knowledge in financial matters. As sustained and regular update of information on banking activities may result in dynamic perceptual change and consequent influence on attitude towards banking. Thus, confirming Bailey (2004) notion that elaborate information facilitate consumers' opportunity and motivation to engage in more appraisal of information. On the other hand, the personal bank account customers may not have familiarized themselves with information about banking activities, thus leading to a near static perceptual view of the bank activities if Bajah (2003) and Griswold (2000, 2002) findings that Nigerian public lack reading culture is considered.

Lack of significant duration of bank patronage on customers' attitude towards banking may be because the customers' priority for bank patronage is to derive satisfactory service through regular banks' fulfilment of the contractual obligations and not to sustain long-term relationship. This confirms Fiske and Taylor's (1991) explanation that perceivers try to arrive at meaningful impression of whole attitude towards banking rather than just absorb new information separately. In other words, duration of bank patronage singly is not enough to create a meaningful influence on attitude towards banking. This finding also contradicts the notions of situational vulnerability, as there was no significant difference between long and short time bank patronage (Singh & Sirdeshmukh, 2000; Yi & La, 2004). It also means that commitment, which is essential for long-term relationship, is lacking (Garbarino & Johnson, 1999; Morgan & Hunt, 1994).

The interaction between perceived financial distress, bank account customers, and duration of bank patronage showed significant effect on attitude towards banking. While, there were no significant effect between the pairs of the two-way interactions (bank account customer by duration of bank patronage; bank account customer by perceived financial distress; and duration of bank patronage by perceived bank distress). Supporting this is Anderson (1965) proposition that the final impression of an attitude object is the average of the different impressions received on the object. The influence of perceived financial distress as demonstrated in this study may help in explains why some banks may lose their customers even when the actual factor that precipitate distress has not been present.

One implication of this finding is that bank managements need to work towards eliminating cues that customers interpret as signs of managerial apathy. As Parasuraman, et al. (1985) advocated, banks should provide customers with accurate reference points and undertake research to measure customers' expectations. As information from the banking, industries can help customers set reasonable expectations and reduce tension by providing a basis for reappraisal (Kassarjian, 1973). Importantly, banks' welfare must be given prime attention by bank management. In addition to physical growth and financial profit, customers need trust and confidence to also boost positive influence of their attitude toward banking as any misrepresentation of banks' state of health could lead to adverse effects. Bank practitioners should endeavour to create an inviting atmosphere for their customers; as a combination of factors affect attitude toward banking.

5. Conclusion

Although this study has far reaching implications for the banking industry in particular and Nigerian economy as a whole, its findings are however not conclusive. The results undoubtedly serve as providing enriched insight into customers' attitude towards banking. Notwithstanding, there are some inherent limitations. First, the relatively small sample size and the use of only participants from Lagos, the commercial capital of Nigeria may limit the general applicability of the findings. Second, the research design was ex-post facto, which means that subjects' financial distress experience had occurred. Perhaps the responses would have been different if the participants have never witness financial distress. Finally, companies also have reputations which they have built over time which could be good or bad, and they could influence how customers perceive an event such as a distress. It is possible that customers could perceive firms with good reputations differently, as compared to firms with poor reputations, when these companies are involved in non-fulfilment. Future studies should control for some these limitations.

References

Ahluwalia R., Burnkrant, R. E., & Unnava, H. R. (2000). Consumer response to negative publicity: The moderating role of commitment. *Journal of Marketing Research*, 37, 203–214.

Anderson, H. H. (1965). Averaging versus adding as a stimulus combination rule in impression formation. *Journal of Experimental Social Psychology*, 70, 394-400.

Bailey, A. A. (2004). The interplay of social influence and nature of fulfilment: Effects on consumer attitudes. *Psychology and Marketing*, 21(4), 263–278.

Bajah, S. T. (2003). Demystifying science for children through Reading: The ELSSA approach. In A. E. Arua (Ed.). *Reading for all in Africa* (pp. 63-66). Newark, DE: International Reading Association.

Bearden, W. O., Netemyer, R. G., & Mobely, M. F. (1993). *Handbook of marketing scales.* Sage Publications: Newbury Park.

Bernanke, B. S. (1983). Nonmonetary effects of the financial crisis in the propagation of the great depression. *American Economic Review,* 73, 257-276.

Brownbridge, M. (1998). Financial distress in local banks in Kenya, Nigeria, Uganda, and Zambia: Causes and implications for regulatory policy. *Development Policy Review*, 16, 173-188.

Calomiris, C. W., & Mason, J. R. (2003). Consequences of bank distress during the great depression. *American Economic Review,* 93, 937-947.

Calomiris, C. W., & Wilson, B. (2004). Bank capital and portfolio management: The 1930s 'capital crunch' and scramble to shed risk. *Journal of Business,* 77, 421-455.

Calomiris, C.W. (2007). Bank failures in theory and history: The great depression and other "contagious" events. *NBER Working Paper*, No. 13597. [Online] Available: http://www.nber.org/papers/w13597

Canbas, S., Cabuk, A., & Kilic, S. B. (2005). Prediction of commercial bank failure via multivariate statistical analysis of financial structures: The Turkish case. *European Journal of Operational Research,* 166(2)*,* 528-546.

Casseldon, P. A., & Hampson, S. E. (1990). Forming impressions from incongruent traits. *Journal of Personality and Social Psychology*, 59*,* 353-362.

Central Bank of Nigeria CBN. (2002). *Framework for contingency planning for banking systemic distress and crises* (pp. 1-27). Lagos, Nigeria.

Demirgüç-Kunt, A., & Detragiache, E. (2005). *Cross-country empirical studies of systemic bank distress: A survey.* IMF Working Paper WP/05/96. Washington: International Monetary Fund.

Ebhodaghe, J. U. (1996). The impact of failed banks on the Nigerian economy. *Nigeria Deposit Insurance Corporation Quarterly*, 6, 25-39.

Fiske, S. T., & Taylor, S. E. (1991). *A reliable introduction to the field social cognition for college students* (2nd ed.). New York: McGraw Hill.

Folkes, V. S., & Kamins, M. A. (1999). Effects of information about firms' ethical and unethical actions on consumers' attitudes. *Journal of Consumer Psychology*, 8, 243–259.

Garbarino, E., & Johnson, M. S. (1999). The different roles of satisfaction, trust, and commitment in customer relationship. *Journal of Marketing*, 63, 70–87.

Gounaris, S. P. (2005). Trust and commitment influences on consumer retention: Insights from business-to-business services. *Journal of Business Research*, 58*,* 126 – 140.

Griswold, W. (2000). *Bearing witness: Readers, writers, and the novel in Nigeria.* Princeton: Princeton University Press.

Griswold, W. (2002). Number magic in Nigeria. *Book History*, 5*,* 275-282

Hardy, D. C., & Pazarbasioglu, C. (1998). *Leading indicators of banking crises: Was Asia different?* IMF Working Paper 98/91. Washington: International Monetary Fund.

Howard, J. A., & Sheth, J. N. (1969). *The theory of buyer behaviour*. New York: John Wiley and Sons.

Kassarjian, H. H. (1973). Field theory in consumer behaviour. In S. Ward & T. S. Robertson (Eds.). *Consumer behaviour: Theoretical sources* (pp. 118–140). Englewood Cliffs, NJ: Prentice Hall.

Klein, W. M., & Kunda, Z. (1992). Motivated person perception: Constructing justifications for desired beliefs. *Journal of Experimental Social Psychology*, 28, 145-168.

Krishnamurti, L., & Raj, S. P. (1991). An empirical analysis of the relationship between brand loyalty and customer price elasticity. *Marketing Science*, 10, 172–183.

Lewin, K. (1946). Behaviour and development as a function of the total situation. In L. Carmichael (Ed.). *Manual of child psychology*. New York: John Wiley & Sons.

Lewin, K. (1951). *Field theory in social science.* New York: Harper & Row.

Miller, M. G., & Tesser A. (1989). The effective cognitive consistency and thought on attitude behaviour relations. *Journal of Experimental Social Psychology*, 25, 189-202.

Morgan, R. M., & Hunt S. D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58, 20–38.

NDIC. (1996). The appraisal of current resolution option in the banking industry. *Nigeria Deposit Insurance Corporation Quarterly*, 6(3/4)*,* 37-69.

Nunnally, J. C. (1978). *Psychometric theory.* McGraw Hill: New York.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing,* 49*,* 41–50.

Pedersen, P. E., & Nysveen, H. (2001). Shopbot banking: An exploratory study of customer loyalty effects. *International Journal of Bank Marketing*, 19, 146–155.

Popoola, S. O. (2000). Scanning the environment for competitive advantage: A study of corporate banking managers in

Nigeria. *International Journal of Libraries and Information Services*, 50(3)*,* 210-216.

Rose, G. M., Meuter, M. L., & Curran, J. M. (2005). On-line waiting: The role of download time and other important predictors on attitude toward e-retailers. *Psychology and Marketing*, 22(2), 127–151.

Sanusi, J. O. (2002). *Central bank and the macroeconomic environment in Nigeria*. A Lecture delivered to the participants of the Senior Executive Course No. 24 of the National Institute for Policy and Strategic Studies (NIPSS), Kuru, on 19th August, 2002.

Singh, J., & Sirdeshmukh, D. (2000). Agency and trust mechanisms in consumer satisfaction and loyalty judgment. *Journal of the Academy of Marketing Science*, 28, 150–167.

So, S. L. M., & M. Speece, M. (2000). Perceptions of relationship marketing among account managers of commercial banks in a Chinese environment. *International Journal of Bank Marketing,* 18 (7), 315 - 327.

Timewell, S. (2000). A window to transparency. *The Banker*, *January*, 86- 87.

Tyler, K., & Stanley, E. (1999). UK bank-corporate relationships: Large corporations' expectations of service. *International Journal of Bank Marketing*, 17 (4), 158 - 170.

Walter, A., Holzle, K., & Ritter, T. (2002). Relationship functions and customer trust as value creators in relationships: A conceptual model and empirical findings for the creation of customer value. Proceedings of the 18th IMP conference, Dijon, France.

Yi, Y., & La, S. (2004). What influences the relationship between customer satisfactions and repurchase intention? Investigating the effects of adjusted expectations and customer loyalty. *Psychology and Marketing*, 21(5), 351-373.

Zineldin, M. (1995). Bank-company interactions and relationships: Some empirical evidence. *International Journal of Bank Marketing*, 13 (2), 30 - 40.

Table 1. Attitudes toward banking mean scores of respondents on perceived financial distress, duration of bank patronage and bank account customers

VARIABLE	No.	Mean
Perceived Financial Distress: Low	121	48.42
High	80	53.84
Duration of bank patronage: Short	124	52.15
Long	77	48.60
Bank account customers: Corporate	39	54.38
Individual	162	49.92

Table 2. Summary table showing the effects of perceived financial distress, bank account customers and duration of bank patronage on attitudes toward banking

Variable	SS	DF	Ms	F
PFD	1441.21	1	1441.21	9.34**
Customers	729.00	1	729.00	4.73*
Duration	289.36	1	289.36	1.88
PFD by Customers	1.40	1	1.395	0.01
PFD by Duration	27.33	1	27.331	0.18
Customers by Duration	206.95	1	206.949	1.34
PFD by Customers by Duration	767.07	1	767.069	4.97*
Residual	29776.14	193	154.281	
Total	33471.8	200	167.359	

Note: PFD = Perceived financial distress; Type = Bank account customers; Duration = Duration of bank patronage; ** = p < 0.01; * = p < 0.05.

Table 3. Attitudes towards banking mean scores on 3-way interaction combination between perceived financial distress, bank account customers and duration of bank patronage

	Low PFD		High PFD	
	Short Duration	Long Duration	Short Duration	Long Duration
Corporate bank account customers	57.50	44.00	55.14	59.86
Personal bank account customers	47.53	47.11	54.44	50.93

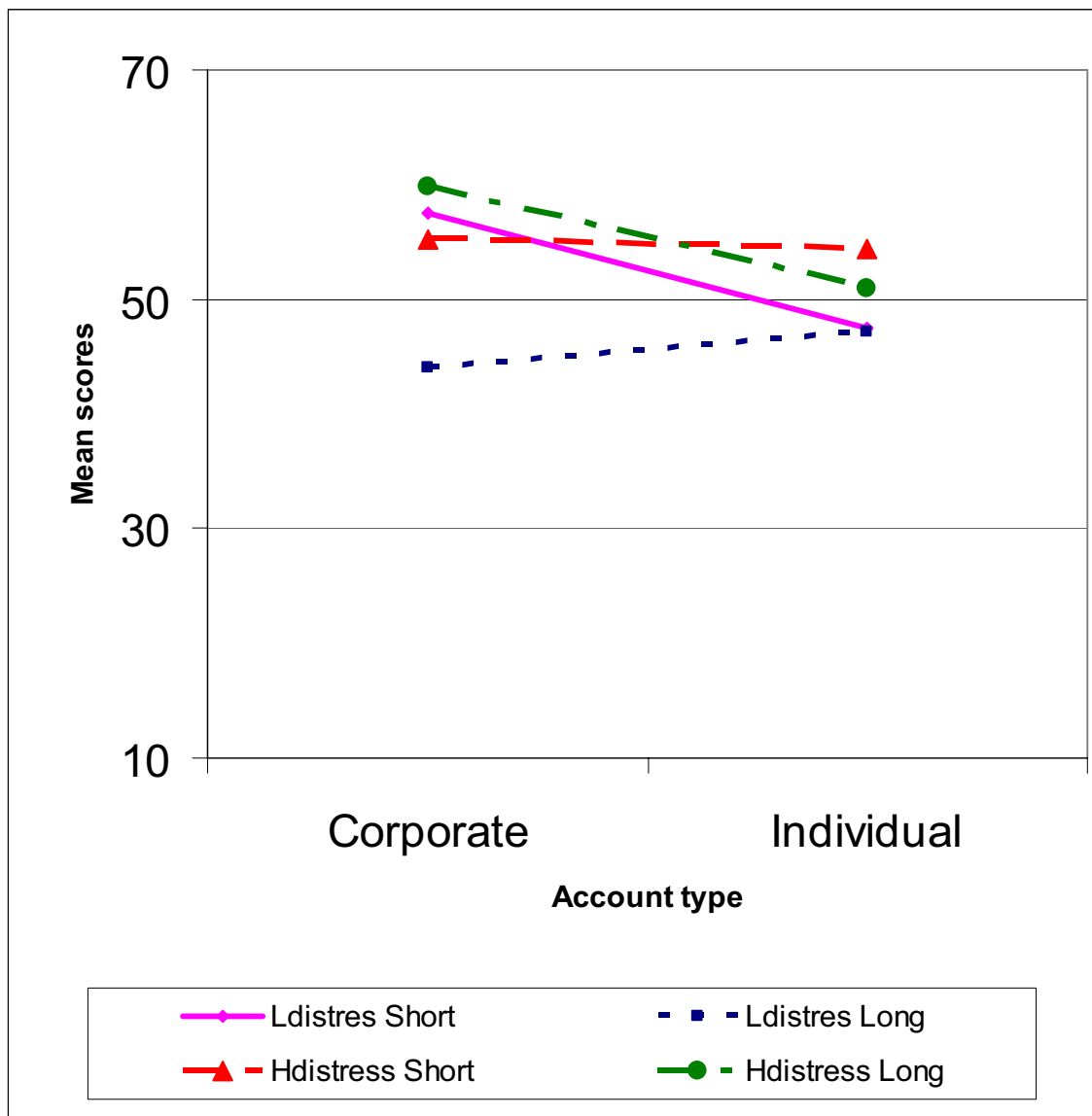Note: PFD = Perceived financial distress; Duration = Duration of bank patronage.

Figure 1. A 3-way interaction of perceived financial distress, bank account customers and duration of bank patronage

A Comprehensive Evaluation Analysis of Financial Core

Competitiveness of Listed Companies

Xiaolin Chen

School of Business Administration, Northeastern University, Shenyang 110004, China

E-mail: xlchen@mail.neu.edu.cn

Abstract

Financial management is an important component of companies' economic activities. Companies' core competitiveness is based on the financial core competitiveness in a sense. To measure a company's financial core competitiveness is meaningful for understanding the company's financial management performance and building the company's core competitiveness. This essay constitutes a set of indexes system for evaluating listed companies' financial core competitiveness. According to data from 15 steel companies listed in Shenzhen Stock Exchange, this essay analyzes and evaluates listed companies' financial core competitiveness, and finally advances several suggestions for cultivating and improving listed companies' financial core competitiveness.

Keywords: Financial core competitiveness, Comprehensive evaluation, Listed companies, Steel industry

In China, some scholars have already put forward relevant theories concerning the accounting core competitiveness, corporate financial core competence, and the core competitiveness finance. Considering scholars' different understandings toward the essence of core competitiveness due to different views of integration, knowledge, culture, and organization, the financial core competitiveness refers to a series of special, excellent, dynamic corporate financial competitive competences rooted in corporate financial management system, taking knowledge and innovation as the basic core. It is the upgrade and the optimization of corporate financial management competence. And it is a company's core competitiveness or part of core competitiveness.

The formation of financial core competitiveness is a continuous innovative process in which financial resources are organized and coordinated reasonably and effectively, and the financial competitiveness will match the company more. In this process, the relevant issues about financial core competitiveness can be regarded as a system in which different elements and rings influence one another. This system consists of four kinds of elements, namely ability resource, basic resource, ability institution, and ability state. However, as a company tries to apply the idea of core competitiveness in perspective of financial core ability, the greatest difficulty is that it does not know whether there is financial core competitiveness in the company or not. Where is financial core competitiveness? And how powerful is it? Although to build an objective common evaluation standard for financial core competitiveness is very difficult, a company has to build a standard since it wants to use it. The company must organically integrate financial core competitiveness' separate evaluation and general evaluation together. Therefore, we should design the evaluation indexes system from the formation of financial core competitiveness instead of the result. Then, it can help to evaluate a company's financial abilities properly. Specific designed indexes are shown in Table 1 as follow.

Based on the evaluation indexes system, we adopt the linear weight comprehensive evaluation method to evaluate the financial core competitiveness. Mark the evaluation indexes group as: $X = \{X_1, X_2, \ldots\ldots, X_{10}\}$.

Here, X_1 ------ Percentage of high and higher financial employees; X_2 ------ Information level of financial management information system; X_3 ------ Industrial rank of total assets; X_4 ------ Industrial rank of financing scale in recent three years; X_5 ------ Corporate governance index; X_6 ------ Internal control; X_7 ------ Z value; X_8 ------ Investment growth ratio; X_9 ------ Industrial rank of cash flow; X_{10} ------ Cash dividend payout ratio.

As for the corporate governance level, we adopt the latest study fruit ------ China listed company's governance index, by Donghui Shi from the Research Center of Shanghai Stock Exchange. Corporate governance index = 35% * Score of controlling shareholders' behavior + 25% * Score of key man's restraint and incentive + 25% * Score of The Board's structure and operation + 15% * Score of information transparency. In detail, it is shown in Table 2 as follow.

A company's financial pre-warning ability is based on the application of financial pre-warning system. Here we select American Altman's Z model which can reflect whether a company's finance is stable or not in general. This model

adopts five financial ratios. It generates the final evaluation value (Z value) by weights and integration. The function is: $Z=1.2Y_1+1.4Y_2+3.3Y_3+0.6Y_4+0.999Y_5$

Here: $Y1$ = Operational funds / Total assets, $Y2$ = Retained profits (undistributed profits) / Total assets, $Y3$ = Profits before taxes and interests / Total assets, $Y4$ = Market value of common shares and priority shares / Accounting value of debts, $Y5$ = Total sales / Total assets. In general, the smaller the Z value is, the more possible the company may come to bankruptcy, the more imperfect the company's financial pre-warning system, and the poorer the company's financial pre-warning ability is.

We can get data of industrial rank of total assets, financing scale in recent three years, investment growth ratio, total cash flow, and cash dividend payout ratio from companies' annual reports or easy calculations. But for data of higher financial professional percentage, we have to perform investigations in companies. As for the information level of companies' financial management information system, we should ask helps from experts considering whether it is the manual accounting system or the electric accounting system, it is MRP, MRPII, or ERP.

Due to certain objective restraints (in a narrow scope), this essay selects eight indexes in the designed indexes system and takes them as the comprehensive evaluation indexes for valuing listed companies' financial abilities. The eight indexes are information level of financial management information system, industrial rank of total assets, industrial rank of financing scale, corporate governance index, Z value, investment growth ratio, industrial rank of cash flow, and cash dividend payout ratio.

This essay adopts the sorting leveled design in building an evaluation indexes system for financial core competitiveness, and uses a new evaluation indexes weight method ------ G_1, which is advanced by Professor Yajun Guo, in establishing the weights. It is not necessary to build a judgment matrix or consistency check for the G_1 method. Calculations are easier comparing with the leveled analysis method. Besides, the G_1 method can maintain the sequence of indexes' weights.

For the sake of comparisons and statistics, this essay chooses 15 steel companies (Presently, China has 42 listed steel companies) that listed in Shenzhen Stock Exchange ("0" in the company code as the first number means it is a steel company that listed in Shenzhen Stock Exchange). Relevant materials concerning listed companies are all from legal information disclosure websites appointed by China Securities Regulatory Commission: http://www.bj.cninfo.com.cn and http://www.stockstar.com.

In processing the data, the general principle is to turn quality indexes into quantity indexes, and turn quantity indexes into non-dimensional maximum indexes with same tendency. And the total score of each index is 10. In detail, procedures are listed as follow.

(1) As for the industrial rank of total assets, use N/42 to represent the rank of one company. Turn it into the maximum by 1-N/42, and then multiply with 10. Get the final score of the index.

(2) As for the industrial rank of cash flow and the industrial rank of financing in recent years, the process is similar to above.

(3) As for the listed companies' governance index: Firstly, calculate the score of each question. In the evaluation system, each question of 12 questions has two choices: positive or negative, respectively with the value "0" or "1". Secondly, calculate the score of each item. For the four items, namely the controlling shareholders' behavior, key man's selection, incentive, and restraint, Board's structure and operation, and transparency of information disclosure, get the total score of each item respectively and then divide the number of questions, and multiply with 10. Get the final score of one item. Therefore, the total score of each item is 10. Finally, according to the weight of each item, calculate the total score of corporate governance index.

(4) As for the investment growth ratio and the cash dividend payout ratio, make the score in calculation multiply with 10 and get the final score of each index.

(5) As for the information level of financial management information system, get the score according to the nature of system, ERP, MRPII, MRP, common electric accounting system, or traditional manual accounting system.

(6) As for the value of Z, if it is larger than 2.675, the score is in the scope between 8.0 and 10.0. If it is in the scope 1.81 and 2.675, the score is in the scope between 4.0 and 8.0. If it is smaller than 1.81, the core is in the scope between 1.0 and 4.0. For example, if one listed company has a Z value 2.42, then, $Z=[(2.42-1.81)/(2.675-1.81)]\times(8-4)+4$

As for the relative importance of index in the indexes system, this essay designs a questionnaire and selects some theoretical scholars, financial workers, and postgraduates specialized in relevant subjects for the questionnaire. This research issues 12 questionnaires and collects 10. Calculate the weights of each index according to the methods mentioned above. Results are shown in Table 3 as follow.

Based on the financial core competitiveness indexes system after a pre-process and the weights by the G_1 method, we

get the comprehensive rank of 15 listed steel companies' financial core competitiveness, which is shown in Table 4 as follow.

By comparing scores of financial core competitiveness' comprehensive evaluation indexes of 15 steel companies listed in Shenzhen Stock Exchange, we find that Beijing Shougang (000959) firstly adopts the latest ERP system and improves its information level of financial management information system as other 14 companies still use common electric accounting system. By this way, it becomes the information provider and sharer from a saver. Only for the one index, Beijing Shougang wins advantages over others in financial core competitiveness. Meanwhile, Beijing Shougang ranks No.1 concerning the ability of financing among the 15 companies. But it does not expand fast but apply the collected funds to production management by its excellent financial organization and coordination ability (ranks No.2) and funds utility ability (ranks No.1), forming the financial core competitiveness better than others in the industry.

In addition, we find that the top five companies in the comprehensive evaluation rank of financial core competitiveness get higher scores than the last five companies in the rank concerning the five indexes, namely total assets, financing scale in recent three years, corporate governance index, investment growth ratio, and cash flow.

Apparently, China's listed steel companies should pay more attentions to basic resources, financing ability, investment ability, capital use ability, and financial organization and coordination ability, and continue to dig out the potentials, in order to maintain the financial competitive advantages in severe market competition and maintain the leading advantage.

References

Feng, Qiaogen. (2003). Core competitiveness finance ------- a new financial view. *Shanghai Accounting*. No.3. p26-27.

Guo, Yajun. (2002). *Comprehensive Evaluation Theory and Method.* Beijing: Science Press.

Huang, Jigang. (2003). *Dynamic Management on Core Competitiveness*. Beijing: Economic Management Press.

Shi, Donghui & Situ, Danian. (2004). An empirical study on the quality of corporate governance and its effect on the performance of the China's listed companies. *Nankai Business Review*, No.1, p. 41-48.

Wang, Yuetang. Mao, Danxia & Luo, Hui. (2004). The core competency of accounting: the impact and prospect of information technology. *Accounting Research*, No.1, p. 65-68.

Zhu, Kaixi. (2001). Financial management objectives and corporate financial core competence. *Collected Essays on Finance and Economics*, No. 5, p. 10.

Table 1. The evaluation indexes for financial core competitiveness

	Basic element	Evaluation element	Evaluation index	Meanings of index
Financial core competitiveness	Ability resource	Financial human resource	Percentage of high financial professionals	High and higher professional financial employees / Total financial employees
		Ability of information process	Information level of financial management information system	Adopt information process system: popular accounting software, MRP, MRPII, OR ERP system
		Scale of asset	Industrial rank of total asset	
		Ability of financial relationship	Industrial rank of financing in recent three years	
	Ability institution and mechanism	Ability of financial organization and coordination	Index of corporate governance	Corporate governance index = 35% * Score of controlling shareholders' behavior + 25% * Score of key man's restraint and incentive + 25% * Score of The Board's structure and operation + 15% * Score of information transparency
		Ability of financial control	Internal control	Internal system report suggestions
		Ability of financial pre-warning	Z value	Z = 1.2* Working capitals / Total assets + 1.4* Retained profits / Total assets + 3.3* Profits before taxes and interests / Total assets + 0.6 * Market value of stock / Total debts + 0.999 * Total sales / Total assets
	Ability state	Ability of investment	Investment growth	Growth ratio of projects in construction, fixed assets, and long-term investments
		Ability of funds application	Industrial rank of cash flow	
		Ability of distribution	Cash dividend payout ratio	Cash dividends in recent three years / Cash stock dividends in recent three years

Table 2. Components of corporate governance index.

Governance aspect	Sub-index
Controlling shareholders' behavior (35%)	Whether there is related transactions between controlling shareholders and the listed company;
	Whether controlling shareholders or related parties occupy listed company's funds;
	Whether listed company offers guaranties for controlling shareholders and related parties.
Key man's selection, incentive, and restraint (25%)	Whether the general manager is from controlling shareholders;
	Whether the board president or the general manager gets salaries from the listed company;
	Whether the board president or the general manager holds the listed company's stocks;
	Whether the listed company distributes cash dividends in one evaluation year.
Structure and operation of board (25%)	Whether the listed company's board has an independent director;
	Whether the listed company's board president and the general manager is the same person;
	Whether the listed company's board president or the general manager is employed by controlling shareholders.
Transparency of information disclosure (15%)	Whether the registered accountant presents the non-standard and unpreserved opinions for the accounting reports in one evaluation year;
	Whether the listed company is criticized openly by Shanghai Stock Exchange and Shenzhen Stock Exchange because of information disclosure in one evaluation year.

Table 3. Weights of evaluation indexes.

Evaluation element	Weight	Evaluation element	Weight
Financial human resource	0.15	Ability of financial control	0.13
Ability of information process	0.13	Ability of financial pre-warning	0.12
Asset scale	0.09	Ability of investment	0.04
Ability of financial relationship	0.10	Efficiency of funds utility	0.07
Ability of financial organization and coordination	0.14	Ability of distribution	0.03

Table 4. Comprehensive evaluation rank of financial core competitiveness.

Rank	Stock code	Stock name	Comprehensive evaluation value	Rank	Stock code	Stock name	Comprehensive evaluation value
1	000959	Beijing Shougang	5.2811	9	000778	Xinxing Pipes	3.5785
2	000898	Angang New Steel Co.	4.6482	10	000708	Daye Steel	3.4325
3	000932	Valin Line	4.5827	11	000890	China Fasten	3.4033
4	000825	Taiyuan Steel Stainless	4.5406	12	000761	Benxi Steel Plate Co	3.2730
5	000717	Shaoguan Iron & Steel	4.5198	13	000961	Dalian Jinniu	2.8626
6	001696	Zongshen Motor	4.4635	14	000569	Greatwall Corp.	2.7271
7	000709	Tangshan Steel	4.3096	15	000656	ST Dongyuan	2.4216
8	000629	Panzhihua New Steel & Vanadium Co	4.0934				

The Background and Challenges Faced by the Small Medium Enterprises. A Human Resource Development Perspective

Siti Sarah bt. Omar

University Tun Hussein Onn Malaysia, MALAYSIA

E-mail: sarah@uthm.edu.my

Lawrence Arokiasamy

University Tunku Abdul Rahman, MALAYSIA

E-mail: lawrence@utar.edu.my

Maimunah Ismail

University Putra Malaysia, MALAYSIA

E-mail: mismail@educ.upm.my

Abstract

In the recent years, a number of emerging issues are posing serious challenges to the small and medium sized enterprises (SME's) in Malaysia. Hence, these enterprises enter the new era, dramatic challenges begun such as establishing new enterprises, globalization, financial constraints, high turnover, low motivation among employees, lack of human capital building, and more challenges ahead. Thus understanding the problems and challenges are fundamental solutions to expand and strategize SME's to future progress and grows. Therefore this article examines the background and challenges face by SME's which play a vital role in the nation growth. The uniqueness of this paper is the emphasis on the human resource development perspective which is important for SME's to progress and be competitive. Finally, this article maps out how future research can be more sensitive to how SME's actually develop their own human resource development for future development.

Keywords: Training and development, Small medium sized enterprises, Human resource development

1. Introduction

The increasing demand of the SMEs is the recognized feature of most nations. In Malaysia, this norm is no exception. In order for vision 2020 to be fully developed and become an industrialized nation by the year 2020, the future progress seems to depend greatly upon development of SMEs. In the year 2020, the country will develop to become an industrialize nation by capitalizing on the country's strengths and able to overcome weaknesses.

In response to the drastic changes, SMEs play an important role in developing country to a higher level. According to Schlogl (2004), he stated that small and medium-sized firms dominate our economies in terms of employment and number of companies, yet their full potential remains remarkably untapped. Although there is a broad assumption stating that SMEs generally has positive effects on country economic growth, the notion of economic imperatives for SMEs remains largely untested. Hence, this paper attempts to look into the background challenges faced by the SMEs.

This paper begins by defining the Small and Medium Enterprises (SMEs) and the background of SMEs in Malaysia. It then explores the roles of the SMEs in the economic development and challenges faced. The discussion leads to consideration on the importance of Human Resource Development (HRD) taking into account the SMEs. The final section concludes the importance of SMEs in economic development.

2. Research Objective and Significance of the Study

The objective of the study was to show that there are important for the SMEs to implement the HRD. This HRD is main tool to develop the SMEs in Malaysia. The significance of the study is to add value to the body of knowledge on human resource development and practice. Specifically for practice, the findings of this study would enlighten the significance HRD in the SMEs in Malaysia since the country's tremendous progress in economy has made it highly dependent on the manufacturing industry.

From the theoretical this study aims to extend existing knowledge of the HRD with specific reference to the newly expanded component in the manufacturing which is SMEs. Most of the HRD studies were involving universities, multinational companies, private firms, government agencies and larger businesses. Therefore, the present study addressed the above argument in an effort to increase our understanding of HRD in SMEs in Malaysia.

2.1 Definition of Small and Medium Sized Enterprises (SMEs)

There is no accepted worldwide definition of SMEs (Hooi, 2006). In Malaysia, the definitions are solely based on a fixed quantitative measure; for instance the total number of workers, the total number of capital, total assets and lately by determining sales turnover (Hashim and Abdullah, 2000). According to the Third Industrial Master Plan (2006), SMEs in the manufacturing sector are defined as 'enterprises with full time employees not exceeding 150 or annual sales turnover not exceeding RM25 million whereas SMEs in the services and primary agriculture sectors and ICT are enterprises with full time employees not exceeding 50 or annual sales turnover not exceeding RM5 million'. These SMEs are further categorized into medium-sized companies, small enterprises and micro-enterprises, as indicated in Table 1(see appendix).

2.2 Background of SMEs in Malaysia

It is reported by the Malaysian Department of Statistics as in 2003, there were 523,132 total establishments in Malaysia which SMEs accounted the most for the total of 99.2% (518,996). While only 0.8 percent remaining were occupied by large companies. SMEs comprise of three key economic sectors namely manufacturing, services and agriculture. Micro establishments constitute the largest number with more than three quarters out of the total SMEs formations. They are primarily represented in the services and agriculture sectors with the proportions for 80.4 and 93.3 percent respectively. Small companies make up to 18.4 percent and medium companies 2.2 per cent. The manufacturing sector also displayed the same pattern nevertheless the percentage of micro firms was lower (55.3 percent), while small firms accounted to 39.5 percent (Normah, 2007).

According to Khairuddin (2000), SMEs in Malaysia may be categorized into three components; (1) general business, (2) manufacturing and (3) agricultures. The general business sector includes construction, wholesaling and retailing, transport and storage, business services and activities, and providing services such as hotel and restaurant. The main activities in the manufacturing sector consist of processing and production of raw materials. Meanwhile the agriculture sector includes rubber, oil palm, paddy, coconuts, fruits, and vegetables. From the three components; the manufacturing sector emerged as the most important component for SMEs in Malaysia. Below are descriptions of the three components in detail.

(i) Manufacturing Sector

In the manufacturing sector, the largest number consists of micro-enterprises (53.4 per cent) followed by small sized category (38.1 per cent) and lastly medium sized category (5 per cent). In terms of distribution by industry, SMEs were mainly in the textiles and apparel and resource based industries. The detailed of manufacturing sub sector and number of establishments is indicated in Table 2.

In regards to geographical location, Saleh and Ndubisi (2006) found that a vast number of manufacturing companies in Malaysia was located in the West Coast of Malaysia which is the industrialized location which is equipped with ports services. They found that Johor has the largest concentration of manufacturing companies such as textiles and apparel and wood based industries with 17.5 percent, followed by Selangor (16.7 percent), Perak (9.4 percent) and Pulau Pinang (8.7 percent). Johor led of the country due to the accessibility of cheap labour and logging activities there.

(ii) General business

In the general business or service sector, about 449,004 out of total establishments were SMEs which constituted to 99.4 percent. In the sector, 69.3 percent of SMEs were in the distributive trade (wholesale, retail and restaurants), followed by transportation and communication (6.2 percent), financial intermediaries (4.3 percent) and professional services (2.5 percent). Table 3 shows the detail of establishments by this sub-sector.

Saleh and Ndubisi (2006) mentioned the list of activities for the transportation and communication sub-sector services were logistics and freight forwarding services, storage and warehousing, road haulage, sea and inland transport, highway operations, courier services, public bus transport, car parking services.

Meanwhile, the professional sub-sector service is defined under the Malaysian Standard Industrial Classification as (1) Non-technical related: legal, accounting, business and management consultancy, advertising and (2) Technical related: architectural, engineering, surveying and other technical activities.

(iii) Agriculture Sector

In the agriculture sector, out of 32,397 active companies, 99.2 percent were SMEs. Based on the SMEs total establishments, 65.8 percent were in the planting, market plantation and horticulture, followed by fisheries (20.9 percent), poultry farming (6.9 percent) and agricultural and animal husbandry services (4.8 percent). Table 4 indicates the detailed number of firms and proportions.

Normah (2007) mentioned the concentration of SMEs in the states has a close relationship with the dominant economic activities. In Kedah where agriculture is the main stay of the economy, the number of SMEs were the largest with the total of 8,803 (27.4 percent) followed by the east coast states with 26.6 percent.

2.3 Impact of SMEs on Malaysian Economy

SMEs play a vital role in the development of Malaysian economy. Their contributions resulted big impacts to the economy as a whole. SMEs are also important traders and service providers to primary industries. Furthermore, a large number of SMEs are also producers of finished goods and services. Collectively, these SMEs contributed to the growth of manufacturing, services and agriculture sectors, as well as ICT services, in terms of output, value-added, employment and exports (Industrial Malaysia Plan, 2006). Additionally, Hashim and Wafa (2002) also mentioned that SMEs offer employment opportunities, initiate improvement, accelerate competition and support big companies.

Recent evidence shows that SMEs contribute to 32 percent to gross domestic product, 56.4 percent to employment opportunities and 19 percent to export (SMIDEC, 2008). Specifically, Table 5 below indicates the total output and value added by sector namely manufacturing, services and agriculture.

According to the table above, in terms of share contribution SMEs accounted to 43.5 percent of total output and 47.3 percent of value added. It is noted that SMEs in services sector contributed the largest share, 56.7 percent and 54.7 percent respectively. SMEs in the manufacturing sector saw a 34.9 percent contribution in output and 37.1 percent in value added.

While Table 6 indicates the contributions of SMEs in terms of total manufacturing output, manufacturing value-added and employment in manufacturing from 2002 to 2003. The output of SMEs have grown by 9.7 percent during 2003, value added production increased by 11.8 percent and employment by 3.7 percent.

2.4 Challenges

The Small and Medium Enterprises has special features as to compare with the larger organizations. SMEs must consider the motivations, constraints and uncertainties facing smaller firms and recognize that these factors differ from those facing larger firms. According to Westhead and Storey (1996) noted the characteristics which distinguishes small organizations form larger ones other than size itself is that of uncertainty. For the small organization external uncertainty has affected the most such as lack of power and influence in a market place, larger customer and vulnerability. Therefore, the SMEs seem unpredictable and ruthless market. Therefore, uncertainties have become a major problem in the small organizations.

In the current development, changes in the environment such as globalization, political, social, economic and technological occurred surrounding the organizations. The changes in environment pose a challenge to the SMEs, which limits their abilities to maintain their position against larger organizations. According Snell and Lau (1994) found that more management competencies are required for growth in small organization compared to larger organizations. In this situation, small organization failed to develop skills, knowledge and competencies among workers in the small organization. This is mainly because of financial constraints and insufficient training. According to Gupta and Cawthon (1996) argued that small organization especially managers required the most training. Therefore, training is an essential tool for developing employees and the organizations.

The small organization receives major challenges form larger firms, whose command of resources and global reach can be significant. Some great innovations have come from SMEs, particularly in technological fields, but these often owe much to larger firms. These features are becoming a trend for many entrepreneurs is seizing their opportunities. Small firms receive more information such as global market accessible, tax, regulatory frameworks, trade rules, and other legal and advisory services. Helping them to gain access to finance is also important. By receiving all information, small firms prefers to join with larger organizations. Financing is frequently becoming a major hurdle to overcome the way to setting up and staying in business, with access to risk capital.

According to Hill and Stewart (2000), on a case study research into human resource development within three SMEs firms, investigated employers attitudes towards learning, examined the link between career structures and training in organizations of all sizes. Evidence from this study found that small organization lacked of career structure which did not guarantee promotion and training. Therefore, small firms have difficulties to progress and compete with larger firms whereby the employees have low motivation to perform. This is a major hurdle that small firms faced especially in the developing countries.

In today's firms are very much exposed to market pressure, SMEs are frequently at a disadvantage relative to their larger counterparts regarding their abilities to attract, retain, and motivate the best human resources (Beaver and Hutchings, 2005). Consequences of this practice, the SMEs are unable to attract and retain highly qualified staff in the firms. These have led for poor performance and eventually the small sized firms were unable to be competitive in the market.

According to Schlogl (2004) small sized firms failed to improve the basic infrastructure like expanding broadband and secure servers. These factors have impacts on the small sized firms to turn to e-business approach. One of the main reasons is cost. In addition, the SMEs frequently cannot afford or find qualified e-business staff to operate the business. These major impediments for smaller firms simply lengthen the usual problems relating to trust, traction security and, crucially concerns about violations of intellectual property rights. Therefore, HRD is the solutions for training the staff to be more equipped with knowledge and skills on handling e-business.

3. The Human Resource Development (HRD) perspective

Recent studies of SMEs have witnessed a major contribution to the developing economics. From the HRD point of view, SMEs need to improve in order to be competitive in the market and to continue their survival. According to Harrison (1997) argued that HRD literature is now strategically focused and well integrated with fields of human resource management, business strategy and organizational learning. A number of dimensions of HRD initiations are investment in human resource capabilities, change in both organizational and individual concern on enhancing the core competencies, organizational and individual learning, and enhancement of human resource competencies.

According to Harrison (1997), HRD is essential for organizational strategy, external labour market strategies, changes in internal labour market needs and the value system within an organization.   Much of the literature appears to be positing that investment in employees will enhance learning and performance. However, the small firms facing difficulties cater appropriate system in the organization due to financial constraint. If the SMEs can overcome this hurdles therefore small firm also can be outperform. HRD is generally preoccupied with activity and it is proven that there is a causal link between human resource development investment and organizational and business performance.

From the HRD perspective, it encompasses activities that improve the performance of individuals and the organizations. The central notion is that HRD may include training and development, organizational development and career development. Training involves the fostering of learning and education activities designed to improve the overall competence of an employee. Therefore at its most basic, HRD increases workforce competence, skills development and quality, motivation, commitment and development of the organization. According McLagan, (1989) argued that HRD strategic has linked training and development to organizational objectives and able to respond to the changes in the environment and technology. Therefore, HRD strategic is a tool for developing the firms and long term survival. However, the only consent that the SMEs worried are the costs, poor strategic planning and lack of managerial support.

According to Rigg and Trehan (2002) argued that HRD in small organizations took a discourse perspective on organizational, learning and development. A qualitative approach is used to identify the three elements. The finding showed that HRD practices were misconstrued in SMEs. In today's organization learning and development go well beyond the individual who attended the course and formal HRD investment is undermined by organization processes that prevented learning. Therefore, formal HRD activity alone can give a highly distorted perspective. Moreover, the HRD within SMEs indicates a need for research that enables the HRD in action for small firm development.

HRD is equally central for both small and large companies. However, HRD in small organization failed to realize the importance for organizational learning.   According to Essi Saru (2007) argued HRD and organizational learning issues form the perspective of small firms. In this study, it argued that learning is about developing the organization or its individual, and therefore it is closely connected to the HRD processes. As understood form this description, HRD issues are very important for the sake of the survival of the small firms. Competencies and learning in organizations are ways to overcome some of the problems and HRD are the solutions provider for the firms.

4. Conclusion

This article has set a context and rationale for research into human resource development within SMEs. Our discussion focused on the background and challenges of SMEs and the importance of human resource development. Based on the study, we have described human resource development is fundamental for small sized firms to develop.

In conclusion, the HRD activities are essential for SMEs for long term survival. HRD activities such as training and development, career planning, self-directed learning, employee motivation have led towards a better performance, higher creativity and innovation, retaining, staff, better service, equality and enrich human capital. It is believed that small firms should put in place, strategies to enhance knowledge, skills, and expertise. In terms of HRD, these have led to better performance and encouraged individual for higher commitment to the organizational performance. In today's HRD, it is important for all sized organization and with no exceptional for small firms as well. (Hill and Stewart, 2000).

This study provides insights into definition, background and roles of SMEs, challenges faced by the SMEs and the view form the HRD perspective. In today's society, organizations have begun to consider HRD as a component towards their survival. It is not because of legal requirement but also for the reason of preparing the organizations in the long run domestically and internationally. HRD will allow small firms to gain a competitive advantage and this will lead to better performance.

References

Beaver, G., & Hutchings, K. (2005). Training and developing an age diverse workforce in SMEs: The need for a strategic approach. *Education & Training,* Vol. 47, No. 8/9, pp.592.

Census of Establishments and Enterprises. (2005). Preliminary Report – Profile of Small and Medium Enterprises. Putrajaya.

Department of Statistics. (2003). Census of Manufacturing Industries. Putrajaya

Gupta, M., & Cawthon, G. (1996). Managerial implication of flexible manufacturing for small/medium enterprises. *The International Journal of Technological Innovation, Entrepreneurships and Technology Development,* Vol. 16, No. 2, pp. 77-83.

Harrison, R. (1997). Employee Development, Institute of Personnel and development, London.

Hashim, M.K. and Abdullah, M.S. (2000c). Developing SMEs taxonomies in Malaysia. *Malaysian Management Journal*, June/Dec, 4(1), pp.43-50.

Hashim, M.K. and Wafa, S.A. (2002). Small and medium sized enterprises in Malaysia: Development issues (Petaling Jaya: Prentice Hall).

Hill, R. and Stewart, J. (2000). Human resource development in small organizations. *Journal of European Industrial Training,* Vol. 24, Nos 2/3/4, pp.105-17.

Hooi, L.W. (2006). Implementing e-HRM: The readiness of SME manufacturing company in Malaysia. *Asia Pacific Business Review*, Vol.12, No.4, 465-485.

Khairuddin, H. (2000). Redefining SMEs in Malaysia: One Industry One Definition. *Asian Academy of Management Journal,* Jan–June, 2000.

