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Travelling Pattern and Preferences of the Arab Tourists in Malaysian Hotels

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Abstract

This study examined the travelling pattern of the Arab tourists in relation to their purpose and frequency of visit, duration of stay, travelling companions and activities engaged in during the vacation. The preferences of these tourists for hotel restaurant food and front office attributes while staying in selected five star hotels were also investigated. The result demonstrated that Arab tourists came to Malaysia mostly for a vacation with their spouse and children, and the majority of them were visiting for the first time. The major activities engaged in were sightseeing and visiting interesting places plus other activities such as shopping, visiting theme parks and beaches. The average length of stay was from 3-10 nights. The findings also revealed that besides other type of cuisines, home cooking (Arab cuisine) was preferred by the Arab tourists. Similarly, the Arab tourists preferred to have a fast check in, friendly and personalized service and courtesy by front office personnel upon arrival at the hotel. The ability to communicate in and understand the Arabic language among the front office personnel also had a profound effect on their fondness. In turn, a strong relationship among government, local authorities, private agencies and hotel operators should be fostered to capture a larger share of this market segment

Keywords: Travelling pattern, Preferences, Arab tourists, Hotel management, Food and beverages, Front office

1. Introduction

The global impact from the September 11 terrorist attacks on the United States in 2001 and the subsequent unforeseen terrorism has affected the world tourism industry (Hamarneh & Steiner, 2004). These unexpected events have had a significant impact on the travelling mood of international tourists particularly the Arabs from the Gulf region and Muslim communities. The Arabs and the Muslim communities have been blamed for being responsible for terrorism. Consequently, the feeling by Arabs of being misunderstood and unwelcome in non-Muslim countries has increased. The travelling policy against the Arab tourists has become more rigid in many countries especially in the United States, United Kingdom, Australia and European nations. Over-reactions, ignorance and chauvinism in those countries have forced many Arabs tourists to look for new frontiers and change their traditional holiday destinations to other countries (Hamarneh & Steiner, 2004). As a result, Malaysia as well as other Asian countries was found to be one of the favourite alternative vacation destinations for the Arabs. Malaysia as a Muslim country shares a common Islamic culture and tradition and the Muslim Arabs feel safer in terms of security, food, shopping and religious obligation.

Lately, the number of tourist from the Gulf region has risen over the last few years. As reported, the influx of Arab tourists to Malaysia reached a total of 126,000 in 2004; 150,000 in 2005 and 200,000 in 2006 (New Straits Time, 2007). This is further strengthened as the West Asian market is considered as high yield expenditure with an average expenditure of RM3, 397.4 per capita and an average stay of 13.7 nights compared to tourists from other countries. In fact, the Middle Eastern markets turned out to be in the top for per capita expenditure in the year 2003, despite a slight reduction in the Arab tourists' arrivals. However, the decline was expected due to the SARS outbreak and the haze. The income from the influx, outstanding expenditure and spending power among the Arabs tourists have contributed to a significant impact on the Malaysian economy. Such contributions have made the Middle East one of the most important market segments for the Malaysian tourism industry. In line with this new pattern, Tourism Malaysia, tour operators as well as hotel operators should take this opportunity to promote tourism products such as attractions, cultural events, shopping facilities, hotels and services to capture a larger share of this market segment. In other words, understanding the travelling patterns enables the hotel operators in particular to comply with the needs of these tourists, which in turn enhances their satisfaction and leads to repeat visits to this country.

To date, most of the studies pertaining to Arab tourists were undertaken in developed countries (Ritter, 1989; Din, 1989; Graburn, 1997; Houellebecq, 2001). Ritter (1989) investigated the differences between the travel behavioural pattern of Muslims and Arabs and those of their European counterparts. Din (1989) looked on the Islamic concept of tourism while Graburn (1997) discussed the Islamic concept of travel related to the sacred goal of submission to the ways of God as opposed the commercial goals of mass travel that stresses profit maximization and customer satisfaction. Houellebecq (2001) examined the travelling pattern of pilgrims during the hajj season. However, very limited analysis on the behavioural patterns and preferences among these Arab tourists related to Malaysia has been undertaken. This study therefore aimed to identify the travelling patterns of the Arab tourists in relation to their purpose and frequency of visit, duration of stay, travelling companions and activities engaged in. In addition, their preferences regarding hotel restaurant food and front office attributes while staying in Malaysian hotels were also investigated.