McLagan, P. (1989). Models for HRD Practice, ASTD Press, St. Paul, MN.Ministry of International Trade and Industry Malaysia, The Third Industrial Master Plan (IMP3), 2006.

Normah Mohd Aris. (2007). SMEs: Building Blocks for Economic Growth. Paper presented in National Statistics Conference 4-5 September 2006. Department of Statistics.

Rigg, C., & Trehan. K. (2002). Do they or don't they? A comparison of traditional and discourse perspective of HRD in SMEs. *Education & Training,* Vol. 44, No. 8/9, pp. 388-397.

Saleh, A.S. and Ndubisi N.O. (2006). An Evaluation of SME Development in Malaysia. *International Review of Busienss Research Papers,* Vol. 2, 1, pp. 1-14

Saru, E. (2007). Organizational learning and HRD: how appropriate are they are for small firms? *Journal of European Industrial Training,* Vol. 31, No. 1, pp. 36-51.

Schlogl, H. (2004). Small and medium enterprises: Seizing the potential. *Organizational for Economic Cooperation and Development,* No. 243, pp. 46-48.

SMIDEC. (2008). *Promoting Innovation –led and Technology –Driven SMEs.* Paper presented in Asia Pacific Conference of Technology and Technology Entrepreneurship.

Snell, R., & Lau, A. (1994). Exploring Local Competencies salient for expanding small businesses. *Journal of Management Development,* Vol. 13, No. 4, pp. 4-15.

Westhead, P. and Storey, D. (1996). Management training and small firm performance: why is the link so weak? *International Small Business Journal,* Vol. 14, No. 4, pp.13-24.

Table 1. Definitions of SMEs

	Category	Micro-enterprise	Small enterprise	Medium Enterprise
1.	Manufacturing	Annual sales turnover not exceeding RM250, 000 or with full time employees not more than five person.	Annual sales turnover of between RM250, 000 and RM10 million or employing between five and 50 full time employees.	Annual sales turnover of between RM10 million and RM25 million or employing between 51 and 150 workers.
2.	Services, primary agriculture and Information and Communication Technology (ICT)	Annual sales turnover not exceeding RM200, 000 or with full time employees not more than five person.	Annual sales turnover of between RM200, 000 and RM1 million or employing between five and 20 full time employees.	Annual sales turnover of between RM1 million and RM5 million or employing between 20 and 50 workers.

(Source: Third Industrial Master Plan 2006-2020, 2006)

Table 2. Distribution of Small and Medium Enterprises in manufacturing by Sub-Sector

Sub-sector	Total Number of Establishments	SMEs	
		Number	Share (%)
Total	39,219	37,866	100.0
Textile and apparel	8,855	8,779	23.2
Food and beverages	5,804	5,664	15.0
Metals and metals products	4,809	4,686	12.4
Paper, printing and publishing	3,549	3,483	9.2
Furniture	2,352	2,286	6.0
Rubber and plastics products	2,343	2,166	5.7
Wood and wood products	2,149	2,052	5.4
Non-metallic mineral products	1,708	1,650	4.4
Machinery and equipment	1,435	1,390	3.7
Electrical and electronics	1,362	1,077	2.8
Chemicals and chemicals products	1,115	1,047	2.8
Transport equipment	769	699	1.8
General manufacturing	2,969	2,887	7.6

(Source: Census of Establishments and Enterprise, 2005)

Table 3. Distribution of Small and Medium Enterprises in services by Sub-Sector

Sub-sector	Total Number of Establishments	SMEs	
		Number	Share (%)
Total	451,516	449,004	100.0
Wholesale and retail	249,178	248,221	55.3
Restaurants	63,067	63,013	14.0
Transportation and communication	28,231	27,980	6.2
Financial intermediaries	19,291	19,108	4.3
Professional services	11,245	11,120	2.5
Real estate activities	8,847	8,779	2.0
Business and management Consultancy services	8,404	8,352	1.9
Health	7,838	7,759	1.7
Education	7,738	7,618	1.7
Hotel	2,494	2,275	0.5
Computer services	1,182	1,095	0.2
Telecommunications	88	58	Negligible
Selected services	43,913	43,626	9.7

(Source: Census of Establishments and Enterprise, 2005)

Table 4. Distribution of Small and Medium Enterprises in agriculture by Sub-Sector

Sub-sector	Total Number of Establishments	SMEs	
		Number	Share (%)
Total	32,397	32,126	100.0
Planting, market plantation and horticulture	21,333	21,146	65.8
Fisheries	6,701	6,699	20.9
Poultry farming	2,249	2,208	6.9
Agricultural and animal husbandry	1,571	1,558	4.8
Forestry, logging and other related services	283	258	0.8
Mixed agriculture – agricultural and animal husbandry	230	227	0.7
Hunting, trapping and game propagation including related services	30	30	0.1

(Source: Census of Establishments and Enterprise, 2005)

Table 5. Output and value added by Sector, 2003

Sector	Output (RM billion)			Value added (RM billion)		
	Total	SMEs	%	Total	SMEs	%
Manufacturing	549.1	191.6	34.9	128.1	47.5	37.1
Services	361.7	204.9	56.7	187.6	102.7	54.7
Agriculture	20.6	8.7	42.1	9.1	3.6	39.7
Total	931.4	405.2	43.5	324.7	153.7	47.3

(Source: Department of Statistics, 2003)

Table 6. Contribution of SMEs in the Manufacturing Sector

Indicators	Value		Share contributed to manufacturing Sector output (percent)		Annual Growth (percent)
	2003	2002	2003	2002	2003
Total output (RM billion)	68.9	62.8	29.1	29.1	9.7
Value added (RM billion)	14.2	12.7	26.1	25.8	11.8
Employment	375,840	362,345	32.5	31.5	3.7

(Source: Saleh and Ndubisi, 2006)

Research on Economic Procurement Models

on the Basis of Controllable Lead Time

Xiaoping Fang, Xianyun Li & Li He

School of Traffic and Transportation Engineering, Central South University

Changsha 410075, China

E-mail: fangxp@csu.edu.cn

Abstract

On the basis of extremum principle, a mathematical model of two-echelon supply chain for both the suppliers and the purchasers is established. The model is built to analyze the decentralized and centralized procurement decision-making under the condition of controllable lead time and the joint undertaking of costs. By using the numerical analysis and operating the two models, the difference of the amount of economic procurement and the lead time under different manner of decision-making and costs undertaking are discussed. The results show that the amount of costs reduction is associated with the compensation costs paid by suppliers for further cutting down the lead time. Therefore, cutting down the lead time to a certain extent would reduce the overall costs of supply chain.

Keywords: SCM (Supply Chain Management), Lead time, Decentralized decision-making, Co-determination

1. Preface

The stock management, including ordering in advance and the confirmation of the amount of procurement within the supply chain is an important part of supply chain management (SCM). The costs of stocking and advance in time are closely related with each other. Lead time refers to the length of time from the issuing the order to the receiving the goods. It includes the time of four links: processing the order form, supply position, transportation and identifying the goods.

Many stock models regard the lead time as a constant or random variability (Luo, 2004) without considering the controllability of lead time and the influence it exerts on the amount of procurement and the safety of stock. In the production activity, the lead time could be cut down and controlled by supplementing the extra costs for operating around the clock.

Liao and Shyu (1991) are the first ones to research the controllable lead time. They assume that it is formed by many operation periods and every operation period contains an average lasting time and a minimal lasting time. Moreover, the extent of reduced lead time in every period changes with the costs in linear. Based on their research, Ben-daya & Raouf's (1994) model regards both the lead time and the amount of ordering as decision-making variations. And Ouyang ,Yen & Wu (1996) put forward the model of lead time considering the condition of short supply and further categorize the shortage into two kinds: replenish-able short supply and the shortage that leads to loss.

However, thanks to the fact that the reduction of the costs of lead time is based on the assumption of linear change, there are still some deficiencies in practice. According to the principle that the marginal utility is actually a diminishing process, the costs of lead time in every operation period should exhibit a relationship of convex function. And after being minimized into linear, all the results of the mentioned dissertations are that the annual costs are at the lowest point when every single operation period of lead time is valued from the end points (it means the shortest duration and also the longest duration). The fact that the end point of optimal lead time only values the decentralized one which leaves us no chance to compare and analyze the function of reducing the lead time in stock management. Therefore, their results are not applicable in practice.

The thesis believes that the lead time can be cut down and controlled by supplementing costs. By applying the negative index function proposed in document 5 to deal with the compensation costs for cutting down the delivery lead time,

which means that the time for cutting down the lead time varies with the costs in non-linear, the thesis builds two stock decision-making models including centralized and decentralized ones in the two-echelon supply chain.

2. The Hypothesis of Models and Explanation of Signs

2.1 Basic Hypothesis

A two-echelon supply chain between a purchaser and a supplier is taken into consideration. The purchaser sends the demand information through the order. The supplier should design supply strategies according to the demand information and their own conditions. The following hypothesis is made to resolve the problem:

(1) If the demand during the lead time follows the normal distribution of mean μ and Standard Deviation σ, the demand X during a fixed lead time l must follow the normal distribution of mean $\mu \cdot l$ and standard deviation $\mu \cdot l$.

(2) The reorder point $r = \mu \cdot l + k\sigma\sqrt{l}$, among which, $\mu \cdot l$ is the demand expectation during the lead time, $k\sigma\sqrt{l}$ the safety storage, k the safe inventory factor, k accords with $P(X>r)=P(Z>k)=q$. Z is the random variable of the standard normal distribution and k can be calculated in the normal distribution chart (Ling,2008).

(3) The inventory level is supervised in a sequential way so that when the storage lowers to the reorder point the immediate purchase form the supplier can be realized.

(4) The total annual demand is known and out of stock is unallowable.

2.2 Explanation of Signs

D is total demand facing the purchaser in unit time; A stands for the purchaser's cost per order; Q stands for Buyer's order quantity, which is a decisive variable; r is re-order point of the purchaser, which is a decisive variable; h_v shows the cost of purchaser's unit inventory holding per unit time; l is the normal procurement lead-time of the purchaser ; L stands for volume of compressed lead-time, which is a decisive variable; $CS(L,Q)$ is the expected total cost per unit time of the purchaser; $Cv(L,Q)$ shows the expected total cost per unit time of the supplier $C(L,Q)$ stands for the joint expected total cost of both supplier and purchaser.

3. Cost Analysis when lead time being a constant

In the purchasing model the lead time is usually decided by the average replenishment time, that is to say the lead time is a constant in the model and does not affect the decisive variable. The purchaser determines the quantity of economic purchasing according to their total demand and safety stock. Thus the total cost is equal to:

$$CS(Q) = A\frac{D}{Q} + h\left(\frac{Q}{2} + k\sigma\sqrt{l}\right) \tag{1}$$

Then $Q^* = \sqrt{\dfrac{2AD}{h}}$, therefore $CS(Q^*) = \dfrac{\sqrt{2ADh}}{2} + h\left(\dfrac{1}{2}\sqrt{\dfrac{2AD}{h}} + k\sigma\sqrt{l}\right)$ (1.1)

The inventories of the supplier equal to the purchasing quantity of the purchaser for a two-echelon supply chain. The cost of the supplier consists of inventory cost and preparation cost:

$$Cv(Q) = DS_v/Q + Qh_v/2 \tag{2}$$

Then $Q^* = \sqrt{\dfrac{2AD}{h}}$, i.e., $Cv(Q^*) = \dfrac{S_v\sqrt{2DAh}}{2A} + \sqrt{\dfrac{2AD}{h}}h_v$ (2.1)

4. Cost Analysis of Controllable Procurement Lead Time

Lead time control, and procurement lead time control in particular, plays a vital role that can not be neglected in the inventory management in enterprises. Shortening the lead time can reduce the amount of safety stock and inventory capital, thus to enhance the competitiveness of enterprises. However, this will increase ordering frequency, and thus increase set-up costs. So it should be considered carefully. In this thesis, the additional cost required by the shortened delivery lead-time adopts the form of exponential function: $C(L) = ae^{-bL}$. The cost compressed lead-time should be shared by the purchaser and supplier. There are two decision-making modes for the quantity of economic purchasing and lead time. The first one is de co-determination, and the second one is co-determination. They have different decision-making process.

4.1 Co-determination Process and Cost Analysis

The purchaser is in charge of determining the purchasing quantity in the co-determination process and the purchasing quantity is determined by the supplier in the lead time.

(1) The Determination of Economic Purchasing Quantity

The costs of purchaser are composed of purchasing cost, inventory cost and the cost formed in sharing the compressed

lead time.

$$CS\ (L,Q) = A\frac{D}{Q} + h\left(\frac{Q}{2} + k\sigma\sqrt{l+L}\right) + \frac{D}{Q}\alpha C(L) = A\frac{D}{Q} + h\left(\frac{Q}{2} + k\sigma\sqrt{l+L}\right) + \frac{D}{Q}\alpha ae^{-bL} \qquad (3)$$

α stands for the cost proportion of the purchaser. So the purchaser decides the quantity of economic purchasing according to a reasonable lead time provided by the supplier to minimize the total cost $CS(L,Q)$. Therefore

derivation of Q^* can be obtained in the solution of the model. $Q^* = \sqrt{2\dfrac{AD + D\alpha ae^{-bL}}{h}}$, It can be seen from that

economic purchasing quantity of the purchaser and purchasing lead time are relevant to the sharing proportion of the cost of compressed lead time.

$$CS(L,Q^*) = A\frac{\sqrt{2Dh(A + \alpha ae^{-bL})}}{2(A + \alpha ae^{-bL})} + h\left(\sqrt{\frac{AD + D\alpha ae^{-bL}}{2h}} + k\sigma\sqrt{l+L}\right) + \frac{\sqrt{2Dh(A + \alpha ae^{-bL})}}{2(A + \alpha ae^{-bL})}\alpha ae^{-bL} \quad (3.1)$$

(2) Determination of Lead Time

Cost of the supplier consists of order cost, inventory cost and lead time shortening, so:

$$Cv(L,Q) = DS_v/Q + Qh_v/2 + \beta DC(L)/Q = S_v D/Q + Qh_v/2 + \beta ae^{-bL}D/Q \qquad (4)$$

Supplier's stock is determined by purchaser's need, that is to say purchaser places an order and the supplier prepare goods according to the order to reduce the cost.

For

$$Q^* = \sqrt{2\frac{AD + D\alpha ae^{-bL}}{h}}$$

$$\text{So,}\ Cv(L,Q^*) = S_v D/\sqrt{2\frac{AD + D\alpha ae^{-bL}}{h}} + \sqrt{2\frac{AD + D\alpha ae^{-bL}}{h}}h_v/2 + \beta ae^{-bL}D/\sqrt{2\frac{AD + D\alpha ae^{-bL}}{h}}$$

$$= (S_v + \beta ae^{-bL})\sqrt{Dh}/\sqrt{2(A + \alpha ae^{-bL})} + \sqrt{2\frac{AD + D\alpha ae^{-bL}}{h}}h_v/2 \qquad (4.1)$$

$$\frac{\partial C_v(L,Q^*)}{\partial L} = \frac{\sqrt{2}}{4}S_v D^{\frac{1}{2}}\alpha bae^{-bL}h^{\frac{1}{2}}(A + \alpha ae^{-bL})^{-\frac{3}{2}} - \frac{\sqrt{2}}{4}D^{\frac{1}{2}}h_v\alpha bae^{-bL}h^{-\frac{1}{2}}(A + \alpha ae^{-bL})^{-\frac{1}{2}}$$

$$+ \frac{\sqrt{2}}{4}D^{\frac{1}{2}}b\alpha\beta a^2 e^{-2bL}h^{\frac{1}{2}}(A + \alpha ae^{-bL})^{-\frac{3}{2}} - \frac{\sqrt{2}}{2}D^{\frac{1}{2}}b\beta ae^{-bL}\left(\frac{A + \alpha ae^{-bL}}{h}\right)^{-\frac{1}{2}} \quad (5)$$

Supposing (5) equals zero, so we can get

$$L^* = -\log\left[\frac{S_v h\alpha - 2Ah_v\alpha - 2Ah\beta}{(h_v\alpha + \beta h)\alpha a}\right]/b$$

When $L < L_1^*$, then $\dfrac{\partial C_v(L,Q^*)}{\partial L} < 0$; when $L > L_1^*$, then $\dfrac{\partial C_v(L,Q^*)}{\partial L} > 0$.

When $L = L_1^*$, $Cv(L_1^*, Q^*)$ is the smallest.; When $L^* < 0$,let $L^* = 0$,that is to say the lead time is not shortened.

So $Q^* = \sqrt{2\dfrac{AD + D\left(\dfrac{S_v h\alpha - 2Ah_v\alpha - 2Ah\beta}{(h_v\alpha + \beta h)}\right)}{h}}$, $L^* = -\log\left[\dfrac{S_v h\alpha - 2Ah_v\alpha - 2Ah\beta}{(h_v\alpha + \beta h)\alpha a}\right]/b$

When we put Q^* 和 L^* into $CS(L,Q)$ and $Cv(L,Q)$ respectively, we can get the lowest cost of purchaser and

supplier.

$$\mathrm{CS}(L_1^*, Q^*) = (A + \alpha a e^{-bL})\sqrt{2Dh}\,/\,2\sqrt{A + \alpha a e^{-bL}} + \sqrt{(AD + D\alpha a e^{-bL})h\,/\,2} + hk\sigma\sqrt{L}$$

$$= (A + \frac{S_v h\alpha - 2Ah_v\alpha - 2Ah\beta}{(h_v\alpha + \beta h)})\sqrt{2Dh}\,/\,2\sqrt{A + \frac{S_v h\alpha - 2Ah_v\alpha - 2Ah\beta}{(h_v\alpha + \beta h)}}$$

$$+ \sqrt{(AD + D\frac{S_v h\alpha - 2Ah_v\alpha - 2Ah\beta}{(h_v\alpha + \beta h)})h\,/\,2} + hk\sigma\sqrt{-\log[\frac{S_v h\alpha - 2Ah_v\alpha - 2Ah\beta}{(h_v\alpha + \beta h)\alpha a}]\,/\,b} \qquad (6)$$

$$\mathrm{Cv}(L_1^*, Q^*) = [S_v + \beta\frac{S_v h\alpha - 2Ah_v\alpha - 2Ah\beta}{(h_v\alpha + \beta h)\alpha}]\sqrt{Dh}\,/\,\sqrt{2[A + (\frac{S_v h\alpha - 2Ah_v\alpha - 2Ah\beta}{(h_v\alpha + \beta h)})]}$$

$$+ \sqrt{2\frac{AD + D(\frac{S_v h\alpha - 2Ah_v\alpha - 2Ah\beta}{(h_v\alpha + \beta h)})}{h}}\,h_v\,/\,2 \qquad (7)$$

4.2 Co-determination Process and Cost Analysis

If there is need for codetermination, supplier and purchaser should share their information to avoid such situation as inaccurate decision because of information asymmetry, lead time for purchase prolonged and high cost. The cost of the entire chain is much smaller than the sum of the cost of the purchaser and that of the supplier. Then the total cost is:

$$C(L, Q) = DS_v\,/\,Q + Qh_v\,/\,2 + \beta DC(L)\,/\,Q + A\frac{D}{Q} + h\left(\frac{Q}{2} + k\sigma\sqrt{l + L}\right) + \frac{D}{Q}\alpha C(L)$$

$$= \frac{Qh_v}{2} + (S_v + A)\frac{D}{Q} + h\left(\frac{Q}{2} + k\sigma\sqrt{l + L}\right) + \frac{D}{Q}a e^{-bL} \qquad (8)$$

Different from getting lowest cost of purchaser and supplier through decentralized decision making, centralized decision making has an optimized lead time and economic purchasing amount, so both L and Q are decisive variable.

According to (8) we can get:

$$\begin{cases} \dfrac{\partial C(L,Q)}{\partial Q} = \dfrac{h_v}{2} - \dfrac{(S_v + A)D}{Q^2} + \dfrac{h}{2} - \dfrac{Dae^{-bL}}{Q^2} = 0 \\[4mm] \dfrac{\partial C(L,Q)}{\partial L} = \dfrac{1}{2}hk\sigma(l + L)^{-\frac{1}{2}} - \dfrac{D}{Q}abe^{-bL} = 0 \end{cases} \qquad (9)$$

And
$$\begin{cases} Q = \dfrac{-4h_v Da^2 e^{-2bL}(l + L) + Ah^2 k^2\sigma^2 a^2 b^2 e^{-2bL} hl - 2Da^2 b^2 e^{-2bL} hl + ae^{-bL} h^2 k^2\sigma^2}{(h^2 k^2\sigma^2)} \\[4mm] \dfrac{2Dabe^{-bL}(l + L)^{\frac{1}{2}}}{hk\sigma} - L = 0 \end{cases} \qquad (9.1)$$

The numerical value can be got when you insert this formula in order window "matlab".

5. Model Analysis

With the establishment of the cost models of the purchaser, supplier and supply chain in both decentralized and centralized decision making, this thesis then makes a case study on the models. If it is assumed that there is a purchaser S whose average demand D=1000 t/y, cost-per-order A = 100 CNY / times, h = 30 CNY / ton, S_v = 600 CNY / times, h_v = 20 CNY / ton, $\sigma = 20$, k = 2, normal average lead time L = 16 days, a = 20, b = 0.02.

Insert Table 1 here

The economic purchasing quantity, the cost of the purchase, the cost of supplier and the total cost of supply chain can be

calculated in the above model when the lead time remains a constant. They are 81.649t,7249.5CNY,8165.0CNY 5414.5CNY respectively. The economic purchasing quantity, lead time in the process of co-determination and the cost are shown in the table1. During the co-determination process the economic purchasing quantity is 109.0238t and the shortened period in the lead time is 2.042 days. The cost of purchaser and supplier can be seen in the table2. It is can be seen from table1 and table2 that shortening the led time can reduce the cost of entire supply chain in different degree and shortening the led time in co-determination can minimize the cost of entire supply chain. The conclusion made from table1 is that the cost of the purchaser varies inversely with the degree of compression of lead time. When the purchasing quantity increases   to such degree that the cost of compression will be greater than the normal cost, the purchaser will chose not to shorten the lead time. So the distribution of cost proportion of compressing lead time and the reduced total cost must be reasonable.

Insert Table 2here

6. Conclusions

This thesis studies issues like delivery lead time and the decision making about order quantity in the two-echelon supply chain composed of a purchaser and a supplier.   Cost compression in the lead time adopts the non-linear model. Both the supplier and purchaser should bear the additional cost caused by shortening the lead time according to their own conditions in order to minimize the cost of the entire supply chain. This thesis also analyzes the minimum cost when lead time being a constant and a variable respectively. Discussing the process co-determination and that of centralized one as well as their influence on the cost when lead time being a variable, this thesis testifies the practicality and efficiency of the model through the numerical examples. The result demonstrates that compressing the lead time under co-determination is most conducive to minimization of the cost of the supply chain.

References

Ben-Daya M, & Raouf A. (1994). Inventory Models Involving Lead Time as Decision Variable $C(L,Q)$. *Journal of the Operational Research Society*.

BEN-DAYAM, RAOUFA. (1994). Inventory Models Involving Lead Time as Decision Variable. *JOperationalRes Soc*.

Ling, Yong. (2008). *Inventory Management of Component Commonality in Supply Chain*. Huazhong University of Science and Technology Press, in Chinese.

Liao C J, & Shyu C H. (1991). An Analytical Determination of Lead Time with Normal Demand. *International Journal of Operations and Production Management*.

Luo, Bing. (2004). *Study on Inventory Management of Supplier in Environment of Supply Chain*. Industrial Engineering and Management, in Chinese.

Ouyang L Y, Yen N C, & Wu K S. (1996). Mixture Inventory Model with Backorders and Lost Sales for Variable Lead Time. *Journal of the Operational Research Society*.

Table 1. Economic Purchasing Quantity, Lead Time and Cost in co-determination Process

α	β	Q^*	L^*	$Cs(L,Q)$	$Cv(L,Q)$	$C(L,Q)$
0.1	0.9	81.6497	0	7249.5	8165.0	15414.5
0.2	0.8	81.6497	0	7249.5	8165.0	15414.5
0.3	0.7	82.8846	-1.9744	7019.2	8243.5	15262.7
0.4	0.6	83.3289	-1.9080	7054.5	8183.3	15237.8
0.5	0.5	83.7435	-1.7034	7111.1	8125.7	15236.8
0.6	0.4	84.1380	-1.5420	7160.5	8070.6	15231.1
0.7	0.3	84.5386	-1.4206	7203.3	8015.8	15219.1
0.8	0.2	84.9375	-1.3294	7241.1	7961.8	15202.9
0.9	0.1	85.3346	-1.2609	7275.2	7908.5	15183.7

Table 2. Economic Purchasing Quantity, Lead Time and Cost in co-determination Process

α	β	Q^*	L^*	$Cs(L,Q)$	$Cv(L,Q)$	$C(L,Q)$
0.1	0.9	109.0238	-2.0420	7054.9	6765.6	13820.5
0.2	0.8	135.0603	-2.0420	7074.1	6746.5	13820.6
0.3	0.7	135.0603	-2.0420	7093.2	6727.4	13820.6
0.4	0.6	135.0603	-2.0420	7112.3	6708.3	13820.6
0.5	0.5	135.0603	-2.0420	7131.4	6689.2	13820.6
0.6	0.4	135.0603	-2.0420	7150.5	6670.1	13820.6
0.7	0.3	135.0603	-2.0420	7169.6	6651.0	13820.6
0.8	0.2	135.0603	-2.0420	7188.7	6631.8	13820.5
0.9	0.1	135.0603	-2.0420	7207.8	6612.7	13820.5

Relationship between Efficiency Level of

Working Capital Management and Return on

Total Assets in Ise

Mehmet ŞEN

Akdeniz University, Faculty of Economics and Administrative Sciences, Turkey

Tel: 90-242-310-1841   E-mail: msen@akdeniz.edu.tr

Eda ORUÇ

Akdeniz University, Institute of Social Sciences, Turkey

Tel: 90-242-310-6400   E-mail: edaoruc@akdeniz.edu.tr

Abstract

In our study we aimed to determine the relationship between efficiency level of firms being traded in ISE (Istanbul Stock Exchange) in working capital management and their return on total assets. We tried to explain the relationship between different indicators relating to efficiency in working capital management and their return on total assets through two models. According to the results in terms of both all the firms involved in the study and sectors there is a significance negative relationship between cash conversion cycle, net working capital level, current ratio, accounts receivable period, inventory period and return on total assets.

Keywords: Working capital management, Return on total assets, Panel data analysis

1. Introduction

Working capital means the whole current assets owned by a firm. Net working capital is the sum when short term liabilities are extracted from current assets. Return of total assets of a firm as a result of an activity is closely related to level and distribution of assets of the firm and efficiency in application of these assets. In lots of firms current assets called working capital make up of a remarkable part of community assets. (Note 1) But it is obvious that working capital is neglected in finance literature compared to long term financing decisions. Studies on corporate finance generally focus on main decisions like capital structure, dividend and capital budgeting. However, the amount of assets group a significant part of total asset and called working capital (money and quasi money, trade receivables, inventories and short term liabilities) is a focus matter in all main books relating to corporate finance where efficiency level of distribution and application of assets influence profitability and risk level of the firm.

The main objective of a firm is to increase the market value. Working capital management affects profitability of the firm, its risk, thus its value (Smith, 1980). In other words, efficient management of working capital is an important component of the general strategy aiming at increasing the market value (Howorth & Westhead, 2003; Deloof, 2003; Afza & Nazir, 2007). Since the flexibility of this group of assets is very high in terms of adapting to changing conditions, and due to these characteristics they can often be applied to realize the main objective of financial management through policy changes. Success of a firm mainly depends on efficient management capability of finance director to manage receivables, inventories and liabilities (Filbeck & Krueger, 2005). Firms can strenghten their funding capabilities or decrease the source cost reducing source amount they allocate to current assets.

The fundamental subject of working capital is to provide optimal balance between each element forming working capital. Most of the efforts of finance directors in a firm are the efforts they make to carry the balance between current assets not at optimal level and responsibilities to an optimal level (Lamberson, 1995). One reason for this is the decisive influence of current assets on others, another reasons is   obligation of fulfillment of current responsibilities. The combination of the elements forming working capital change over time. Need for working capital influences liquidity level and profitability of a firm. As a result, it affects investment and financing decisions, too. Amount of current assets to be calculated at a level

where total cost is of a minimum degree means an optimum working capital level. The optimum working capital level is the case in which balance between risk and efficiency is provided. A quest for such balance requires a constant monitoring of the elements forming working capital.

2. Efficiency of Working Capital Management

In finance literature there is a common opinion about the importance of working capital management. Explanations about why working capital management is significant for a firm generally focus on the relationship between efficiency in working capital management and firm profitability. Efficient working capital management includes planning and controlling of current liabilities and assets in a way it avoids excessive investments in current assets and prevents from working with few currents assets insufficient to fulfill the responsibilities. In relevant studies the measure taken as an indicator of efficiency in working capital management is usually cash conversion cycle. Cash conversion cycle for a firm is the period during which it is transited from money to good and again to money and this cycle can be demonstrated like in figure1.

The more cash conversion cycle of the firm extends, the more financing is allocated to working capital (Deloof, 2003). Extension of cash conversion cycle can increase the sales, thus profits of the firm. But increasing need for working capital in parallel with the extension of cash conversion cycle brings together an additional financing cost. On this matter Kienschnick, LaPlante and Moussawi (2006), emphasized that an additional dollar invested in working capital would be less than a dollar, indeed.

In the studies conducted by Shin & Soenen (1998), Deloof (2003), Raheman & Nasr (2007) and Teruel & Solano (2007) it was concluded that there is a negative relationship between profitability of a firm and cash conversion cycle. Thus, it is possible to increase firm profitability through more efficient working capital management . To realize this, it is necessary that main elements of cash conversion cycle (short term trade liabilities, short term account receivables and inventories) should be managed in a way they maximize firm profitability. An efficient working capital management will increase free cash flows to the firm and growth opportunities and returns of stockholders.

Working capital level of a firm indicates that it wants to take a risk. The more working capital amounts, the lower liquidity risk and profitability become. Filbeck & Krueger (2005), stated that working capital policies of firms vary according to the sectors and within each sector it changes over time. Ganesan (2007), put forward that the firms in less competitive sectors focus on cash conversion minimizing receivables, while the firms in more competitive sectors have a relatively higher level of receivables. Lazaridis & Tryfonidis (2005), stated that small firms focus on inventory management, the firms with low profitability on credit management.

Statements in finance literature about the importance of working capital for firms are being once more emphasied in these turbulent days of global economies. While firms make efforts to increase return on assets in a way they pay their due obligations as late as possible and keep the cash, decreases in activity volume decreases the cash flow, too and this case increases the liquidity risk (Hofler, 2009). All these raise the importance of working capital. In the following part our study the practice section where the relationship between efficiency level of firms being traded in ISE in working capital management and their return on total asset is handled.

3. Data and Method

In our study, we tried to determine the relationship between the efficiency levels of working capital management of shares in ISE and their return on total asset. We carried out this study via 3 month-table data declared by 49 production firms being traded in ISE continually between 193 and 2007. For the each firm involved in the study, data of 60 period based on 3 month-financial table for 15 years. The variables and calculation method are given in table 1.

We studied on two models to explain return on total asset of the firms through the indicators shown in table 1 and relating to working capital management. These models follow as:

Model (1)

$$RTA_{it} = \beta_{1it} + \beta_{2it}CCC_{2it} + \beta_{3it}DWC_{3it} + \beta_{4it}CR_{4it} + \beta_{5it}NWCL_{5it} + \varepsilon_t$$

Model (2)

$$RTA_{it} = \beta_{1it} + \beta_{2it}ARP_{2it} + \beta_{3it}APP_{3it} + \beta_{4it}AIP_{4it} + \beta_{5it}CR_{5it} + \beta_{6it}NWCL_{6it} + \varepsilon_t$$

In Model 1 we used return on total asset and cash conversion cycle, current ratio and net working capital as percentage of total asset. In Model 2 we tried to deal with the elements (account receivable period, inventory period and accounts payable period) of the findings about active cycle time in Model 1.

In both models above analysis was made with a data assessment method in a way steadiness of serials were tested in these models. When steadiness of serials were tested with Levin,Lin and Chu and IPS unit root tests, both data used for both models were found steady at significance levels of 5% and 10%. In the models where section data is used a problem of changing variance is likely to occur and this should not be ignored (Gujarati, 1999). Thus, for the changing variance

problem of Model 1 and Model 2 White estimator correction method was applied and applying Durbin-Watson values gained from the analysis, in the cases where autocorrelations were stated, autocorrelation problem was solved operating AR(1) process. Hausman test was conducted to determine if constant influences model or random influence model was to be applied.

4. Findings

The results for two models applied to 49 firms involved in our study are shown in table 2.a and table 2.b. It is obvious in that table that explanation power of Model 1 is 54%, while it is 60% for Model 2. The fact that return on total assets has a negative relationship with current ratio at a significant level, and a positive relationship with net working capital level at a significant level indicates if firms minimize resource allocation for net working capital, their return on total assets increase accordingly. This result emphasizes the positive relationship between liquidity risk and profitability in terms of relative highness of short term liabilities, thus confirming traditional risk relationship. In Model 1 it is obvious that there is a negative relationship between return on total assets, daily working capital and cash conversion cycle. According to this, when working capital level of the firms based on daily sales amount of them decreases and their cash conversion cycle becomes shorter, their return on total assets increases. According to the results of Model 2 we created to make the negative relationship between cash conversion cycle and return on total assets clear, two of the elements of conversion cycle (accounts payable period and inventory period) show a negative relationship with profitability at a significant level. (Note 2)

In the second step of the study, we discussed if there is a difference in sectors in terms of the relationship between efficiency level in working capital management and profitability. The firms involved in the study belong to the following sectors: White goods and Electronic:6, Cement:16, Food:6, Textile:7, Chemistry:14. The results about the sectors are demonstrated in table 3.a and table 3.b.

The results relating to the sectors are highly similar to the ones both for the models and the firms. There is not a significant relationship between cash conversion cycle and return on total assets in model 1 for chemistry sector. According to model 2, there is not a significant relationship between inventory period and return on total assets for textile sector.

Except for these two sectors about two models and these two variables, there is a big similarity between sectors in terms of the relationship between efficiency level in working capital and return on total assets.

5. Conclusion

The fact that the sales of firms have decreased and cash flows have slowed down in this global crisis emphasizes the importance of working capital management for financial decision- taking mechanisms. While obscurity for the future keeps firms away from steady capital investments, the only intervention area is likely to be the assets group called working capital in terms of increasing and preserving profitability, or intervening with decline.

With respect to these assets group, new applications as well as traditional applications should be developed to shorten the cash conversion cycle. Moreover it will be possible to maintain the capital resources allocated to working capital at minimum level by improving short term sources. In the study it is concluded that finance directors positively affect firm profitability through efficiency increase in management of this assets group.

References

Afza, T., & Nazir, M. S. (2007). Is it better to be Aggressive or Conservative in Managing Working Capital?. *Presented at Singapore Economic Review Conference (SERC),* 1-15.

Deloof, M. (2003). Does working capital management affect profitability of Belgian firms?. *Journal of Business Finance&Accounting*, (30), 573-588.

Filbeck, G., & Krueger, M. T. (2005). An Analysis of Working Capital Management Results Across Industries. *Mid-American Journal of Business*, (20), 11-18.

Ganesan, V. (2007). An Analysis of Working Capital Management Efficiency in Telecommunication Equipment Industry. *Rivier Academic Journal*, (3), 1-10.

Gujarati D. N. (1999). *Basic Econometrics*. McGraw-Hill Companies, New York. (Chapter 10).

Hofler, D. (2009). Strategies for High-yield working capital in Today's economic environment. [Online] Available: http://outsourced-logistics.com/field_reports/strategies_highyield_working_capital_1208/ (January 1, 2009)

Howorth, C., & Westhead, P. (2003). The focus of working capital management in UK small firms. *Management Accounting Research*, (14), 94-111.

Kienschnick, R., LaPlante, M., & Moussawi, R. (2006). Corporate working capital management: determinants and consequences. [Online] Available: http://www.fma.org/SLC/Papers/cwcmf_fma.pdf (January 14, 2006)

Lamberson, M. (1995). Changes in Working Capital of Small Firms in Relation to Changes in Economic Activity. *Mid-American Journal of Business*, (10), 45-50.

Lazaridis, D. I., & Tryfonidis, D. (2005). The relationship between working capital management and profitability of listed companies in the Athens Stock Exchange. *Journal of Financial Management and Analysis*, (19), 1-12.

Raheman, A., & Nasr, M. (2007). Working Capital Management and Profitability: Case of Pakistani Firms. *International Review of Business Research Papers*, (3), 279-300.

Ross, A. S., Westerfield, W. R., & Jordan, D. B. (2003). *Fundamentals of Corporate Finance*. (6th ed.). New York, (Chapter 19).

Shin, H. H., & Soenen, L. (1998). Efficiency of working capital management and corporate profitability. *Financial Practice and Education*, (8), 37-45.

Smith, K. (1980). Profitability versus Liquidity Tradeoffs in working capital management. *Readings on the Management of Working Capital,* 549-62.

Teruel, P. J. G., & Solano, P. M. (2007). Effects of working capital management on sme profitability. *International Journal of Managerial Finance*, (3), 164-177.

Notes

Note 1. The mean of current assets/total assets ratio is 58% for all the firms and this ratio at different sectors is as follows: 51% for Cement Sector, 56% for Food Sector, 69% for White goods and Electronic Sector, 62% for Chemistry Sector and 61% for Textile Sector.

Note 2. * means   5% significance level,   ** means 10% significance.

Table 1. Variables and Calculation Methods

Variables Symbol	Variables Name	Calculation Methods
RTA	Return on Total Assets	Net Term Profit/Total Assets
ARP	Accounts Receivable Period	365/(Net Sales/Short-Term Account Receivables)
APP	Accounts Payable Period	365/(Selling Cost/Accounts Payable)
AIP	Accounts Inventory Period	365/(Selling Cost/Inventories)
CR	Current Ratio	Current Assets/Current Liabilities
NWCL	Net Working Capital Level	(Current Assets – Current Liabilities)/Total Assets
CCC	Cash Conversion Cycle	(ARP+AIP)-APP
DWC	Daily Working Capital	(Receivables+Inventories)-Liabilities/Daily Sales

Table 2a. Relationship between Variables and Return on Total Assets: Model 1

Model 1			
Fixed Effects Model			
Variables	coefficient	t-value	p-value
DWC	-0.000203	-3.8366	0.0001*
CCC	-0.00044	-2.5258	0.0116*
CR	-0.026613	6.6071	0.0000*
NWCL	0.015314	1.6699	0.0959**
C(constant)	0.028376	1.8200	0.0689
AR(1)	0.642238	7.7853	0.0000
Adj. R	0.541228		
F-statistic	65.32883		0.0000
Durbin-Watson	2.035881		
Hausman	26.911337		0.0000

Table 2b. Relationship between Variables and Return on Total Assets: Model 2

Model 2 Fixed Effects Model			
Variables	coefficient	t-value	p-value
ARP	-0.000576	-3.3121	0.0009*
APP	0.000577	0.7602	0.4472
AIP	-0.000128	-10.341	0.0000*
CR	-0.022259	7.4454	0.0000*
NWCL	0.009321	1.4738	0.0957**
C(constant)	0.040905	2.9688	0.0030 *
AR(1)	0.671433	7.8473	0.0000 *
Adj. R	0.607737		
F-statistic	83.91675		0.0000
Durbin-Watson	2.057962		
Hausman	20.656462		0.009

Table 3a. Relationship between Variables and Return on Total Asset in Terms of Sectors: Model

Variables	White Goods and Electronic Sector			Cement Sector			Food Sector			Chemistry Sector			Textile Sector		
	Fixed Effects Model			Fixed Effects Model			Random Effects Model			Random Effects Model			Random Effects Model		
	coefficient	t-value	p-value	coefficient	t-value	p-value	coefficient	t-value	p-value	coefficient	t-value	p-value	coefficient	t-value	p-value
DWC	-0.00010	2.221	0.026*	-0.00021	-2.305	0.021*	-0.00083	-1.91	0.047*	-0.00023	-2.800	0.005*	-0.00011	-1.917	0.050*
CCC	-0.00015	-8.796	0.000*	-0.00010	-5.306	0.000*	-0.00020	-2.333	0.020*	-0.00082	-0.925	0.355	-0.00037	-2.455	0.014*
CR	-0.02575	-3.393	0.008*	0.00307	1.128	0.259	-0.02382	-3.263	0.001*	-0.03014	-4.212	0.000*	-0.01533	-4.356	0.000*
NWCL	0.32388	4.019	0.001*	0.39048	8.986	0.000*	0.37890	9.404	0.000*	0.48276	8.060	0.000*	0.36130	8.900	0.000*
C(constant)	0.03215	1.599	0.110	0.02820	1.833	0.067	0.02955	2.875	0.004	0.02511	2.018	0.043	0.01260	1.117	0.264
AR(1)	0.71181	9.278	0.000	0.65303	9.806	0.000									
Adj. R^2	0.66395			0.66912			0.37298			0.40781			0.28552		
F-statistic	70.7458		0.000	111.833		0.000	54.3894		0.000	145.447		0.000	42.8615		0.000
D.Watson	1.87818			2.11110			1.59887			1.66283			1.42769		
Hausman	25.55242		0.000	10.81127		0.028	4.69959		0.319	1.51131		0.824	5.71446		0.221

Table 3b. Relationship between Variables and Return on Total Asset in Terms of Sectors: Model 2

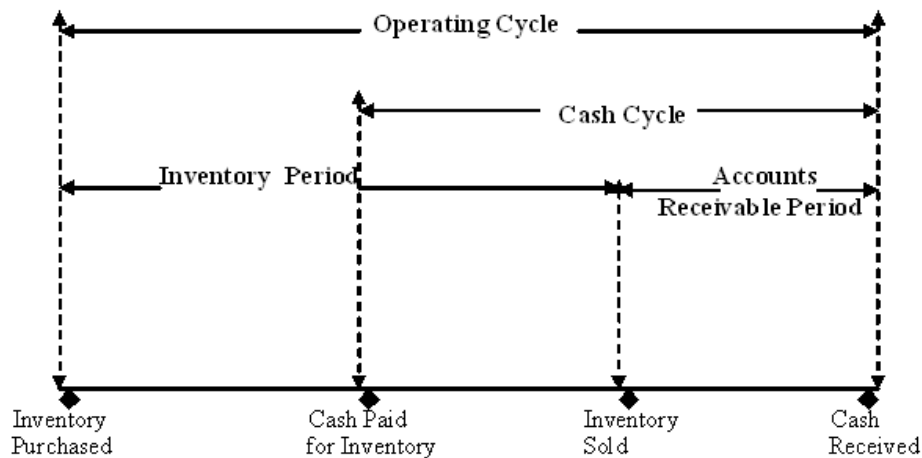| Variables	White Goods and Electronic Sector			Cement Sector			Food Sector			Chemistry Sector			Textile Sector		
	Fixed Effects Model			Fixed Effects Model			Random Effects Model			Random Effects Model			Random Effects Model		
	coefficient	t-value	p-value	coefficient	t-value	p-value	coefficient	t-value	p-value	coefficient	t-value	p-value	coefficient	t-value	p-value
ARP	-0.00010	-2.341	0.019*	-0.00009	-5.467	0.000*	-0.00005	-3.313	0.001*	-0.00012	-5.948	0.000*	-0.00009	-5.068	0.000*
APP	0.00085	3.064	0.002*	0.00044	1.6123	0.107	0.00015	1.876	0.061**	0.00077	0.250	0.802	-0.00016	-0.685	0.493
AIP	-0.00016	-4.605	0.000*	-0.00012	-8.522	0.000*	-0.00004	-1.930	0.054**	-0.00086	-3.304	0.001*	-0.00022	-1.185	0.236
CR	-0.02654	-3.517	0.000*	-0.00285	1.0186	0.068**	-0.02367	-3.002	0.002*	-0.03678	-5.367	0.000*	-0.01604	-4.657	0.000*
NWCL	0.31391	3.9160	0.000	0.35259	7.7631	0.000*	0.37017	8.926	0.000*	0.47894	8.429	0.000*	0.35399	9.5767	0.000*
C(constant)	0.05009	2.7410	0.006	0.02664	1.8407	0.0660	0.03390	3.069	0.002	0.04844	3.654	0.003	0.01603	0.8404	0.401
AR(1)	0.71292	8.8145	0.0000	0.64820	8.7774	0.0000									
Adj. R^2	0.66882			0.67768			0.38970			0.45725			0.31493		
F-statistic	65.8095		0.000	95.4134		0.000	46.8472		0.000	142.368		0.000	39.5243		0.000
D.Watson	1.87058			2.00144			1.58943			1.89224			1.48058		
Hausman	16.3766		0.005	12.43092		0.029	6.97064		0.222	1.69410		0.889	1.03548		0.959

Figure 1. Cash Flow Time Line and the Short-Term Operating Activities of a Firm

(Ross, Westerfield & Jordan, 2003, p. 643)

Study on Energy Saving and Emissions Reduction

of Thermal Plants in China

Bing'en Kou

Business Administration School, North China Electric Power University

Beijing 102206, China

Tel: 86-10-5196-3675   E-mail: linshuai117@163.com

Abstract

China is in the process of industrialization and electricity is indispensable for rapid growth. At the same time, the "coal-based" energy structure in China will not change perennially, which means, the development of power industry will be subject to the constraints of resources and environment for a long period of time. Therefore, according to the development of electric power industry, energy saving and emission reduction will be an eternal theme. The first part of this essay is the presentation of current situation and achievements. The second part, we summarize five most significant problems existed in current situation. According to the deficiency, we provide improvement measures and suggestions from seven aspects including structure adjustment, internal management, market means and legal system, etc, in order to promote the energy saving and reduce emission smoothly and successfully in the thermal plants in China.

Keywords: Thermal plants, Energy, Energy saving and emissions reduction

Nowadays, the energy situation in China is fairly severe. Contradictions between energy supply and demand will last for a long time. The sustainable development of energy will support the sustainable development of economic and social, and is also a long-term strategic task in China's modernization process. Looking into the future, China is still in the process of industrialization and electricity is indispensable for rapid growth. At the same time, the "coal-based" energy structure in China will not change perennially as we discussed before. Therefore, according to the development of electric power industrial, energy saving and emission reduction will be the key topic.

1. The present situation and achievements

1.1 The coal consumption and line loss rate decreased greatly

From 1980 to 2007, China's standard coal consumption for power supply had totally reduced to 91g / (kw•h). 2007 is the year of the largest drop since 1980. The coal consumption for power supply declined by 10g/(kw•h), the auxiliary power ratio dropped from 7% in 1992 to 5.92%, and the line loss rate fell from 8.93% to 6.97 % ,with a decrease of 1.96%. Figure 1 below shows the standard coal consumption for power supply and auxiliary power ratio from 2000 to 2007; figure 2 shows the line loss rate from 2000 to 2007 in China.

Insert Figure 1 here

Insert Figure 2 here

1.2 Emission of air pollutants has been controlled effectively

Emission of sulfur dioxide has achieved a historic turning point. At the end of 2006, the capacity of flue gas desulfurization units in national wide had reached to 160GW, and the operation scale was expanding further more. At the end of 2007, the capacity of flue gas desulfurization units in nationwide scope has already reached 270 GW, exceeding by 50% of the coal-fired units. The capacity of flue gas desulfurization units of the thermal plants increased by approximately 53 times compared with that in 2000. Figure 3 shows the development of flue gas desulfurization units in coal-fired power plants in national scale.

Insert Figure 3 here

The level of dust control is rising yearly. The average efficiency of dust removing in new coal-fired power plants is above 99%, and the electrostatic precipitators, which designed with the standard of dust emission concentration of

$150mg/m^3$ or below, have already reached the international advanced level. At the same time, bag filters are widely adopted by a number of units. Since China introduced the reform and opening up policies, the installed capacity of thermal power plants has been growing significantly, therefore, it is worth mentioning that the decline of dust emissions is inconspicuous.

The emission of nitrogen oxides has been initially controlled. In accordance with national laws and regulations, the combustion mode controlling of low NOX is still the main means to control nitrogen oxides emissions. Since the "Tenth Five-Year Plan" of China, most new coal-fired units have adopted the low nitrogen oxide combustion mode as required simultaneous, and a number of technical transformation of existing units have installed low nitrogen oxide burners. In the influence of new situation of energy saving and emission reduction and the strict requirements of the government, the control level of nitrogen oxides of the thermal plants has already far exceeded the legal requirements and emission standards to enable the plants to launch new projects. According to the statistics published by China Electricity Council, at the end of 2007, about 10GW with single capacity of more than 300MW or 600MW gas commercialization denitration devices were put into operation, and the 40GW denitrifications of flue gas devices were under construction. Most denitrification devices are utilizing "selective catalytic reduction" (SCR) technology, which ensures the level of desulphurization efficiency to be 85% or higher.

1.3 Water-intaking quantity for specific generated energy and discharged volume of industrial waste water are decreasing year by year

In the past years, the new units had obtained obvious achievements in water-saving. Since the "direct air cooling" technology came into commercial operation stage, an increasing number of power plants utilized epigenetic city water as fresh water source, and achieved the implementation aim of "zero emissions" through optimal design. As the increasing momentum of water-saving transformation of the existing units, the amount of ash water and emissions of waste water were significantly declined. In 2007, repeating utilization rate of waste water in the nation was larger than 70%.

1.4 The comprehensive utilization rate of fly ash is above 60%

Comprehensive utilization of fly ash has gained more and more attention by electric power enterprises and generating enterprises. Since the "Eleventh Five-Year Plan", the comprehensive utilization rate of fly ash has been maintained around 60%, and the capacity of utilization has increased yearly. In 2007, fly ash discharged by coal fired power plants is about 380 million tons nationwide, which increased about 3% comparing with that in 2006. The comprehensive utilization rate of fly ash by the coal-fired power plants is 69%, which increased by 3%; the comprehensive utilization of fly ash is 260 million tons, with the rising amplitude of 13%.

2. Main existing problems

With the sustained and rapid development of the power industry and the promotion of the government and the enterprises themselves, remarkable achievements have been made in the field of energy saving and emission reduction, but there are still some problems as below:

2.1 Both construction quality and operational effectiveness of desulphurization facilities need to be improved

Recently, the desulfurization facilities in thermal power plants are processing "explosive" development in China. From the year 2006 to 2007, the capacity of desulfurization facilities had increased from 53 million kilowatts to 266 million kilowatts, with the annual increase of 100 million kilowatts, the ratio of homemade facilities have exceeded 90%. Because of poor sense of environmental protection, low quality of construction, inadequate awareness of regulations and lack of operating experiences, the effectiveness of desulfurization is far away from prominent.

2.2 Decline in the quality of the fired coal results in the low efficiency of energy saving and emission reduction

As a result of price increase and supply shortage, the electricity heat decreased and ash raised sharply. On one hand, it leads to serious wear to the equipment and reduces the efficiency of electricity generation; on the other, it causes serious overload to desulfurization devices, or even damage the equipments, which greatly influences the effectiveness of desulfurization.

2.3 The effort of energy saving and emissions reduction in small and self-supply plants needs to be ameliorated

The proportion of small thermal units is still very large. At present, the whole capacity of small thermal units is about 100 million KW; the proportion is particularly high in the northeast and northwest region of China, which results in high coal consumption for power supply. The development momentum of a few high energy-consuming and self-supply power plants in some areas has not been effectively controlled. These plants are of small capacities, inadequate environmental protection facilities and non-standard management. Moreover the energy sent into grid is instability and not good for energy saving.

2.4 The statistical work of energy reduction in some enterprises is far away from perfect

Despite the statistical indicator system of energy saving and emission reduction is relatively perfect; some enterprises do not understand the importance of the statistical work sufficiently. Currently, the statistical data of energy saving and emission reduction mainly relies on self-declaration by enterprises and compiled analysis from concerned departments of government. Statistical information lacks accuracy and timeliness, causing a definite affect on the correctness of energy saving and emission reduction.

2.5 The diversity of market means of promoting energy-saving emission reduction is inadequate

Energy saving and emission reduction in China are promoted by the rule of law, executive orders and market incentives, among which the leading role is government executive orders. The effectiveness of the market in resource allocation is inadequate. The cost of environmental governance has not been reflected in reasonable price system which brings in series influences on the promotion of energy saving and emission reduction.

3. Improvement measures and suggestions

For the thermal power enterprises, energy saving and emission reduction is a long-term and arduous work, making great sense to the realization of China's resource saving and environmental protection. In order to promote the "Eleventh Five-Year Plan" smoothly, we make the following observations and recommendations:

3.1 Continue to promote the structure adjustment of electricity vigorously

Strengthen the exploitation of renewable energy. Accelerating the construction of regional and provincial power grids and improving the efficiency of comprehensive utilization. In the meantime, optimizing the construction of urban and rural power grids and trying to make a harmony situation between power supply and power network and between transmission and distribution. On the guarantee of power supply, the plants should support the development of "distributed energy systems"-this system owns the characteristics of flexible, low investment, high reliability and low power transmission losses, which ensure the electricity supply for important customers and improve energy efficiency.

3.2 Improving the internal management and enhancing the construction quality and operation effect

Strengthen the tender management of desulfurization equipments to avoid the successful low-cost regardless of quality; carry out the study on the reliability for the desulfurization device to enhance the reliability of equipment management; standardize the operation management of desulfurization installations, induction training and technical exchanges of operation staff; establish the internal supervision and management system, strengthen the internal assessment, improve the adaptability of poor quality coal to meet environmental protection requirements and enhance the quality of the management of electricity coal.

3.3 Strengthen the statistical work according to the law, and scientifically monitor the effectiveness of emission

Thermal power plants should strengthen the statistical work of energy saving and emission reduction, provide the statistical information accurately according to the requirements of statistical plans ,and prevent from making false reports , failed reports and delayed reports of the statistics.

Moreover, the thermal power plants should continue to pay attention to the construction, operation and maintenance of the "fume online monitoring system" so that monitoring data can be a true reflection to the actual situation. Strengthen the scientific analysis of energy saving effectiveness, in order to provide the real and reliable data.

3.4 Further strengthen the intensity of closing down small thermal power units

One of the most crucial ways to reduce emissions is to close down small thermal plants, and timely solve the problems concerned during this process. Combined with practical, the plants should formulate practical programs for the "closing down". Providing various conveniences from every aspects, establishing relevant policies to accelerate the whole process and resolving the problems appeared in time are also important.

The supervision organization should strengthen the monitor and management of small thermal power units, establish monitoring information systems, and refuse to award licenses to those plants which have not meet the requirements of regulations.

3.5 Improve the legal system and strengthen supervision

Establish the legal system for energy saving and emission reduction, timely combine the existing laws and regulations which are not in conformity with the provisions of energy saving and emission reduction policies, and ensure coordination between the relevant laws and energy saving and emission reduction.

The electric power guild organization should improve the research on laws, regulations and policies, collect information and analyze the existed situation, and clearly review the evaluation of new energy saving and emission reduction project by the government-commissioned. Improve the relevant standards, establish the energy monitoring service system, promote the energy conservation technology and clean production evaluation, establish self-regulatory mechanism,

training, consulting and other services to save energy and reduce emission.

3.6 Consummate the market means of energy saving and emission reduction

First, keep implementing the existing price policies related to energy saving and emission reduction. For example, make difference prices according to kinds of high energy consumption enterprises and provide supervision and inspection to the small thermal power plants and self-supply power plants to ensure the implementation of policies. Furthermore, improve the coal price policies; accelerate the establishment of forming mechanism of power price for the clean energy and renewable sources. Establish a competitive electricity market to encourage the active participations of large industrial users and enable the generation cost sharing by the industrial users in kinds of forms

Positively carry out and promote energy saving and emission reduction to improve the economic policy. Improve the compensation policy such as assets verification , personnel placement, debt treatment, project authorization,etc.

Promote the trading policy of sulfur dioxide emissions in electricity industry, handle the relationship between emissions trading and existing regulations correctly to fully embody the market economy principle, and guide and encourage the enterprises to participate actively.

3.7 Strengthen the research on the technology of energy saving and emission reduction

Energy saving and emission reduction is a huge systematic project; scientific research is solid foundation. Nowadays, power system, industry energy saving management system of emission reduction, monitoring and supervisory system were reconstituted, classified as related research institutions of the power grid and power generation. To some extent, this reform brings in increase of research capability for some enterprises, but as a whole, the comprehensive, systematic, timely research ability for the development of power industry is severely weakened. For example, the macro-policy research for the sustainable development and strategic planning. Therefore, we must spare no effort to promote the comprehensive study on the development of electric power, especially on the perceptiveness and tracking work of the international power development.

References

De Tug1ie, E., Dicorato, M. & La Scala, M. (2000). Disclosing environmental attributes to stimu1ate "Green Power" marketing. *Power Engineering Society Winter Meeting*, 15, 174-179.

Fredric C & Menz. (2005). Green electricity policies in the United States: case study. *Energy Policy*, 33, 22-29.

Hill. (2001). Thinking about a more sustainable business--An indicators approach. *Corporate Environmental Strategy*, 8, 141-144.

L.Bird, R.Wustenhagen & J. Aabakken. (2002). A review of international green power markets: recent experience, trends and market drivers. *Renewable and Sustainable Energy Reviews*, 6, 12-16.

S.Borenstein. (2002). The trouble with electricity markets: understanding California`s restructuring disaster. *Journal of Economic Perspectives*, 16, 47-52.

Seow, C. & Hall, D. (2004). Six sigma as a process enabler and strategic facilitator for knowledge in sustainable development: a SME case study. *Engineering Management Conference, Proceedings of IEEE International*, 168, 1117-1120.
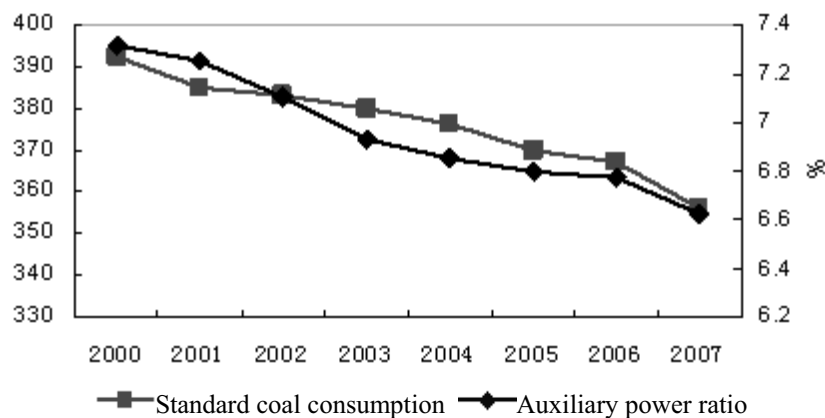
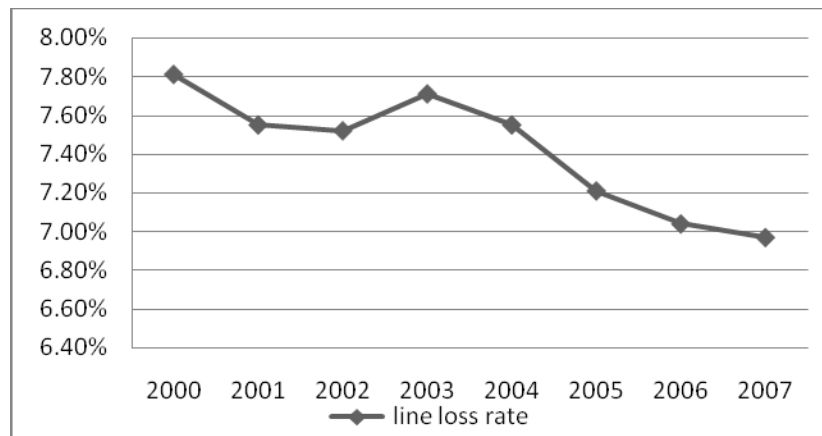Figure 1. Standard coal consumption for power supply and auxiliary power ratio from 2000 to 2007

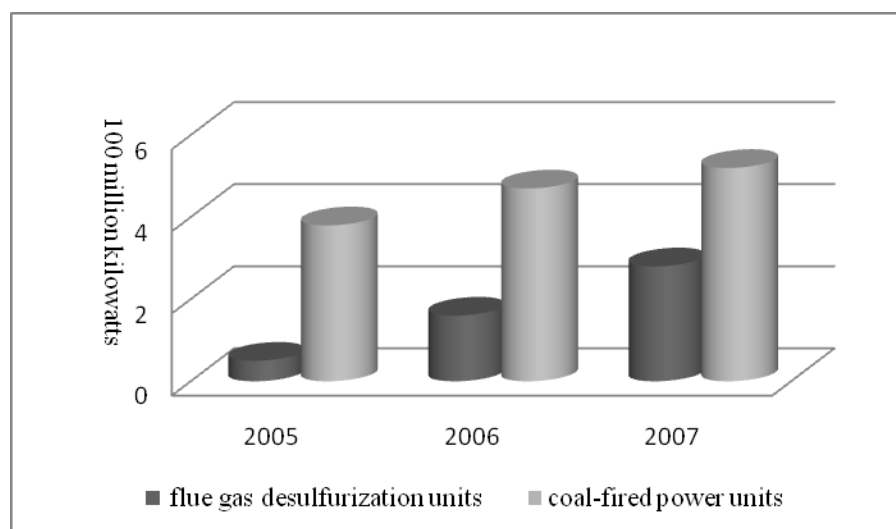Figure 2. The trend of line loss rate from 2000 to 2007

Figure 3.The development of flue gas desulfurization units in coal-fired power units in nation scope

Testing the Dimensionality of Integrated HRM Strategy

among Malaysian Manufacturing Organizations

Hasliza Abdul-Halim (Corresponding author)

School of Management, University Science Malaysia

11800 Minden, Penang, Malaysia

Tel: 60-4-6533-985   E-mail: haslizahalim@usm.my

Norbani Che-Ha, PhD

Faculty Business and Accountancy, University Malaya

50603 Kuala Lumpur, Malaysia

E-mail: norbanicheha@um.edu.my

Abstract

This paper aims to examine the dimensionality of the integrated HRM strategy in the Malaysian context. The effectiveness of the dimensional scale of HRM strategy was investigated with a sample of 113 manufacturing organizations. Results of exploratory and confirmatory factor analyses demonstrated that the 6-subscale structure of HRM strategy was valid. Furthermore, the results verified that the integrated HRM strategy scale has high internal reliability. These results indicated that the integrated HRM strategy scale can be used in research related to manufacturing organizations in Malaysia.

Keywords: Business strategy, Construct validity, Convergent validity, Discriminant validity, Reliability

Introduction

HRM strategy has been studied increasingly by many scholars in recent years (Huang, 2001; Wang and Shyu, 2007). HRM strategy is conceptualized as an outcome that is the pattern of decisions regarding the policies and practices associated with HR system. The focus of HRM strategy needs to be on the HR system, and not the HR function. The HR system is one of numerous organizational systems (e.g. finance system, marketing system, production system), each of which plays a role in the formulation of organization wide strategies (Bamberger and Fiegenbaum, 1996). In this respect, HR systems are focused on various HR functions such as staffing and development, appraisal, rewards, compensations and work system. Each of HR system that possesses similar characteristics is convened to a similar HRM strategy.   HR system which comprises of different types of HR functions has the primary responsibility for the implementation of HRM strategy.

It is apparent that HR functions appear to emerge in bundles or clusters and these clusters of functions often tend to vary systematically across organizations as a relatively stable configuration. As such HRM strategy is designed to support the different departmental activities and the overall business strategy. This indicates that the analysis of HRM strategy in terms of typologies is appealing since individual HR functions should tend over time to support and reinforce one another. That is, there should be a tendency, over time to abandon internally inconsistency HR functions in order to favor the HR functions that are more aligned with the other functions (Bamberger and Meshoulam, 2000).

Many studies have provided typologies of HRM strategy (e.g. Arthur, 1992, 1994; Miles and Snow, 1984; Wright and Snell, 1991) and numerous attempts have been made to define and operationalize its concept, in addition to identifying its determinants (Dyer, 1984; Tichy et al., 1982; Dyer and Reeves, 1995) and predicting the outcomes of effective strategy formulation processes (Buller, 1988). However, the concept of HRM strategy is relatively new in Asia country particularly in Malaysia. The effectiveness of scale to measure the HRM strategy is very much popular and has been used in numerous studies in Western countries. Therefore, it is pertinent to have instruments to measure aspects of the HRM strategy dimensions. In fact, this study aims to combine the HRM strategy typologies from previous researchers

into an integrated HRM strategy. As a result, the purpose of this study is to test on the scale of integrated HRM strategy among manufacturing organizations in Malaysia.

HRM Strategy Typologies

HRM strategy concerned with devising ways of managing people which will assist in the achievement of the organizational objectives (Fombrun et al. 1982). It is not an activity but a collection of HRM decisions which organizational members make over a time period as they emerge from actions (Bamberger and Phillips, 1991). In fact, HRM strategy is expressed through philosophies, policies and practices in order to manage its employees (Tyson, 1995).

The concept of HRM strategy concludes that individual HR functions, if viewed in isolation tend to lack congruency in most organizations (Grundy, 1998). Hence, the application of HRM strategy typologies provides more meaningful insights. Many researchers attempt to develop typologies of HRM strategy. Some of these typologies are generated intuitively on the basis of theory, while others derived the typologies empirically. Though it may not be possible to reconcile all typologies differences, a number of common underlying elements across these typologies are identified (Bamberger & Meshoulam, 2000).

There are various HRM typologies discussed in literature. From business strategy typology, Miles and Snow (1984) extend their work to the development of a HRM strategy typology. In close approximation with the business strategy typology, three types of HRM strategy namely utilizer, accumulator and facilitator are identified. Utilizer HRM strategy is based on minimal commitment and high skill utilization. It seeks to deploy the HR of an organization as efficiently as possible through acquiring and dismissing personnel based on short term needs and matching employee skills to specific task requirements. In contrast, accumulator is based on maximum involvement and skilled execution. It seeks to build the employees of the organization through the acquisition of personnel with large latent potential and the development of that latent potential over time in a manner consistent with the needs of the organization. Finally, facilitator is based on new knowledge creation. It attempts to develop the employees as effectively as possible through the acquisition of self motivated personnel and the encouragement and support of personnel to develop, on their own, the skills and knowledge in which the employees believe are important.

Osterman (1987) is also one of the first authors to develop the concept of HRM strategy typology. Based on theoretical speculation, Osterman (1987) identifies four different HRM strategies: craft, secondary, industrial and salaried. The author posits that each strategy has its own exchange-based internal logic that requires an alignment with employment rules. On the other hand, Dowling and Schuler's (1990) produce three types of HRM strategies which are almost similar to Miles and Snow's HRM typology, namely utilization, facilitation and accumulation. Dyer and Holder's (1988) investment strategy is somewhat similar to Dowling and Schuler's (1990) facilitation strategy and Miles and Snow's (1984) facilitator strategy. Their inducement strategy reflects Dowling and Schuler's (1990) utilization, Arthur's (1992) cost reduction, MacDuffie's (1995) mass production and Miles and Snow's (1984) utilizer strategies. The involvement strategy is a combination of cost reduction and innovative strategies.

Although the market strategy of Delery and Doty (1996) has some semblance with the utilizer (Miles and Snow, 1984), cost reduction (Arthur, 1992), utilization (Dowling and Schuler, 1990) and inducement (Dyer and Holder, 1988) strategies, the concept is more geared towards traditional HRM strategy in which organizations do not really value or appreciate the employees. Internal strategy is a strategy that actually emphasizes an employee's strengths and competencies. As such, training and development of employees are greatly looked into. On the other hand, middle of the road strategy is very similar to the involvement strategy of Dyer and Holder (1988) and the transition strategy of MacDuffie (1995).

Besides developing the cost reduction strategy, Arthur (1992) focuses on the commitment strategy to underlie the importance of developing committed employees who can be trusted to use their discretion to implement job tasks in ways that are consistent with the organizations' goals. In yet another way of perceiving HRM strategies, MacDuffie (1995) asserts that HRM strategies are manifested in bundles of interrelated and internally consistent HR functions. The author's mass production strategy is similar to Dyer and Holder's (1988) inducement, Dowling and Schuler's (1990) utilization, Arthur's (1992) cost reduction and Miles and Snow's (1984) utilizer strategies, while the flexibility strategy is comparable to Dowling and Schuler's (1990) accumulation and Miles and Snow's (1984) accumulator strategies. MacDuffie's (1995) third strategy, the transition strategy, is related to Dyer and Holder's (1988) involvement and Delery and Doty's (1996) middle of the road strategies.

Integrated HRM strategy

Although some of the HRM typologies mentioned above are almost similar to one another, they are described in different ways. Moreover, some strategies proposed by one typology may not be reflected in another typology. Therefore, this study attempts to reconcile the typologies into an integrated HRM strategy. The purpose of integrating the HRM strategies from various sources is to reconcile the differences of the various views on HRM typology.

Bamberger and Meshoulam (2000) posit that one way to resolve these differences is by viewing them as an integrated model. This approach is able to include the key variants of HRM strategies in a comprehensive yet parsimonious manner. In other words, integrated HRM strategies in this context provide comprehensive views of the most discussed HRM typologies.

Though it may be impossible to reconcile all model differences, a number of common underlying elements across these models can be identified. Each type of integrated HRM strategies has similar characteristics with the original typologies but the integrated strategies embrace different approaches to conceptualization and measurement of the HRM strategy. Therefore, in trying to capture the dynamic difference of the term, HRM strategy in this study integrates typologies of Miles and Snow (1984), Dyer and Holder (1988), Dowling and Schuler (1990), Arthur (1992), MacDuffie (1995) and Delery and Doty (1996). In fact, many researchers have used these HRM typologies in their studies and have empirically tested them with persuasive results (e.g. Huang, 2001; Bird and Beechler, 1995; Sanz-Valle et al., 1999).

As such the integrated HRM strategies are renamed into six distinct HRM strategies namely 1) Expansion 2) Quality conscious 3) Cost minimization 4) Commitment 5) Employee development and 6) Conventional.

An organization that uses expansion HRM strategy focuses constantly on bringing out new products and exploring new markets. To perform well in these areas, it does not hesitate to source from outside the necessary talent and expertise. It is a penchant for risk taking means that has no uncertainties of moving on quickly if it appears that there is little opportunity for profit in any given area. This type of organization needs employees who possess the creativity and willingness to work in a team based environment that stresses on cooperation and interdependent behavior. The employees should also be moderately concerned with both the quality and quantity of their work, bold at taking risks, highly tolerant of ambiguities and unpredictability and having a longer focus (George and MacMillan, 1984; Albrecht and Albrecht, 1987).

In contrast, cost minimization HRM strategy is predicated on minimal commitment and high skill utilization. This organization has narrow and stable product-market domain and seldom makes major adjustments in its technology or structure. It seeks to deploy the employees as efficient as possible and they are expected to have a relatively repetitive and predictable behavior, and a modest concern for quality and quantity (Bird and Beechler, 1995).

Quality-conscious strategy is based on maximum involvement and skilled execution. In brief, it represents policies and practices of attracting many good candidates very carefully and very consistently, often more on the basis of personal fit rather than technical fit. In-house training equips for the lack of technical skills (Dowling and Schuler, 1990). Training investment is high since its benefits are likely to be obtained only after several years. This practice matches with the world that is constantly changing and where new skills are needed all the time. A person with initial technical skills would soon become outdated and would thereby require change and re-training (MacDuffie, 1995; Dowling and Schuler, 1990).

On the other hand, commitment strategy encourages employees to freely exercise their discretion in dispensing their duties when confronted with situations of uncertainties that impinge on the goals of the organizations (Schuler, et al. 1987). Stressing the need for skilled employees to be involved in the decision making process, organizations that use this strategy provide a high level of autonomy to the employees, extensive general skills training and attractive compensation packages that include wide benefits, high wages and stock ownership. In short, organizations go all out to attract, motivate and retain qualified and committed employees who internalize the goals of the organization.

The conventional HRM strategy is known as the traditional way of managing the employees. This strategy is characterized by external hiring, little or no formal training, evaluative based performance measurement, very little use of career ladders, little or no career path planning provided to employees, little socialization, lack of employment security, loose or vague job definitions and very little employee say in the decisions of the organization (Delery and Doty, 1996).

Finally, employee development HRM strategy is characterized by the existence of an internal labor market. According to Delery and Doty (1996), extensive socialization and training are very common. The performance of the employees is assessed through their behavior, and the appraisal feedback is given for developmental purposes rather than for evaluation. Hiring mainly from within the organization means that there is a tremendous amount of training and development being provided, in addition to well-defined career ladders. Employment security is ensured for those who make it through the initial trial period. However, those who fail to make it will be subjected to formal and tight dismissal policies. In this strategy, organizations practice an open door policy which enables employees to participate in decision making and to voice their grievances freely.

Methodology

This study used mail survey questionnaire. The questionnaires were targeted to the head of HR department of Malaysian manufacturing organizations. The mailing list was obtained from Federation of Malaysian Manufacturers Directory (FMM). The survey yielded 12 percent response rate resulting in 113 respondents useable responses from an eligible

sample of 900 organizations. The data collected was restricted to large and established manufacturing organizations only. Large organizations with 150 employees (SMIDEC 2005) and above and organizations that have been in operation for at least five years were selected because these organizations are presumed to have well developed and established HRM strategy (Youndt and Snell 1996). Organization size and years of establishment are often good indicators of an organization's likelihood to design and adopt different types of HRM strategy. Small and medium organizations are quite different from large and established organizations since they are inherently flexible and nimble and they seldom have a well defined HRM strategy (Corbet 2001).

T-tests were performed to examine possible non-response bias. Respondents were divided into two groups based on whether they responded to the first mailing and the follow-up. The results found that there was no significant difference between the two groups on integrated HRM strategy, organizations establishment period and size. Therefore, there was no evident of systematic non-response bias. In addition, all variables were tested for normality and linearity in order to be used for subsequent analysis.

Measurements

The determination of HRM strategy adopted by Malaysian manufacturing organizations entails the scoping of generic dimensions of HRM strategy from extensive literature. HRM strategies comprise of expansion, quality conscious, cost minimization, commitment, employee development and conventional. The operationalization of these six HRM strategies was accomplished by using dimensions/functions of human resource suggested by previous researchers (e.g. Miles and Snow, 1984; Dowling and Schuler 1990; MacDuffie, 1995; Dyer and Holder, 1988; Delery and Doty, 1996; Arthur, 1992).

From the list of HRM functions, six dimensions were identified: work system, appraisal, training, staffing, compensation and planning. Each of these HRM functions measures the HRM strategy whereby other HRM functions that possess similar characteristics will converge into each type of HRM strategy. Based on the measurements of the various researchers mentioned above, only the relevant ones were chosen for the present study to measure the HRM strategy.

However, following the feedback gained from the pre-testing, minor modifications were made to the items to suit the language, cultures and business environment of the respondents. These minor modifications however did not alter the content of the constructs. 44 questions on integrated HRM strategies were measured on a six-point semantic differential-likert scale. For the purpose of data interpretation, the descriptive phrases for the main side of the six-point scale are (1) "strongly agree", (2) "moderately agree", (3) "slightly agree", (4) "slightly disagree", (5) "moderately disagree", and (6) "strongly disagree". The scale contains a series of bipolar items for the various properties of the construct. An even-numbered six-point scale was used in order to avoid the clustering of responses at the neutral point, which will make the result unreliable (Ling, 1998). This is because, most respondents use a neutral response as a dumping ground when they prefer not to choose, do not care or have no opinion. Therefore, the validity of the question will be improved by using a six-point scale.

Results

The profile of the manufacturing organizations is discussed and all the items are recapitulated in Table 1.

(Insert Table 1)

Most of the respondents (15%) are from the machinery and equipment industry. Almost 41 percent of the organizations employ 301 to 1000 employees. Next, 36.3 percent of these organizations have been in business for at least 20 years. In terms of the position of the respondents, almost 56 percent of them are the HR managers and about 61 percent of respondents have less than five years of working experience.

Testing Validity and Reliability of Integrated HRM Strategy

Validity and reliability are the tools used to evaluate the characteristics of a good measurement and these tools involved a measurement of accuracy and applicability (Malhotra, 2004; Cooper and Schindler, 2001). The main concern for performing validity and reliability is the reduction of measurement errors which make the most of the model testing in the hypotheses. In other words, the idea is to develop a measurement that reflects a true score of the variables being measured (Churchill and Iacobucci, 2002).

Content Validity

Content validity is the extent to which there is a need for the adequate coverage of all the domains of the constructs being examined (Cooper and Schindler, 2001). Content validity cannot be examined using statistical analysis and thus, a thorough exploration of the literature and an extensive search of measures used in the literature must be applied. Moreover, pre-testing is used to check on the validity of the constructs. In this case, the measures used will be reviewed by experts, academicians or professionals on the relevancy and adequacy of the constructs (Zikmund, 2003). For this

study, content validity was also applied for the constructs in which the items were reviewed by several academicians in the management field and HR managers in the manufacturing organizations.

Construct Validity

Construct validity is "the extent to which the constructs or a set of measured items actually reflects the theoretical latent construct those items are designed to measure" (Hair et al, 2006:776). Therefore, construct validity deals with the accuracy of the measurement in which that item measures selected from a sample represent the actual true score that exists in the population (Hair et al., 2006).

Each measurement scale for this study was evaluated by analyzing its convergent and discriminant validity, using factor analysis (Nunnally, 1978). Two types of factor analyses, i.e., the exploratory factor analysis and followed by the confirmatory analysis were used in this study to measure construct validity of the scales. Below are the discussions on the results of constructs validity checking based on factor analysis.

a) Exploratory Factor Analysis

Exploratory factor analysis (EFA) is a technique for data exploration and to determine the structure of factors to be analyzed. It is used to establish dimensionality and convergent validity of the relationship between items and constructs. Therefore, in order to ascertain whether all the scales used in this study have construct validity, EFA was performed on HRM strategies construct. Besides determining the validity of measurements, the objective of doing factor analysis in this study was to identify representative variables and to create new variables, if any to be used in the subsequent analysis. The idea was to obtain the most parsimonious set of variables to be included in the analysis.

To justify the application of factor analysis in this study, the measure of sampling adequacy, a statistical test to quantify the degree of inter-correlations among the variables (Hair et al., 1998) was used. The measure of sampling adequacy uses the Bartlett's Test of Sphericity (Bartlett's Test) and Kaiser-Mayer-Olkin (KMO). The Bartlett's Test should be significant ($p<0.05$) for the factor analysis to be considered appropriate and the measure of sampling adequacy produces the KMO index that ranges from 0 to 1, and indicates that KMO more than 0.60 are considered appropriate for factor analysis (Pallant, 2001). Factor analysis under the extraction method of principal component analysis with the rotation method of varimax with Kaiser Normalization was used to analyze the scales of HRM strategy. Varimax rotation was favored since it minimized the correlation across factors and maximized within the factors. This helped to yield 'clear' factors (Nunnally, 1978). In fact this method is robust and able to simplify the factor loadings and supports the interpretation. Factor loading indicates the strength of the relationship between the item and the latent construct and thus, is used to ascertain the convergent and discriminant validity of the scales (Hair et al., 2006). Nunnally (1978) posits that items with loadings higher than 0.50 on one factor are retained for further analysis, however, this study retained items with a coefficient of 0.4 and above as it indicates a reasonable and sufficient loading (Lee and Crompton, 1992; Gorsuch, 1983).

Since the measurements of HRM strategy were developed based on various authors, the HRM strategy type will be determined from the exploratory factor analysis. Table 2 shows the results factor analysis of the constructs.

(Insert Table 2)

Eight factors of HRM strategy were derived from the output (Table 3.15) with eigen values greater than one. Nevertheless, two factors with only two items were dropped since two items were not sufficient to represent one factor (Hair et. al., 2006). The six factors contributed 52.33% to item variance and the values of factor loadings were ranged between 0.42 and 0.82. The six factors were labeled as expansion, quality conscious, cost minimization, commitment, employee development and conventional.

b) Confirmatory Factor Analysis: Structural Equation Modeling

Confirmatory factor analysis (CFA) is comparable to EFA in some respects, but philosophically it is rather different. CFA involves analyzing the relationship between latent (unmeasured or theoretical construct) and observed (measured or indicators) variables (Tabachnick and Fidel, 1996). In this respect, CFA does not use statistical results to determine the number of factors and loadings as in EFA. This is because, the researcher must specify both the number of factors that exist within a set of variables and which factor each variable load highly on before the results can be computed (Hair et al., 2006). In other words, CFA does not assign variables to factors. Rather, the researcher makes this assignment before any results can be achieved. SEM using AMOS was also used as the primary construct validation tool. That is, the CFA is used to analyze convergent and discriminant validity, by assessing the measurement model developed for testing the HRM strategy construct in this study.

Convergent validity would be assessed through the inspection of the statistical significance of factor loadings (the estimated parameter between latent variables and their indicators). In terms of the value of standardized loading, the commonly considered threshold value is 0.4 (Ford, MacCallum and Tait, 1986). Moreover to assess convergent validity,

the proposed model has to present a holistic fit. There are multiple indices that are used to determine the fit of the model and operationalize different aspects of model fit (Kelloway, 1995; Hair et al., 2006: Bentler, 1990).

According to Hair et al. (2006) and Bentler (1990), the proposed model has to illustrate a satisfactory fit in terms of absolute fit, incremental fit and model parsimony. Absolute fit indices are a direct measure of how well the model specified by the researcher reproduces the observed data. These indices include chi-square statistics (χ^2), normed chi-square or relative chi-square (χ^2 /df), goodness-of-fit (GFI), adjusted goodness-of-fit (AGFI) and root mean-square error of approximation (RMSEA). Incremental fit indices differ from absolute fit indices in that they assess how well a specified model fits relative to some alternative baseline model. The score for the incremental fit model ranges from 0 to 1. A score close to 1 suggests a perfect fit whereas 0 refers to there being no difference between hypothesized and independent model. The indices of the incremental fit comprising of the Normed Fit Index (NFI), the Comparative Fit Index (CFI), Tucker Lewis Index (TLI) or Non-Normed Fit Index (NNFI) and Relative Noncentrality Index (RNI).

Finally, parsimony fit indices refer to the application of parameters or the coefficient of hypothesized model. The fewer the estimated parameters used in the model, the more parsimonious the model (Hair et al., 2006; Bentler, 1995). The indices include the Parsimony Goodness-of Fit Index (PGFI), The Parsimony Normed Fit Index (PNFI) and Aikaike Information Criterion (AIC).

Garver and Mentzer (1999) state that many fit indices do not meet the above criteria simply because they are adversely affected by sample size. For instance, the chi-square is the most common method of evaluating overall model fit, but it is frequently criticized due to its high sensitivity to sample size, and the fact that the significance level can be misleading (Hair et al., 2006). Therefore, based on these criteria, they propose the use of the TLI, the CFI and the RMSEA. Moreover, TLI and CFI are preferred when dealing with samples with fewer than 200 respondents because they are likely to produce biased estimates (Bentler, 1989; Kline, 1998). Based on the important criteria suggested in the above discussion, this study used the fit indices namely, 1) the TLI or NNFI; 2) the CFI; and 3) the RMSEA. Nevertheless, this study still report on the chi-square, degree of freedom, its significance level GFI and NFI as these figures are also important in examining the validity. Table 3 exhibits all the selected indices mentioned above to estimate the measurement model of the study.

(Insert Table 3)

CFA provides a number of advantages in examining the instruments in terms of their convergent and discriminant validity. Firstly, CFA measures the overall degree of fit in any particular application such as chi-square and goodness-of-fit test.   Secondly, with the used of chi-square difference test, together with the size of factor loadings for traits and the estimates for trait correlations, CFA provides useful information on how well convergent and discriminant validity are achieved. Finally, through squared factor loadings and error variance, explicit results are available for partitioning variance into trait, method, and error component (Bagozzi et al., 1991: 429). Table 4 shows the results of convergent validity for business strategy of the study.

(Insert Table 4)

The results from these models show that based on modification indices and standardized error, a few items were deleted to get the data to fit the model. Here, expand1, quacon5, cost4, commit5 and commit6 were eliminated to ensure the data fits the model.

From the results, most χ^2 are not significant with p value mostly greater than 0.05. NNFI, GFI, TLI and CFI yield results of above 0.90 indicating a good fit model. The majority of the values of χ^2/df are between 1 and 3, with RMSEA on an average of 0.06. This indicates that $\chi2$/df and RMSEA are good indicators of absolute fit of the model. Additionally, the factor loading for each indicator was above the reasonable benchmark of 0.40 (Hatcher, 1994). Therefore, the convergent validity exists for the study variables of the measurement models.

Discriminant Validity

To perform discriminant validity is to compare the average variance extracted for any two constructs or more with the squared of the correlations estimate. As such, the average variance extracted has to be bigger than the variance of the correlation (Hair et al., 2006). This is because a latent construct should explain its item measures better than it explains other constructs. The average variance of expansion, quality conscious, cost minimization, commitment, employee development and conventional were 0.70, 0.65, 0.57, 0.70, 0.66 and 0.68 respectively. The covariance between expansion and quality conscious was 0.92, while the covariance between quality conscious and cost minimization was at -0.06. The covariance between cost minimization and commitment was -0.07. Moreover, the covariance between commitment and employee development was 0.07, in contrast with employee development and conventional that indicated a correlation of 0.23. Then, the correlations between expansion and cost minimization was 0.00, while -0.06 was the covariance between quality conscious and commitment. As for cost minimization and employee development, the covariance was 0.76, and the covariance between commitment and conventional exhibited a covariance of 0.68.

To analyse further, the covariance between expansion and commitment was 0.49 and -0.09 between quality conscious and employee development. In contrast the correlation between cost minimisation and conventional was 0.09. Likewise, the covariance between expansion and employee development was -0.13, while the covariance between quality conscious and conventional was 0.33. Finally, the covariance between expansion and conventional was 0.25. The results indicate that a majority of the average variance extracted for each construct was larger than the covariance between each of the constructs. This suggests that each of the constructs uniquely represent the dimensions of HRM strategy.

Alternatively, discriminant validity was also assessed by using a correlation analysis. Six factors generated from the factor analysis were correlated each other and the result is presented in Table 5. The results show that all the six factors are not perfectly correlated where their correlation coefficients range between 0 and 1. Hence, we can conclude that discriminant validity has been established.

(Insert Table 5)

In the context of CFA, it is possible to compute a composite reliability index for each latent variable. Both of these methods were applied to test the reliability of the scales in this study. The following sections discuss them in detail.

a) Reliability Tests – Cronbach's Coefficient Alpha

The results of the internal consistency reliability test for the variables examining the six factors are produced from the EFA analysis. The reliability test for expansion and employee development recorded excellent reliability with coefficient alphas of above 0.7 as recommended by Nunnally (1978). However, the coefficient alpha for quality-conscious, cost minimization and commitment was below 0.6. Coefficient alpha in the range from 0.5 to 0.6 is still at the minimum acceptable level of reliability for preliminary research (Nunnally, 1967). Table 6 exhibits the results of Cronbach Coefficient Alpha for HRM strategy.

(Insert Table 6)

b) Reliability Test –Using Structural Equation Modeling

Alternatively, the composite reliability and variance extracted measures for each construct via SEM will also be examined. In SEM, the value associated with each latent variable-to-item equation measures the reliability of that individual item (Garver and Mentzer, 1999). The stronger the correlation of the systematic component, the higher the reliability associated with the indicator to its latent variable. Furthermore, SEM construct reliability values do not assume that the individual items have equal reliabilities (Bollen, 1989).

The AMOS programme does not provide the construct's scale reliability and variance extracted value automatically, so manual calculation is required by using the formula given in Figure 1 (Garver and Mentzer, 1999).

(Insert Figure 1)

From Figure 1, the λ represents the standardized factor loadings and j is the indicator/item. For the construct reliability, the formula specifies that the numerator equals the standardized parameter estimates (in AMOS, standardized regression weights) between a latent variable and its indicators summed, and then the summation is squared. The denominator equals the numerator plus the summed measurement error for each indicator (Garver and Mentzer, 1999). For the variance extracted, the formula is similar to that of construct reliability, except that the numerator equals the standardized regression weight (λ) between the latent variable and its indicators squared, then summed (Garver and Mentzer, 1999).

The construct reliability value is also an indicator of convergent validity. The rule of thumb for the reliability estimate is that 0.7 or higher suggests good reliability and between 0.6 – 0.7 may be acceptable. High construct reliability value indicates that internal consistency exists, meaning that the measures are all consistently representing the same latent construct (Hair et al., 2006; Garver and Mentzer, 1999). Kline (1998), meanwhile, suggests that alpha values below 0.5 show that at least half of the observed variance may be due to random error and the measures are considered unreliable.

Table 7 shows the construct reliability and variance extracted values for all the latent constructs in this study. From the Table, the construct reliability value for all the latent variables or factors in this study are above 0.6 as suggested by previous researchers (Hatcher, 1994). This shows a good reliability and that the measures are all consistently representing the same latent construct. As for the variance extracted, some of the value estimates of the constructs are below 0.5. However, Hatcher (1994) posits that this situation does not cause concern since it is quite frequent from the previous studies to find an estimate below 0.50, even when the construct reliability is acceptable. Thus, it can be concluded that the measures for integrated HRM strategy produce sufficient reliability.

(Insert Table 7)

Discussion and conclusion

The primary focus of this paper was to test the dimensionality of integrated HRM strategy scale that has been predominantly used in the Western culture to the Malaysian context. To a certain extent the study has shown that by getting a 35 items of HRM strategy which is capable of explaining sufficient variation in the construct being measured. It has also been proven that the instrument is valid (content, construct, convergent, and discriminant) as well as reliable.

HR managers from manufacturing organizations can benefit from the use of this scale in numerous ways. Integrated HRM strategies were developed and operationalized based on the established HRM strategy typologies (e.g. Miles and Snow, 1984; Dowling and Schuler, 1990; Delery and Doty, 1996). From the integration, six types of HRM strategic dimensions were proposed namely: expansion, quality conscious, cost minimization, commitment, employee development and conventional. Exploratory factor analysis suggested that the six-factor model was used within this sample of manufacturing organizations, providing support for the construct validity of this scale. The range of factor loadings was observed changing from 0.42 to 0.82 and six factors explained 52.33 percent of total variance. In addition, the results of the confirmatory factor analysis indicated that the fit indices for the four factors of integrated business strategies provided a good fit to the data.

Therefore, these validated strategic dimensions can be utilized as an alternative to establish HRM strategic typologies for the manufacturing organisations. Importantly, this result could be used as reference and as a basis for HR managers for a further in-depth understanding of the concept of HRM strategies in manufacturing organisations in Malaysia.

However, there are some HRM strategies that can be considered in order to identify weak areas in the manufacturing organizations. Upon discovering the problematic situation (e.g. HR managers scored very low in the dimension of cost minimization and quality conscious HRM strategy), it is worthwhile for the organizations to further investigate the causes of the problems and ultimately lead to decision-makings to remedy the situation. Apart from that, evaluations using the scale can be carried out from time-to-time to keep a close tab on the adoption of different types of HRM strategy among the manufacturing organizations in Malaysia.

Finally, in the wake of rising global competition, this empirical finding of integrated HRM strategy scale provides manufacturing organizations with a better understanding on the desirable to have a strategy that promotes competencies inside the HR department and ultimately to the organisations as a whole. Moreover, the organizations are also aware on the various types of HRM strategies to adopt particularly in the hyper competitive environment,

In conclusion the integrated HRM strategy has been presented as a reliable, valid and extremely versatile instrument for the measurement of HRM strategies espoused by the manufacturing organizations in Malaysia. The instrument can assist with the development of theory and research on human resource management. It may provide a valuable tool for research on HRM strategy particularly for researchers who are interested in the application of HRM strategy typologies, organization-based perspectives on strategy, strategic HRM and strategy-performance relationship. A final insight, the integrated HRM strategy scale is predicted to perform as a useful role in synthesizing theory, practice, and research on HRM.

References

Albrecht, K. and S. Albrecht. (1987). *The creative corporation*. Homewood, Illinios: Dow Jones-Irwin.

Arthur, J. (1992). The link between business strategy and industrial relations systems in American steels minimills. *Industrial and Labor Relations Review,* 45(4), 488-506.

Arthur, J. (1994). The effects of human resource systems on manufacturing performance and turnover. *Academy of Management Journal,* 37(4), 670-87.

Bamberger, P. A. and F.A., Fiegenbaum. (1996). The Role of strategic reference points in explaining the nature and consequences of human resource strategy. *Academy of Management Review,* 21, 926-958.

Bamberger, P. and I. Meshoulam. (2000). *Human resource strategy: Formulation, implementation and impact*. Saga Publication, Inc.

Bamberger, P. and B. Phillips. (1991). Organisational environment and business strategy: Parallel versus conflicting influences on human resource strategy in pharmaceutical industry. *Human Resource Management,* 30(2), 153-82.

Bentler, P.M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin,* 107, 238-246.

Bentler, P.M. (1995). On the fit models to covariances and methodology. *Psychological Bulletin,* 112, 400-404.

Bird, A., and Beechler, S. (1995). Links between business strategy and human resource management strategy in U.S. based Japanese subsidiaries: An empirical investigation. *Journal of International Business Studies,* 23, 23-46.

Bollen, K.A. (1989). Structural e*quation with latern variables*. New York: John Wiley & Son.

Buller, P.F. (1988). Successful partnerships: HR and strategic planning at eight top firms. *Organisational Dynamics,* 3, 27-43.

Churchill, G. A., and D. Iacobucci. (2002). *Marketing research – Methodological foundations,* Australia: South Western Thomson Learning.

Cooper, D.R. and P.S. Schindler. (2001). *Business research methods* (7th ed).Boston: McGraw-Hill Irwin.

Corbett, F. M. (2001). *The 2001 Strategic outsourcing; the outsourcing research* council, Michael F. Corbette & Associates.

Delery, J.E. and D.H. Doty. (1996). Modes of theorizing in strategic human resource management: Test of universalistic, contingency and configural performance Prediction. *Academy of Management Journal,* 39(4), 802-35.

Dowling, P. and R. Schuler. (1990). Human resource management, in Blanpian, R. (ed.) *Comparative labour law and industrial relations in industrialized market economics* 2, Boston Kluwer Law and Taxation Publisher*, Deventer* 2: 125-49.

Dyer, L. (1984). Studying human resource strategy: An approach and an agenda. *Industrial Relations,* 23, 156-69.

Dyer, L. and G.W. Holder. (1988). A strategic perspective of human resource management. In L. Dyer and G.W. Holders (Eds), *Human resource management: Evolving roles and responsibilities*, 1-45. Washington, DC: American Society for Personnel Administration.

Dyer, L. and T. Reeves. (1995). Human resource strategies and firm performance: What do we know and where do we need to go? *The International Journal of Human Resource Management,* 6(3), 656 -70.

Federation of Malaysian Manufacturer. (2005). *Malaysian industries*: *FMM Directory* (36th ed) Federation of Malaysia Manufacturers. Kuala Lumpur.

Fombrun, C., N.M. Tichy, and M.A. Devanna. (1984). *Strategic Human Resource Management.* New York: Willey

Ford, J.K., R.C. MacCallum and M. Tait. (1986). The application of exploratory factor analysis in applied psychology: a critical review and analysis. *Personnel Psychology,* 39: 291-314.

Garver, M.S. and J.T. Mentzer. (1999). Logistic research methods: employing structural equation modeling to test for construct validity. *Journal of Business Logistics,* 20(1), 33-57.

George, R. and I.C. MacMillan. (1984). Corporate venturing/senior management responsibilities. Working paper, Center for Entrepreneurial Studies, New York University. In Schuler, R.S. (1989). Strategic human resource management and industrial relation. *Management and Industrial Relation,* 42(2), 157-184.

Gorsuch, R.L. (1983). *Factor analysis*. Hillsdale, NJ: Lawrence Erlbaun Associates.

Grundy, T. (1998). How are corporate strategy and human resource strategy linked? *Journal of General Management,* 23(3), 323-37.

Hair, J.F, W.C. Black, B.J. Babin, R.E. Anderson and R.I. Tatham. (2006). *Multivariate data analysi*s (6th ed.) Upper Sadle River, New Jersey: Prentice Hall.

Hatcher, L. (1994). *A step-by-step approach for using sas ® system for factor analysis and structural equation modeling*. Cary, NC: SAS Institute

Huang, T.C. (2001). The effects of linkage between business and human resource strategies. *Personnel Review,* 30(2), 132-151.

Kelloway, E.K. (1995). Structural equation modeling in perspective. *Journal of Organizational Behaviour,* 16(3), 215-224.

Kline, R.B. (1998). *Principles and practices of structural equation modeling.* New York: The Guilford Press.

Lee, T.H and J. Crompton. (1992). Measuring novelty seeking in tourism. *Annals of Tourism Research,* 19, 732-751.

Ling, L.C.P. (1998). *Interactional effects of supervisors' personality and leadership styles on immediate subordinates in Chinese organizations*. Unpublished Master of Philosophy Dissertation. University of Hong Kong.

Malhorta, N.K. (2004). *Marketing research: an applied orientation* (4th ed.). Upper Saddle River, New Jersey: Prentice Hall.

MacDuffie J.P. (1995). Human resource bundles, and manufacturing performance: flexibility productions systems in the world auto industry. *Industrial and Labor Relations Review,* 48(2), 197-221.

Miles, R.E., and C.C. Snow. (1984). Designing strategic human resources systems. *Organisational Dynamics* Summer, 36-52.

Nunnally, J.C. (1967). *Psychometric Methods*. New York: McGraw Hill.

Nunnally, J.C. (1978). *Psychometrict theory* (2nd ed.). New York: McGraw Hill.

Osterman, P. (1987). Choice of employment systems in the internal labour market. *Industrial Relations,* 26, 46-67.

Pallant, J. (2001). *SPSS survival manual: a step by step guide to data analysis using spss for windows (version 10)*. Maryborough, Victoria, Australia: McPherson's Printing Group.

Sanz-Valle, R., R. Sabater_Sanchez and A. Aragon-Sanchez. (1999). Human resource management and business strategy links: An empirical study. *The International Journal of Human Resource Management,* 10(4), 655-671.

Schuler, R.S., S.P. Galante and S.E. Jackson. (1987). Matching effective HR Practices with competitive strategy. *Personnel,* 64, 18–27.

SMIDEC, Malaysia, (2005). Small and medium industries development corporation. [Online] Available: http://www.smidec.gov.my/detailpage.jsp?section=defsme&level=1

Tabachnick, B.G. and L.S. Fidell. (1996). *Using multivariate statistics*. (3rd ed.) New York: HarperCollins College Publishers.

Tichy, N.M., C.J. Fombrun and M.A. Devanna. (1982). Strategic human resource management. *Sloan Management Review,* Winter, 47-61.

Tyson, S. (1995). *Human resource strategy*. London: Pitman Publishing.

Wang, D.S. and C.L. Shyu. (2008). Will the strategic fit between business and HRM strategy influence HRM effectiveness and organizational performance? *International Journal of Manpower,* 29(2), 92-110.

Wright, P.M., and S.A. Snell. (1991). Toward and integrative view of strategic human resource management. *Human Resource Management Review,* 1, 203-225.

Youndt, M.A., and S.A. Snell. (1996). Human resource management manufacturing strategy and firm performance. *Academy of Management Journal,* 39(4), 836-66.

Zikmund, W.G. (2003). *Business research* m*ethods* (7th ed.) USA: Thomson Learning, South-Western.

Table 1. Profile of the Respondents

Descriptions	Number	Percentage
Type of industry		
• Food and beverages	8	7.1
• Textiles	10	8.8
• Wood products	6	5.3
• Chemical products	12	10.6
• Rubber and plastic products	11	9.7
• Metal products	9	8.0
• Machinery and equipment	17	15
• Electronics	16	14.2
• Radio, TV and communication	16	14.2
• Motor vehicles, trailers and semi-trailers	8	7.1
Years in operation		
• 20 years above	41	36.3
• 11-20 years	40	35.4
• 10 years and below	32	28.3
Total employees		
• 150 to 300 employees	30	26.5
• 301 to 1000 employees	46	40.7
• Above 1000 employees	37	32.7
Positions		
• Top Management	9	8
• Senior Management	23	20.4
• Management Level	63	55.8
• Senior Executive	18	15.9
7. Years of working experience		
• Below 5 years	69	61.1
• 5 to 10 years	34	30.1
• Above 10 years	10	8.8

Table 2. Exploratory Factor Analysis of the Integrated HRM Strategies

Factors/Items	Factor loading
HRM Strategy - KMO = 0.908 Barlett's: Sig. = 0.000	
Factor 1: Expansion	
• All HR activities are fully integrated with one another.	0.817
• Human resource activities are in line with overall corporate strategy.	0.693
• The human resource department has as much say in corporate matters.	0.721
• The human resource department has explicit statement of its goal.	0.552
• Promotion is closely tied to performance appraisal.	0.575
• Training is viewed as an investment.	0.549
• Supervisors keep open communication with employees.	0.545
• Training is a valued function.	0.481
• Employees may suggest improvement in the way things are done.	0.471
Factor 2: Quality Conscious	
• Employees are actively involved in formal participation process.	0.676
• The job descriptions are explicit.	0.685
• Employees' performance appraisal is according to standard set of procedures.	0.645
• Employees' complaint through proper channel is encouraged.	0.609
• My company conducts standardized/structured interviews.	0.589
• The job has an updated job description.	0.496
• There are multiple promotion ladders.	0.439
Factor 3: Cost minimization	
• The human resource department function is accorded a trivial role.	0.700
• Qualified employees have narrow opportunities to be promoted.	0.696
• Job duties are ambiguously defined.	0.632
• Employees have little participation in goal setting.	0.602
• The head of human resource is excluded from the executive meeting.	0.552
• Promotion is based on seniority.	0.544
• The career path is broad.	0.512
• The basic salary offered is low compared to others.	0.419
Factor 4: Commitment	
• Employees' performance is emphasized on their personal development.	0.650
• Performance is based on objective results.	0.608
• Employee will go through the training programs frequently.	0.482
• The discussion between supervisor and subordinate focuses on future performance.	0.481
• My company constantly updates the range of benefits for the employees.	0.472
• Performance appraisal is discussed frequently with the employees.	0.451

Factors/Items **Table 2 (Continued)**	Factor loading
Factor 5: Employee Development	
• There are formal training programs to teach new skills.	0.714
• Extensive training programs are provided for a group of employees.	0.545
• Salary raise for employees is based on job performance.	0.509
• My company has comprehensive flexible benefits scheme.	0.443
Factor 6 : Conventional	
• The job security is almost guaranteed.	
• It is difficult to dismiss an employee.	0.760
• My company emphasizes on individual criteria is assessing performance.	0.728
	0.537

Table 3. Summary of Fit Indices

Indices	Abbrev.	Acceptable Level	Comments
Chi-Square	$(\chi^2)(df, p)$	$p > 0.05$ at $\alpha = 0.05$	P > 0.05 reflects acceptable fit; 0.1 reflects a good fit.
Normed Chi-Square	$(\chi^2)/df$	$1.0 < (\chi^2)/df < 3.0$	Values close to 1 indicate good fit but values less than 1 may indicate overfit.
Goodness of fit	GFI	GFI > 0.90	Values between 0.90 – 0.95 indicate satisfactory fit and values higher than 0.95 indicate good fit.
Root Mean Square of Approximation	RMSEA	RMSEA < 0.05	Values between 0.05 – 0.08 indicates satisfactory fit. Value 0 indicates a perfect fit.
Normed Fit Index	NFI	NFI > 0.90	Values between 0.90 – 0.95 indicate satisfactory fit and values higher than 0.95 indicate good fit. Values greater than 1 indicate overfit
Tucker-Lewis Index	TLI	TLI >0.90	Values between 0.90 – 0.95 indicate satisfactory fit and values higher than 0.95 indicate good fit. Values greater than 1 indicate overfit
Comparative Fit Index	CFI	CFI > 0.90	Values between 0.90 – 0.95 indicate satisfactory fit and values higher than 0.95 indicate good fit. Values close to 0 indicate poor fit, CFI =1 indicates perfect fit.

Source: Adapted from Schumacker and Lomax, 1996; Kline, 1998

Table 4. Results of Confirmatory Factor Analysis

Variable	Chi-square ($\chi2$)	P value	$\chi2$/df	NFI	GFI	TLI	CFI	RMSEA
HRM Strategies								
Expansion	29.689	0.075	1.484	0.932	0.934	0.967	0.976	0.066
Quality-Conscious	10.952	0.279	1.217	0.949	0.968	0.984	0.990	0.044
Cost Minimization	16.856	0.264	1.204	0.906	0.960	0.973	0.982	0.043
Commitment	4.830	0.185	1.610	0.966	0.978	0.973	0.987	0.074
Conventional	1.490	0.222	1.490	0.976	0.991	0.975	0.992	0.066
Employee Development	3.219	0.359	1.073	0.967	0.985	0.955	0.998	0.026

Table 5. Correlation results

	Quacon	**Cost**	**Commit**	**Conv**	**Expand**	**Empdev**
Quacon	1					
Cost	.492[**]	1				
Commit	.499[**]	.424[**]	1			
Conv	.253[**]	.296[**]	.486[**]	1		
Expand	.562[**]	.445[**]	.324[**]	.221[*]	1	
Empdev	-.065	-.116	.001	.151	-.125	1

Quacon- quality-conscious, Cost- cost-minimization, Commit- commitment, Conv-conventional, Expand- expansion, Empdev- employee development.

Table 6. Reliability of the HRM Strategies

Variables	No of items	Cronbach's Coefficient Alpha
HRM Strategies		
Expansion	9	0.904
Cost minimization	7	0.589
Quality conscious	8	0.592
Commitment	6	0.536
Employee development	4	0.743
Conventional	3	0.677

Table 7. Variance Extract and Construct Reliability for HRM Strategies

Construct	Variance Extracted	Construct Reliability
Expansion	0.52	0.89
Quality conscious	0.44	0.82
Cost minimization	0.34	0.78
Commitment	0.50	0.80
Employee Development	0.44	0.75
Conventional	0.48	0.71

$$\text{Construct Reliability (CR)} = (\textstyle\sum\lambda)^2 / [(\textstyle\sum\lambda)^2 + \textstyle\sum (1 - \lambda j^2)]$$

$$\text{Variance Extracted (VE)} = \textstyle\sum\lambda^2 / [\textstyle\sum\lambda^2 + \textstyle\sum (1 - \lambda j^2)]$$

Where:

λ = Standardized regression weight

$1 - \lambda j^2$ = Measurement error for each indicator/item

Figure 1. Formulas for Variance Extracted and Construct Reliability

Analysis of the Current Financial Crisis

from an Accounting Point of View

Fan Wu

School of Accounting

Southwestern University of Finance and Economics, SWUFE

Yi B-328, LiuTai Road 555, SWUFE, 611130, Sichuan, China

E-mail: eileen890830@hotmail.com

Yu Pan

School of Accounting

Southwestern University of Finance and Economics, SWUFE

Zhu B-618, LiuTai Avenue 555, SWUFE, 611130, Sichuan, China

E-mail: panpan_py1988@hotmail.com

Abstract

The subprime mortgage crisis which started from early 2007 has gradually become the evolution of the global financial crisis, thus will inevitably bring a significant impact on the real economy over the next period of time. This paper is to elaborate on how the accounting will impact the financial crisis, as well as the development of the accounting, from the point of view of accounting standards, disclosure of accounting information and the accounting measurement attributes.

Keywords: Subprime mortgage crisis, Accounting standards, Accounting information disclosure, Accounting measurement attributes

1. Introduction

In April, 2007, applies along with American New Century Financial Company to go bankrupt, symbolizes the loan crisis official eruption. In a period of time following that, the crisis was not gradually reduced as was expected. Instead, it became more and more severe. Since the beginning of 2008, the mortgage crisis became further worsened, with many old financial institutions trapped in a difficult situation. First, Bear Stearns suffered from liquidity crisis, and was finally acquired by JP Morgan at a price of $10 per share; at the same time, Freddie Mae which took up half of the market share in US mortgage loan market went into difficulty, and was taken over by the US government in September. Later, Merrill Lynch Securities, the third largest investment bank in US, was acquired by Bank of America; the fourth largest investment bank Lehman Brothers declared to apply for bankruptcy protection due to huge loss in MBS and CMBS caused by the mortgage loans. Also, the world largest insurance company AIG was also faced with bankruptcy due to huge loss and was practically taken over by the US government. From the above cases, it proves what Green Span, former chairman of US Federal Reserves said, US is now in a unprecedented financial crisis now, with an increasing possibility in leading to economic recession.

Looking closely into this issue, we can find that many causes contributing to this crisis. One reason is that, since 911, the US Federal Reserves has cut down the interest rate for 13 times. As a result, the low interest rate policy led to bubbles in the property market. After then, the Federal Reserves began to raise the interest rate for 17 consecutive times, which then causes breaks of the property bubbles and further the mortgage crisis. Another reason is that, financial institutions are highly interest in high-leveraged investment tools, while at the same time, the government lacked regulations prior occurrence of this crisis. From an accounting perspective, the essay is going to analyze the impact of this crisis and enlightenment for the future development of accounting.

2. Accountant influence for this financial crisis

2.1 Accountant criterion

2.1.1 Transaction finance property measurement

Regarding Chinese accountant the criterion, the financial tool divides into following four kinds: (1) includes by the fair and just value measurement also its change works as time profit and loss financial property or financial debt, if the transaction finance property and the finance are in debt (2) have invest (3) loan and the receivable fund to the due (4) may supply the sell finance property.

The transaction finance property and the financial debt, mainly is refers to the enterprise the financial property or the financial debt which will sell for the near future in either returns buys, for example the enterprise take will earn the price difference as the goal the stock, the bond, the fund which will buy from two levels of markets and so on.

International accountant the criterion request (generally for market price) carries on the value appraisal regarding the transaction finance property in the end of the period according to the fair and just value. When the current price on market is higher than the cost price, surpasses the part to count for the company works as the time income; Likewise, if the current price on market is lower than the cost price, then should be lower than the amount to include the company when the time loses, this process namely is called Mark-to-Market.

US Financial inventory accounting Criterion Committee formulates 157th accountant the criterion, requests to the finance property according to the fair and just value measurement, and will change includes works as the time statement of profit and loss.

In reality, the domestic financial organ is generally makes the disposable computation in the end of the month, regarding certain overseas throws the line, as a result of internal request by day computation investment profit and loss, therefore, Mark-to-Market is calculates day after day based on the same day market closing price, and writes down the same day profit and loss.

Explains with examples, the investment bank buys the secondary loan bond in front of the loan crisis by 98 US dollars/units, the original plan sells after the bond rise in price earns business price difference the income. But after loan crisis eruption, because this kind of bond foundation finance tool (secondary loan with collateral) has the serious issue, on July 10, 2007, US enlightens the investor service company to announce solemnly, reduces to the total value approximately 5,200,000,000 US dollar 399 kind of secondary mortgage loan bond credit rating. The same day, Standard and Poor Company also announced that, will be able to decline to 612 kind of this kind of bond rating, the total value reaches as high as 12,000,000,000 US dollars. Influence is declined which the bond rating, loans the bond the price to fall rapidly secondarily, some large-scale organization investor even does not hesitate 6 to fold or lowly price transfer, the sell secondary mortgage loan bond, the quick short stopping damages in order to. According to the above estimates, the investments abroad bank only loses in the secondary loan bond surpasses 40%.According to international accountant criterion, even if has not sold secondary loan bond, also cannot belong to has to the due class finance property, therefore still needed to carry on the corresponding property depreciation according to the market price. For example the market price is 60 US dollars/units, then needs to carry on the property according to per unit 38 US dollars to reduce records, its loss includes the company to work as directly time profit and loss. This also meant after the financial organ has the securitization mortgage property, even if has not undersold, has not realized loses money, this causes the financial enterprise dynamically to reflect thoroughly in the mortgage property aspect investment in the statement of profit and loss, but did not look like before might hide in the property debt table.

2.1.2 Correlation finances grow the measurement question

Finance derivation tool is the emerging financial tool which in the traditional finance tool (for example cash, stock, foreign exchange, bond and so on) in the foundation grows, including forward, the stock, falls the time (exchange) and the option, as well as has forward, the stock, falls the time (exchange) and in the option one kind of or many kinds of characteristic structured finance tool.

Because this financial crisis involves to massively has grows about the finance the content, how grows accountant regarding the finance to measure the question, also is an unusual crucial question. If the transaction object exists actively in a transaction, the information transmission rapid, in the supervising and managing mechanism perfect market, then the present market price had reflected all public information, the present market price is the fair and just value manifests specifically, this time the fair and just value is the transaction number is multiplied by the market price; But if this derivation finance tool does not have the active market the similar derivation finance tool existence active market, if then its fair and just value should refer to the similar derivation finance tool market price, and determined after the suitable difference adjustment; If the similar derivation finance tool does not have the active market, then should use the suitable idea price model computation determination, the examination fair and just value change produces Benefit or the loss looked it is writes down the property debt table as the ownership interest to take the comprehensive income. When

uses counts the price model computation determination derivation finance tool the fair and just value, if can use the extraneous information, should better not have to use internal information.

For instance, in certain situations, under not the public transaction condition exchange produces market signals and so on market price compared to the interior estimated the cash current capacity commutation value determined the not public marked price finance tool the fair and just value possibly has the significance. Regarding certain financial tool, the enterprise in determined when its fair and just value may have two kinds of choices, take immediately settles accounts the value as the foundation, or take the anticipated settlement value as the foundation. When determination not public marked price finance tool fair and just value, with many is uses the interior to estimate the future cash current capacity the commutation value will take the measurement foundation. Regarding puts with other similar financial tool in the same place forms the combination to carry on the risk management the financial derivation tool, also is usually says "the pack" the phenomenon, this time, the single item

Finance tool fair and just value determined should consider "pack" the influence, should establish in the value foundation which the similar financial tool combines, but is not the single item finance tool may observe or in the estimate market price. Thus it can be seen, the finance grows the measurement possibly can have the person subjective ingredient, therefore the measurement price is by no means with the real value consistent, therefore will possibly have the huge uncertainty in the future to the financial risk.

2.2 Disclosure of accounting information

2.2.1 The lack of transparency and mobility in the structure of products.

International Organization of Securities Commissions (IOSCO) has issued securities of Exchange Traded species information disclosure standards, the implementation of the various countries and regions, not differences. The issuer of securities products, the founder, the guarantor, and the trustee, asset pool, trading rules, transaction information, legal instruments, after-sales service, investor education have overt and standard specification. However, many times credit derivatives MBS and CDO is not only a narrow range, but not active trading; not only in the over-the-counter transactions, but institutional investors are mostly one-on-one transactions; not only the market price formation mechanisms, and credit rating price discovery mechanism for institutions of the lack of competition; not only limited transaction information and transaction information of little value to the public; not only liability, SPV tools such as tables and clear tables conditions, and criteria and non-uniform table; not only the issuer information was incomplete, and the lack of prudent investors Review mechanism; In other words, the structure of OTC products that lack of transparency and liquidity, the price formation mechanisms and impeded discovery mechanism, form the structure of the potential risks of products.

2.2.2 Risk management and lack of prudential supervision

International Securities Supervisory Association organized President (IOSCO) technical committee the work team to investigate 11 large-scale international investment bank fluidity and the credit risk service situation, which has formed "about Loan Crisis Risk management Report of investigation". They found that in sub-loan market, the securities industry is only the business intermediaries, the investment through an intermediary to obtain financing and management commission, pays little attention to risk management is not only positive but also quite a few loan products in the off-market transaction, there is no high-frequency market transactions and the fair market value, it is difficult to timely management of market risk; a number of institutions had no choice but to "outsourcing" their internal risk management, reliance on credit ratings measure the risk of sub-loan products, resulting in the sub-loan crisis, many securities companies in line with statutory net capital requirement , but it can not meet the company's liquidity needs; the lack of interim financing, the ability of securities companies, but also because of the liquidity and insolvency merger, spread the risk of sub-loan crisis, the proliferation of the sub-loan crisis.

Significant changes in the external environment to the users of financial statements are now more concerned about the information disclosure requirements, such as the fair value of short and long-term liabilities from continuing operations and asset impairment calculations, to require disclosure of information by adding liquidity and credit policy information, which users of financial reports is worth special attention.

Therefore, the main body of the financial report must disclose all related to the management of credit risk, liquidity risk, market risk, capital management, as well as continuing operations in the uncertain policy. Disclosure of fair value must be the fair value is determined through an active market quotations or estimates derived using valuation techniques.

2.3 Accountant measures the attribute

Fair value accounting has been promoted by makers, in their view, fair value is the basis of accounting measurement, it can make a better accounting statements reflect the economic reality. Therefore, the fair value is increasingly being incorporated into the new and revised accounting standards are. However, fair value is a double-edged sword. In the market to the good, the so-called fair value of financial assets lucrative, financial institutions reflect the profit and loss

account on a lot of profit, which is easier to allow asset managers and traders the breeding of blind optimism, but also to the distribution of shareholder dividends increased by more than the impulse, these actions are not conducive to financial institutions to enhance ability to resist risks. Once the economy down, the market space to see when the value of financial assets related to underestimate the time, according to the requirements of accounting standards, financial institutions have been requested in accordance with the provision of different attributes of the assets set aside or reduce the owner's equity. This will affect the profitability of financial institutions and the level of capital adequacy ratio. In order to circumvent the adverse effects resulting from, financial institutions will be bound to intensify efforts to sell the assets. Market into a transaction that is the fall in asset prices - Extraction provision, a reduction of the rights and interests - panic selling - a further fall in prices - must continue to increase the provision for a reduction of the rights and interests and the continued provision of a vicious cycle, eventually lead to a result of these financial institutions The lack of liquidity can not solve and the problem of insufficient capital adequacy ratio and the fall. Well-known investment bank Bear Stearns and recently filed for bankruptcy protection as well as the Lehman Brothers collapse this reason.

3. Crisis on the impact of accounting

International Accounting Standards Board (IASB) is scheduled for October 13 in a special meeting on global credit crisis at the fair value accounting (Fair value accounting) and off-balance-sheet accounting (Off-balance-sheet accounting) for discussion and through a relaxation of fair value accounting standards. IASB amendments to IAS 39 provide that the bank which assets can be re-classified so as to avoid the need to mark-to-market (mark-to-market) results. IASB said in a statement: "the provisions of the revised, in accordance with International Financial Reporting Standards (IFRS) accounts of the enterprise board, the new criteria will be reclassified based assets."

Financial Accounting Standards Board (Financial Accounting Standards Board, referred to as: FASB) 10 later issued an explanation, further elaborated in accordance with the market price (mark-to-market) accounting standards. This explanation permission finance enterprise is higher than these property current selling price to the partial fluid low property the level to carry on the fixed price.

ASB and the United States Securities and Exchange Commission (Securities and Exchange Commission) on September 30 issued a joint statement outlined how to determine the best use of, the transaction is not active in the asset pricing. FASB published to explain the above and further clarified the application of the statement.

The Council said the move means that the listed banks in Europe and the United States compared with the industry does not place under the wind, which respond to the requirements of European finance ministers to revise the criteria for the call, and lifting their concerns.

All these phenomena show that the financial crisis sweeping the globe has changed the development of accounting, the accounting will necessarily result in the measurement and disclosure aspects of the properties to draw lessons from the financial crisis, as to how to develop in the future, we will wait and look forward to it.

References

Chen, Baosen. (2008). The loan crisis is worsening the. *World economics,* pp.18.

Justin Ciel, Zhang, Haixian, & Zhang, Lin. (2008). *China finance,* pp.17.

Li, Chong. (2007). By US secondary mortgage loan crisis reason and influence [J]. *Economic tendency*, pp.9.

Song. (2008). Financial derivation tool accountant studies. *Liaoning economy,* pp. 2.

Yin, Zhongli. (2007). Analyze the American real estate market and the Chinese real estate market relations from the loan crisis. *China finance from the loan crisis*, pp.18.

Advanced Booking Discount Program: A Coordinating Strategy for SMEs Food Processors on Managing Demand Uncertainty

Juma Makweba Ruteri (Corresponding author) & Qi Xu

Glorious School of Business and Management, Donghua University

PO box 474, 1882 West Yan an Rd Shanghai, China

Tel: 86-2-16237-3965   E-mail: jmakweba@yahoo.com

Abstract

Because demand for processed food products is uncertain, the processors face dilemma to satisfy their customers. The processors are unable to sell their products if demand turns out to be low. That is, some of the products will expire, the producer would have been better off by producing less. But if the processors choose to produce less to ensure that the entire products are sold, there will be an excess of demand if demand turns out to be high. In this case the processors would have been better off by choosing to produce large quantity. The dilemma is more experienced by SMEs food processors because they lack enough capital to acquire advanced technologies to assist in decision making. In this paper an attempt has been made to address the coordinating effects of ABD program in managing demand uncertainty. Fruits and vegetables drying factory has been focused as a case study. Theoretical expressions supported by explanatory mathematical equations have been offered. It is noted that the processor may achieve better decisions and managed demand uncertainty once they agree upon information sharing.

Keywords: Advanced booking discount, Supply chain coordination, Production decision, Demand uncertainty, SMEs

1. Introduction

Challenges in the food industry sector regardless of the size (small or large) are diverse and demanding, and need to be addressed on several fronts to improve service levels and take unnecessary inventory out of the supply chain and achieve higher customer service levels while meeting local and international regulations. Coordination mechanisms provide a system for a supply chain partners to collectively create value and achieve improved supply chain performance.

A supply chain is believed to be coordinated if the decisions the retailer and the processor make maximizes the total supply chain profits. In reality, each stage in a supply chain operate independently and attempt to maximize individual profit. The result of this independent decision making is lack of coordination because actions that maximize retailer's profit may not necessarily maximize the processor's profit. In our view, chain performance in the food processing industries is hindered by the presence of uncertainties to do with decision making. The uncertainty observed frequently in the food industries such as deliveries, product recalls, demand fluctuation, consumers' perceptions, machine breakdowns, and lead times leads to increased customers' dissatisfactions. Efficient and effective supply chain strategies are therefore needed to reduce those uncertainties not only in the entire supply chain of large food processing industries but also in small and medium enterprises (SMEs).

Processed food products have high unpredictable demand. It is a trend that demand is low during harvest season as most of people prefer to eat fresh harvested fruits and vegetables or other raw materials rather than consuming processed products. Similarly for drinks, demand is low during cold weather and significant increase during hot season. For the processor is more cost effective to buy and produce different products during harvest season as the price of raw materials become low. SMEs experience more pressure on handling freshly harvested materials as they are perishable. Despite of available advanced technologies around the world, most of SMEs food processors can not afford to buy these technologies because of capital constraint. In steady SMEs opt to use poor and labor intensive technologies with low production capacities accompanied with low skilled and less experienced personnel. To provide a high level of product availability it requires production of large quantity of products. High level of product availability is likely to satisfy unexpected demand, but also is likely to result in a large quantity of expired products at the end of the selling season. Low product availability is likely to result in few expired products, but also it is quite clear that other customers willing to buy will turn away without the product because of stock out. Thus, responding accurately to changing

demand patterns by forecasting and translating forecasts into an efficient production and distribution plan are key ingredients for success.

The majority of food processors use *push supply model* where by the product goes through the distribution network without orders in hand, in such strategy production and inventory held are therefore guided by predictions or anticipation of customer demand. Financial and technological constraints impose difficulties for SMEs to employ *just-in-time* (JIT) approach or *pull supply model*; the supply chain strategies which production process focus on customer needs. The strategies help to minimize inventory and avoid the risk of excess production of unwanted products. On the other hand, customers are not willing to wait the time it would take to process their order through the supply chain and make the product based on their order.

Working as an individual entity it becomes very difficult to attain supply chain efficiency as the food processing sector encounter a number of uncertainties which need joint efforts to address. Inspired by Tang et al. (2002) findings, this paper presents and analyses the impact of advanced booking discount (ABD) program as a coordinating strategy for SMEs food processors in managing demand uncertainty. Fruits and vegetables drying factory is referred to as a case study to demonstrate the coordinating effects of ABD program. In this study we consider that the retailer offer the program as a selling strategy to attract customers to buy more.

2. Literature review

In this section, selected works on supply chain strategies are reviewed. Having reviewed the literature two strategies for the purpose of this study have been identified as one of the strategies reported to improve supply chain performance as well as profit maximization. Hence, the review is based on two factors; discounts and coordination. Furthermore, we extended our review on demand uncertainty and some characteristics of SMEs. The objective of this review is to ascertain the correlation mechanisms that can help to develop theoretical description in managing demand uncertainty.

2.1 Discounts

Provision of discounts to entice customers in different business sectors has been widely used. For the manufacturer discounts induce the wholesaler or retailer to order more while for the retailer discounts entice consumers to purchase more. A number of literatures and models addressing different discount schemes are also widely available as well. Lau, et al. (2008) presented quantity discount and handling charge for a manufacturer supplying numerous heterogeneous retailers. In the model, they showed a "price break" referred to the order size needed to qualify for quantity discount or handling charge reduction. Schotanus et al. (2009) studied an analytical and empirical basis for one general quantity discount function that can be used to describe the underlying function of almost all different quantity discount types. For a broad literature review on quantity discount few to mention, the reader is referred to (Crama et al. 2004, Li and Liu 2006, Lau et al. 2007, Burke et al. 2008, Mirmohammadi et al. 2009). Tang et al. (2002) discussed an alternative strategy on improving demand accuracy forecast referred to as advanced booking discount program. The essence of this program is to overcome the difficulties in responding accurately to changing demand especially for products with short life cycles and high demand uncertainty. The program attracts the customers to pre-commit and pay their orders at a discount price before the selling season. However, once the customer commits and pay, no cancellation or refund is allowed and the order is delivered during the selling season. Purchase in advance under non-refundable discount price and redeem the service in a later period has been widely pronounced in the service industry sector such as in the hotels, airlines, tourist companies among others (Lee and Ng 2001, Schwartz 2006) . In the food industry Maxim's bakery in Hong Kong provide a successful story on the use of ABD program for the sales of moon cakes a Chinese traditional cake consumed during mid-Autumn festival. The bakery offer 25% off the regular price, while the customers who do not pre-commit their orders, they buy the cake at the regular selling price.

Lee and Ng (2001) have shown theoretically that when the firm undertakes advanced sale, capacity utilization and profits are higher even though prices for sale in advance are discounted. The firm can offer advanced sell for cash flow reasons, to maximize cash revenues, to preempt competition for an alternative product, to ease planning and budget based on committed revenues. Perishability also may be a reason that forces a firm to practice advance sale especially when unused capacity has no salvage value (Lee and Ng 2001).

2.2 Demand uncertainty

Demand uncertainty comes from difficulties in predicting customer needs and wants in a given period of time. Information variation across the supply chain is usually greater if the supplier is farther away from the customer. This phenomenon, often referred to as "bullwhip effect" is commonly pronounced in an uncoordinated supply chain network (Chopra and Meindl 2008). Costs associated with bullwhip effects can be as high as 12 to 25 percent for each member in the supply chain (Fawcett et al. 2007). Demand variability can be reduced by application of more advanced forecasting techniques, providing advanced information or smoothing its product consumption through coordination (Bayraktar et al. 2008). However, although both supplier and the customer benefit from these activities the costs associated with them are usually born only by customers. Thus, the need for the supplier to share the costs of the

activities with the customers or provide other incentives such as price discounts (Kunnumkal and Topaloglu, 2008).

2.3 Coordination in the supply chain

Coordination refers to the coordination of diverse elements into an integrated and harmonious operation. Coordination is realized when a decision maker in the supply chain, acting rationally, makes decisions that are efficient for the supply chain as a whole (Gupta and Weerawat, 2006). Companies forming a supply chain are dependent on the performance of other organizations. The need to manage dependencies and different resource flows is important for a company's success (Danese et al. 2004; Patnayakuni et al. 2006). Supply chain coordination is a vehicle for redesigning decision rights, process flow, and resources between supply chain members to influence improved performance (Lee, 2000). Good coordination in the supply chain reduces uncertainty in processing networks (Simatupang et al. 2004), which in turn translates into reduced variability. Some authors argue that coping with uncertainty is the primary motivation for supply chain coordination (Simatupang, et al. 2004). Supply chain coordination offers a means to understand and analyze a supply chain as a set of dependencies. These dependencies exist both in physical flow, which is the flow and storage of goods, and informational flow, which deals with the storage and flow of information associated with those goods (Lewis and Talalayevski, 2004).

Coordination mechanisms provide tools for effectively managing interactions between people, processes, and entities that interact in order to execute supply chain objectives (Xu and Beamon, 2006). They are specific tools designed to address particular coordination problems (Fugate et al. 2006). According to Li and Wang (2007), an important supply chain coordination-mechanism is an operational plan to coordinate the operations of individual supply chain members and improve system profit.

2.4 Small and medium enterprises

A number of literature reports the definition of SMEs base on different criteria. Verhees and Meulenberg (2004) define SMEs as a firm that is run and controlled under the direct supervision of the owner. SMEs have also been defined by the number of employees as well as capital investment (Ministry of Industry and Trade, Tanzania, 2002). In recent year SMEs have come under the center of public policy attention (Schlogl, 2004) because of the contribution it offers in the countries' economic growth and job creation. However, in terms of adopting supply chain management (SCM) concept, SMEs tends to be more reluctant mainly because of lack of resources and skills (Verhees and Meulenberg, 2004). Even though the literatures emphasize that SMEs have poor specialization skills, the recent trend indicate the increasing awareness of the importance of key words such as knowledge, skills or competencies for assuring their competitiveness. Most of SMEs operate in a decentralized system where each business entity in the network tries to make decisions which meet individual objectives rather than the entire network. In the case where the enterprise is owned by individual entrepreneur, the choice to adopt or not to adopt a marketing strategy lies on what the owner think about the consequences of the adoption of such strategy in their organization. On the other hand, SMEs today are part of supply chains that require them to manage their processes, orders and participate in collaborative planning and communication to meet local and global competition as a whole.

3. A case study insight

The focus study addressed here come from an established small local factory, drying different products of fruits and vegetables in Tanzania. To gain a deep understanding of the factory's business operation, six semi-structured face to face interviews with employees of this factory were conducted to probe information relevant to this study. The respondents provided initial insight into the historical development of the factory. Quantitative and qualitative information for this study were accessible through factory's staffs from production and sales departments.

3.1 Availability of primary raw materials

Availability of raw materials are scattered through out of the year but with relatively short harvesting period as shown in Table 2. Production is continuously done by succession of the crop in season. Once two or more crops are in the same season, then production planning, scheduling and rescheduling is done to accommodate the required processes. The products reach ultimate consumers through multiple independent large and small retailers with varying and uncorrelated probability distributions of demand. The relationship which exists between supply chain partners is buy-sell relationship. Each entity is responsible and subjected to the loss which may result from expired products or any other cause.

(Insert Table 2 here)

3.2 Production technology

The factory use hybrid solar drier with limited production capacity. The machine is provided with supplementary heating unit to allow continuous process. The technology gives an opportunity for the processor to use solar energy during sunny days and diesel fuel during rain season or night if the process has to continue. Production processing time for each product varies according to water content in the raw materials. Vegetables have less water content as compared to fruits and therefore drying time is short as well. Production cost per unit increases once employing diesel in the

production process.

Lack of appropriate storage facilities the manufacture keeps limited raw materials to be processed before spoilage starts. Since the product produced has a shelf life of one year, then manufacturer produce enough to meet anticipated market demand. During harvest and production season, the rate of inventory increase for each product is higher than the rate at which the inventory is used up vis-à-vis.

3.3 Demand for Dried fruits and vegetables

The three years average data of production, supply and demand of *Sonchus spieces* and sweet potato leaves are reflected in Figure 1 and Figure 2 respectively. Production of dries *Sonchus* is carried out in four months of each year; this is because *Sonchus spieces* grow naturally during rain season. During this season, the factory produces enough products to meet the expected demand of the whole year. The firm forecasts the demand based on the previous year's sales.

(Insert Figure 1 here)

The demand of dried *Sonchus* and sweet potato leaves fluctuates depending on the season of the year. The processor experience low demand during harvest season because some of consumers prefer to eat freshly harvested vegetables rather than consuming dried vegetable products. The demand start to increase when freshly harvested vegetables becomes scarce and this happen during dry season. Since there is no coordinating mechanisms which exist among the supply chain partners, in some months the supply seems to be higher than the demand and some months supply is low than what the market needs. The implication of this observation is that, in the case where the supply exceeds the demand then, it is likely that one or all of the supply chain partners may remain with large quantity of products at the end of the selling season. Selling season for food products ends when the product expires and there is no salvage value at the end of the selling season. But also, customers become dissatisfied once they go out without the product because of stock out. It should be clear that, dissatisfied customers may not only talk negatively about the firm to other customers but also they are likely to opt for a new supplier or go for an alternative product.   For potential customers "word of mouth" is a source of information as most of potential customers tend to trust more non paid agents (Nasution and Mavondo, 2008). It is necessary for the supplier to balance between supply and demand by providing customers with the right quantity at the right place and on time.

(Insert Figure 2 here)

Production of sweet potato leaves takes place in several months more than *Sonchus spicies,* this is because the crop is drought stable and some farmers irrigate their vegetable gardens to ensure sustainable supply of sweet potato leaves to the market. There is no production towards the end of the year for the reason that, during these months the drought condition is severe enough not to be able to support irrigation activities.

According to Chung et al, (2008) preseason demand information is usually very poor and therefore production levels that exceed or undershoot demand are common. This can be seen from the figures above where the supply sometimes exceeds or do not meet the market demand. This situation may occur as the result of poor forecasting techniques. The demand forecast technique used in this factory is by guessing based on the previous sales data. Bad guessing may cost the factory in terms of time and money including losing potential customers whenever their demand is not well met. The processors tend to produce and keep a substantial amount of safety stock to avoid shortages; on the other hand, retailers are willing to keep low quantity to avoid unnecessary inventory (Frascatore and Mahmoodi, 2008) in such conflicting objectives it creates difficulties in harmonizing the entire network. The factory plans the level and timing of demand to customers individually, resulting in an endless of inventory excess or out of stocks as opposed to collaborative planning (Bowesox et al. 2006), their supply is basically based on push strategy where production and distribution decisions are based on long term forecast (Simchi-Levi et al. 2003).

Delivery of the right quantity, to the right location and at the right time is crucial to the success of any businesses. From Figure 1 and Figure 2 one can notice on how inefficiency delivery can costs the firm, the time in which the product is highly needed no enough supply and the time in which the demand is low there is an excess supply. Since the demand of the products is seasonal, increasing replenishment lead times can contribute to the above observation because the product may enter into another cycle of the demand. Mismatching of production and supply is the result of poor coordination, which in turn translates into an increased demand uncertainty as well as difficulties in managing the demand.

3.4 Demand trend

Extrapolation of the three years (36 months) demand data by static method described by Chopra and Meindl (2008) show a seasonal demand cycle, increasing before and after harvesting season. The demand pattern for each processed product repeats year after year (Figure 3 and 4) with two seasons of high demand and one season of low demand i.e. pre-harvest, post harvest and harvesting period respectively. Since the processor is far from the final consumers, it is not easy to have accurate demand data which would help to respond accordingly.

(Insert figure 3 here)

(Insert figure 4 here)

It would be easy for the processor to predict future demand if the product show a slow demand change (see the slope of a deseasonalized demand) season after season. This happens when fluctuations are considered to be absent. In the real sense the demand for these products are influenced by season i.e. season with high demand and season with low demand. Knowing that trend, the challenge for the processor remain on "how much to produce, where and when to deliver" in respect to the demand trend.

3.5 Coordinating effect of ABD program on demand uncertainty

In this section we analyze the coordinating effect of the program on managing demand uncertainty. The reader is reminded to consider the results from the case study as the first option in which each partner strive to optimize individual profit. The study reveals that in some months, the supply overage or underage the demand. The Second option we consider the situation where the processor and the retailer agree to coordinate. The retailer use ABD program as a selling strategy to attract consumers. It is important to note that partners agree to coordinate or collaborate if they realize that the benefits obtain exceeds those they get when operating as an individual entity. As presented by Tang et al. (2002), ABD programs requires customers to commit, pay at a discount price and obtain their orders during the regular selling season. As we can recall, food products are different from other items such as seasonal cards, fashion clothes, electronics among others in the sense that, food products are consumed through out the year and no salvage value once the product expires. However, the demand for food products varies depending on the season of the year. Also the demand may changes due to an unexpected events such as September 11, flood, drought, economic crisis, change in consumers' preference etc. We pay attention on demand uncertainties that the processor experiences in different season of the year but difficult to predict customers' needs *"where and when"*.

Normally, the processor and the retailer have different stocks which comprise different product batches and ages which expire in different times *(t)*, where *t = 1, 2, 3...x* and *x* is the maximum product shelf life. For dried vegetables *x = 12* months. Retailer's inventory vector for dried *Sonchus species* and sweet potato leaves is: $Q_r = q_1 + q_2 + q_3 + ... q_x$ and the demand is satisfied by first in first out (FIFO). Q_r includes the demand Q_c for pre-committed customers and demand Q_u for uncommitted customers. Q_r is expected to be distributed among the three seasons. Which means $Q_c = q_{c1} + q_{c2} + q_{c3}$ and $Q_u = q_{u1} + q_{u2} + q_{u3}$ where q_c and q_u are committed and uncommitted quantities respectively, while 1, 2, and 3 represent different seasons. The retailer expects the processor to deliver the right quantities in each season to fulfill the committed orders as well as to meet the forecasted demand for uncommitted consumers. On the other hand, the processor's inventory vector for dried *Sonchus species* and sweet potato leaves is: $Q_f = q_{f1} + q_{f2} + q_{f3} .. q_{fm}$ and quantity Q_f is expected to meet the processor' predicted demand for the whole year.

Also it should be recalled that the production process activities takes place in a limited period of time i.e. three months for *Sonchus species* and nine months for sweet potato leaves. Since all products have a limited shelf life of one year, then the product produced in each month expires in the same month of the next year. For example the quantity Q_s of *Sonchus species* produced in April expires in April of the following year. Similarly for quantity Q_p of sweet potato leaves. To minimize expired products the quantity Q_s and Q_p produced must not exceed the total market demand Q_m but more important customers' demand have to be met. Theoretically, to operate efficiently and zero expired product while satisfying market demand quantity Q_m must be equal to quantity $Q_s + Q_p$. Apart from distribution factor, to match exactly the production side and demand side in the food industry sector is real difficult and an ideal event. In real life, it is either a certain degree of unfulfilled demand occurs or a certain degree of unused product remains. This happens because forecasts never be perfect. Therefore, an important strategy is to minimize as much as possible the cumulative differences between production and market demand. In this case $\pm \Delta Q = Q_m - (Q_s + Q_p)$. Uncertainties and errors on predicting demand and production increases when coordination among the supply chain partners does not exist. For example if the retailer predicts to order and sell quantity Q_r during the selling seasons, then the question is *"does the quantity predicted match with quantity Q_f planned and produced by the processor?"* This would be possible if both partners agree upon information sharing. ABD program require customers to pre-commit and pay their orders, in such situation portion of the demand (Q_c) is made known and therefore providing useful information in developing more accurate forecasts and distribution plans. It is true that the variance of the demand that occurs in unconditioned purchase is greater than the variance that occurs in a conditioned purchase (pre-committed orders). In conditioned purchases, quantity q_c of each season is well known, only quantity q_u is uncertain. Since the retailer is close to ultimate consumers, it is also obvious that the retailer has superior demand information than the processor. This means demand error $(\pm \Delta q_u)$ at the retailer's level is much less than the demand error that would happen at the processor's level. If this message with known demand and probably with low demand error of uncertainty goes back to the processor, then the processor will be able to achieve efficient planning of production and distribution among the selling seasons. If the food processing factory addressed in this paper as a case study was working with

retailers as a coordinated team then all figures would have assumed different shapes that depict more accuracy between production, supply, and demand in their respective seasons.

In general the overall implication of pre-committed order is the decreased demand uncertainty and the best way for SMEs who face financial constraints. It may be a challenging strategy when advanced technologies (electronic data interchange and software) are required to transfer the information. But affordable alternative to electronic data interchange (EDI) and software e.g. webEDI and e-mailing excel spread sheets with demand and inventory information are highly recommended for SMEs.

It should be emphasized that implementation objectives of ABD program may be the same in different industries but implementation strategies may differ. The nature of the product or service offered by the firm plays a major role in the differences of implementing the program. Within the food industry sector still the difference may be observed. This is because the firm may produce a wide range of products that requires different distribution chain or management.

3.6 Practical limitations and obstacles of setting up ABD program in SMEs

It can be recalled that retailers are found into two groups; small and large scale retail traders. The two groups in the food sector differ in many ways including the area which they cover, the number of employees, capital investment and sometimes education level of the owners. Small scale retail shops are scattered in large areas, trading in nearby localities. Usually small scale retail businesses are owned by individual or family members. In the situation where educational level of the owner is low, adoption of new strategy may not be easily acquired. This is because of the fear that information shared may leak and get utilized by rivals to sabotage his business. Information sharing is a key element for successfulness of ABD program as such advanced technologies are needed to convey information efficiently. Apart from capital constraints, lack of technical knowledge may limit the use of advanced technologies in SMEs. Last but not least widely scattered retails shops may impose difficulties in implementation and collection of demand information.

4. Conclusion

In this paper an attempt has been made to address the coordinating effects of ABD program in managing demand uncertainty in SMEs food processing industries. A theoretical expression supported by explanatory mathematical equations has been offered. It is noted that supply chain efficiency and reduced demand uncertainty can be achieved once the processor and the retailer agree upon information sharing. This is, of course true and it requires flexible information that support decentralized coordination process.

The growth and sustainable operation of SMEs food processors relies on the performance and efficiency not only in the production side but also in the distribution network. As literatures reports on inventory, through sharing demand and inventory information the visibility in the supply chain increases thus reducing uncertainty of demand of demanded quantities. The increased awareness of demanded quantities will lead to reduced shortage and spoilage costs and, hence, increased profits.

Although theoretical expression show a significant reduced demand uncertainty, we believe that still a lot need to be done in developing coordinating mechanisms of ABD program suitable for SMEs and their specific type of products they produce. This is because processed food products display some uniqueness characteristics and requirements for example shelf life, texture, taste, distribution requirements (normal or cold chain requirements) and processing technologies. Furthermore, we need to extend our research findings to reach stakeholders, influence their decisions, and helping them to create new structures and processes that would help to manage demand uncertainty more efficiently.

We have showed that shared information under ABD program can help the processor to improve the decision towards production planning and distribution. As such incentive to motivate the retailer to share information and means of information monitoring and transfer need to be addressed.

References

Bayraktar, E., Koh, S.C.L.,Sari, K. & Tatoglu, E. (2008). The role of forecasting on bullwhip effect for E-SCM applications. *International Journal Production Economics*, 113, 193-204.

Burke, G.J., Carrillo, J., & Vakharia, A.J. (2008). Heuristics for sourcing from multiple suppliers with alternative quantity discounts. *European Journal of Operational Research*, 186, 317–329.

Chopra, S., & Meindl, P. (2008). Supply chain management. Strategy, planning, and operation. 3rd Ed. Pearson Eductaion Education Asia Ltd, Tsingua University.

Chung, C. Flynn, J. & Kirca, Ö. (2008). A mult-item newsvendor problem with preseason production and capacitated reactive production. *European Journal of Operational Research*, 188, 775-792.

Crama, Y., Pascual, R. J., & Torres, A. (2004). Optimal procurement decisions in the presence of total quantity discounts and alternative product recipes. *European Journal of Operational Research,* 159, 364–378.

Danese, P., Romano, P., & Vinelli, A. (2004). Managing business processes across supply networks: The role of coordination mechanisms. *Journal of Purchasing and Supply Management,* 10 (4-5), 165-177.

Fawcett, S.E, Ellram, L.M., & Ogden, J.A. (2007). *Supply chain management from vision to implementation.*Tsinghua University press.

Frascatore, M.R., & Mahmoodi, F. (2008). Long-term and penalty contracts in a two-stage supply chain with stochastic demand. *European Journal of Operational Research,* 184, 147-156.

Fugate, B., Sahin, F., & Mentzer, J.T. (2006). Supply chain management coordination mechanisms. *Journal of Business Logistics*, 27 (2), 129-161.

Gupta, D., & Weerawat, W. (2006). Supplier-manufacturer coordination in capacitated twostage supply chains. *European Journal of Operational Research, 175* (1), 67-89.

Kunnumkal, S., & Topaloglu, H. (2008). Price discounts in exchange for reduced customer demand variability and applications to advance demand information acquisition. *International Journal of Production Economics,* 111, 543-561.

Lau, A.H.L., Lau, H.S., & Wang, J.C. (2007). Designing a quantity discount scheme for a newsvendor-type product with numerous heterogeneous retailers. *European Journal of Operational Research,* 180, 585–600.

Lau, A.H.L., Lau, H.S., & Zhou, Y.w. (2008). Quantity discount and handling-charge reduction schemes for a manufacturer supplying numerous heterogeneous retailers. *Int. J. Production Economic,* 113, 425-445.

Lee, H.L. (2000). Creating value through supply chain integration. *Supply Chain Management Review,* 4 (4), 30-36.

Lee, K.S., & Ng, I.C.L. (2001). Advanced sale of service capacities: A theoretical analysis of the impact of price sensitivity on pricing and allocations. *Journal of Business Research, 54, 219-225.*

Lewis I., & Talalayevsky, A. (2004). Improving the interorganisational supply through optimization of information flows. *The Journal of Enterprise Information Management,*17 (3), 229-237.

Li, J., & Liu, L. (2006). Supply chain coordination with quantity discount policy. *International Journal of Production Economics,* 101, 89-98.

Li, X., & Wang, Q. (2007). Coordination mechanisms of supply chain systems. *European Journal of Operational Research,* 179 (1), 1-16.

Mirmohammadi, S.H., Shadrokh, S., & Kianfar, F. (2009). An efficient optimal algorithm for the quantity discount problem in material requirement planning. *Computers & Operations Research,* 36, 1780-1788.

Nasution, H., N., & Mavondo, F.T. (2008). Customer value in the hotel industry: What managers believe they deliver and what customer experience. *Interntnational Journal of Hospitality Management.* 27, 204-213.

Patnayakuni, R., Rai, A., & Seth, N. (2006). Relational antecedents of information flow integration for supply chain coordination. *Journal of Management Informational Systems,* 23 (1), 13-49.

Schotanus, F., Telgen, J., & Boer, L. (2009). Unraveling quantity discount. *Omega,* 37, 510-521.

Schwart, Z. (2006). Advanced booking and revenue management: Room rates and the consumers' strategic zones. *Hospitality Management, 25, 447-462.*

Simatupang, T.M., Wright, A.C., & Sridharan, R. (2002).The knowledge of coordination for supply chain integration. *Business Process Management Journal,* 8(3), 289-308.

Simchi-Levi, D., Kaminsky, P., & Simchi-Levi, E. (2003). *Designing and managing the supply chain: concepts, strategies and case studies*. 2nd Ed. McGraw Hill, Singapore.

Schlogl, H. (2004). Small and medium enterprises: seizing the potential. *Observer*, 243, 46-8.

Tang, C.S., Rajaram, K., & Ou, J. (2002). Managing demand uncertainty for short life cycle products using advanced booking discount program. In supply chain management: Methods, applications and research directions. Kluwer Academic Publisher. Netherlands. 69-95.

United Republic of Tanzania, Ministry of Industry and Trade. (2002). Small and Medium Enterprises Development Policy.

Verhees, J.H.M. Frans and Matthew T.G. Meulenberg. (2004), Market Orientation, Innovativeness, Product Innovation, and Performance in Small Firms. *Journal of Small Business Management*, 42 (2), 134-154.

Xu, L., & Beamon, B.M. (2006). Supply chain coordination and cooperation mechanisms: An attribute-based approach. *The Journal of Supply Chain Management*, 42 (1), 4-12.

Table 1. Harvesting season for fruits and vegetable

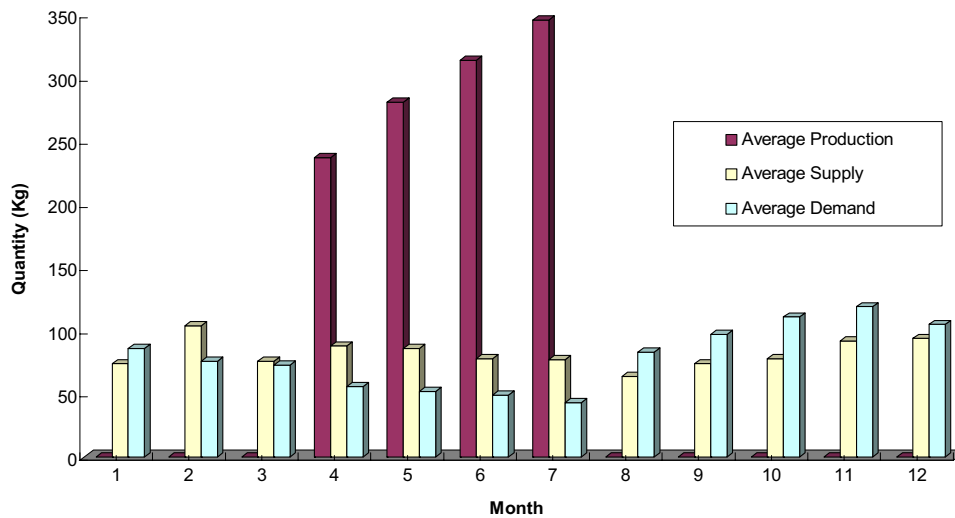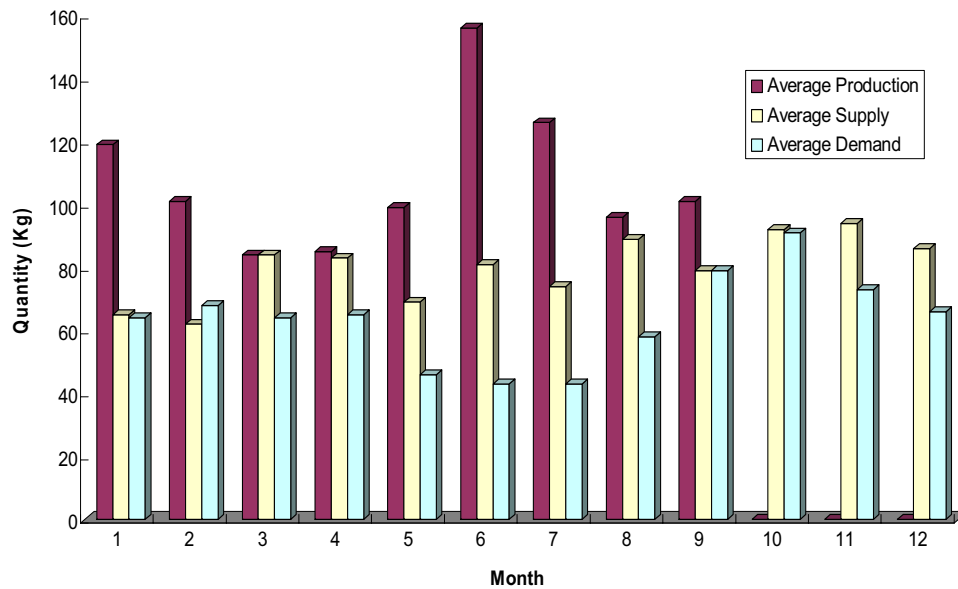| Raw material	Available
Mangoes	December-January and April-July
Jackfruit	October-December
Oranges	April-July
Sweet potato leaves	January-September
Sonchus species	April-July

Figure 1: Dried Sonchus species

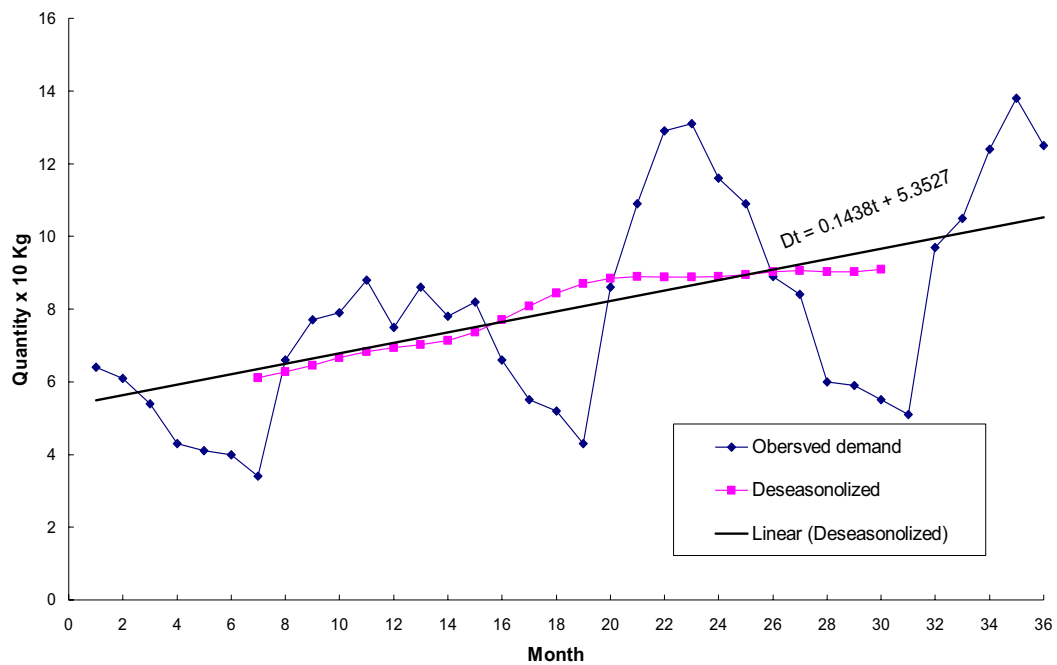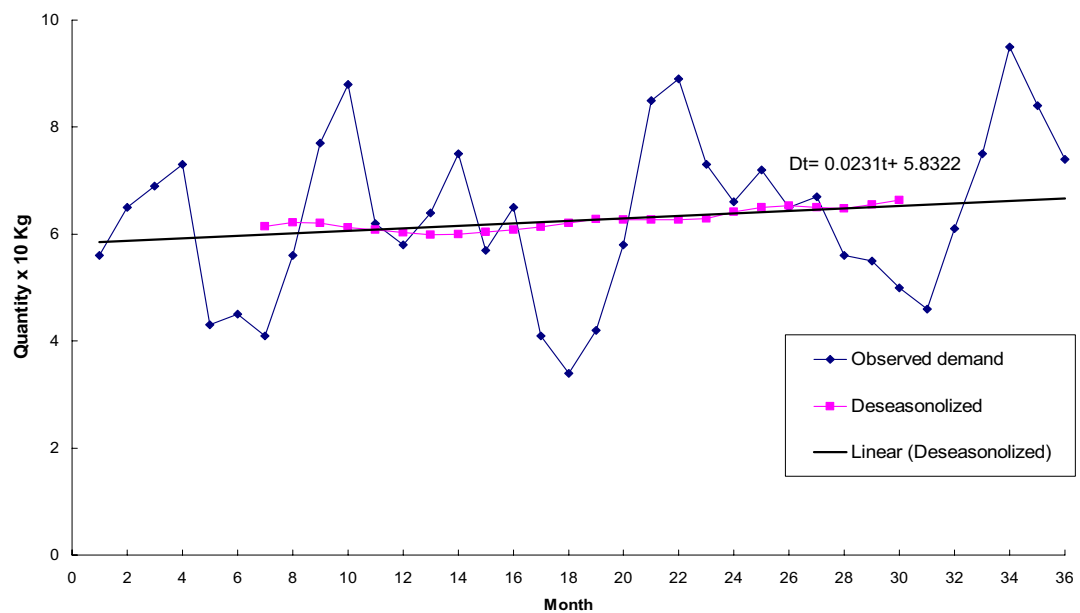**Figure 2:** Dried sweet potato leaves

Figure 3: Observed and deseasonalized demand for *Sonchus spp*

Figure 4: Observed and deseasonalized demand for sweet potato leaves

Study on the Value Base of the Capability Construction

of Urban Traffic System

Feng Han & Yachen Liu

School of Management, Shenyang Jian Zhu University, Shenyang 110168, China

Tel: 86-24-2469-2209   E-mail: hanf606@163.com

Abstract

The urban traffic system based on traditional value view has faced many problems. Based on the sustainable development view which takes the double needs including the subject need and the object need as its value base, the connotation of the capability of the urban traffic system is proposed in the article, and the double needs are two important aspects of the value base of the capability construction of urban traffic system.

Keywords: Urban traffic system, Capability, Value base, Sustainable development

Since the city established in the industrial revaluation formed, the concept of sustainable development has largely impacted the value view of "anthropocentrism" which only considered fulfilling the need of the subject (i.e. human beings). The opinion of sustainable development can not only introduce new contents into the research domain of urban traffic, which makes the problems about society, resource and environment to be emphasized and studied on a higher layer, but induce the reconstruction of the capability base of the urban traffic system.

1. Problems existing in the urban traffic system based on traditional value view

First, traditional value view of urban traffic system oriented the value base to the "anthropocentrism" which only fulfilled the need of subject (i.e. human beings). Based on this value base, human value concept and behavior fashion certainly take the "selves" as the center and ignore the existence and evolvement of the nature. Traditional value dimension oriented the value base to the "fulfilling the need of subject", which inevitably made the value relation between human being and nature to have the color of the extreme utilitarianism. People sometimes only start from their own needs and benefits, and regard the nature as the subordinate which they can use randomly, so the implementation of the value target is almost based on the self-need, which directly induce the degeneration of the environment and the abuse of the resources (Chen, 2005, p.111-118 & Mou, 2000, p.38-40). In this way, the human being only emphasize the rights to the nature such as the occupation rights without payment and the soliciting rights without term, but completely ignore the "need of subject", i.e. the need of nature.

Under the function of this value view, the urban traffic system which gradually rose and quickly developed because of industrialization also completely ignored the existence and evolvement of the nature, and the classic traffic research methods put the function of traffic to the economic growth on the top station, but didn't fully consider the limitations of the traffic system from the environment and resources, only pursued to extend the supply, so the development mode of the supply-oriented type was formed (Chen, 2003, p.78-81).

Second, the urban traffic system based on the traditional value view is facing serious challenge. With the quick development of Chinese economy, Chinese urbanization is also entering into the stage of quick development, and the tendency of human urbanization is more and more obvious, and the communication between human and matters increases largely, and in many cities, the traffic has been the bottleneck to restrain the economic development. Based on the traditional value view, the urban traffic planning faced to demand of traffic, and the urban traffic system would always form the supply-oriented mode. Under this mode, on the one hand, the infrastructure construction developed quickly, but on the other hand, the traffic travel amount of private car increased dramatically and could not be controlled, so the traffic systems of many cities in China was in a vicious circle of "more cars- road construction- more and more cars", and the vicious circle from resource consumption, ecological unbalance to environment quality degeneration further formed. Undeniably, in the situation that the traffic supply and demand seriously lost balance, the construction was necessary and effectively, and the infrastructure construction with large scale could successfully keep the deterioration of the crowed traffic within limits in some stages, but the sustainable development of economy will

certainly quicken the speed of urbanization and mechanization, especially the urbanization of China is lower than the corresponding economic development level.

When human beings ask for various rights to the nature, they sometimes forget the limitation to themselves. On the one hand, the increase of traffic demand and the change of traffic mode have not be managed and restrained correspondingly, and on the other hand, the urban traffic will infinitely use the resource. Aiming at the increasing traffic demand, human only increased the infrastructure construction of the urban traffic, built and widened existing road infrastructures, but didn't consider that the function location, spatial structure and urban traffic system in the city should be developed harmoniously, even in some cities, the edge areas were developed without limitations by the guidance of the road infrastructure, which made large gap occurred in the supply and demand of traffic. In most cities of China, the traffic technology level is low, especially the quick railway traffic systems with large carrying capability are deficient, and the deficiency of traffic capability of road and conveyances often induced many problems such as traffic jam, long traveling time, weak traffic management and worrying traffic security. The limitless increase of motor vehicle will induce the increase of atmosphere pollution and noises which have been the main sources of the environment pollution in big and middle cities. The proportion of traffic transportation in the energy consumption of various industries continually increases, especially the dependence and consumption of the oil resources will further deteriorate the structured conflict of the supply and demand of Chinese energy (Li, 2002 & Han, 2007, p.106-110).

2. The sustainable development and the capability of urban traffic system

Traditional "anthropocentrism" only started from the dimension of single value "fulfilling the need of subject", which makes human being eager for quick success and instant benefit, and induces the development of natural environment emerges into the vicious circle, and it has not adopted the requirements of the social development, therefore, it is the urgent affairs to concern the "need of object" for the development of the value view, and people should get rid of the short sight about the individual benefit and human present, and turn to care about the existence and development of human being which is in the "species". So human being should evaluate or study the value relationship between object and subject from two value bases including the subject of value and the object of value, i.e. the value should be established on the double value bases which can fulfill not only the need of subject, but the need of object. So both the human being and the nature are required at the same time. On the one hand, the nature offers materials such as energy and resource and survival space to fulfill the needs of human survival and development, and on the other hand, human being should protect the natural environment to fulfill the needs of existence and evolvement of the nature.

The view of sustainable development is the new value view which takes the double value bases as the start, and the sustainable development is a comprehensive concept involving economy, society, culture, technology and natural environment, and it mainly includes the sustainable development of natural resource and ecological environment, the sustainable development of economy, and the sustainable development of society. The target of the sustainable development is to realize the sustainable, stable and health development of the composite system with nature, economy and society. It means that human cognition to the nature has been transferred from the space type to the time-space type, requires the realization of the harmonious development of human and nature, pursues the harmony among human beings, and realizes the justice among generations and in generation.

Therefore, the value base of the capability construction of urban traffic system is the theory of sustainable development, and the total target and the development strategy of the sustainable development will induce the adjustment and change of the value view of the urban traffic system construction. So the relationships among the urban traffic, lands use, resource distribution, ecological environment protection, traffic demand management and technology will be properly adjusted, and the relationships among the urban traffic system and society, economy and macro ecology will be studied to establish the capability system of the urban traffic system with sustainable development will be established.

The capability of urban traffic system means the ability which is possessed and controlled by the urban traffic system, is established by attracting various resources, is to ensure the development of itself and the big complex system of society when fulfilling the higher requirements from the development of the society, and achieve the long-term and dynamic organization and harmony between the interior of the urban traffic system and the exterior environment. It includes the ability to control and fulfill the traffic demands, the ability to improve the quality of environment, and the ability to optimize and utilize resources, and these three abilities are based on the double-value dimension and the sustainable development, and they are associated and restrained each other.

Concretely speaking, under the guidance idea of reasonably utilizing resources and protecting ecological environment, the urban traffic system should take the advanced scientific technology as the base, enhance the control power, utilizing efficiency and service level of the traffic system, and offer guarantees for the sustainable developments of the whole society and the ecological environment when reasonably fulfilling the demands of the economic development. The decision-makers should pay attention to the optimization and utilization of resources and the protection of the urban ecological environment, emphasize the enhancement of the using efficiency of traffic establishments, and accord with the total requirements of the sustainable development of the composite system including city, society, economy, ecology

and environment when fulfilling the demands in the near future.

3. The capability construction of urban traffic system should be based on the natural value view of sustainable development

The natural value view of the sustainable development is to pursue the harmonious development between human being and nature, and it can embody a kind of modern "anthropocentrism", and it persists in the principle status of human value, and emphasizes human preferential status and intention status in the natural ecological system (Jia, 2000, p.95-98).

The sustainable development is to solve the conflict between the infinity of human development demand and the limitation of natural resources, i.e. the problem whether human value orientation and development intension to the nature accord with the natural rules. The settlement of this conflict is historical, and it is a course with permanent and durative time. At the same time, because of the regional feature of the resource distribution, the human beings in different regions have different value orientations, development intentions and natural rules to the nature, so the settlement of this conflict is also concrete. Thus it can be seen that the sustainable development is to explore the natural value view of the harmonious development of human beings and natures from time and space, and correspondingly, the urban traffic system should adopt the natural value view of the time-space type to utilize the natural resources.

The urban traffic system is the entity composed by five mutually functional factors such as human beings, car, road, environment and energy, and it is closely associated with the ecological environment where urban citizens depend on to survive. On the one hand, the developed urban traffic system must be based on natural resources such as lands and energies, and on the other hand, the urban traffic has brought serious pressures to the resources and environment, and largely impacted the developments of the society and the economy. Therefore, the capability construction emphasized by the urban traffic system is the development with certain limited conditions, and the sustainable development of the urban traffic should be realized by transforming the development mode. First, the growth speed and mode of the urban traffic demand can not exceed the load of the urban environment. Second, the supply of the urban traffic transportation should match with the growth speed of the transportation demand. Finally, the economic construction supported by the urban traffic system must use the natural resources and environment costs by the sustainable mode to control the development in the load of the urban environment. By various limitation conditions, the production mode and the consumption mode of the urban traffic system can be changed to implement clean production and civilized consumption, and reduce the environment pressures induced by each unit personnel's traffic activities.

The local governments should largely exert the function of the scientific technology which is the first productivity, fully exert the positive effect of the scientific technology, increase the investments of scientific technology, continually enhance the contribution share of the scientific technology in the growth of traffic transportation, use advanced scientific and technical means to enhance the transportation ability and the ability of traffic management, and research, develop and adopt advanced, quick and safe traffic vehicles and measures with low energy-consumptions such as controlling the land use scales, adopting strict development mode, emphasizing the land development combining with traffic planning and oriented public traffic, researching and developing traffic vehicles with low energy-consumptions or new energies, promote the high efficiency to realize the utilization of resources, establish the running system with resource saving, realize the optimized allocation of resources, and effectively enhance the resource utilization rate.

4. The key of the capability construction of urban traffic system is the social value view of sustainable development

The social value view of the sustainable development is to realize the harmonious development of economy, society, culture and nature. That is to say, the sustainable and harmonious development of the society should be the high integration of three dimensional system of "nature-economy-society", and its core idea is the harmonious development of many factors such as society, economy and ecology to realize the normal cycle of the whole society. Just as Deng Xiaoping pointed out, "the problem of development should be cognized on the level of whole human beings, and problems should be observed and solved on this level too (Editorial Committee on Party Literature of the CPC Central Committee, 1993, p.282)". Therefore, the sustainable development is the sustainable development of the whole society, and it is the development view taking the human beings as the center, emphasizes the mutual development of economy, society and human beings, starts from "human development" and ends in "human complete development". The final core and the ultimate target of the sustainable development are the complete development of human beings (Liu, 2008, p.40-42). The sustainable development is also the global problem which can influence the reality and future of the survival and development of whole human beings, embody human mutual benefits and value orientation to the largest extent.

The sustainable development is also a kind of human social practice guided by the idea of sustainable development. The practice form of the sustainable development view is the development mode of ecological economics. The development mode of ecological economics is the economic development mode which highly effectively utilizes the natural

resources and combines with the functions and process of the natural ecological system (Xiang, 2003, p.106-108). As a sort of new concept, though the sustainable development has been cognized by the earth, but the cognition degrees are different, and the practice types in different countries and regions in different development stages are significantly different, so the strategic practice of the sustainable development should be studied from the global and regional angles, and the practices should standardized in empirical researches to realize the target of the sustainable development on the meaning of the whole planet (Liao, 2002, p.40-41).

The social value view of the sustainable development decides the social value view of the capability construction of the urban traffic system. The social value view of the capability construction of the urban traffic system can persist in the people-oriented idea, offer better life, work, learning and leisure space for human beings, create better base and conditions for human complete development, re-scan the development strategy, system planning and system management of urban traffic by the research about the relationship between the society-economy-ecology and the traffic system, adjust the strategic target of the system, and more widely pay attention to the balanced development of the society and the fair distribution of traffic resources.

Therefore, the ultimate target of the capability construction of the urban traffic system is to pursue the complete advance of the society, research the practice of the capability construction of the urban traffic system from the global and regional angles, standardize the practices in the empirical researches, realize the sustainable development target on the global meaning, and realize equal development opportunity and equal service of various regions and groups in the whole world.

Only the urban traffic system can keep being harmonious with economy, society, resource and environment in every term, it will accord with the demand of the sustainable development. By the durative, stable and healthy development of the urban traffic system, taking the uniform of economic benefit, social benefit and ecological environment benefit as the center, the saving-type economic development mode with high production, good quality and high efficiency will be established, the high reserves of human resource will be realized and laborers' comprehensive quality can be continually enhanced, and the urban traffic ecological civilization in the whole planet will be established.

References

Chen, Xiaohong. (2003). The Sustainable Development Concept, Value and Planning Method of Urban Transportation. *Urban Mass Transit,* No.1, p.78-81.

Chen, Xinxia. (2005). Value Analysis of the Sustainable Development. *Philosophical Researches,* No. 4, p.111-118.

Editorial Committee on Party Literature of the CPC Central Committee. (1993). *Selected Works of Deng Xiaoping (Volume 3).* Beijing: Renmin Press. p. 282.

Han, Feng & Liu, Jisheng. (2007). Study on the Harmonious Development of the Functional Location Mode and the Traffic Organization in Big City. *Social Science Journal,* No.2, p.106-110.

Jia, Yuefang. (2000). The Value Connotation of the Sustainable Development. *Theory Journal,* No.3, p. 95-98.

Liao, Ronghua. (2002). Study on the Research Objects of the Sustainable Development Theory. *Qiu Suo,* No.1, p.40-41.

Liu, Zengzhi & Zhao, Donghua. (2008). The Value Orientation of the Sustainable Development. *Journal of Heibei University (Philosophy and Social Science),* No. 33(1), p. 40-42.

Li, Yan. (2002). *Study on the Sustainable Development and Resource Mode of Urban Traffic.* Xi'an: Thesis of Chang'an University.

Mou, Yongfu. (2000). Study on the Value Dimension to Implement the Sustainable Development. *Journal of Shaanxi Institute of Junior Managerial Personnel,* No.13(4), p. 38-40.

Xiang, Yuqiao & Hu, Pingjie. (2003). Rationalism, Humanism and Ecological Economics. *Qiu Suo,* No. 3, p.106-108.

The Linkage of Employee Satisfaction and Loyalty

in Hotel Industry in Klang Valley, Malaysia

Rahman Bin Abdullah

Faculty of Hotel and Tourism Management, Universiti Teknologi MARA, Dungun, 23000, Terengganu, Malaysia

Tel: 60-9-8401-913/60-19-741-6820   E-mail: rahma255@tganu.uitm.edu.my

Noraida Bte Abdul Karim

Faculty of Hotel and Tourism Management, Universiti Teknologi MARA, Dungun, 23000, Terengganu, Malaysia

Tel: 60-9- 8403-772/60-12- 2773-736   E-mail: norai297@tganu.uitm.edu.my

Mohd Onn Rashidi Bin Abdul Patah

Faculty of Hotel and Tourism Management, Universiti Teknologi MARA, Dungun, 23000, Terengganu, Malaysia

Tel: 60-9- 8401-913/ 60-13 -9342-148   E-mail: onnrashdi@gmail.com

Harnizam Zahari

Faculty of Hotel and Tourism Management, Universiti Teknologi MARA, Dungun, 23000, Terengganu, Malaysia

Tel: 60-9- 8481-700/60-12 -6896-581   E-mail: harnizamz@tganu.uitm.edu.my

Gopala Krishnan Sekharan Nair

Academy of Language Studies, Universiti Teknologi MARA, Dungun, 23000, Terengganu, Malaysia

Tel: 60-9- 8403-825/60-12- 9002-6026   E-mail: gopal792@tganu.uitm.edu.my

Kamaruzaman Jusoff (Corresponding author)

TropAIR, Faculty of Forestry, Universiti Putra Malaysia, UPM Serdang 43400, Selangor. Malaysia

Tel: 60-3-8946-7176   E-mail: kjusoff@yahoo.com

Abstract

Many organizations in the hotel industry face difficulties in retaining employees since they are unable to identify the factors that contribute to both employee satisfaction and loyalty. This study, covers 13 satisfaction variables and 3 loyalty variables. Employment tenure, employee future plan with the company, and recommending employment in the company would be taken as the 3 loyalty indicators in this study. This study sought to identify factors which could lead to increased tenure, in addition, any linkage between employee satisfaction and employee loyalty was investigated. In order to do that, a business model, called the Service Profit Chain was used and applied in hotels in the Klang Valley area in Malaysia. A portion of the model that measures employee satisfaction and employee loyalty was adopted for this study. The findings indicate the existence of a correlation between employee satisfaction and employee loyalty. Four of the thirteen satisfaction variables, namely, relationship with supervisor, recognition and rewards, working conditions, teamwork and cooperation showed the strongest correlation with the three loyalty variables afore mentioned. It is hoped that the findings could be used by managers in the service industries in developing effective employee training programmes by placing emphasis on the four satisfaction variables which correlated strongly with the three loyalty variables. However, since the sample of this study comprises only the front line employees, it is hoped that a future extended study would be carried out which would include the back of the house staff as well. If the findings are similar, then the theories of employee satisfaction and loyalty would apply equally to the entire hotel staff and this would greatly assist hotels in organizing uniform, effective and cost saving training programmes for all the staff to increase the level of employee satisfaction and loyalty for the mutual benefit of the employee and the organization.

Keywords: Service profit chain, Employee satisfaction, Employee loyalty, Linkage

1. Introduction

Interest in the potential and quality of the service industry has increased significantly both in the industry itself and in the academic field over the past 20 years. As many countries shifted from a manufacturing base towards a service based

economy, both the industry as well as the academia started to pay close scrutiny to it (Fitzsimmons & Fitzsimmons, 2006). As a result, studies of service management have grown to become an important element in the academic field. In this study the service profit chain model by Heskett et. al. (1997) which is one of the significant conceptual frameworks in service management will be adopted. However, only a portion of the service profit chain that links employee satisfaction to employee loyalty in the context of the hotel industry will be discussed in the literature.

In Malaysia, the hotel industry has been recognized as a potential prospect in the growth of the service industry. However, the growth is impeded by the high turnover rates of employees in the hotel industry. Many organizations in the hotel industry face difficulties in retaining employees since they are unable to identify the factors which contribute to employee satisfaction and the resultant loyalty. This study would endeavor to identify the factors which would actually make employees stay in their current working place. Additionally, the linkage between employee satisfaction and employee loyalty will be investigated.

The management of many organizations develops their training programmes, benefit packages, performance appraisal and work system based on their company policy. Usually these policies are aimed at developing loyal employees because this leads to a more lengthy tenure. The longer an employee works for a company the more valuable they become, especially in the service industry. On the other hand, there are retail companies which would only be focusing on employee satisfaction instead of prioritizing on employee loyalty. It is hoped that the findings of this study would assist organizations in coming up with staff training programmes, which would help create employee satisfaction and loyalty. In order to do that, a business model called the Service Profit Chain by Heskett et. al. (1997) was used and applied in hotels in the Klang Valley area in Malaysia. A fraction of the model that identifies employee satisfaction and employee loyalty was used in the questionnaire. The questionnaire is designed to elicit information which would be used to investigate the linkage between satisfaction and loyalty. The service profit chain is a concept introduced by Heskett et. al. (1997). The model was created to answer why certain service organizations perform better than the others (Heskett et. al., 1997).

The service profit chain model postulates that there are direct and strong networks of relationships between variables such as profit, growth, customer loyalty, customer satisfaction, the value of goods, services delivered to customers, employee capability, satisfaction, loyalty and productivity. Heskett et al. (1997) established the linkage by collecting empirical evidence from some 20 large service organizations. The findings lend support to the linkages stipulated in the service profit chain model. The model espouses the following chain of relationships, namely, that profit and growth are linked to customer loyalty, customer loyalty is linked to customer satisfaction, in turn, customer satisfaction is linked to service value while service value is linked to employee productivity, whereas employee productivity is linked to employee loyalty, employee loyalty is in turn linked to employee satisfaction, and employee satisfaction is linked to internal quality of work life (Heskett et al, 1997). The internal quality of work life, according to Heskett et al. (1997) simply denotes the feelings that employees have towards their jobs, colleagues, and the organization.

According to Heskett et al (1997), the strongest relationship as indicated by the data collected in the early tests of the service profit chain model, were those between: (1) profit and customer loyalty, (2) employee loyalty and customer loyalty, and (3) employee satisfaction and customer satisfaction. They suggested that in service settings, the relationships were self- reinforcing. That is, satisfied customers contributed to employee satisfaction, and vice versa. The chain starts with the productivity and quality of the output from the employees which has a linkage with employee loyalty; employee loyalty has a linkage with employee satisfaction and employee satisfaction is linked to employee capability. The customer value equation suggests that the value of goods and services delivered to customers is equivalent to the sum total of all the activities which contributed to the service value. The value is also dependant on the quality of the processes used to deliver the results, this is in relation to the price of a service to the customer and other costs incurred by the customer in acquiring the service. Furthermore, Heskett et al (1997) has found that value defined in this way is directly related to customer satisfaction. Subsequently, customer satisfaction has been found to have a linkage with customer loyalty, which eventually, theoretically leads to revenue growth and profitability which is the main objective of many organizations.

2. Materials & method

This is a descriptive study using statistical data to generate results. This research uses a survey method which focuses on contemporary events and does not require control over behavior of events. A close ended survey questionnaire was used in order to assess employee satisfaction and employee loyalty in hotels in Malaysia, which participated in this study. Most of the items in the questionnaire were adopted from Loveman (1998). He had used the questionnaire to measure employee satisfaction in retail banking.

A few items in the questionnaire were taken from the instrument used by Fosam et al (1998) which measures employee satisfaction and employee loyalty. The remaining items in the questionnaire was adapted from existing questionnaires that were taken from various literature review with appropriate adjustments

The questionnaire includes 19 items all together, with each item consisting of few sub questions. The questionnaire was divided into 3 sections; namely demographic data section, employee satisfaction section and employee loyalty section..

All the items in the questionnaire have an established validity and reliability based on Loveman (1998) and Fosam et al (1998) questionnaire items.

The questionnaires were distributed to the frontline employees of the participating hotels in the Klang Valley in Malaysia. A total of 300 questionnaires were distributed and a total of 258 questionnaires were retrieved for analysis.

Descriptive analysis involving frequencies were carried out to establish the percentage of employee satisfaction and loyalty. A scatter plot was generated in order to see the connection between employee satisfaction and employee loyalty. After that, correlation tests were conducted to see the relationship strength between employee satisfaction variables and the employee loyalty components as characterized earlier.

3. Results and discussion

All the data pertaining to employee satisfaction was analyzed using frequencies in order to identify factors that led to employee satisfaction. Subsequently, the employee satisfaction data was cross tabulated and correlated with the employee loyalty data. This was done in order to identify factors in the employee satisfaction section correlated positively to the three forms that denotes employee loyalty, namely, employment tenure, the making of career advancement plans within the company and recommending the employment to others. The linkage between employee satisfaction and employee loyalty was ascertained through these tests.

According to Table 1, most employees were basically satisfied. Their satisfaction stems from several factors. However, the study also found that employees place certain elements of their satisfaction as more important than the others. This seems to be evident when in general the employees say they were satisfied, but when being asked of each item in the questionnaire, some variables produced a better satisfaction score than the others (Table 2).

Before assessing whether the variables have any significant relationship. A Pearson Chi Square test was conducted to see the degree of confidence. The stated confidence level is the percentage equivalent to the decimal value of 1-α, and vice versa. A 95% confidence interval is to be found at, α= 0.05, since 1 − 0.05 = 0.95, or 95%. When α = 0.01, then 1 − α = 1 − 0.01 = 0.99, and the confidence interval is 99%. For the purpose of this study, a confidence level of 95% is used.

In terms of age, most of the respondents are aged between 21 and 34. This is an indication that the majority of the respondents are also a representation of Generation X (born between 1996 and 1982). The finding was that the majority of the respondents are loyal and the literature shows that Generation X have the tendency to be more loyal towards their employers than generation Y (born between 1978 and 1994). However, their loyalty is only as long as the business they are working with is still good. In other words, Generation X value loyalty at the workplace as long as the mutual need between employee and employer is fulfilled.

The respondents also seem to regard highly matters concerning career advancement and the opportunities to learn and grow that is offered by their organization. This finding agrees with the results of Walker Information's 2005 study which found that satisfied employees will become loyal when they perceive their organization as offering the opportunities to learn, grow and at the same time providing a clear established career path that they can pursue in the organization. These findings coincided with the employee commitment studies carried out by Carlson (2005). Carlson concluded that in order for the employees to be committed, which is a broad definition of loyalty, they look forward to the opportunities of continuous learning in order to improve their skills and knowledge.

Performance appraisal plays a role in the relationship between employee satisfaction and employee loyalty in this study. According to Jawahar (2006), performance appraisal is an important element of satisfaction because it is positively related to job satisfaction, organizational commitment and negatively related to turnover intentions. Job satisfaction and organizational commitment fall into a broader definition of loyalty. When mentioning turnover, it implies that the employee would not be loyal if the performance appraisal system is not fair and it does not accurately reflect true employee performance. Jawahar (2006) found that employee satisfaction has a linkage with employee loyalty, however in this study, performance appraisal, which is one of the thirteen variables denoting employee satisfaction did not correlate significantly with any of the three dimension of employee loyalty.

On the other hand, employee's role, which is also a variable denoting employee satisfaction, was found to correlate with employee loyalty in this study. The study of employee's role found that empowerment could lead employees to a higher level of satisfaction and a better quality of work life. Studies on employee empowerment/involvement programs were carried out by The Center for Effective Organizations at the University of Southern California and reported by Lawler et. al., 1992, 1995). They surveyed Fortune 1000 companies in 1987, 1990, and 1993 to determine the degree to which firms are adopting practices that redistribute power, information, knowledge, rewards, and the effects. Their 1990 and 1993 data was obtained from a sample which consisted of a mixture of manufacturing and service firms. The findings indicated that empowerment may have a positive impact on a number of performance indicators. However, in the service context, before the management decides to give a certain level of empowerment to their employees, especially to those whom are in constant contact with customers, the management must ensure that the empowerment is in no way abused. Management discretion in granting empowerment is essential in ensuring that such empowerment brings mutual benefit to both

employee and employer. This is in line with the Customer Oriented Service Employee (COSE) constructed by Kelley (1992).

Hennig (2004) defines COSE as the extent to which the employee's behavior in personal interactions with customers meets those of customer needs. It is important to note that the conceptualization of COSE as suggested here implies that all four dimensions (technical skills, social skills, motivation and decision making power) are indispensable to a certain extent to enable employees to behave in a customer oriented way. In order for the employees to perform all the other three dimensions, employees should be allowed a certain degree of decision making power, or they are empowered to decide what is best for the customer. However, this should only be carried out when the employees are able to fulfill all the other three dimensions.

Recognition and rewards is also one of the elements that have been found to link with employee loyalty in this study. Schneider (1994) alleges that customers report superior service when employees indicate that they work in a positive climate for service. Such climate refers to employee perceptions of the practices, procedures and behaviors that get rewarded, supported and expected with regard to customer service and customers service quality (Schneider et. al., 1998). The notion of employee as a customer has been previously developed. For example, Berry (1981) states that whether managing customers or employees "the central purpose remains the same: the attraction of patronage through the satisfaction of needs and wants".   In both cases individuals and organizations are involved in the exchange. The nature of what is exchanged may vary, but the importance of satisfying needs and wants remains constant, meaning that the management of employees is often similar to the management of customers. Similarly, employee needs and wants are satisfied when they perceive that rewards from the organization (e.g. pay, promotion, recognition, personal growth, meaningful work) meet or exceed their expectations (Hackman and Oldham, 1980; Locke, 1976).

This study also established the link between working conditions (employee satisfaction variable) and the three dimensions of employee loyalty. In the service profit chain model, the antecedents of employee satisfaction are variables related to "internal service quality" and include workplace and job design. According to Schneider (1994), customers report superior services when employees indicate that they work in a positive climate for service. Subsequently, Walker Information's 2005 found that employees are more loyal when they   feel that their job is secure, which is one of the items included under working condition section in this study. Working condition seems to have a significant relationship with employee loyalty in this study (Table 5).

In addition, studies of employee's satisfaction had identified areas that seem to be important for the satisfaction of the employees. The areas include a well managed, supportive and prosperous work environment, ongoing professional development, career growth potential, challenging and exciting work, teamwork, acknowledgement of work well done, work life balance and the work culture (Tarasco & Damato, 2006). Their study seems to agree in most aspects with the findings of this study. However, the strongest correlation between employee satisfaction and employee loyalty in this study comes from the following satisfaction variables, namely, recognition and rewards, teamwork and cooperation, working conditions and relationship with supervisor. The score for relationship with supervisor, strongly correlates with all three dimensions of employee loyalty. Sturgeon (2006) states that worker's relationship with their immediate supervisor is very important to employees since both are working in the same organization and share the same workplace. Anonymous (2005) reported that, when employees leave their job because they are not satisfied, they don't leave their job and company, but they are divorcing their manager or supervisor. In addition, he added, fostering satisfaction among subordinates is often largely affected by the capabilities of the manager or supervisor. On the other hand, training was also found to be a major contributor to employee satisfaction. However, in this study, it does not have a significant relationship with employee loyalty. Sturgeon (2006) agrees that training is one of the main drivers of employee satisfaction. Tarasco & Damato (2006) identified training in the form of ongoing professional development is an important contributory factor to employee satisfaction. In addition to that, Walker Information's 2005 also found that training and development to be one of the biggest factors that lead to employee loyalty. According to the report, employees want the opportunity to grow, and they want career path and opportunities that allow them to advance within the company. This study found that the benefits package, correlated with employee loyalty measures. Benefits package take into account factors such as, the amount of vacation, sick leave policy, amount of health care paid for by the organization, and dental benefits.

These results appear to agree with the model of the service profit chain developed by Heskett'et al (1997). The model shows that there is a relationship between employee satisfaction and employee loyalty. In addition to that, the findings of this study appears to agree with Heskett et al (1997) that workplace conditions, job design/decision making latitude, rewards & recognition, information & communication, and adequate "tools" to serve customers and are factors that lead to employee satisfaction. The findings of employee satisfaction and employee loyalty in this study does corroborate   the linkage proposed by Heskett et al (1997), in which, it is claimed that there is a strong relationship between employee satisfaction and employee loyalty. The findings of this study show that Heskett's theories are also applicable to the hotel industry, this corroboration is important since the findings of Heskett et al were from other fields of service.

In light of these findings, hotel organizations might want to construct a more comprehensive employee career development program that not only helps in improving employee satisfaction, but also uplifts their loyalty level. Factors such as recognition and rewards, teamwork and cooperation, working conditions, and relationship with supervisors are variables which seem to correlate satisfactorily to employee satisfaction and loyalty. These factors should be strongly emphasized in creating employee career development programs. However, a much more comprehensive study with a sample which comprises both the frontline and the non frontline hotel employees should be carried out in the future to find out whether the findings are also relevant and applicable to the back stage boys. If it should apply equally to the back stage staff then the findings can be used to create relevant staff development programme for the whole of the hotel staff and not just for the frontline people.

4. Conclusion

These findings underscore the important postulation that there is linkage between employee satisfaction and employee loyalty. In other words an increase of employee satisfaction could actually result in increased in employee participation and has the potential of making both the employee and employer equally loyal to the company. Basically employee satisfaction is dependant on benefits package, training and development, relationship with supervisor, working conditions, teamwork and cooperation, recognition and rewards, empowerment and communication. Whereas, employee loyalty is a result of the satisfaction that stems from satisfaction variables such as, recognition and rewards, working conditions, teamwork and cooperation, and relationship with supervisor.

These four satisfaction variables correlates with all the three aspect of loyalty in this study, namely, employment tenure, planning career with company and recommending employment (Table 3,4,5, and 6). The findings of this study could be used by managers in organizations in developing their staff training programme in order to create satisfied and loyal workers. Companies should be mindful of satisfaction variables such as: recognition and rewards, teamwork and cooperation, working conditions, and relationship with supervisor. The training programmes should make the employees confident that the company is sincere about the satisfaction variables such as mentioned in the preceding sentence. However, a future extended study that evaluates a wider scope of employee satisfaction and loyalty dimensions in the hotel industry should be conducted using a sample which includes the back of the house employees as well in order to establish the various strength between the variables in this study amongst the different samples. This would enable them to come up with a comprehensive training programme which is uniform to all hotel staff irrespective of whether they are in the frontline or the back room.

References

Berry, L.L. (1981). The employee as customer. *Journal of Retail Banking*, March. pp. 33-40.

Fitzsimmons, J., and Fitzsimmons M.J. (2006). *Service Management: Operations, Strategy, Information Technology*. Fifth Edition. McGraw Hill. New York.

Fosam, E.B., Grimsley, M.F.J., and Wisher, S.J. (1998). Exploring models for employee satisfaction; with particular reference to a police force. *Total Quality Management*, Vol. 9, No. 2 and 3, pp. 235-47.

Hackman, J.R. and Oldham, G.R. (1980). *Work Redesign*, Addison-Wesley, Reading, MA.

Hennig T. T. (2004). Customer orientation of service employees: Its impact on customer satisfaction, commitment and retention. *International Journal of Service Industry Management*, Vol. 15, No. 5, pp. 460-478.

Heskett, J.L, Sasser Jr, W.E. and Schlesinger, L.A. (1997). *The service profit chain: How Leading Companies Link Profit and Growth to Loyalty, Satisfaction and Value*, free press, New York, NY.

http://www.marketresearchworld.net/index.php?option=com_content&task=view&id=1326&Itemid=77Are   Your Employees Ambassadors or Saboteurs? Harris Interactive Unveils Employee Ambassadorship Research Solution: Links Employee Commitment to Customer Loyalty

Jawahar, I. M. (2006) Correlates of satisfaction with performance appraisal feedback. *Journal of Labor research*. Fairfax: Spring, Vol 27, Iss 2, p. 213.

Kelley, S.W. (1992). Developing customer orientation among service employees. *Journal of Academy of Marketing Science*, Vol. 20, No. 1. Pp. 27-36.

Lawler, E. E III, S.A. Mohrman and G.E. Ledford, Jr. (1995). *Involvement and Total Quality Management*. San Francisco, Jossey-Bass.

Lawler, E.E III, S.A. Mohrman and G.E. Ledford, Jr. (1992). *Employee involvement and total quality management: Practices and results in Fortune 1000 companies*. San Francisco: Jossey-bass publishers.

Locke, E.E. (1976). *The nature and causes of job satisfaction*. in Dunnette, M.D (Ed), Handbook of Industrial and Organizational Psychology, Rand McNally, Chicago, IL, pp. 1297-349

Loveman, G.W. (1998). Employee satisfaction, customer loyalty, and financial performance. *Journal of Service Research*, Vol. 1, No. 1, pp. 18-31.

Schneider, B, White, S.S. and Paul, M.C. (1998). Linking service climate and customer perceptions of service quality; test of a causal model. *Journal of Applied Psychology*, Vol. 83, No. 2, pp. 150-63.

Schneider, B. (1994). HRM: A service perspective: Towards a customer focused HRM. *International Journal of Service industry Management*, Vol. 5, No. 1, pp. 64-76.

Sturgeon, J. (2006). *Springing for Training. Government Executive.* Washington. Vol. 38, Iss. 12, p. 20.

Tarasco J. A. & Damato N. A. (2006). Build a better career path. *Journal of Accountancy*, New York. Vol. 201, Issue 5, p. 37.

Table 1. Employee satisfaction variables

Variables	Disagree strongly	Disagree somewhat	Neutral	Agree Somewhat	Agree Strongly
Corporate communications		13.3%	19.6%	**54.4%**	**12.7%**
Employee Trust company		10.8%	15.8%	**57.0%**	**16.5%**
Communication between dept		3.2%	13.3%	**53.2%**	**30.4%**
Established Career Path		5.1%	15.2%	**57.0%**	**22.8%**
Opportunities to Learn & Grow		3.2%	15.2%	**50.0%**	**31.6%**
Performance Appraisal reflect Performance		8.2%	29.75	**49.4%**	**12.7%**
Performance Appraisal is Fair	0.6%	8.9%	28.5%	**46.8%**	**15.2%**
Authority to make decisions	0.6%	7.6%	12.0%	**58.2%**	**21.5%**
Contribute to Company Mission			12.0%	**58.9%**	**29.1%**
Materials & Equipment to do job well		7.0%	10.1%	**60.1%**	**22.8%**
Good Work results in more money		7.0%	17.7%	**50.0%**	**25.3%**
Good Work results in Promotion		13.3%	35.4%	**37.3%**	**13.9%**
Employee valued at company	0.6%	6.3%	22.2%	**51.9%**	**19.0%**
Recognition for good job	0.6%	6.3%	17.7%	**55.7%**	**19.6%**
Salary equals the responsibilities		9.5%	22.8%	**49.4%**	**18.4%**
Feel part of a team working toward a shared goal		6.3%	13.3%	**60.1%**	**20.3%**
Politics at company kept to minimum	**4.4%**	**27.8%**	**29.7%**	29.7%	8.2%

Feel committed to work toward a shared goal	0.6%	10.1%	12.7%	**53.8%**	**22.8%**
My job is secure		4.4%	10.1%	**65.8%**	**19.6%**
Physical work conditions are good		7.0%	8.2%	**69.0%**	**15.8%**
Deadlines are realistic		10.8%	17.7%	**55.1%**	**16.5%**
Workload is reasonable	0.6%	8.2%	15.2%	**57.6%**	**18.4%**
Keep balance between work and personal	0.6%	5.7%	5.7%	**56.3%**	**31.0%**
Supervisor treats me fairly	0.6%	1.9%	11.4%	**62.0%**	**24.1%**
Supervisor treats me with respect	0.6%	0.6%	11.4%	**65.2%**	**22.2%**
Supervisor handles work related issues satisfactorily		10.1%	15.2%	**54.4%**	**20.3%**
Supervisor asks for my input	1.9%	7.6%	15.8%	**54.4%**	**20.3%**
Supervisor is an effective manager	3.2%	6.3%	17.1%	**50.6%**	**22.8%**
Company provide as much initial training as needed		5.1%	24.1%	**48.1%**	**22.8%**
Company provides as much ongoing training as needed	0.6%	11.4%	27.8%	**39.9%**	**20.3%**
Received the training needed to do my job	0.6%	8.2%	20.3%	**48.1%**	**22.8%**
Training helps to improve my work performance		6.3%	18.4%	**55.7%**	**19.6%**
Satisfied with comp' benefit package		2.5%	14.6%	**69.0%**	**13.9%**
Satisfied with amount of vacation	1.3%	1.9%	15.2%	**68.4%**	**13.3%**
Satisfied with sick leave policy		0.6%	10.1%	**77.2%**	**12.0%**
Satisfied with amount of health care paid for	0.6%	4.4%	8.2%	**74.1%**	**12.7%**
Satisfied with dental benefits	7.6%	13.9%	22.2%	**44.9%**	**11.4%**

Table 2. Percentage of employee satisfaction items in the questionnaire

Items in the Questionnaire	Percentage of Employee Satisfaction
I'm satisfied with the sick leave policy	89.2%
I feel I am contributing to the company's mission	88%
My supervisor treats me with respect	87.4%
I can keep a reasonable balance between work and personal life	87.3%
I'm satisfied with the amount of health care paid for	86.8%
My supervisor treats me fairly	86.1%
My job is secure	85.4%
My physical working conditions are good	84.8%
There is adequate communication between departments	83.6%
I have enough materials & equipment I need to do my job well	82.9%
Overall, I am satisfied with the company' benefit package	82.9%
I am satisfied with the amount of vacation I received for my benefit package	81.7%
I have the opportunities to learn & grow	81.6%
I feel part of a team working towards a shared goal	80.4%
I have a clearly established career path at this company	79.8%
I am given enough authority to make decisions I need to make	79.7%
I feel committed to work towards a shared goal	76.6%
My workload is reasonable	76%
If I do good work, I can count on making more money	75.3%
This company gives enough recognition for work that's is well done	75.3%
The training helps me to improve my work performance	75.3%
My supervisor handles work related issues satisfactorily	74.7%
My supervisor asks for my input to help make decisions	74.7%
I feel I can trust what company tells me	73.5%
My supervisor is an effective manager	73.4%
Deadlines at this company are realistic	71.6%
I feel I am valued at this company	70.9%
I received the training I need to do my job	70.9%
The company provided as much initial training as I needed	70.9%
My salary is fair for my responsibilities	67.8%
Corporate communications are frequent enough	67.1%
My last performance appraisal accurately reflect my performance	62.1%
The performance appraisal system is fair	62%
I am satisfied with the dental benefits	56.3%
If I do good work, I can count on being promoted	51.2%
"Politics" at this company are kept to a minimum	37.9%

Table 3. Recognition and rewards (satisfaction) that led to employee loyalty

Correlations

		M_LOYAL	M_RR
M_LOYAL	Pearson Correlation	1	.235**
	Sig. (2-tailed)	.	.003
	N	158	158
M_RR	Pearson Correlation	.235**	1
	Sig. (2-tailed)	.003	.
	N	158	158

**.· Correlation is significant at the 0.01 level (2-tailed).

Table 4. Teamwork and cooperation (satisfaction) that leads to employee loyalty

Correlations

		M_LOYAL	M_TC
M_LOYAL	Pearson Correlation	1	.298**
	Sig. (2-tailed)	.	.000
	N	158	158
M_TC	Pearson Correlation	.298**	1
	Sig. (2-tailed)	.000	.
	N	158	158

**.· Correlation is significant at the 0.01 level (2-tailed).

Table 5. Working conditions (satisfaction) that led to employee loyalty

Correlations

		M_LOYAL	M_WC
M_LOYAL	Pearson Correlation	1	.328**
	Sig. (2-tailed)	.	.000
	N	158	158
M_WC	Pearson Correlation	.328**	1
	Sig. (2-tailed)	.000	.
	N	158	158

**.· Correlation is significant at the 0.01 level (2-tailed).

Table 6. Relationship with supervisor (satisfaction) that led to employee loyalty

Correlations

		M_LOYAL	M_SUPER
M_LOYAL	Pearson Correlation	1	.263**
	Sig. (2-tailed)	.	.001
	N	158	158
M_SUPER	Pearson Correlation	.263**	1
	Sig. (2-tailed)	.001	.
	N	158	158

**.· Correlation is significant at the 0.01 level (2-tailed).

Chinese Listed Companies Preference to Equity Fund:

Non-Systematic Factors

Hao Zeng (Corresponding author)

School of Management, South-Central University for Nationalities

Wuhan 430074, China

E-mail: zenghao1011@163.com

Junxia Xu

Auditing Department, Wuhan Tongji Hospital

Wuhan 430030, China

Abstract

This article concentrates on the listed companies' financing activities in China, analyses the reasons that why the listed companies prefer to equity fund from the aspect of non-systematic factors by using western financing theories, such as financing cost, types and qualities of the enterprises' assets, profitability, industry factors, shareholding structure factors, level of financial management and society culture, and concludes that the preference to equity fund is a reasonable choice to the listed companies according to Chinese financing environment. At last, there are some concise suggestions be given to rectify the companies' preference to equity fund.

Keywords: Equity fund, Non-systematic factors, Financial cost

1. Introduction

The listed companies in China prefer to equity fund, According to the statistic data showed in <China Securities Journal>, the amount of the listed companies finance in capital market account to 95.87 billions in 1997, among which equity fund take the proportion of 72.5%, and the proportion is 72.6% in 1998 and 72.3% in 1999, on the other hand, the proportion of debt fund to total fund is respective 17.8%, 24.9% and 25.1% in those three years. The proportion of equity fund to total fund is lower in the developed capital market than that in China. Take US for example, when American enterprises need to fund in the capital market, they prefer to debt fund than equity fund. The statistic data shows that, from 1970 to 1985, the American enterprises' debt fund financed occupied the 91.7% proportion of outside financing, more than equity fund. Yan Dawu etc. found that, approximately 3/4 of the listed companies preferred to equity fund in China. Many researchers agree upon that the listed companies' outside financing following this order: first one is equity fund, second one is convertible bond, third one is short-term liabilities, last one is long-term liabilities.

Many researchers usually analyze our national listed companies' preference to equity fund with the systematic factors arising in the reform of our national economy. They thought that it just because of those systematic facts that made the listed companies' financial activities betray to western classical financing theory. For example, the "picking order" theory claims that when enterprise need fund, they should turn to inside fund (depreciation and retained earnings) first, and then debt fund, and the last choice is equity fund. In this article, the author thinks that it is because of the specific financial environment that activates the enterprises' such preference, and try to interpret the reasons of that preference to equity fund by combination of non-systematic factors and western financial theories.

2. Financingl cost of the listed company and preference to equity fund

According to western financing theories, capital cost of equity fund is more than capital cost of debt fund, thus the enterprise should choose debt fund first, then is the turn to equity fund when it fund outside. We should understand that this conception of "capital cost" is taken into account by investors, it is somewhat opportunity cost of the investors, can also be called expected returns. It contains of risk-free rate of returns and risk rate of returns arising from the investors' risk investment. It is different with financing cost in essence. Financing cost is the cost arising from enterprises' financing activities and using fund, we can call it fund cost. If capital market is efficient, capital cost should equal to

International Journal of Business and Management

fund cost, that is to say, what investors gain in capital market should equal to what fund raisers pay, or the transfer of fund is inevitable. But in an inefficient capital market, the price of stock will be different from its value because of investors' action of speculation; they only chase capital gain and don't want to hold the stocks in a long time and receive dividends. Thus the listed companies can gain fund with its fund cost being lower than capital cost.

But in our national capital market, capital cost of equity fund is very low; it is because of the following factors: first, the high P/E Ratio (Price Earning Ratio) of new issued shares. According to calculation, average P/E Ratio of Chinese listed companies' shares is between 30 and 40, it also is maintained at 20 although drops somewhat recently. But the normal P/E Ratio should be under 20 according to experience. We can observe the P/E was only 13.2 from 1874 to 1988 in US, and only 10 in Hong Kong. High P/E Ratio means high share issue price, then the capital cost of equity fund drops even given the same level of dividend. Second, low dividend policy in the listed companies, capital cost of equity fund decided by dividend pay-out ratio and price of per share. In China, many listed companies pay little or even no dividends to their shareholders. According to statistic data, there were 488 listed companies paid no dividend to their shareholders in 1998, 58.44 percents of all listed companies, there were 590, 59.83 percents in 1999, even 2000 in which China Securities Regulatory Commission issue new files to rule dividend policy of companies, there were only 699 companies which pay dividends, 18.47 percents more than that in 1999, but dividend payout ratio deduce 22%. Thus capital cost of equity is very low. Third, there is no rigidity on equity fund, if the listed companies choose equity fund, they can use the fund forever and has no obligation to return this fund. Most of listed companies is controlled by Government in China, taking financing risk into account, the major stockholders prefers to equity fund. The management also prefer equity fund because its lower fund cost and needn't to be paid off, then their position will be more stable than financing in equity fund.

We can conclude from the above analysis that cost of equity fund is lower than cost of debt fund in Chinese listed companies and the listed companies prefer to such low-cost fund.

3. Types and qualities of assets in listed companies and preference to equity fund

Static Trade-off Theory tells us, the value of enterprise with financial leverage is decided by the value of self-owned capital; value arising from tax benefit, cost of financial embarrassment and agency cost. Cost of financial embarrassment and agency cost are negative correlative to the types and qualities of companies' assets, if the enterprise has more intangible assets, more assets with lower quality, it will has lower liquidity and its assets have lower mortgage value. When this kind of enterprise faces to great financial risk, it will have no way to solve its questions by selling its assets. Furthermore, because care for the ability of turning into cash of the mortgage assets, the creditors will high the level of rate and lay additional items in financial contract to rule the debtor's action, all of those will enhance the agency cost and deduce the companies' value. Qualcomm is supplier of wireless data and communication service in America, it is the inventor and user of CDMA, it also occupies the technology of HDR. The market value of its share is 1120 billions dollars at the end of March, 2000, but the quantities of long-term liabilities is zero. Why? Some reasons may be that there are some competitors in the market who own analogous technologies and the management of Qualcomm Company takes conservative attitude in financing activities. But the most important factor may be Qualcomm Company's owning a mass of intangible assets which will have lower convertibility and the company's value will decline when it has no enough money to pay for its debt.

Many listed companies in China is transformed from the national enterprises. In the transformation, these listed companies take over the high-quality assets of the national enterprises, but with the development of economy, some projects can not coincide with the market demand and the values of relative assets decline. On the other hand, there are many intangible assets in new high-tech companies. State-owned companies and high-tech companies are the most parts of the capital market. We can conclude that the qualities of listed companies' assets are very low. This point is supported by the index of P/B (Price-to-Book value) which is usually thought as one of the most important indexes which can weigh the qualities of the listed companies' assets. According to statistic data coming from Shenzhen Securities Information Company, by the end of November 14, 2003, there were 412 companies whose P/B is less than 2, take the 30% proportions of total listed companies which issue A-share in China, among them, there were 150 companies whose P/B is less than 1.53, and weighted average P/B of the stock market is 2.42. Lower qualities of assets means more cost may be brought out from debt fund and lower total value of the listed companies. Thus the listed companies prefer to equity fund when need outside financial support in China.

4. Profitability and preference to equity fund

Financial Leverage Theory tells us that a small change in company's profit may make great change in company's EPS (Earnings per share). Just like leverage, we can get an amplified action by use of it. Debt fund can supply us with this leverage, by use of debt fund, these companies which have high level of profitability will get higher level of EPS because debt fund produces more profit for shareholders than interest shareholder shall pay. On the contrary, these companies which have low level of profitability will get lower level of EPS by use of debt fund because debt fund can not produce enough profit for shareholder to fulfill the demand of paying off the interests.

Edison International Company has steady amount of customers and many intangible assets, these supply it with high level of profitability and ability to gain debt fund, its debt account to 67.2% proportions of its total assets in 1999.

Listed companies in developed countries or regions always have high level of profitability. Take US for example, there are many listed companies which have excellent performance in American capital market when do business, such as J.P Morgan, its EPS is $11.16 per share in 1999. Besides it, GM, GE, Coca Cola, IBM, Intel, Microsoft, Dell etc. all always are profitable. In Hong Kong, most of those companies whose stock included in Hang Seng Index have the level of EPS more than 1 HKD, many are more than 2 HKD. Such as Cheung Kong (Holdings) Limited, its EPS is 7.66 HKD. But listed companies do not have such excellent performance in profitability in China inland. Their profitability is common low. Take the performance of 2000 for example, the weighted average EPS of total listed companies is only 0.20 Yuan per share, and the weighted average P/B is 2.65 Yuan per share, 8.55 percents of these listed companies have negative profit. With low or no profit, the benefit can be gained from debt fund is very little; the listed companies can even suffer from the financial distress caused by debt fund. So with the consideration of shareholders' interest, the listed companies prefer to equity fund when need outside financial support in China.

5. Industry factors and preference to equity fund

China's industrial organization is during the course of intense changes, that is to say profit margin increase according to the scales of enterprises. Looked from the financing perspective, large enterprises have more convenient financing conditions and occupy financing advantages in the fierce competitive environment. These competitive advantages may include having more funds for research and development, market development for large enterprises. In this sense, the interaction of industrial organization and financing structures affect the choice of financing plan. In the competitive sectors, such as household electrical appliance industries, on the one hand, as competition intensifies, profit margins drop more and more low, and lower than the rate of debt fund, if using debt fund, it is probable to make the enterprise drop into financial difficulties, and income became instable, when facing to risk such as insufficient demand, change of consumer preferences, competition with similar products and technology risks brought by rapid product upgrading. On the other hand, the entry of multinational companies makes technological progress accelerate. The enterprises which want to remain competitive, need to increase investment in research and development, but Chinese Enterprises' investment in research and development are seriously inadequate. Therefore enterprises need to continue to invest and develop new products, upgrade products and manufacturing processes, increase manufacturing efficiency to reduce costs, gain more market share, and R&D investment is in large quantities, the risk is great. In such a competitive environment, enterprises in these sectors in order to avoid falling into financial difficulties will inevitably reduce the amount of debt financing.

In an industry with intense competition and frequent price war, the current capital structure of enterprise will have an impact on the follow-up product market competition. High financial leverage has negative impact significantly on the financial ability to bear the investment capacity of enterprises and follow-up price war, making the company suffer disadvantages of operating strategy. Enterprises only with high operating efficiency can't be ensured to survive. These enterprises with high operational efficiency and adequate financial resources, that is, enterprises with low financial leverage, will have long-term survival. The current selection of equity financing help enterprises maintain the ability to re-investment when profitability and cash flow decline, go further, if competitors choose equity financing, enterprises choose debt financing may incited competitors to launch a price war to force enterprises to withdraw from the market.

But in monopoly industries, such as utilities, there is no product research and development, upgrading and marketing issues, the risk of revenue came mainly from insufficient demand, rather than competition. Product or service prices are relatively stable, with higher margins and stability, debt financing generally will not lead to financial difficulties. Therefore, these industries can use debt fund to support the development of enterprises.

To sum up, in different industrial structure and with different financial leverage, the differences of financing of listed companies is very significant. Sector is an important factor to determine the structure of corporate finance, industry factors or characteristics of industry factors can be a very good explanation of some Chinese listed companies' equity financing preferences actions.

6. Shareholding structure factors and preference to equity fund

Listed companies not only face to external financing environmental impacts, but also the structure of the companies shares. Shareholding structure of Chinese listed companies shows characteristics as followed: I. Ownership structure is fairly complex. In addition to the public shares, there are shares held with inland fund and foreign stocks, state-owned shares, legal person shares, and internal employee shares, transferred allotted shares, A shares, B shares, H shares And N shares, and other distinction. From 1995 to 2003, Chinese companies' outstanding shares of the total equity share almost have no change, even declined slightly. II. There are different prices, dividends, and rights of shares issued by same enterprise. III. The over-concentration of shares.

We use the quantity of shares of the three major shareholders who top the list of shareholders of the listed companies to

measure the concentration of stock. We study the concentration of stock of these companies which issue new share publicly in the years from 1995 to 2003 and focus on the situation of Chinese listed companies over the same period. The results showed that: from 1995 to 2003, the company-Which once transferred or allotted shares-whose top three shareholders' shareholding ratio are generally higher than the average level of all the listed companies, and most of these company's top three shareholders holding 40 percent or higher percent of companies' shares. In some years, the maximum number even is more than 90 percent, indicating that the company with the implementation of transferred and allotted shares have relatively high concentration rate of shares and major shareholders have absolute control over it. In short, transferring allotting shares and the issuance of additional shares have a certain relevance to the company's concentration of ownership structure, the company's financing policy is largely controlled by the major shareholders.

Chinese listed companies' special shareholding structure effects its financing action. Because stockholders of the state-owned shares, legal person shares, social and outstanding shares, foreign share have a different objective function, their modes of financing preferences vary, and their preference affect the financing structure of listed companies. Controlling shareholders which hold state-owned shares account for the status of enterprises and carry out financing decisions in accordance with its own objective function. When the objective function conflict with the other shareholders benefit, they often damage the interests of other shareholders by use of the status of controlling. As the first major shareholders of the companies, government has multiple objectives, not always market-oriented, it prefers to use safe fund such as equity fund to maintain the value of state-owned assets, thus resulting in listed company's preference to equity financing. Debt financing bring business with greater pressure to pay off the par value and interests. Therefore, the state-owned company showing a more offensive attitude to debt fund, again because of Chinese state-controlled listed companies have the absolute status in all listed companies, listed companies' preference to equity fund is a reasonable phenomenon.

7. Level of financial management skill, society culture and preference to equity fund

Low level of financial management skill of listed companies is one of the most important reasons why they prefer to equity fund. Because of special development course, financial management is not paid enough attention and its level is very slow. Many enterprises have not enough retained earnings to support following investments and have to turn to outside financial support. Moreover, many financial managers of listed companies concentrate on reflection and control of enterprises' economic activities and finance fund to fulfill the enterprises' need of money, thus it is unavoidable that in many listed companies there are no efficient financial management and no rational choice of suitable financing methods or financing instruments.

On the other hand, there is such an idea in Chinese traditional culture that is called "Golden Means". According to this idea, the enterprise should not have much debt fund, because less debt fund means more stable financial position. It is a conservative thought, but people used to take it for granted who live in Chinese traditional culture. Thus many managers take conservative actions in their financial policies and prefer to equity fund which doesn't need to be paid for. Shown as Lu Zhengfei's research data, listed companies prefer to short-term liabilities than long-term liabilities in China.

8. Conclusion

There are many systematic reasons to interpret why Chinese listed companies prefer to equity fund, but it is not correct to ignore non-systematic factors which influence the listed companies' action potentially. In above analysis, we discuss financial cost, types and qualities of assets, profitability, industry factors, shareholding structure, level of financial management and society culture, all of those are non-systematic factors which lead to listed companies' preference to equity fund. We shall recognize that it is not a reasonable phenomenon. Listed companies will lose much investment chance if they depend mostly on equity fund because there are many strict terms and rules. Moreover listed companies' such irrational preference will make the use of economy resource inefficiently because these profitable listed companies may finance fund more than they need.

To rectify this irrational preference to equity fund, we shall build up a perfect capital market, in which all participators are rational and they should pay reasonable corresponding cost for each financial instrument they choose. Moreover the managers in listed companies shall improve their financial skills and make use of modern western financial theories in financial decisions. At last, we should rectify the shareholding structure of state-owned listed companies, and make those companies more profitable.

References

Barton et al. (2004). Investor Protection under Unregulated Financial Reporting. *Journal of Accounting and Economics*.

Jensen M C, & W H Meckling. (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics*.

Johnson et al. (2000). Corporate Governance in the Asian Financial Crisis. *Journal of Financial Economics*.

La Porta et al. (1998). Law and Finance. *Journal of Political Economy*.

La Porta et al. (2000). Investor Protection and Corporate Governance. *Journal of Financial Economics*.

Leuzet al. (2003). Investor Protection and Earnings Management: An International Comparison. *Journal of Financial Economics*.

Lu, Zhengfei, & Gao, Qiang. (2003). Research on Chinese Listed Companies' Financial Action-Bases on questionnaire. *Accounting Research*, (10) (In Chinese).

Modigliani F, & M H Miller. (1958). Corporate Income Taxes and the Cost of Capital: a Correction. *American Economic Review*.

Myers & Majluf. (1984). Corporate Finance and Investment Decisions When Firms Have Information that Investors do not Have. *Journal of Financial Economics*.

Myers, Stewart C. (1984). The Capital Structure Puzzle. *Journal of Finance*.

Myers, S. C. (2003). *Financing of Corporations*. Handbook of the Economics of Finance: Corporate Finance.

Shleifer & Vishny. (1994). Large Shareholders and Corporate Control. *The Journal of Political Economy*, 461-488.

Song, Lin. (2003). Analysis of Capital Cost and Financial Cost and Its Influence on Listed Companies' Preference to Equity Fund. *Finance*, (3) (In Chinese)

Stephen. A. Ross, Randolph. W. Westerfield, & Teffrey. F. Jaffe. (2003). *Corporate Finance*. Beijing: China Machine Press.

Sukuk (Islamic Bond): A Crucial Financial Instrument

for Securitisation of Debt for the Debt-holders

in Shari'ah-compliant Capital Market

Mohd Nasir bin Mohd Yatim

Department of Finance and Economic, College of Business and Accounting, Universiti Tenaga Nasional

Muadzam Shah, Pahang, Malaysia

E-mail: nasir@uniten.edu.my

Abstract

This applied study is aimed at guiding practitioners and offering an insight to academicians, investors and interested parties in understanding the manner in which an Islamic bond be created. As such, all terms in respect of shari'ah-compliant were thoroughly observed and analysed in the stages of creation of such sukuk. As such, documentations and transactions involve in the dealings of this instrument are thoroughly explored. The simple model of sukuk in this study contributed in term of an innovation that offer an insight to the practitioners, academicians, investors and the interested parties of this shari'ah-compliant capital market instrument to facilitate the process of securitisation for the debt holders.

Qualitative method of research and descriptive approach to research method are employed in this study as they are appropriate in looking into the research issue understudied. [Mohd Nasir bin Mohd Yatim, 2009] Capitalising on the explored and examined instrument shall then become the basis in innovating more sophisticated models by future research efforts for multiplicity of instruments to be made available in the shari'ah-compliant capital market.

Keywords: Sukuk, Shari'ah-compliant, Securitisation, Shahadah al-dayn and gharar

1. Introduction

The Accounting and Auditing Organisation for Islamic Financial Institution (AAOIFI) defines sukuk as certificates of equal value representing, after closing subscription, receipt of the value of the certificates and putting it to use as planned, common title to shares and rights in tangible assets, usufructs and services, or equity of a given project or equity of a special investment activity. In simple term sukuk is a right for both ownership and claim over the underlying asset or its usufruct substantiating the issuance of such sukuk. Sukuk has now becoming a preferred financing option for governments and corporate across the globe. This phenomenon led the international fraternity to jump on the Islamic finance bandwagon. [Anna Maria Samsudin, 2008]. Presently there is an ever growing global market for shari'ah-compliant bond term as sukuk. Basically, there are two types of sukuk, debt-based sukuk and equity-based sukuk. Both are created to facilitate financing for capital requirement of businesses and the governments. Subsequent to the issuance process, the sukuk shall then be readily securitised. Such duly created and issued certificate of debt could then be traded in the secondary market. This process is known as securitisation. This securitisation is facilitated by the shari'ah framework of shahadah al-dayn. Shahadah al-dayn simply refers to certificate of debt or sukuk issued evidencing the drawer's debt onto the drawee in a primary market. The criteria for issuance of sukuk includes firstly, there must not be any element of interest be it fixed or floating and secondly, its creation is based on an underlying permissible transaction whether a debt-based or an equity-based assets, utilising further shari'ah frameworks such as ijarah, bai' bithaman ajil, murabahah, musharakah mudharabah etceteras.

In conventional banking this tradable certificate or security is issued for a loan with interest to raise fund. In addition to this, annual coupon rate is introduced for the security; often serve as sweetener to the potential investors. The prime difference between sukuk and conventional bond is the absent of interest element and the existence of an underlying permissible transaction. There is no annual coupon rate attached to the sukuk and thus its characteristic is of zero coupon bonds. [Mohd Nasir bin Mohd Yatim and Amirul Hafiz bin Mohd Nasir, 2008]

2. Archival review

Sukuk is the form of certificate of debt which works under the shari'ah-compliant framework of shahadah al-dayn [Mohd Nasir bin Mohd Yatim, 2009]. It is just like an Islamic accepted bill (IAB), an al-dayn instrument created based on the framework of murabahah. Both sukuk and IAB are traded in the secondary market based on the principle of al-dayn or exchange of debt. Whilst, pricing of sukuk in its dealings in the secondary market is at a discount to the value payable by the issuer upon maturity. For instance, if a customer A owes RM100 million to Bank A, apart from the legal documents, an "I owe you" (IOU), a form of promissory note is created to evidence this debt. In this case, customer A draws the note onto Bank A. Bank A may then sell this debt to Bank B, Bank C or other interested institutions in the secondary market.

This study will address the issuance of sukuk to offer a guide for future innovation of more sophisticated instrument for shari'ah-compliant capital market. In order to achieve the objective of this study, we began with looking into the regulation particularly related to the restrictions in exchange of sukuk in a setting of shari'ah-compliant financial and capital markets. The exchange dealings of sukuk in a secondary capital market usually were restricted to corporations with established reputation such as a takaful institutions, statutory bodies, and approved pension funds and government-linked-companies. The rationale is simply for the assurance in the repayments of the indebted party of such sukuk.

In revisiting the basics, in its exchange dealings a sukuk does not involve with physical delivery and it shall be deposited with the authorised depository or principal dealer of the facility. At this juncture, the responsibilities of the issuance and paying agent (authorised depository) have to be explored in order to ensure the efficient and effective operation of this instrument in its trade dealings. Amongst others, the responsibilities of the issuing agent include ensuring the correct quantity of the executed notes and this can be controlled by way of numbering the issuance with serial number noting the maturity date and the issuing date. Further, the issuing agent has to ensure that all notes be duly executed by the authorised signatories of the issuer and the agent. Finally, the issuing agent shall within ten business days of the issue date or date of cancellation or destruction of the sukuk, communicates with the issuer by issuing a certificate confirming the number of sukuk issued, the face value, serial number, the date of issue and maturity date of such notes, and notification on the number of sukuk being cancelled and destroyed (if any) and their serial numbers.

This exploratory study is not complete without looking into the responsibilities of the paying agent. Amongst others, the paying agent has to maintain promissory notes register containing full and complete records of all issuance, redemptions and cancellations. The paying agent too, is to ensure the issuer is instructed within two business days of any maturity date, to place the redemption amount in a designated account at the latest before noon on the maturity date. Further, the paying agent is to pay the face value of the notes to the owners of the notes as appeared on the promissory notes register on the maturity date and shall cancel and return to the issuer all notes paid and redeemed within 30 days of the date of cancellation. In addition to those, the paying agent shall only allow replacing notes which are mutilated or destroyed upon receipt of the cost of replacement, evidence of destruction or mutilation and submission of safe custody receipt. Finally, the paying agent shall track out of pocket expenses (legal, cable and postages) incurred and bill it onto the issuer.

Another important aspect in guiding the innovation of sukuk is to identify the responsibilities of the authorised depository agent which include duty to keep track of the security cover which shall be 130% of the security amounts at all times and to ensure customer to respond within 7 days of notice for additional security. They also act as market maker for the notes by providing a two way quotation at all times on inquiry by the public and help the note holder to dispose his notes in the event he decide to sell. In addition to those, the depository agent shall make known the availability of notes to other potential investors and to ensure that the total number of note holders does not exceed a certain number at any one time and be restricted to the following entities namely, banks and corporations gazetted by the ministry of finance, insurance companies, statutory bodies and approved pension funds [Companies Act of Malaysia, 1965]

3. Methodology

In designing a sukuk, the task is not only scratching beneath the surface. It needs to explore the product and mechanism of its dealings to avoid marketing gimmicks alone. Therefore, it needs efforts in navigating uncharted waters to arrive at a solid instrument. This study emphasised on qualitative research method and descriptive research approach as both are appropriate to look into the research issues under-studied. In addition, analytical and comparative approaches to research are also employed where appropriate. Exploratory and observation by visit and re-visiting approaches were also carried out. Scrutiny on relevant documentation with reasonable broad and in-depth study of the subject matter has been carried out to ensure coverage on the locus and focus of the issue under-studied respectively. Thus these could justify the holistic nature of the issue being focussed and the scientific characteristic of this study. Interviews were also carried out aimed at validating on the technicalities and looking into the perspectives of various parties on the understudied issues including the operators, users, regulators and both external and internal auditors.

In this study, it was hypothesized that innovation of sukuk is probable in shari'ah-compliant capital market. Therefore, the justification on such assertion has to be explored in order to ensure its shari'ah compliant and trueness of the assertion. Archival study was intensively studied and interactive exploration with selected above discussed respondent on related activities were carried out. Relevant documentations were scrutinised in detail to justify the validity and reliability of the outcome of the model being innovated in this study. A shari'ah-compliant banking activities are commercial activities as reported in the New Strait Times on Thursday dated 14th April, 2009 and therefore relevant guidelines are necessary to facilitate the industry, otherwise it impacts on the consumer and the integrity of both the shari'ah-compliant financial and capital market.

4. Discussion on a simple model of sukuk

For the purpose of clarity this discussion on a simple model of sukuk be categorised into five steps which deal with assessment of the issuer, obtaining mandate of the potential issuer, outlines the principal terms and conditions of sukuk facility, finalising the material and legal aspects with execution of documentations and finally computation of face values of both primary and secondary sukuk and working on their issuance. The discussion on designing a model of sukuk issuance shall include the steps and procedures involve in the innovation. The first step that a bank should look into is of the reputation of the corporate customer which normally a listed corporation. Apart from this the principal business of the corporation is looked into including the currently on-going projects for the justification of the type and amount of funds required. Assuming (1st assumption) in this case a corporation requires RM30 million working capital funds to complete a project. Next, assuming (2nd assumption) also this customer is negotiating with one bank to save time and costs for the issuance of sukuk.

In the second step, the bank shall obtain a mandate from this customer to arrange for the facility. This mandate is usually in the form of a resolution of meeting of the board of management or board of directors of the corporation where appropriate. The implication of insisting this mandate on the part of the bank is that, should the facility be aborted, then the bank can seek a remedy to recover its expenses from the customer. In the next discussion, we identify the characteristics of sukuk, which can suit the capital requirement of this customer. The objective of liberalising the characteristics is none other than to provide convenience in attracting both the local and international investors in investing with the corporation issuing the sukuk. Efforts in liberalising the characteristics include issuance of sukuk in foreign currencies outside the issuer's country. This can be facilitated by making available the shari'ah and legal framework and conducive tax incentive

The third step, the bank shall then negotiate the principal terms and conditions of the facility with the customer. Such terms and conditions of the facility shall then be the characteristics of this facility which usually include the tenor of this facility, the collateral of facility, the yield of this facility, the mode and related subject matter of the permissible underlying transaction to accommodate the basis for the issuance of the sukuk. In furtherance of the process of issuance of sukuk, it is further assumed (3rd assumption) that this customer requires the financing facility for a tenor of five years. This customer is also offering its shares in a listed subsidiary as collateral and at the same time the subsidiary's assets are used to facilitate a trade transaction on the basis of al-bai' bithaman ajil (4th assumption).

In order to determine the acceptable yield, both the bank and the customer will take a view of what shall be the cost of financing or market rate that will prevail in the next five years from now. One must bear in mind that, the customer would not want a yield that would be too high, if market rate is going to drop over the next five years. On the other hand, the bank would not want a yield that would be too low, if market rate is going to rise over the next five years. As such, in determining what would be the anticipated market rate over the next five years requires some knowledge, skill, experience and element of intuition that could be offered by market analysts or specialise consultants or even the banker and the customer themselves. It might be after some negotiation, the bank and customer will agree to a determinable yield. Assuming in this case the agreed yield for this facility is 8.75% p.a. (5th assumption). This is actually what would be the internal rate of return (IRR) for the bank's investment.

In step four, the bank shall device the following final principal terms and conditions which may basically be exhibited as example for this case as depicted in Exhibit 1. The final step is the computation of face value of secondary notes. In this regard, all computations shall be finalised and all notes shall be issued within three months after the date of the share sale agreement. The date of notes issued shall be the date of the disbursement of the purchase price of the shares. The following computation is based on the above discussed assumptions. In concluding these discussions on the modelling of a simple sukuk, a summary in Exhibit 1 provides the information relating to the characteristics of the assumed sukuk. In exhibit 2, shows the computation of the total profit of the facility for the 5 years tenor.

5. Conclusion

The prerequisites in the success of an innovated instrument lie on having good financial infra-structure, full-range system and good regulatory system. [Kamal Bayramov, 2009] Thus a valid and reliable innovated product has to go through exploratory processes at its designing stage. Verification and testing activities were conducted to achieve the

aim of wide acceptance of this innovation. The duly discussed innovation is about a simple model of sukuk for both primary and secondary shari'ah-compliant capital market. Based on the above discussion relating to this innovation, the hypothesis, that innovation of sukuk is probable in shari'ah-compliant capital market is validated and therefore a reliable financial instrument for investors. The instrument is reliable for use by the investors in shari'ah-compliant capital market as there is no element of usury (riba) involve both at the stage of its issuance as well as in its trade dealings. The instrument is also created free from element of ambiguity (gharar) as all material facts are made clear in both its documentation as well as the instrument. Further, there is no element of gambling (maisir) in its trade dealings.

Since its permissibility is of probable in nature, therefore it is worthy to look at the advantages of issuance of sukuk so as to encourage more players both the issuer and the investors involve in it and thus benefiting the economic well being of the society (ummah). Such advantages include facilitating an alternative to conduct business financial affairs according to the dictates of Islam and hoping for the blessings in the form of al-falah and help in boosting the frontier of the Islamic capital market. In country such as Malaysia, there is incentive in the form of cost saving in term of stamp duties exemption on issuance of Islamic private debt securities including sukuk Sukuk is therefore a securitised facility and thus is more attractive in term of its marketability compared to a syndicated facility which is a non-securitised. The underlying transaction for the issuance of sukuk has the ceiling limit in term of its pricing. This will enable a customer to prepare budgets and projections with certain degree of certainty. It can be issued and floated internationally and thus enabling access to international Islamic funds. It can be issued in foreign currency too. Since sukuk is issued on a yield to maturity, therefore it is known to be issued on the basis of deep discount and thus giving full grace to the issuer. It can be listed on the stock exchange and this offers an opportunity for capital gains to interim investors which are suitable for the behavioural need of a capital market. It is a pre-requisite that a Sukuk to be made as a bank guaranteed facility, in order to ensure confidence on the instrument and to ensure wide acceptance of it. For this reason, big investors such as Employee Provident Fund and Government-Linked Companies (GLC) are readily available in accepting as the drawee party to the sukuk.

References

Anna Maria Samsudin. (2008). Sukuk strikes the right chord. Islamic finance Asia. Kuala Lumpur. Companies Acts of Malaysia, 1965.

Kamal Bayramov. (2009). Can equilibrium be reached?. Islamic Finance Asia. Feb/March. IFA Media Sdn. Bhd. Kuala Lumpur. Malaysia.

Mohd Nasir bin Mohd Yatim and Amirul Hafiz bin Mohd Nasir. (2008). *The principles and practices of Islamic banking and finance*. Pearson-Prentice Hall. Kuala Lumpur. Malaysia.

Mohd Nasir bin Mohd Yatim. (2000). *Non-interest unit trust funds. Journal of National Accountants*. Kuala Lumpur. Malaysia.

Mohd Nasir bin Mohd Yatim. (2001). Bai' bithaman ajil financing in financial system. *Journal of National Accountants*. Kuala Lumpur. Malaysia.

Mohd Nasir bin Mohd Yatim. (2001). Bai' istisna' financing in non-interest banking. *Journal of International Accountants*. Newcastle. UK.

Mohd Nasir bin Mohd Yatim. (2001). Murabahah sales. *Journal of National Accountants*. Kuala Lumpur. Malaysia.

Mohd Nasir bin Mohd Yatim. (2009). A review on conflicting issues in a deferred payment sale product of a shari'ah-compliant banking business. *International Journal of Economics and Finance*, Vol. 1. No.2. August. CCSE Toronto. Canada.

Mohd Nasir bin Mohd Yatim. (2009). Do the treasury activities function well in shari'ah compliant financial market? *International Business Research*, Vol. 2, No. 3. July. CCSE Toronto. Canada.

Noriza Mohd Saad, Melinda Mazlan, Nor Edi Azhar Mohamad and Dr. Mohd Nasir bin Mohd Yatim. (2008/2009). Performance of sukuk issuer in Malaysia. *The Journal of Muamalat and Islamic Finance research*. USIM Nilai. Malaysia. The Accounting and Auditing Organisation for Islamic Financial Institution (AAOIFI). Bahrain.

Exhibit 1

1	Customer/ Issuer	Corporate client
2	Nature and amount of facility	Syndicated al-bai' bithaman ajil with notes issuance facility of Currency:30 million (The facility)
		Under this facility, the financiers shall first purchase from corporate client's subsidiary's shares at agreed purchase price.
		These same shares shall then be sold to the corporate client at a selling price which shall be made up of the original purchase price and a profit margin to be imposed by the financiers.
		The corporate client is to settle the selling price by instalments.
3	Arranger / agent	The corporate client's named banker
4	Authorised depository	The corporate client's named banker
5	Financiers	Financial or other institution acceptable to the arranger and the issuer
6	Purpose	To refinance the shares belonging to corporate client and the proceeds to be utilised for its working capital requirements.
7	Purchase price	Currency30.0 million
8	Availability	The facility shall be made available in one trench in the following manner.

Trench	Amount/ Purchase price (Currency in million)	Tenor of notes (years)
1	30	5

9	Disbursement	Disbursement of the purchase price of the shares shall be against acceptable documentary evidence.
10	Selling price	Currency43.125 million
11	Instalment period	5 years
12	Payment of selling price/ Notes Issuance	The selling price shall be payable by 10 semi-annual instalments of Currency:1.3125 million per instalment for the first nine instalments.
		The last instalment shall be Currency: 31.3125 million. Thus, this facility is structured on a bullet basis with the cost portion payable in one lump sum at the end of the tenor.
		The profit margin added to the purchase price shall be Currency: 13.125 million representing a yield of 8.75% per annum.
		The selling price of the shares shall be satisfied by the notes issuance of shari'ah compliant based on the principle of al-bai' bithaman ajil. Those notes shall represent the issuer's unconditional obligation to settle the selling price of the shares in the following manner.

Primary notes

60 primary notes of Currency: 500,000 each, representing the cost portion of the selling price which will mature and be payable by the issuer at the end of the tenor of the facility.

Secondary notes

Each primary note shall be supported by 10 secondary notes of Currency: 21.875 each of six monthly maturities commencing six months from the released of purchase price. Those notes

		represent part of the profit portion of the selling price.
13	Issue of notes	The notes shall only be issued by the issuer upon; Firstly, satisfactory completion of all legal documents and compliance with all conditions precedent to the facility.
		Secondly, receipt of seven business days prior written notice to the agent.
14	Trading of notes	The primary notes together with the respective supporting secondary notes shall be tradable in the secondary market based on willing buyer-seller basis. However, in Malaysia, the trading is subject to the certain restrictions.
15	Security	The shares to be refinanced shall be pledged to the financier under a memorandum of deposit with readily executed blank transfer forms. The total market value of the shares pledged shall not be less than 130% of the total amount outstanding under the facility at all times.
16	Principal pre-disbursement and other conditions	According to the standard practices.
17	Approval and rating	The facility shall be subject to the approval of central bank and security commission and be rated by applicable rating agency.
18	Taxation	All payments under the facility shall be made free and clear of all present and future withholding and other taxes. In the event that any such taxes are in future imposed, the issuer shall make the necessary deduction for payment to the relevant authorities and shall furnish the holder with the relevant official receipt.
19	Documentation	The facility shall be evidenced by the following principal documents.
		i. Share purchase agreement
		ii. Share sale agreement
		iii. Islamic financing notes issuance agreement
		iv. Memorandum of deposit of shares
		v. Share certificates and readily executed blank transfer forms
		vi. Deed of covenant
		vii. Issuing and paying agency agreement
		viii. Depository letter of agreement
		ix. The primary and secondary notes and other appropriate documents which shall reflect the terms and conditions herein stated and other conditions, warranties, covenants, events of default etceteras currently adopted for facilities of this nature.
20	Other conditions	The facility shall be at all times be governed by rules and instructions whether persuasive or in operative in nature required or imposed on the financier, the manager and/ or agent by the central bank or other appropriate authority.
21	Arrangement fee	As agreed between the issuer and the arranger.
22	Agency fee and authorised depository fee	As agreed between the issuer and the agent/ authorised depository.
23	Legal fees, costs and other expenses	For the account of the issuer
24	Governing law	The country's applicable law.

Exhibit 2

Purchase price	Currency:30.0 million
Number of primary notes for Currency:500,000 each	$\dfrac{\text{Currency:30.0 million}}{\text{Currency:500,000}}$ = 60 pieces of primary notes
Tenor of facility	5 years
Maturity of secondary notes	Every six monthly basis
Number of secondary notes supporting each primary note for the tenor of five years	5 x 2 = 10
Total profit of facility for 5 years	Currency:30 million x 8.75% p.a. x 5 years =Currency:13.125 million
Portion of profit per primary note	$\dfrac{\text{Currency:13.125 million}}{60}$ =Currency:218,750
Portion of profit per secondary note	$\dfrac{\text{Currency:218,750}}{10}$ Currency:21,875

A Study on Financing Preference of

China Electric Power Industry

Xiaoyan Liu

School of Business Administration, North China Electric Power University

Beijing 110026, China

Tel: 86-10-8079-8426   E-mail: lliu716@sina.com

Tao Li

School of Business Administration, North China Electric Power University

Beijing 110026, China

Tel: 86-10-8079-8537   E-mail: litaol@263.net

Abstract

This paper is an analysis of the financing preference of China electric power industry through an empirical analysis method. Through a detailed study using the data of listed electric power companies from 2004-2006, which belongs to the security markets of Shanghai and Shenzhen, We grasp the fact that debt financing is the main method widely used in listed electric power companies, especially long-term debt financing method. This find is very useful for further research on financing effects of to electric power industry, as well as to investors and creditors of the listed electric power companies.

Keywords: Financing preference, Listed electric power company, Debt financing

1. Background of financing in electric power industry in China

As a basic component industry, electric power industry is playing a more and more important role in the whole economic in China, with a rapid growth. Due to the unique industry characteristics, the economies of scale in electric power industry work significantly. Especially nowadays, pushing forward of electricity reform provides China electric power industry unprecedented new opportunities of development. To some extent, the larger scale, the bigger profit. In order to increase the scale and company Competitiveness, expanding the scale of plant asset is the most effective way. And to expand the scale of plant assets, gathering funds through financing is necessary. Also, the industry advantages provides electric power industry stable and good profitability, thus good solvency. From the fact that the average return on assets of electric power industry is larger than the whole listed company, we can see good solvency is another factor contributing to financing of electric power industry.

The above two factors make up the background of financing of electric power industry in China. Therefore, it is important to research how to finance funds rationally. Most of the domestic current researches regard all listed companies as an overall sample, study of specific industry listed company's capital structure and financing is lacked. This article generalizes the financing preference of electric power industry, and adopts listed electric power companies as samples and analyzes their financing preference status, especially debt financing structure and types. According to capital structure theory, appropriate financing can effectively enhance the value of company

The sample data and industry classifications that we choose derive from the CCER database. After removing companies not suitable, 51 listed electricity power companies of Shenzhen security market and Shanghai market in 2006, belonging to power plate, are selected as research samples.

2. Analysis of financing methods

Financing methods of listed power companies mainly contain endogenous financing and exogenous financing. Endogenous financing refers to the company's own funds and funds that come from accumulation of the production and of operation process. Exogenous financing means the part of external funding sources, it relates two sections, that is, equity financing and debt financing. The equity is equity financing activities, such as IPO, lettings and additional, and the debt is debt financing activities that the funds derive from bank, and non-bank lending.

Table 1 reflects changes of endogenous financing and exogenous of power listed companies between 2004 and 2006. We find that the average of endogenous of power listed companies, in three years, is 17.71%, in other words, the exogenous reaches to 82.29%. Those enclose that most funds of electricity listed companies come from the external market, and accumulation of its own funds to meet the needs plays light effect.

Compared with the whole listed companies, the power listed companies is nearly the same with others, and is different in some extents; The same point is the dominant source of financing is exogenous—the average proportion of all listed companies exogenous financing reaches to 84%, which is lightly higher than the proportion of power listed companies, 83%. The difference is all listed companies prefer to equity financing, with the average percentage of all listed companies 44.09%, and the debt financing proportion 40.75%, opposite of electricity listed companies. **3. Analysis of debt financing structure**

In this part, we statistic and analyze the status quo of power listed companies' debt financing structure in China. In the analysis, source projects of debt funds follow debt categories of Balance Sheet in listed companies' annual report.

3.1 Analyzing Overall Debt Structure

Table 2 lists overall debt structures of power listed companies and the whole listed companies. As can be seen from the table, the power listed companies' Debt ratios gradually increase for three consecutive years and borrowing increases as well. At the end of 2006, Debt ratios ratio of electricity reached to 55.09%, which is equal to the average level of all listed companies.

Seeing horizontally, long-term liabilities in total of power listed companies are apparently higher than all the others. The table 2 below clearly reflects the situation, such describes that the power listed companies' debt financing has obviously industry characteristics, that is, prefers to long-term liabilities, which are long term and weak mobility.

3.2 Analyzing debt maturity structure

Viewing vertically, although the percentage of current liabilities to total liabilities declined between 2004 and 2006, the average level is still up to 71.35%. Additionally, proportion of current liabilities differs with long-term liabilities largely: the ratio of current is 1.5 more than the ratio of long-term. However, long-term liabilities and current liabilities are almost the same in power listed companies, long-term in total liabilities is 52.52%, higher than short-term, which is 47.48%.

Seeing horizontally, long-term liabilities in total of power listed companies are apparently higher than all the others. The chart below clearly reflects the situation, such describes that the power listed companies' debt financing has obviously industry characteristics, that is, prefers to long-term liabilities, which are long term and weak mobility. *3.3 Analyzing debt-types structure*

Usually, stakeholders that have creditor relationships with power listed companies mainly are banks, enterprises with business, workers and shareholders, etc. From the table 3, in short-term debt financing structure, short-term debt accounts for the biggest proportion, the average is 42.05%, adding long-term liabilities that due within one year, the proportion of bank credit is the average of 52.35%, following accounts payable notes payable and advance accounts; Those three indexes reflect occupation relationship among companies, occupying current liabilities at the average of 20.29%. As for debt from company employees and shareholders accounts little proportion of current liabilities, at the average of 0.83% and 0.84%, wages payable decreasing year by year and dividends payable increasing. This indirectly explains that companies make every effort to retain funds, in order to meet the financial needs of business development. The table 3 lists changes of power listed companies in the structure of long-term debt. In electricity listed companies, long-term borrowings dominate long-term debt, at the average of 90.15%, increasing gradually, followed by bonds payable, which reports listed companies issue bonds to raise long-term funding, at the average of 7.09%, the proportion decreasing when compared with long-term borrowings. As for long-term payables, it mainly mirrors that listed companies adopt compensation trade to introduce foreign equipment, lease charges payable of fixed assets, etc., occupying little, only 1.98%. Nevertheless, even though bank credit is the main source of debt capital of the power listed companies; long-term borrowing of some samples is zero. We also find that the number of companies that do not take advantage of the long-term borrowing is reducing. Under the sample distribution of bonds payable, the number of companies that issue bonds to raise funds is rare, and the number of sample, whose bonds payable is 0, is above 90%. Reasons are that China is strict to issuing bonds.

4. Summary

To sum up, the above statistical analysis of financing preference about China listed electric power companies tells us a financing preference of electric power companies completely different from the whole listed companies. After analyzing the financing methods and details of financing structures, we conclude that:

The preferable financing method of power listed companies is external financing. Furthermore, in external financing, the staple is debt financing, supplemented by equity. Such is the opposite of preference of Chinese listed companies as a

whole, preferring equity financing. And about details, the major external financing approach of the listed electric power companies is long-term liabilities, supported by current liabilities. Such opposes the situation of Chinese security market, the proportion of current liabilities over high.

References

Chen, Xiaoyue, & Li, Chen. (1995). An empirical study on the relationship between income and capital structure in Shanghai stock market. *Journal of Beijing University*, January, pp. 19-21.

Fisher, I. (1933). The Debt Deflation Theory of Great Depression. *Econometrica*, 1, pp. 217-223.

Hu, Yuancheng. (2002). An Empirical study on the relationship between business capital structure and effectiveness. *Management World*, October, pp. 146-152.

Richard Barker. (2004). Reporting Financial Performance. *Accounting Horizons*, 18 (2).

Ross, Stephen. (1997). The determinants of financial structure: The Incentive Signaling Approach. *Bell Journal of Economics*, August, pp. 46-62.

Wu, Xiaoqiu. (2003). *Chinese Listed Company: Capital Structure and Corporation Government*. Beijing: China Renmin University Press, 295-319.

Table 1. Internal and External Financing Structure of Listed Enterprises (%)

Year	Electric power Listed companies			Whole Listed Companies		
	Internal Financing	External Financing		Internal Financing	External Financing	
		Equity Financing	Debt Financing		Equity Financing	Debt Financing
2004	18.49	36.81	44.7	13.64	45.97	40.39
2005	17.17	32.75	50.08	15.4	43.36	41.24
2006	17.47	29.9	52.64	16.45	42.93	40.63
Average	17.71	33.15	49.14	15.16	44.09	40.75

a. "Internal Financing" refers to retained earnings; "Equity financing" is the total of capital stock and additional paid-in capital; "Debt financing" is calculated as the sum of "long-term liability", "short-term liability", "bonds payable" and "long-term accounts payable".

b. The percentages in the table are calculated from the data provided by the CCER database.

Table 2. Financing Structure of Listed Enterprises (%)

Year	Listed Electric Power Companies			Whole Listed Companies		
	Debt Ratio	Current Liability/ Total Liability	Long-term Liability/ Total Liability	Debt Ratio	Current Liability/ Total Liability	Long-term Liability/ Total Liability
2004	47.33	46.08	53.92	52.32	75.23	24.77
2005	52.68	46.94	53.06	54.39	75.71	24.29
2006	55.09	49.42	50.58	58.48	63.10	36.90
Average	51.70	47.48	52.52	55.06	71.35	28.66

a. All amounts in the table are calculated by the data from the CCER database.

b. All ratios in the table are consistent with the items in Balance Sheet in the year end.

Table 3. short-Term Financing Structure of Electric Power Listed Companies (%)

Year	Short-term loans	Long-term Liabilities due in 1 year	Accounts payable	Notes payable	Prepaid accounts	Salaries payable	Dividends payable	Others
2004	44.43	7.62	16.46	1.73	2.75	0.65	1.06	25.29
2005	36.11	15.01	13.00	3.50	2.73	0.87	1.04	27.73
2006	45.61	8.26	12.56	5.10	3.04	0.96	0.43	24.05
Average	42.05	10.30	14.01	3.44	2.84	0.83	0.84	25.69

a. "Others" is the sum of "other short-term debts", "taxes payable", and "other accounts payable".

b. All amounts in the table are calculated by the data from the CCER database.

Table 4. Long-Term Financing Structure of Electric Power Listed Companies (%)

Year	Long-term Liabilities	Bonds Payable	Long-term Accounts Payable	Others
2004	88.18	8.89	2.33	0.59
2005	90.38	6.96	1.91	0.75
2006	91.89	5.41	1.70	1.00
Average	90.15	7.09	1.98	0.78

a. "Others" is the sum of "other long-term debts", "special accounts payable" and "house funds".

b. All amounts in the table are calculated by the data from the CCER database

Unraveling the Relationship between Employees' Perception to Organization and Turnover Intentions: Exploring the Mediating Effects of Trust to Organization

Belal Al-Sakarnah

Assistant Professor, Department of Business Administration

Alisra private University, Amman, Jordan

E-mail: bilal_sakarneh@yahoo.com

Faleh Abdelgader Alhawary

Assistant Professor, Department of Business Administration

Applied Science private University, Amman, Jordan

E-mail: Alhawary2002@yahoo.com

Abstract

Staff turnover is a serious issue in the field of human resources management, Organizations of all kind must pay more attention to this phenomenon and must not be overlooked, so it is important to understand their needs and be able to satisfy it in order to reduce or may be strongly control the turnover. This study therefore was conducted to examine the main effects of employees' perceived organizational support and external prestige on their turnover intentions, with the mediating effects of their trust to organization. Questionnaire was designed and administered to collect data from sample of 402 employees of various levels selected from different insurance companies in Jordan. The study findings show that employees with higher level of perceived organizational support and perceived external prestige may have higher level of trust towards the management of their company, and hence, less likely to leave the firm. Therefore, the key to maintain a stable workforce is to make employees perceive the support from the company, and become proud of their company. The direct and indirect effects of these constructs on turnover intention are analyzed by structural equation modeling (SEM). The findings of this study will assist top management in business organizations to better deal with the phenomena of staff turnover, finally, the limitations of the study, directions for future research, and implications of the results are discussed.

Keywords: Perceived organizational support, Perceived external prestige, Trust to organization, Turnover intention

1. Introduction

Staff turnover is a serious issue in the field of human resources management. Turnover costs can be as much as six months to three years' pay and benefits depending on job types (Fitz-Enz, 1998). Many researchers try to understand the major determinants of turnover intention and develop some managerial implications to deal with the problem of high turnover rate (Tuzun, 2007).This paper is attempted to link perceived external prestige (PEP), perceived organizational support (POS), and turnover intention through the trust in organization.

For many years, social exchange theory is applied to investigate and explain a variety of organizationally desired work attitudes, and behavioral outcomes (Wayne, Shore & Liden, 1997).The employment relationship allows the employee to acquire for valuable resources, which include material goods such as pay and fringe benefits, and social goods such as approval, trust, and prestige. After receiving the benefits, the norm of reciprocity required employees to repay the party who provided them those benefits. For example, individual who are well treated are more likely to become effectively committed to the organization which display more organizational citizenship behaviors.

To operationalize the concepts of social exchange, Eisenberger, Huntington, Hutchison, & Sowa Eisenberger, Huntington, Hutchison, & Sowa (1986). Developed the perceived organizational support (POS) construct, which defined as employees' general perception as how an organization values their contributions and concerns their well-being (Eisenberger, Cummings, Armeli, & Lynch, 1997; Eisenberger, et al., 1986). POS affected employees'

behaviors in different aspects such as their innovativeness and sense of responsibility to their jobs (Eisenberger, et al., 1986).In addition, employees with high POS are more likely to demonstrate higher work performance, thus reducing the likelihood of absenteeism and the propensity to leave (Mathieu & Zajac, 1990; Meyer & Allen, 1997; Mowday, Porter, & Steers, 1982; Rhoades & Eisenberger, 2002).

Fuller, Hester, Barnett, Prey & Relyea (2006) extended the model of social exchange by examining the indirect, impersonal transaction between the employees and other parties related. They argued that the social exchange process involved two different processes: direct exchange with the organization (as in the case of POS), and indirect, impersonal transactions with outsiders. For example, the employees may satisfy with their esteem needs by both internal promotions within the organization and indirectly from the good reputation of their company held by outsiders. As a result, there is a need to incorporate relational variables such as Perceived External Prestige (PEP) into the social-exchange framework (Fuller, et al., 2006). Perceived external prestige also known as "construed external image", which refers to an employee's own beliefs about how other people outside the organization evaluate the status and prestige of the organization (Smidts, Pryun, & VanRiel, 2001).   Many research studies suggested that PEP is strongly related to employee's identification with his/her organization and hence, their behaviors (Fuller, Bamett, Hester, Relyea, 2003; Dukerich, Golden & Shortell, 2002; Dutton, Dukerich, & Harquail, 1994).

The Research objective of this study is therefore to develop a better conceptual model of the nature of social exchange by examining whether employees report trust to reciprocate their perceptions of support and prestige from the organization. It also adds to the body of research on turnover intention antecedents by investigating the mediating effects of trust on the relationships between perceived organizational support (POS), perceived external prestige (PEP), and Turnover Intention.

2. Theoretical Background of the Research Model

POS and PEP have been found to be related to various employee work outcomes such as affective organizational commitment, in-role performance, and organizational citizenship behaviors (Rhoades & Eisenberger, 2002). This study suggests a mediation model, in which the relationship between PEP & POS and turnover intention is mediated by the employee's trust in organization.

The Mediating effects of trust in organization

Different researchers define trust differently. In this paper, the definition of trust in organization, adapted from Tan & Tan (2000), is the 'global evaluation of an organization's trustworthiness as perceived by the employee.' POS, PEP and trust represent distinct but related constructs. Eisenberger et al. (1990) argued that POS "creates trust that the organization will fulfill its exchange obligation of noticing and rewarding employee efforts made on its behalf." Tan & Tan (2000) also showed that perceived organizational support is significantly related to trust in organization. When employees perceived that the organization values their contributions and concerns with their well-being, which creates a general trust feeling toward this organization. Perceived organizational support is also part of a reciprocal exchange agreement in the view of social exchange theory. The perceptions of good treatment by the organization create feelings of employee obligation to repay the organization through trust and commitment following from these findings; we argue that employee's perception of organizational support may increase their feelings of trust in organization. Thus, we put forward the following

3. Study Hypothesis

Thus, we hypothesized the following:

H1. POS is positively related to trust in organization.

The present study also investigates how organizational prestige plays a substantial role in binding these individuals to their employer, which is a relatively understudied area in the field of organizational studies. Perceived external prestige (PEP) is the employee's personal beliefs about what outsiders such as customers, competitors, and suppliers think about their organization represents or stands for (Dutton et al., 1994). Based on their set of evaluative criteria, employees make judgment or evaluation about their organizations status and prestige (Carmeli, 2005). PEP is a socio-emotional reward that employees gain indirectly from the organization. After the company creates favorable corporate reputation by its corporate communication programs, employees learn the outsiders' image of their organization through feedback and develop their perceptions of the organization's external prestige (Gotsi & Wilson, 2001). To the extent that PEP has satisfied an employee's need for self-esteem, he or she should develop an obligation to trust and repay the organization for this reward (Fuller, et al., 2006). We therefore, expect PEP to be related to trust in organization.

H2. PEP is positively related to trust in organization.

Turnover intention refers to "an individual own estimated probability that they are permanently leaving the organization at some point in the near future (Vandenberg & Nelson, 1999). Many studies found that high level of trust in organization could help to reduce employee turnover. With higher level of trust in management, employees are less

willful to leave the organization. High level of trust to organization may enhance their attachment to the organization and make them have little or no intention to leave.

H3. Trust in organization is negatively related to turnover intention.

H1-H3 can logically be combined to predict a mediating relationship (Baron & Kenny, 1986). Some researchers have suggested that POS, an organizational variable, is likely to serve as an antecedent to trust in organization, with trust then leading to individual-level outcomes. The norm of reciprocity also explains the influence of trust on employee's work outcomes (Dirks & Ferrin, 2002). Trust has been shown to be positively related to many work outcomes such as organizational commitment and OCB (Aryee, Budhwar, & Chen 2002; Whitener, 2001). As shown in Chen, et al. (2004), trust fully mediates the relationship between POS and the organizational commitment and in-role performance. I expect trust in organization would also mediate the relationship between POS, PEP, and the turnover intention of employees.

H4. The relationship between PEP & POS and turnover intention are mediated by trust in organization.

4. Methodology

4.1 Sample and Procedure

Data were collected through self-administered questionnaires in this study. Snowball sampling was used by given out the questionnaires to respondents in various firms and the fieldworkers collected the questionnaires back. Of the 500 questionnaires distributed, 436 were returned, yielding a response rate of 86.2%. 30 of them were incomplete and could not be used. The final response rate for usable questionnaires was 80.0%. The sample of employees was 47.1 percent male and 52.9 percent female. In this sample, 39 percent of the employees were aged of 18-24, 19 percent of 25-29, 26.3 per cent were 30-42, and 15.8 percent aged 43 or above. The average job tenure was 6.8 years.

4.2 Measures

For consistency, we administered all items using a 6-point Likert-type scale (1=strongly disagree, 6=strongly agree).We used seven items from the scale developed by Eisenberger, et al. (1986) to measure Perceived Organizational Support (POS), with Cronbach Alpha .93. we used the seven items with the highest factor loadings from the original 36-item scale, as this study began prior to the publication of the short form of the POS scale (Eisenberger, et al., 1997). Items included, for example, "My employer cares about my well-being" and "My employer values my contributions to its well being".

We measured perceived external prestige through Riordan, Gatewood, and Bill's (1997) five-item scale with Cronbach Alpha .81. Items included, for example, "Generally I think my organization has a good reputation in the community" and "Generally I think my organization has a good overall image".

We measured trust in organization using Wong, Ngo & Wong's (2002) eight item measure, which were originally adapted from Ashford, Lee, & Bobko. (1989) and Cook & Wall (1980). This scale measures employees' trusts to two referents: specific individuals and groups (e.g. their supervisors), and generalized representatives (e.g. the company).Items included, for example, "I trust this organization to look out for my best interests" and "I believe in the top management of this organization". In this sample, the alpha coefficient was .86.

We assessed turnover intentions using four-item scale measure from Farh, Tsui, Xin & Cheng (1998) with Cronbach's alpha 0.81. Items included, for example, "I often think of quitting my present job" and "I may leave this company and work for another company in the next year".

4.3 Data Analysis

H1 and H2 were tested by path coefficients between POS and trust in organization, and between PEP and trust in organization, respectively. H3 was tested by the path coefficient between trust in organization and turnover intention. To test the hypothesized mediating role of trust in organization, we assessed the four conditions for mediation: (a) the independent variable must be related to the mediator; (b) the independent variable must be related to the dependent variable; (c) the mediator must be related to the dependent variable; and (d) the independent variable must have no effect on the dependent variable when the mediator is held constant (full mediation) or should become significantly smaller (partial mediation) [34] .

To test the mediation model presented, a path analysis was performed using LISREL 8 (Joreskog & Sorbom, 1993). To avoid the bias of single indicator, this paper would rely on multiple goodness-of-fit indices to assess the fit of the model (Medsker et al., 1994). The indices relied upon here included the Chi-square divided by the degree of freedom ($\chi2/df$) (Kline, 1998), which recommended to be less than three. As pointed out by Joreskog & Sorbom (1993), it might not be realistic to assess the exact fit of model. As a result, we also include some less sensitive tests in our analysis, which include root mean squared error of approximation (RMSEA) (acceptable value below 0.08), relative fit index (RFI), the normed fit index (NFI), and the comparative fit index (CFI) (recommended to be >0.90 and close to a value of 1.00).

5. Results

As Table 1 shows, there is strong positive correlation between perceived organizational support and trust in organization (r = 0.72, p < .01), and perceived external prestige and trust in organization (r = 0.64, p < .01). Turnover intentions had a strong negative relationship with trust (r = -0.45, p < .01), pos (r = -0.33, p < .01), and pep (r = -.29, p < .01).

Figure 1 shows the path coefficients for the mediation model of from the LISREL analysis. First, the global fit indexs ((²/df = 2.33; GFI = .81, CFI = .98, NFI = .96, IFI = .98, and RMSEA = .058) were reached the acceptable levels. Second, the relationships between each construct were investigated. All of the relationships were significant. Three hypotheses were supported based on the parameter estimates and p-values for the hypothesized relationships. As Figure 1 indicates, perceived organizational support is positively related to trust in organization (β = .54, p < .01) and perceived external prestige is positively related to trust in organization (β = .39, p < .01). Thus, H1 and H2 are supported. H3 states that the employees' turnover intention will be negatively related to their levels of trust in organization. Figure 1 also shows that their turnover intention is negatively related to trust in organization (β = -.45, p < .01). Thus, H3 is also supported in this model.

To test the Hypothesis 4, we would evaluate the four conditions for mediation. First, correlation coefficients shows that POS and PEP were correlated with trust and both perceived organizational support and perceived external prestige are significantly accounted for the variance in trust in organization (R2 = .64, p < .01). Second, both perceived organizational support and perceived external prestige significantly predicted turnover intention (R2 = .13, p < .01). Third, the condition was also satisfied as the results showed that trust in organization significantly explained the variance of turnover intention (R2 = .20, p < .01).

To evaluate the fourth condition for mediation, we examine the direct effects, indirect effects, and total effects of POS, PEP on trust in organization and turnover intention. As shown in Table 2, the significant PEP total effects were completely indirect, which means that trust in organization fully mediates the relationship between PEP and turnover intention. In contrast, there is significant direct effect from POS to turnover intention, which supports the idea that trust in organization only partially, mediates the relationship between POS and turnover intention. As a result, the proposed mediation model is revised according to the partial mediation phenomenon, and its path coefficients are reported (Figure 2).

The revised model includes significant direct and indirect effects as shown in Figure 2. The path POS → TI has been added in the revised structural model. The global fit indexes (χ²/df = 2.33; GFI = .81, CFI = .98, NFI = .96, IFI = .98, and RMSEA = .058) of the revised model also reached the acceptable levels. All path coefficients in Figure 2 represent standardized estimates. The revised structural model suggests that trust in organization (TIO) fully mediates the relationship between perceived external prestige (PEP) and turnover intention (TI); and partially mediates the relationship between perceived organizational support (POS) and turnover intention (TI).

6. Discussion

The findings not only suggest that the perceptions on organizational support and external prestige are important to employees' perceptions of the quality of their exchange relationships with their organizations, but also suggest that these perceptions affect employees' work attitudes and behaviors indirectly, through the quality of exchange relationships with their organization. Trust in organization not only affected by the internal exchange but also by the indirect exchange of rewards that individuals receive outside the company.

The results provide support to different propositions within the literature. Consistent with Rhoades & Eisenberger (2002), this research examined how POS relate to the work outcomes. Employees reciprocate the organization's cares and recognitions by developing trust in organization and reduce their intention to leave the company. Dutton et al. (1994) suggested the declines in organizational performance might lower the PEP of employees, which would result in weakened their organizational identification and less organizational-supportive behaviors. The suggested research model provides support to this mechanism, which suggests that the decrease of PEP would weaken employees trust in organization and increase their intention to leave the company.

The findings of this study point to several implications for management practice. Most importantly, this study indicates the possibility that desirable organizational outcomes might be achieved by both strong corporate communication campaigns that promote its position in the society, and internal communication strategies enhance their feelings of support and cares. For example, employee recognition programs, training programs that incorporate information about the accomplishments of the organization and its employees, internal newsletters, company websites, and other ways to enhance the image of the company, are all effective in building up employees' trust in organization.

The findings also provide support to the view of incorporating corporate social responsibility programs in companies as these programs can have positive effects on employees' attitudes, and hence their behaviors. By fulfilling the expectations of society, corporations not only avoid the government's tighten up of regulatory actions, but also develop

trust of employees to the company. Thus, it is in the best interests of a company to operate above the moral minimum of the market.

7. Conclusion

To conclude, the present study provides an explanation for why PEP and POS has been shown to be related to trust in organization and turnover intentions. However, several major limitations concerning this study need to be acknowledged. First of all, to avoid common method bias, the importance of collecting data from multiple sources and by using a longitudinal design, instead of collecting data from a single questionnaire. As this study utilized a cross-sectional design, we cannot draw conclusions about the direction of causality. Longitudinal research is needed to firmly establish the direction of causality for the model presented here. Furthermore, according to Carmeli, et al. (2006), differential effects of PEP among different stakeholder groups were found with regard to employees' affective commitment to the company. Thus, the future studies should first identify those key and most influential stakeholders to explore whether there is a variation across organizations, industries and different levels of employees.

Finally, as advise caution with regard to generalizing the results of the study. The majority of the subjects were lower level workers, and most of these workers are worked in service companies. However, as discussed in Fuller et al. (2006), the importance of rewards that individuals receive through direct and indirect exchange may vary across different groups and classes of employees. Thus, more future studies need to be conducted in different industries and different classes of employees to see whether the findings can be generalized to other part of the company.

References

Aryee, S., Budhwar, P., & Chen, Z. X. (2002). Trust as a mediator of the relationship between organizational justice and work outcomes: Test of a social exchange model. *Journal of Organizational Behavior*, 23, 267-285.

Ashford, S., Lee, C. & Bobko, P. (1989). Content, causes, and consequences of job insecurity: a theory-based measure and substantive test. *Academy of Management Journal*, 32, 803-829.

Baron, R., & Kenny, D. (1986). The moderator–mediator variable distinction in social psychological research. *Journal of Personality and Social Psychology*, 51, 1173–1182.

Carmeli, A., Gilat, G., & Weisberg, J. (2006). Perceived external prestige, organizational identification and affective commitment: A stakeholder approach. *Corporate Reputation Review*, 9, 92-104.

Chen, Z. X., Aryee, S. & Lee, C. (2004). Test of a mediation model of perceived organizational support. *Journal of Vocational Behavior*, 66, 457-470.

Cook, J. & Wall, T. D. (1980). New work attitude measures of trust, organizational commitment and personal need non-fulfillment. *Journal of Occupational Psychology*, 53, 39-52.

Dirks, K. T., & Ferrin, D. L. (2002). Trust in leadership: Meta-analytic Wndings and implications for research and practice. *Journal of Applied Psychology*, 87, 611–628.

Dukerich, J. M., Golden, B., and Shortell, S.M. (2002). Beauty is in the eye of the beholder: The impact of organizational identification, identity, and image on physician cooperative behavior. *Administrative Service Quarterly*, 45:507-33.

Dutton, J. E., Dukerich, J. M. & Harquail, C. V. (1994). Organizational images and member identification. *Administrative Science Quarterly*, 39, 239-263.

Eisenberger, R., Cummings, J., Armeli, S., & Lynch, P. (1997). Perceived organizational support, directionary treatment and job satisfaction. *Journal of Applied Psychology*, 82, 812-820.

Eisenberger, R., Fasolo, P., & Davis –LaMastro, V. (1990). Perceived organizational support and employee diligence, commitment, and innovation. *Journal of Applied Psychology*, 75, 51–59.

Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology*, 71, 500-507.

Farh, J. L., Tsui, A. S., Xin, K. R. & Cheng, B. S. (1998). The influence of relational demography and guanxi: The Chinese case. *Organizational Science*, 9, 1-18.

Fitz-Enz, J. (1998). Top 10 calculations for your HRIS. *HR Focus*, 75, 3.

Fuller, J. B., Bamett, T., Hester, K., & Relyea, C. (2003). A social identity perspective on the relationship between perceived organizational commitment. *The Journal of Social Psychology*, 143, 789-791.

Fuller, J. B., Marler, L., Hester, K., Frey, L., & Relyea, C. (2006). Construed external image and organizational identification: a test of the moderating influence of need for self-esteem. *The Journal of Social Psychology*, 146, 701-717.

Gotsi , M., & Wilson, A. (2001). Corporate reputation management: Living the brand. *Management Decision*, 39, 99-105.

Joreskog, K. G., & Sorbom, D. (1993). *LISREL 8: Structural equation modeling with the SIMPLIS Command Language.* Chicago: Scientific Software International Inc.

Kline, R. B. (1998). *Principles and Practices of Structural Equation Modeling*. New York: The Guilford Press.

Mathieu, J. E. & Zajac, D. M. (1990). A review and meta-analysis of the antecedents, correlates, and consequences of organizational commitment. *Psychological Bulletin*, 108, 171-194.

Medsker, G. J., Williams, L. J., & Holohan, P. J. (1994). A review of current practice for evaluating causal models in organizational behavior and human resources management research. *Journal of Management*, 20, 439–464.

Mowday, R. T., Porter, L. W., & Steers, R. M. (1982). *Organizational linkages: The psychology of commitment, absenteeism, and turnover*. San Diego, CA: Academic Press.

Rhoades, L., & Eisenberger, R. (2002). Perceived organizational support: A review of the literature. *Journal of Applied Psychology*, 87, 698–714.

Riordan, C. M., Gatewood, R. D., & Bill, J. B. (1997). Corporate image: Employee reactions and implications for managing corporate social performance. *Journal of Business Ethics*, 16, 401-412.

Smidts, A., Pryun, A. & VanRiel, C. B. M. (2001). The impact of employee communication and perceived external prestige on organizational identification. *Academy of Management Journal*, 44, 1051-1062.

Tan, H. H., & Tan, C. S. (2000). Toward the differentiation of trust in supervisor and trust in organization. *Genetic, Social, and Psychology Monographs*, 126, 241-260.

Tuzun, I. K. (2007). Antecedents of turnover intention toward a service provider. *The Business Review*, 8, 128-135.

Vandenberg, J. R. & Nelson, J. B. (1999). Disaggregatives the motives underlying turnover intentions: when do intentions predict turnover behaviour. *Human Relations*, 52, 1340-1352.

Wayne, S. J., Shore, L. M., & Liden, R. C. (1997). Perceived organizational support and leader–member exchange: A social exchange perspective. *Academy of Management Journal*, 40, 82–111.

Whitener, E. M. (2001). Do "high commitment" human resource practices affect employee commitment? A cross-level analysis using hierarchical linear modeling. *Journal of Management*, 27, 515-535.

Wong, Y. T., Ngo, H. Y. & Wong C. S. (2002). Affective organizational commitment of workers in Chinese joint ventures. *Journal of Managerial Psychology*, 17, 580-598.

Table 1. Means, standard deviations, and correlations among measures

Variable	*Mean*	*SD*	*1*	*2*	*3*	*4*
1. Perceived organizational support	3.45	1.04	(.86)			
2. Perceived external prestige	3.57	0.84	0.47**	(.85)		
3. Trust in organization	4.10	0.86	0.72**	0.64**	(.86)	
4. Turnover intention	3.82	0.80	-0.33**	-0.29**	-0.45**	(.73)

Notes: Values in parentheses are Cronbach's alphas. n = 402; **p < 0.01

Table 2. Direct, Indirect, and Total Effects of POS, PEP

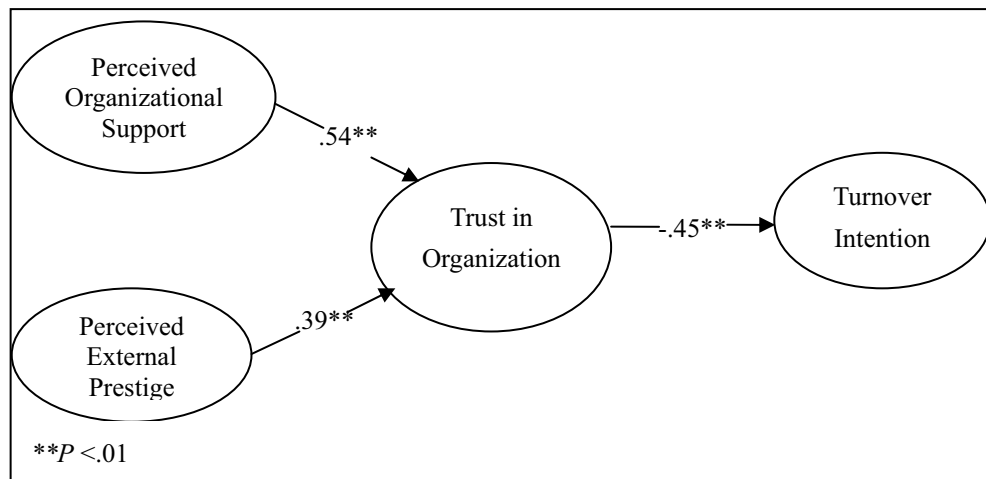|	*Total Effect*	*Direct Effect*	*Indirect Effect*
Perceived Organizational Support			
POS→ Trust	0.53**	0.53**	--
POS→ Turnover Intention	-0.40**	-0.26**	-0.14*
Perceived External Prestige			
PEP→ Trust	0.39**	0.39**	--
PEP→ Turnover Intention	-0.09*	0.02	-0.11*
Trust			
Trust→Turnover Intention	-.27*	-.27*	--

*P <.05. **P <.01

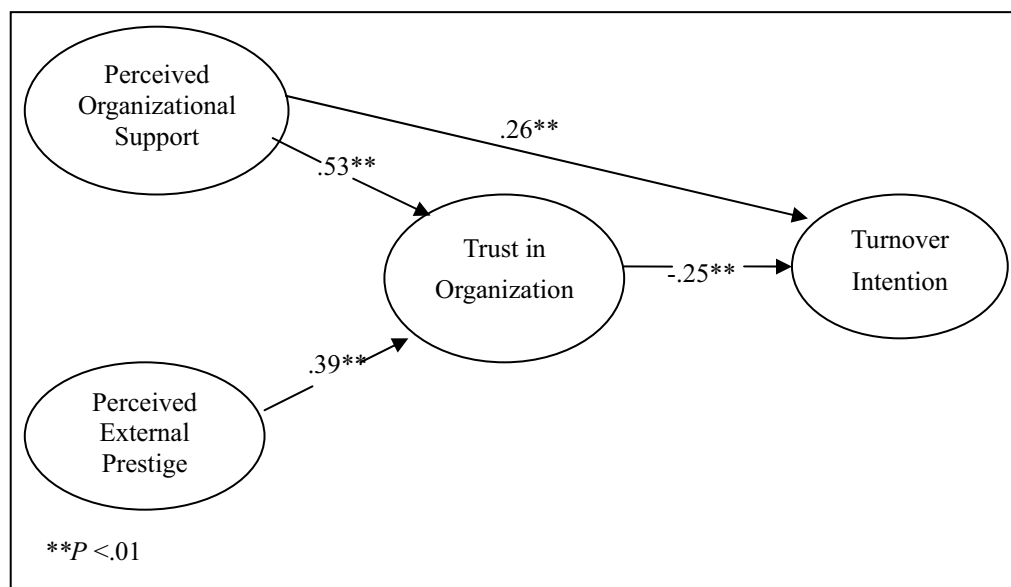Figure 1. Proposed structured model

Figure 2. Revised structural model

Development of Cultural Industries to

Promote Urban Economic Development

Fang Hu

Kaiping District of Tangshan City, Hebei Province labor personnel

E-mail: lsxdym@sina.com

Abstract

Further development of the urban economy in general the need for a new round of industrial restructuring. Pursuit of cultural products and intellectual development is premised on the value of local culture to explore for the content, people and cities to meet the needs of economic development as the goal of a resource-conserving development. Therefore become cultural products accumulate wealth, create jobs and improve the competitiveness of the drivers of urban-based industries.

Keywords: Cultural products in regional development

First, the development of foreign cultural products of the Enlightenment London Development Agency in the "comment on an important industry in London" in the definition of cultural products sector for the restaurants, bars, stadiums and sports betting, museums and tourist attractions in six industrial sectors. Advertising, architecture, works of art and antiques, crafts, design, fashion design, film and video, interactive culture of software, music, performing arts, publishing, software and computer services, television and radio industries, such as 13 defined as the cultural and creative industries. The above two categories of China's basic industries sector ownership of most of their cultural products, two types of industrial sector output and consumption can be classified as the majority of the cultural economy. Cultural products in this article to the concept of our country as the standard.

Today, cultural and creative industries in London is becoming one of the largest industrial sectors, the volume of output and employment, second only to business services. In recent decades, the British culture time increasing, rising disposable income, making for cultural products and a substantial increase in demand for services, and promote the cultural and creative industries and cultural products and services to provide the output.

British products including: books, newspapers, magazines; sports and camping supplies; photographic and video equipment; television, video, computer and sound equipment; toys and hobbies; gardening items, plants and flowers. Cultural services, including: film and theater; television, video, satellite rental, Internet; education and training costs; betting funded; to participate in sports with the Order; other recreational activities (including dancing, at night around bars, galleries and museums); holidays and holiday spending.

At present, the cultural economy is becoming the London School of Economics and the main source of growth is the City of London the most important pillar industry. According to the United Kingdom in July 2003 the Financial Times reported that London cultural and creative industries are the annual output value of more than 21 billion pounds, and the London School of Economics and Cultural products are one of the fastest-growing consumer market of 9.5 billion pounds. Employees of cultural and creative industries (including fashion, software design, publishing, construction and trading antiques, etc.) the number has reached 525,000, while another 290,000 people employed in London, catering, entertainment, sports, gambling, sightseeing and other cultural products. The sum of the two jobs has been more than 800,000 people, far more than financial services (32.5 million), manufacturing (26 million), education (25.5 million) and health (20 million). London proved the development of cultural products, the economic emergence of culture-led prosperity, which the integration of related industries and the expansion, will further promote the rapid economic development.

Second, cultural products, supply and demand Cultural products to meet consumers to enjoy entertainment and the needs of the popular cultural products must be in line with the product of the trend of the times. The nature and value of culture is to increase people's spiritual world and the ideological realm, and therefore the supply of cultural products to identify the spiritual and cultural needs of consumers.

1. Culture and attractions combined with the content of culture as a consumer

The development of cultural products, a very important point is to make the traditional food, housing, transportation, travel, purchase, entertainment and other elements associated with the cultural contents, so that cultural products reflect a certain culture. For example, the park can be transformed into the traditional play, to eat, can be performed, the park habitable. Engaging features in the park exhibitions, folk-custom show, song and dance performances, cultural displays to attract cultural tourists, so that the content of culture as a consumer.

2. Through the concept of a culture to create new cultural products for the consumer and customer groups

As the economy develops, people's quality of life with a deeper understanding. More and more people are committed to improving the cultivation of their own lives in pursuit of a richer cultural enjoyment. At the same time as a result of unprecedented fierce competition, people often have to go through all sorts of ways of "self-charging", and thus a "intellectual culture" demands, that is, while in the culture a variety of effective access to knowledge and information. If we can seize the domestic emerging "intellectual culture" consumer demand, so that the combination of culture and fashion will be able to create new areas of consumer and customer groups. For instance, bookstores and cultural integration, develop into a "knowledge culture" of the book features, book stores not only sell books, but also operate cafes, catering, audio-visual, stationery, musical instruments, arts and crafts, the laying of broadband network to provide customers with information or remote office, sales of some products and culture-related products, consumers can buy books there, books, photocopying, tea, dinner, chat, let bookstores become a good place to study culture. This book created for the new consumption areas and customers.

Third, the value of cultural products and industrial development

Consumption of cultural products is not simply out of material products, but also implied the "consumer experience at the same time have a" consumer process. Transition caused by the consumption of cultural products and cultural needs of an important source of commercial value. In today's society, it is easy to meet the demands of the material, but emotional appeals will need to explore and develop depth. Therefore the value of cultural products is to explore this great inner aspiration to meet the people's emotional needs, so as to achieve the purpose of the consumer guide.

Cultural products are raw materials of culture. It has its own set of industries to achieve business value model. Culture also affects the industry has a strong and "spill-over effects." Developed countries, the development of cultural products model is fundamental in the biomass industry was developed, followed by the development of cultural products together.

China's biomass industry is relatively developed, but did not keep pace with cultural products. China has a long history of how the cultural resources to enhance the elements of cultural products, it is worth in-depth study. The development of cultural products, is bound to rely on new industrial development. This model is the cultural heritage with an effective combination of fashion. Through the combination of cultural resources to establish the country's cultural image. To promote a culture of non-cultural products and export trade growth.

Fourth, to promote the urban development of cultural products

Abroad, the "cultural and creative" development strategy, highlighting the city of cultural products is a new concept of competition. In China, although the rise of cultural products and the development of only a few years time, but in Beijing, Shanghai and other big cities, not only the rapid rise of cultural products, but also a positive development. Cultural products on the role of urban development is mainly reflected in the strengthening of urban externalities, to enhance the attractiveness of the city, thereby reshaping the city image and brand. Cultural products with a strong role in the integration, you can bring the whole industry chain marketing, to bring the city's economic development to promote powerful.

In the context of economic globalization, the diversification of consumer demand, the consumption structure of cities escalating. The further development of the urban economy in general the need for a new round of industrial restructuring, and the pursuit of cultural products is based on the premise of intellectual development, geographical and cultural value of content to explore and people to meet this demand and urban development as the goal to enhance the quality of the resource-conserving development models, thus becoming a kind of accumulation of wealth, create jobs and improve the competitiveness of the drivers of urban-based industries. From the industry perspective, the cultural products of the urban consumer market has a strong ability to drive can be derived in the traditional service industries in a new category, a new consumption hot spots. At the same time, the promotion of cultural products play a positive role in urban employment.

From 2003 to 2006, the Shanghai government guidance, community support, building replacement, the use of a large number of more than 100 years of the old industrial building development of cultural products, transformation of the construction of nearly 50 cultural products district gathering. Concentration areas of these cultural products with an organic combination of old city, the city added a blend of history and modern cultural landscape, gives a sense of

bustling cities, the heavy sense of cultural vitality and a sense of the times, so the lack of vitality of the old city rejuvenated to create a good cultural atmosphere to enhance the attraction of talent and capital. Most of the above-mentioned areas as a concentration of new economic growth point of Shanghai, and cultural vitality of the region.

Fifth, the promotion of cultural products to enhance the economic strength of city 21 There are two industries can support China's rapid economic growth, the first high-tech industry, and the second is that cultural products industry. The development of information technology has changed the way urban exchanges and consumption, but also to expand the cultural products of the extension, which gives rise to cultural products. Urban culture is an important indicator of the degree of civilization.

When the economy is the level of development, people will more and more attention to products included in culture, including product concept, design, modeling, packaging, trademarks, advertising and so on. When consumers become the pursuit of cultural connotation strong cultural goods will be a strong impetus to sales of products in the market, that is, the economic performance of cultural consumption. Such changes in consumption patterns brought about the transformation of industrial cities. When the cultural products of traditional manufacturing industry to penetrate, then the objective to promote the traditional manufacturing to high value-added industrial upgrading and enhance the city's economic strength. For example, Disney's Mickey Mouse With a wealth of cultural content, its value also improved. For decades, the image of Mickey Mouse is not only a symbol of American culture, it is more the United States trillions of dollars of profits.

Cultural products in urban economic restructuring in the start. As a result of urban land and labor costs rising, cities continue to adjust the industrial structure, resulting in a number of traditional industries and the relocation of the recession. The main use of cultural products of human resources and intellectual resources, only a small consumption of material resources, with the characteristics of non-polluting, lower inputs can receive a higher return on the coordination of economic development and environmental protection has a unique advantage, is conducive to sustainable development of cities. Therefore the development of cultural products is a measure of a city is an important indicator of economic strength.

Sixth, cultural products to enhance the competitiveness of cities

Cities mainly refers to the competitiveness of a city in the development process compared with other cities have influence, as well as to attract, compete for resources, the occupation and control of the market to provide the public with the ability of well-being. Urban competitiveness is reflected not only in construction, transportation, energy and other hardware facilities, is also reflected in the living environment, cultural policies and regulations. A city of the human environment and the degree of civilization, a reflection of a city government and the public the quality of the management level. Cultural environment is a city of an important condition for the prosperity and development.

Cultural products is competitive, the city adjusted its industrial structure, enhance social harmony and improve the living environment of the humanities to stimulate the city plays an important role in the vitality. Well-known futurist Graham Molitor ? predicted: In 2015, the world will be through the peak of the information age into the culture of the times. Industrial upgrading in developed countries mainly relies on the development of cultural products, it has been proved by the facts. According to statistics, in the United States, cultural products of the social value created by the community accounted for more than 30% of GDP, nearly 900 billion U.S. dollars annually. Japan's entertainment industry has already exceeded the annual production value of the annual production value of the automobile industry. Overseas experience has shown that globalization, information technology will lead to a certain degree of hollowing out of cities with the same phenomenon. However, some cities because of its unique cultural identity, provide a high intensity of communication and knowledge exchange will be, so still has the vitality and competitiveness. Therefore culture the city has gradually become the focus of competitiveness, competitiveness of cities will be the ultimate manifestation of ability to innovate in the cultural content and cultural improvement of the product chain.

References

Cai, Shangwei. (2006). City characteristics of route choice and the creative industries [DB / OL]. *Sina blog*, 7, 22.

The country level with a disability: cultural products of the interaction with the creative economy [DB / OL]. (2007). *Cultural China*, 8, 30.

Zhong, Ting. (2005). London cultural products promote the development of the operation of research centers [DB / OL]. *Shanghai network information service platform*, 4, 19.

Community Leaders' Characteristics and Their Effort in Building Community Capacity for Tourism Development in Local Communities

Fariborz Aref

Department of Social and Development Sciences

Faculty of Human Ecology, University of Putra, Malaysia

Tel: 60-12-2999-594   E-mail: fariborzaref@yahoo.com

Ma'rof Redzuan

Department of Social and Development Sciences

Faculty of Human Ecology, University of Putra Malaysia

Tel: 60-12-3484-810   E-mail: marof@putra.upm.edu.my

Abstract

Community leaders are an important element of any community and vital to successful community development. In a community capacity building approach, community leaders play a vital role in handling the programs and plans towards achieving the goals of the community.This paper investigates relationship between the community leaders' characteristics and their effort in building capacity for tourism development in local communities of Shiraz, Iran. The results from Pearson correlation show that there is a significant positive correlation between age, length of residence, length of position held, income with the level of community capacity building in tourism development. Spearman rho correlation also found there was a significant positive correlation between educational level, tourism income, extra activities, tourism jobs, and family engaged in tourism activities with the level of community capacity building in tourism development.

Keywords: Tourism development, Community leaders, Community capacity building

1. Introduction

A critical element in building community capacity and community development is community leaders. Building community capacity without community leaders' efforts is not possible. For the purpose of this study, community leader is defined as one who is able to influence policy, opinion, or community action on building capacity for tourism development because of his official role, title, or position in the local community. Community leadership was an important element of any community and vital to successful community development. Without the community leadership, community capacity building in tourism development do not occur (Austen, 2003). Hence, understanding relationship between the leaders' characteristics and their attempt on building capacity in tourism development is important for further planning in tourism development.

2. Literature review

When reviewing research literature on community leaders and their efforts in building capacity for tourism development, it is necessary to understand the definition of community as it was used in research. Therefore, this section of the literature review offers definitions of community and discusses the needs for community development by illustrating the nature of problems in local communities. Hillery (1955) presented the general definitions of community: community consists of persons in social and cultural interaction within geographic area and having one or more additional common ties. Mattessich & Monsey (2004, p. 56) defined community as a "people who live within a geographically defined area and who have social and psychological ties with each other and with the place where they live". This definition was used in research study for definition of community as the main concept for assessing level of community capacity building in tourism development. Fellin (2001) also described local communities as social systems, including families, groups, and organizations. He noted that community is a social unit based on a common place, interest, identification, or some combination of these characteristics. Dalton et al. (2001) also states community is a meaningful entity that represents resources of empowerment. In addition, a community without leadership may not be equipped to mobilize resources or influence tourism planning. Local communities, like other organization, cannot proceed successfully without having dynamic leaders that are willing and able to take initiatives. Lack of capable community leaders is often

mentioned by local people as a barrier to community development (Aref & Ma'rof, 2008). Therefore the success of local community depends on the quality, creativity and commitment of its leadership in maintaining its daily affairs (Uphoff et al., 1998). Hence, an important issue to address in this literature review is the issue of community leadership because so much community development and tourism development depends on community leaders. Community leaders provide the basis for improving the quality of life (Kuponiyi, 2008).

A great deal of community development literature has been dedicated to community leaders and their power in local communities (Israel & Beaulieu, 1990). This research study involved community leaders within local communities, and those individuals were perceived as leaders of their communities and as people who are influential to the development of tourism in their communities. As such, a discussion and review of the community leadership literature is appropriate because it illustrates research that indicates community leaders very often do what is essential or vital for the survival of their communities. Community leaders supported both community development and tourism development simultaneously. They also realized that citizen participation in the process was imperative to successful community development (Marvill, 2006). Littrell & Hobbs (1989) discussed the importance of community leaders to a community in their discussion of the self-help approach to community development. According to Israel & Beaulieu (1990), without viable community leadership, it was virtually impossible for local communities to tackle problems facing them. In tourism studies, community leaders are often referred to a community knowledgeable, community influential, or people within a community that are involved in tourism decision making and problem solving, influential in tourism planning and development of tourism (Luloff et al., 1994). Hence defining the community leadership is an important approach to understanding community capacity building for tourism development. The importance of community capacity building in tourism development is evident, Community capacity building is a process aimed at strengthening the capacity of individuals and organizations to develop and sustain conditions that support all aspects of community life (Blackwell and Colmenar 2000). It is a necessary condition for the development of tourism industry (Aref & Ma'rof, 2009).

3. Research methodology

The study was carried out in local communities in Shiraz, Iran the data for this study were collected from 175 community leaders. Community leaders was identified as a key factor in developing tourism in local communities (Moscardo, 2008). According to Eyler et al. (1999), Thompson et al. (2000), and Von et al. (1992) the leaders are able to speak for the community because of their knowledge and their roles in the community (Aref et al., 2009). The primary and major data collection is based on questionnaires. According to Riley (1996, p. 22) the majority of tourism research has relied on structured surveys and quantification". The items in the questionnaire for this survey were measured using Likert scale. The Likert scale is most commonly used in tourism marketing research (Aref et al., 2009; Grover & Vriens, 2006). Dong-Wan & William (2002) and Maddox (1985) recommended the use of a Likert scale in tourism research due to its high validity. Most of the questions for this section were obtained and modified from Public Health Agency of Canada (2007) and Maclellan (2007). Descriptive analysis, Pearson Correlation, and Spearman Correlation were used to interpret the data in this study. Descriptive statistics usually include means, standard deviations, and frequencies. Frequencies are commonly performed to count how many people answered each question with each particular response (Anderson, MacLellan-Wright, & Barber, 2007). Pearson correlation is a statistical technique to measure the strength of the association that exist between two quantitative variables (Ary et al.,1996). The Pearson correlation coefficient, used to measure the degree of linear relationship. The value of r is always between +1 and -1. However the variables of the study were normality distributed, but this Spearman rho correlation (rs) was also used in this study. The interpretation is the same as the Pearson Correlation Coefficient. The researchers selected the Spearman's rank correlation coefficient test, to determine the correlation between the leaders' characteristic and level of community capacity building in tourism development. This choice was made for the following reason: Whereas the Pearson correlation test is used to analyze interval or ratio data, Spearman's rank correlation test examines the ordinal data. Similar to other correlation tests, Spearman's rank correlation produces a coefficient somewhere between -1.00 and +1.00 (Gay & Airasian, 2000, p. 452). Mokhtari (2006), Azczel & Sounderpandian (2006), Creswell (2002), and Pallant (2005) also stated Spearman's rank correlation coefficient can be used to measure the degree of relationships between two variables when data are on an ordinal scale. Statistical package for social sciences (SPSS 17) was used to process and analyze the quantitative data. The pre-testing of instrument was carried out prior to the actual data collection to examine the appropriateness and reliability of the instrument. Hence 32 convenient samples were chosen to conduct the pre-testing. The results indicated the sufficiently and factor ability of statements. It also showed satisfactory internal consistency of the manifest items measuring level of community capacity building. In order to determine the reliability of the instrument, the Cronbach Alpha was tested on each dimension of community capacity building. According to Garson (2009), the dimensions should have a Cronbach alpha of at least .70 to establish reliability of the constructs. Base on the reliability alpha values in this study the instruments has reliability with Cronbach's alpha values (between .0.74 and .93)

4. Results and Discussion

The objective of this study was to determine relationship between community leaders' characteristics and their effort in community capacity building for tourism development. The questionnaire was used to obtain the primary data via a

survey of 175 community leaders of Shiraz. All respondents provided completed answers to every question. Table 1 shows details of descriptive statistics for 175 community leaders.. Out of the 175 community leaders, 5.14% were female and 94.86% were male, with an average age of 53.12 years. The youngest participant was 33 years and the eldest one was 72 years of age. Out of all the respondents, 26.36% (47 in numbers) state their highest level of education was a diploma and 42.86% (75 in numbers) holds the bachelor's degree. More that 60% (106 in number) of the respondents had engaged in tourism activities. Median income range of the respondents was 500USD. However, there were 12% who earn less than 350 USD, and 8% who earned more than 750 USD per month. Participants' age, educational level and income did not differ significant by the communities. In terms of income from tourism activities, 42.03% state that tourism did not have any income for them; however 30.09% believed that tourism has a little contribution to their economic activities. Out of all respondents 85.1% had extra activities where majority of them (60.6 %) engaged in tourism activities. In terms of members family who were engaged in tourism activities, 62% said that their family members have tourism activities. And 37.7 % states that they don't have any member of their family engaged in tourism activities. This information provides an introduction for future discussion in tourism development activities. Other characteristics of the community leaders include; length of residence and also length of position held, which are summarized in Table 1.

Pearson coefficient correlation and Spearman rho coefficient correlation were used to identify the relationships between variables under studied. A Pearson product moment coefficient is utilized when variables correlated are expressed as ratio or interval data. As depicted in Table 2 there was a significant positive correlation between age and level community capacity building (r = .416, N = 175, p = .000, two-tailed). Furthermore, there was a significant positive correlation between length of residences and level of community capacity building (r = .402, N = 175, p = .001, two-tailed). This result also shows that there was a significant positive correlation between length of position held as leaders, and level of community capacity building (r = .462, N = 175, p = .000, two-tailed). Furthermore, there was a significant positive correlation between income and level of community capacity building (r = .601, N = 175, p = .000, two-tailed). The Spearman rho is used when the variables are expressed as a rank or ordinal data. Spearman rho coefficient correlation was used to determine the relationship between education, tourism income, tourism job and family engaged in tourism activities and the level of community capacity building. Because the variables were on an ordinal scale, Spearman rank correlation coefficients were computed between the variables (Aczel & Sounderpandian, 2006; Creswell, 2002; Gay & Airasian, 2000; Mokhtari, 2006). The results show that there were statistically significant in some of the relationships between these variables. There was a significant positive correlation between education and level of community capacity building (rs = .401, N = 175, p < .000, two-tailed). There was also significant correlation between tourism income and level community capacity building (rs = .644, N = 175, p < .000, two-tailed). The Table 2 also illustrates that there was a negative significant correlation between extra activity (rs = -.214, N = 175, p < .004, two-tailed), a tourism job (rs = .546, N = 149, p < .000, two-tailed) and family engaged in tourism activities (rs = .356, N = 175, p < .000, two-tailed) with the level of community capacity building.

In Table 3 the result of data analysis were shown. The result of the *rs* showed that there were correlations between the leaders' educational level, tourism income, extra activities, tourism job, family engaged in tourism with level of community capacity building. Although, community resources were identified as effective elements in building capacity for tourism development, the findings of this study in fact illustrate that community leader's characteristics can, con tribute to the community capacity building for tourism development.

Related to the findings of this study, Fisher (2005) stated that the characteristics of the leaders have a significant effect on the community economic development. Meanwhile Schultz (2004) also stated the importance of leaders characteristics in community development effort. One of the key leaders' characteristics of the respondents in this study was educational level. Vaughan (2003) states that people who have higher education have more activate in tourism development. The present study finding also shows that educational level has significant relationship with level of community capacity building. This finding is consistent with the findings by Andriotis & Vaughan (2003), were they found that the higher the level of education, the more likely residents to express their apprehension to tourism development in their communities. Age also was considered as a leaders' characteristic which has significant relationship with level of community capacity building. This is also Consistent with the findings by Chen (2000), Lawton (2005), where they found older residents also more likely to support tourism.

Another key leaders' characteristic of survey respondents were income. A leaders' annual income was also found to have significant relationship with the level of community capacity building. Chen (2001) also states that people with high income have more involved in tourism development. He stated that economic benefits from tourism have effect on the support of local people for development of tourism. Tourism income and family who are engaged in tourism activities also have positive significant relationship with the level of community capacity building for tourism development.

Length of residence was also has a significantly relation with the level of community capacity building. This finding is supported by Green et al. (1986) and Lawton (2005). Green et al. (1986) states   that permanent residents may be more supportive of tourism development than seasonal residents (Green et al., 1986). Lawton (2005) also finds that the length of residence in the destination plays an important role in supporting for tourism development. Length of the leaders'

position as leaders was also identified as a having significant relationship with level of community capacity building. Those community leaders who have lived in the community with the longest position as leaders contribute more effort in community capacity building for tourism development. However, an extra activity has a negative significant relationship with level of community capacity building for tourism development. This finding implies that community leaders who may not work directly in the tourism industry may have less effort in community capacity building for tourism development. Martin et al (1998) conclude that those who do not receive real economic gain from the tourism growth have the tendency to give less support towards the development of tourism industry.

5. Conclusion

The study identified the relationships between the leaders' characteristics and level of community capacity building in tourism development. The results of this study showed that there were significant positive correlations between age, length of residence, length of position held income and community capacity building. A Spearman correlation also found there were significant positive correlations between education, income, extra activities, tourism jobs, and family engaged in tourism activities with level of community capacity building. Thus the importance and need for community leaders in building strong capacity communities cannot be ignored. In order to develop in current economic and social environment, communities need leaders who can help local group, businesses, and non-profit organizations to work together to address challenges and promote local strengths (Wituk et al., 2003). The findings of this study hopefully could be used to assist community leaders in the designing and implementation of tourism development strategies in local communities. It is expected that the findings of this study could also be utilized by the community leaders and tourism developers for their future follow-up studies and reassessment of community capacity building for tourism development in their communities.

References

Aczel, A. D., & Sounderpandian, J. (2006). *Complete business statistics* (6 ed.). Boston: McGraw-Hill.

Anderson, D., MacLellan-Wright, M., & Barber, S. (2007). Analysing Data Collected from the Community Capacity Building Tool: A Manual for Users: Public Health Agency of Canada.

Andriotis, K., & Vaughan, R. D. (2003). Urban residents' attitudes toward tourism development: The case of Crete. *Journal of Travel Research*, 42, 172-185.

Aref, F., Ma'rof, B. R., & Zahid, E. (2009). Assessing Community Leadership Factor in Community Capacity Building in Tourism Development: A Case Study of Shiraz, Iran. *Journal of Human Ecology*, 28(3).

Aref, F., & Ma'rof, R. (2008). Barriers to Community Leadership in Tourism Development in, Shiraz, Iran. *European Journal of Social Sciences*, 7(2), 172-178.

Aref, F., & Ma'rof, R. (2009). Community capacity building for tourism development. *Journal of Human Ecology*, 27(1).

Aref, F., Ma'rof, R., & Sarjit, S. G. (2009). Community Perceptions toward Economic and Environmental Impacts of Tourism on Local Communities. *Asian Social Science*, 5(7), 130-137.

Ary, D., Jacobs, C., & Rezavieh, A. (1996). *Introduction to research in education* (5 ed.). New York: Harcourt Brace College Publishers.

Austen, P. (2003). Community Capacity Building and Mobilization in Youth Mental Health Promotion. [Online] Available:
http://www.phac-aspc.gc.ca/mh-sm/mhp-psm/pub/community-communautaires/pdf/comm-cap-build-mobil-youth.pdf (Retrieved from 5, September, 2008)

Chen, J. S. (2000). An investigation of urban residents' loyalty to tourism. *Journal of Hospitality and Tourism Research*, 24, 5-19.

Chen, J. S. (2001). Assessing and visualizing tourism impacts from urban residents' perspectives. *Journal of Hospitality and Tourism Research*, 25, 235-250.

Creswell, J. W. (2002). Educational research: Planning, conducting, and evaluating quantitative and qualitative research. Upper Saddle River, NJ: Pearson Education.

Dalton, H., Elias, J., & Wandersman, A. (2001). Community psychology: Linking individuals and communities: Stamford, CT: Wadsworth.

Dong-Wan, K., & William, P. S. (2002). A structural equation model of resident's attitudes for tourism development. *Tourism Management*, 23(5), 521-530.

Eyler, A., Mayer, J., Rafi, R., Housemann, R., Brownson, C., & King, C. (1999). Key informant surveys as a tool to implement and evaluate physical activity interventions in the community. *Health Education Research*, 14(2), 289.

Fellin, P. (2001). *The Community and the Social Worker* (3 ed.): Itasca, IL: F.E. Peacock.

Fisher, D. K. (2005). Characteristics of Effective Leaders in Economic Development: An Exploratory Study. [Online]

Available: http://www.allbusiness.com/human-resources/employee-development-leadership/1052513-1.html (Retrieved from 5, June, 2009)

Garson, D. (2009). Structural Equation Modeling. [Online] Available: http://faculty.chass.ncsu.edu/garson/PA765/structur.htm#output (Retrieved from 12, May, 2009)

Gay, L. R., & Airasian, P. (Eds.). (2000). *Educational research: Competencies for analysis and application* (6 ed.). Upper Saddle River, NJ: Prentice Hall, Inc.

Green, G. P., Marcouiller, D., Deller, S., Erkkila, D., & Sumathi, N. R. (1986). Local dependency, land use attitudes, and economic development: Comparisons between seasonal and permanent residents. *Rural Sociology*, 61, 427-445.

Grover, R., & Vriens, M. (2006). The handbook of marketing research: uses, misuses, and future advances: Sage Publications.

Hillery, G. (1955). Definitions of community: areas of agreement. *Rural Sociology*, 20, 111-123.

Israel, D., & Beaulieu, J. (1990). *Community Leadership. In A. Luloff & L. Swanson (Eds.)*, American rural communities. San Francisco: CA: Westview Press.

Kuponiyi, F. A. (2008). Community Power Structure: The Role of Local Leaders in Community Development Decision Making in Ajaawa, Oyo State, Nigeria. *The Anthropologist*, 10(4), 239-243.

Lawton, L. J. (2005). Resident perceptions of tourist attractions on the Gold Coast of Australia. *Journal of Travel Research*, 44, 188-200.

Littrell, D. W., & Hobbs, D. (1989). *"The self help approach". In J. A. Christenson & J. Robinson (Eds.)*, Community Development in Perspective.

Luloff, E., Bridger, C., Graefe, R., Saylor, M., Martin, K., & Gitelson, R. (1994). Assessing rural tourism efforts in the United States. *Annals of Tourism Research*, 21(46-64).

Maclellan-Wright, F., Anderson, D., Barber, S., Smith, N., Cantin, B., & Felix, R., et al. (2007). The development of measures of community capacity for community-based funding programs in Canada. *Health Promot. Int*., 22(4), 299-306.

Maddox, R. N. (1985). Measuring satisfaction with tourism. *Journal of Travel Research*, 23(3), 2-5.

Martin, B., McGuire, F., & Allen, L. (1998). Retirees' attitudes toward tourism: Implications for sustainable development. *Tourism Analysis*, 3, 43-51.

Marvill, C. (2006). Creating an arts destination: The community development process in Waynesville, North Carolina., North Carolina State University.

Mattessich, P., & Monsey, M. (2004). Community Building: What Makes It Work: Wilder Foundation.

Mokhtari, A. (2006). Evaluation of sampling-based methods for sensitivity analysis: Case study for the E. coli Food Safety Process Risk Model. *Human & Ecological Risk Assessment*, 12, 1128-1152.

Moscardo, G. (Ed.). (2008). Building community capacity for tourism development. Australia.

Pallant, J. (2005). *SPSS survival manual Berkshire*, UK: Open University Press.

Public Health Agency of Canada. (2007). Community Capacity Building Tool. [Online] Available: http://www.phac-aspc.gc.ca/canada/regions/ab-nwttno/documents/CCBT_English_web_000.pdf (Retrieved from 2, March, 2008)

Riley, R. W. (1996). Revealing socially constructed knowledge through quasi-structured interviews and grounded theory analysis. *Journal of Travel and Tourism Marketing*, 5(1/2), 21-39.

Schultz, J. (2004). Boomtown USA: The 7 keys to big success in small towns: Hemdon, VA: National Association of Industrial and Office Properties.

Thompson, B., Lichtenstein, E., Corbett, K., Nettekoven, L., & Feng, Z. (2000). Durability of tobacco control efforts in the 22 community Intervention trial for smoking cessation (COMMIT) communities 2 years after the end of intervention. *Health Education Research*, 15(3), 353-366.

Uphoff, N., Esman, M., & Krishna, A. (1998). Reasons for Success: Learning from Instructive Experiences in Rural Development West Hartford Komarian Press inc.

Von Kroff, M., Wickizer, T., Maeser, J., O'Leary, P., Pearson, D., & Beery, W. (1992). Community activation and health promotion: identification of key organizations. *American Journal of Health Promotion*, 7, 110-117.

Wituk, S., Warren, M., Heiny, P., Clark, M., Power, C., & Meissen, G. (2003). Developing communities of leaders: Outcomes of a statewide initiative. *Journal of Leadership & Organizational Studies*, 9(4), 76.

Table 1. Frequency Distributions of Respondents' Demographic Profiles (N=175)

Demographic variables	Category	Frequency	Percentage
Gender (N=175)	Male	166	94.9
	Female	9	5.1
Age(N=175)	30-40	18	10.3
	41-50	57	32.6
	51-60	63	36.0
	61-70	35	20.0
	71-80	2	1.1
Educational level(N=175)	Diploma	47	26.9
	Vocational education	28	16.0
	BA/BS	75	42.9
	MA/MS	18	10.3
	PhD	7	4.0
Length of residence (N=175)	1-15	46	26.3
	16-30	57	32.6
	31-45	20	11.4
	46-60	28	16.0
	61-75	24	13.7
Length of position held (N=175)	1-4	110	62.9
	5-8	34	19.4
	9-12	24	13.7
	13-16	7	4.0
Income(N=175)	> 450$	83	47.4
	450-600$	47	26.9
	600-750$	31	17.7
	750-900$	9	5.1
	900$ <	5	2.9
Tourism Income (N=175)	None	74	42.3
	A little	54	30.9
	some	29	16.6
	A lot	12	6.9
	Almost all	5	2.9
	Missing	1	0.6
External activities(N=175)	Yes	149	85.1
	No	26	14.9
Activities related to tourism(N=175)	Yes	106	60.6
	No	43	24.6
	Missing	26	14.9
Family employment in tourism(N=175)	Yes	109	62.3
	No	66	37.7

Table 2. Pearson Correlation between Leader Characteristics and Level of Community Capacity Building (N=175)

	1	2	3	4	5
1. Age	1				
2. Length of residence	.715**	1			
3. Length of position held	.727**	.803**	1		
4. Income	281**	.109	.177*	1	
5. Community capacity building	.416**	.402**	.462**	.601**	1

**$p<.05$

Table 3. Spearman Correlation between Leaders' Characteristics and Level of Community Capacity Building (N=175)

Variables	r	p
Educational level	.401**	.000
Tourism income	.644**	.000
Extra activities	-.214**	.004
Tourism job	.546**	.000
Family engaged in tourism	.356**	.000

**$p<.05$

Salary Management Model of Professional Managers

-Based on "Agent and Salary Theory"

and "Psychological Contract Theory"

Xiaoqiang Sun

Qingdao University of Science and Technology

Qingdao 266061, China

E-mail: xiaoqiang_626@hotmail.com

Abstract

With the foundation of the modern company system, commission-procuration theory becomes the dominant mode of working out the salary management of enterprises. However, many experts from all over the world derived a conclusion that there is little connection between agent and the salary. Psychological contract theory brought new perspective and conception. Meanwhile, the core staff has been washed away due to the intensive change of the organization. To build a long-term relationship and the psychological contract theory between staff and organization plays an extremely vital rule.

Keywords: Salary management, Psychological contract theory, Agent and salary theory

The object of study in this article is the modern professional managers of enterprises those who play a leading business and handled a sense of mission. Inside, the majority of people are constrainted by few keys as well as the future of the company. So it's more important to inspire those few people, as the management of salary is a core mean to do so. Yet, to a great extent, the spiritual salary has always been ignored. What's more, in a sense, spiritual salary can be instead of material reward. From which, we can economize the deputy cost of the Client. As the core of this study is to analyse and build the psychological contract between agent and client and the material reward based on the psychological contract of pro-managers.

The dimensions and type of psychological contract

The conception of "psychological contract" was first claimed by Organizational Psychologists-Argyris(1960),who emphasized that excepted for the content of official employment contract, the relationship of staff and the organization include a tacit ,officious , undocumented mutual expectation which contained individual level and organization level, the expectation of the mutual accountability between staff and organization.

The dimension of psychological contract

In identification of the dimension of psychological contract, since last century the 90's in the theory circle spread out a server argue between two schools. Herrior & Pemberton (1995) represented the classic school, considered that a psychological contract is the subject explanation of the value provide by the both side of employment and the relationship of them. The research perspective is study upon the both side of employment--"two- dimension and the square" of the individual and organizations' level, that is, the staff's responsibility and the organization's responsibility based on the organization's understanding and based on the staff's understanding."

"Rousseau school" thinks that organization is abstract, which can only creative the environment of psychological contract, but the psychological contract between both members. Rousseau(1990) figures that psychological contract is, under the employment background, the understand and faith of both sides' mutual obligation. The perspective of which becomes " one dimension, one plane" research. And it accentuate the responsibility toward organization of the staff and the perceive of individual's. This definition which built on individual level is quite simple and clear.

Types of Psychological contract

The authority theory in Psychological contract field concludes this psychological contract from a transactional relationship to an intermediate continuum. Staff trade overwork hour and extra work with high reward, performance

award, training and career development; "transaction contract" is a contract relation based on economic exchange. Long-term work, loyalty and willing to take the arrangement of the inner work adjustment is something willing to ensure a job security, which is a contract relationship based on social emotion exchange. It has been called" relationship contract"(Rousseau 1990).

Dr. Weifeng (Fudan university)through the analyzing a demonstration of the psychological contract upon organization and the manager concluded the "triple cone construction" from the organization to the manager, besides "transactional relationship contract" and relationship psychological contract", in allusion to the manager, " management psychological contract" has been pointed out, it focus on the privileges and special benefits provided to those who in key position or with management functions by organization, which is to say, managers think organization should take the obligation of appropriate authorization, full confidence, open mutual communication, special bonus upon exceptional performers, career programming. This result used as a reference to this article.

According to the commission-procuration theory, for the interest of the agent and the client has always been different, if client cannot restrict agent, agent would make decisions from their own benefit but the best decision to the client. In the agency relationship, compared with client, agent will learn the specific information about the certain job divided, and fully understand their own acting, ability and preference. The information asymmetry, incompatibility, unlikeness of responsibility and the imperfection of the contract will cause the opportunism of the agent and moral risk. Due to this point, client will have to extortionate agency cost. To work this problem out, when setting up the excitation mechanism, the salary of manager and the result of operation should be closely-related. In this case, the interest of both client and agent will be identical, and then the agent will make decisions which will benefit the company the most. So the salary system of professional manager--annual salary system, and the stock option are all designed based on commission-procuration theory.

However, the precondition of commission- procuration theory assume that the agent is a egocentric man of business, but the majority of the enterpreneurs donot overvalue money and power, they aspire after the attainment in career, focus on joy and satisfaction in the course of working. This can be explained by the achievement motivation theories (Mcclelland). Because of this, to avoid opportunism activity by monetary incentive is a way to simple. This conflicts the precondition of the agency theory. The appearance of the psychological contract theory may be the complementarity of the agency theory, that is, to rely on the organization responsibility based on staff understanding, intensively inspire professional managers, those inspiration not only from monetary inspiration but also from spirit encouragement.

The agent theory also proposed to control the opportunistic behavior through the combination of manager's pay and performance. This managers' **relationship-based contract** is based on the assumption of confidence, while the tight integration of remuneration and performance will reduce the trust relationship between principal and agent thus lower the morale, providing the atmosphere of encouragement to the opportunist; and a more serious result is, resulting in the manager's psychological contract breach, and force them enter into a **transaction-based contractual relationship.** If their self-interest can not be met, that they may withdraw from the existing companies without any cost go looking for another client. Therefore, to build a relational psychological contract, and give professional managers sufficient confidence and more decision-making powers while encouraging risk-taking behavior when the establishment of long-term relationship with confidence with professional managers is bound to reduce their opportunistic behavior, and at the same time reduce agency costs. This is a win-win choice to the company.

Psychological contract theory in the management of the Professional managers' pay

The analysis mentioned above on the trends of dynamic changes of psychological contract between employees is aimed at the majority of the general staff, and followed by the analysis on the type of psychological contract of professional managers, of which are in small number but have played an important role in the business activities of enterprises. Due to the different nature of their work as well as a significant impact on the enterprise, their psychological contract is different from the general staff. These two types of groups can not be regarded as equivalent, and should make differences in management with awareness, strategy, plans and actions.

The integration of Principal-agent theory and psychological contract theory in the management of pay

The above proves that there are some drawbacks in the pay system based entirely on the agency theory when motivating acts of their agents. However, this is not to say that the theory is wrong. It can only prove that the manager, as a complicated social man, their new incentive cannot be explored only from the perspective of agency theory. The psychological contract will have a significant impact on the manager's behavior. Some scholars have begun to explore how to combine the agency theory and psychological contract theory. This paper presents a integration model of incentive pay, of which the material pay is design and based on the principal-agent theory, combining the performance of professional managers, giving them material incentives. However, the principle of fairness should be kept, which is the psychological contract requirements. At the same time, psychological contract theory, as a complementarity to the principal-agent theory, added that the construction of the trust relationship between principal and agent will not only

throughout the whole concept of pay administration, but also to find a real vector. According to the organizational responsibility understood by employees as outlined in empirical analysis of psychological contract theory, it can be changed into spiritual remuneration to be built, and to realize the complementarity and integration of principal-agent theory and psychological contract theory in the construction of pay model, see Figure 1.

Insert Figure 1 here

Exploration on professional managers' spiritual remuneration based on psychological contract

Through the earlier analysis, professional managers have both general transactional psychological contract, and what is more important their type-specific managing psychological contract and relational psychological contract. Their awareness of the responsibility to organizations comes down to 12 main areas: transactional psychological contract, the internal election, competitive pay and benefits, regularraises; relational psychological contract, stable jobs, comfortable working environment, organization's not making unreasonable demands, provision of training and learning plans; the managing psychological contract type, the appropriate authorization, the full trust and open two-way communication, special incentives to the outstanding performance, career planning. Except the two entries relating to the maintenance and stability of material pay included in the transactional psychological contract, the other 10 entries could be achieved in the construction of spiritual remuneration, which can also prove that the construction of the spiritual remuneration is mainly based on the relational psychological contract and the managing type.

Corporate culture. Its core is to establish common values, values of employees, atmosphere of team spirit, etc. Excellent corporate culture is better than any administrative command and order. It can promote Professional managers' values and the core values of corporate to maintain unified, attach great importance on the needs of professional managers and ensure that the professional managers play to the full, enhancing the professional managers' enterprises loyalty.

Personal development. This includes promotion and training of professional managers. This is a subject can not be ignored when discussing corporate governance. Personal development and career growth of employees is increasingly becoming the focus of enterprises and their employees. For enterprises, that is investment in human resources, a critical point of enterprise growth and development, especially for the training of professional managers, it can bring tremendous value-added human capital, thus bring greater returns for enterprises. For the individual Professional managers, they pay more attention on training and development more than the payment. Therefore, Chinese enterprises should train Professional managers on the actual situation of themselves.

Business success. Including challenging work, is a sense of accomplishment. Professional managers as compared with the general staff have a strong sense of achievement motivation, their demands are in a higher level, and are concerned about the realization of their own values. Their sense of accomplishment comes from the embodiment of their own values, thus the accomplishment of work can provide a higher sense of incentives, which can also be explained with McClelland's achievement motivation theory. Achievement demands are derived from the pursuit of success and the achievement of objectives. Professional managers' goal is to achieve their own values, so the organizational task he wanted is to set challenging performance targets.

Good reputation mechanism. From the management point of view, the pursuit of a good reputation is professional managers' needs of the achievements developing. Efforts of professional managers are not only to get more compensation, but also expect to be highly valued and respected. In the manager market, the reputation of professional managers is not only a long-term success in professional managing, but also an important proof of its ability of operating and managing. It's very necessary to establish a good reputation mechanism in the construction of professional managers' spiritual remuneration, which is also in line with professional managers' expectations of the organization in psychological contract.

Incentive pay has a very important principle that the material incentives and spiritual incentives should combine together. This paper analyses that the deficiencies in the current implementation of material remuneration based on an analysis of principal-agent theory has reduced the trust between principal and agent. This paper, take the complement to the principal-agent theory as an opportunity to introduce a psychological contract, which is designed to build long-term trust between principals and agents, reducing the agents' opportunistic behavior, and advised to build the spiritual remuneration for professional managers on an basis of psychological contract theory, which obviously have more practical significance in professional managers' maintenance, keeping and improvement on contracts.

References

Chen, Jiazhou, Ling Wenquan, & Fang, Liluo. (2003). The content, dimension and type of psychological contract. *Advances in Psychological Science*, 11 (4).

Niu, Jianbo. (2004). Payment, psychological contract of CEO and corporate performance. *Economic management, the new management*, 8.
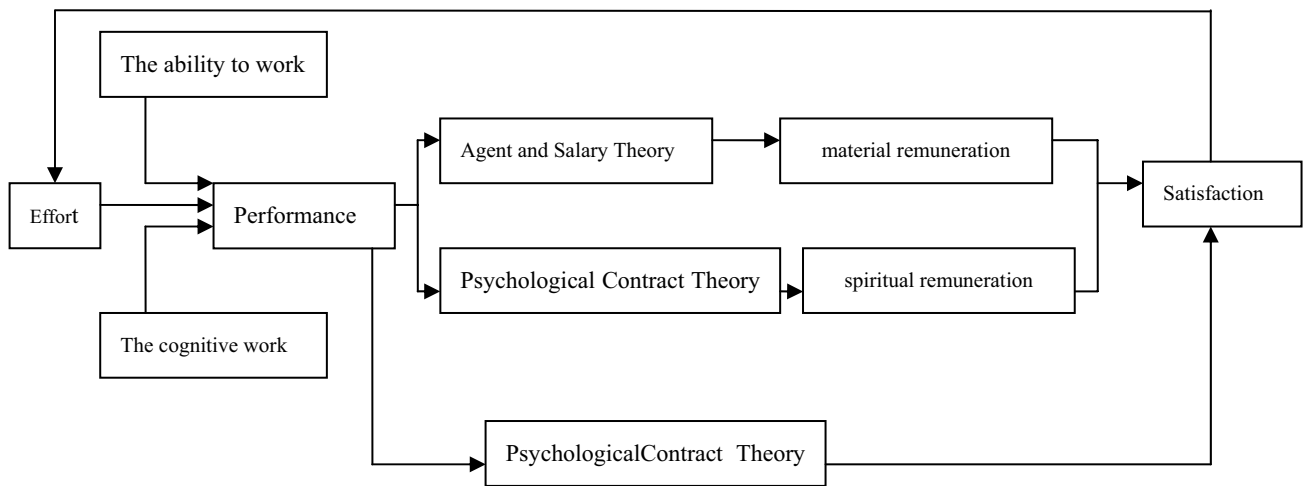
Figure 1. A Integration Model of Incentive Pay

International Journal of Business and Management