2. Methodology

As this study looked at the travelling patterns of the Arab tourists to Malaysia, the triangulation approach (quantitative and qualitative) was used as it gives in depth information on issues investigated (Cavana and Dalahaye, 2001). In the quantitative approach, the target population was the Arab tourists who were staying in five star hotels. The reason for choosing five star hotels was based on the information obtained from the Malaysia Hotel Association (2004) and Tourism Malaysia (2004) that the majority of the Arab tourists were staying in these star rated hotels. Nevertheless, despite many hotels falling into this category in Malaysia, the researcher found difficulties in collecting data from the whole country. A report gathered from Tourism Malaysia indicated that most of the Arabs tourists mainly visited Kuala Lumpur compared to other cities in Malaysia (Tourism Malaysia, 2003). Based on this information plus the other mentioned constraints, it was decided to collect the data from the hotels situated in the Kuala Lumpur Golden Triangle. This area is one of the most famous areas for business, commerce and shopping in the heart of Kuala Lumpur, and most importantly, this area is famous for international chain hotels. Most of the five star hotels like Shangri-la, Parkroyal, Mutiara, Sheraton, Ritz Carlton, Renaissance and many more are located within the vicinity of four kilometres. According to Tourism Malaysia (2006), most of the international hotels in this area are very popular among the Arab tourists compared to other hotels in other parts of Kuala Lumpur.

With regard to the instrument, a few factors were taken into consideration prior to its development. The first relates to the language in the instrument. So as to facilitate a better understanding among Arab tourists, it was decided to develop the questionnaires both in English and the Arabic language. The reasons for this were that some of the Arab tourists were believed to understand the English language and some may have a poor understanding of English. The English version was first edited and then translated and written in Arabic by an Arab language lecturer from the Language Centre of Universiti Teknologi MARA (UiTM) who is fluent in both English and Arabic. The questionnaire comprised three

sections. The first section was developed to gather demographic information from the respondents. Questions were designed using nominal scales and focussed on respondents' age, gender, marital status, profession and country of origin. The second section was created to record information concerning the travelling pattern of the Arab tourists. Questions such as purpose of visit, frequency of visit, duration of stay were included in this section. It was felt that the inclusion of these attributes would provide significant results about the travelling pattern among these tourists to Malaysia. The third section comprised questions relating to the preferences of the respondents towards hotel restaurant food and front office attributes. This section required respondents to rank the answers.

On the data collection process, letters seeking approval to undertake the study were sent to the Human Resource managers at each hotel located in the Kuala Lumpur Golden Triangle. Out of fourteen hotels, only five hotels granted permission. The five hotels were Berjaya Time Square Hotel and Convention Centre, The Ritz-Carlton, Mandarin Oriental Hotel, JW Marriott Hotel and Renaissance Hotel. Subsequent to that, meetings with Human Resource managers at the participating hotels were held as well to explain in detail the instructions, procedure and how the questionnaires were to be administered by the front office personnel. All the respective Human Resource managers were given a time of around one month (August 2005) to disseminate the questionnaire. Subsequently, the researcher personally collected the filled questionnaires from the respective hotels. Out of 321 questionnaires disseminated, 130 useable questionnaires were collected. The questionnaires were then coded using the Statistical Package for Social Science (SPSS for Window V.16.).

For qualitative information, short structured interviews with selected Arab embassies were undertaken. This is one of the best ways to obtain insights into and clarification of the information of the overall travelling pattern of the peoples from the Arab regions. The selected Embassies were Saudi Arabia, Kuwait, Syria, and United Arab Emirates. These embassies were chosen because most of the Arab tourists visiting Malaysia are from those countries as reported by Tourism Malaysia (2006). After permission was granted from all attachés, interview sessions were conducted from 3rd September to 17th September 2005 at each respective embassy. The information gathered was then transcribed.

3. Results and discussion

3.1 Demographic profile

Frequencies related to demographic profile of the respondents were computed. Results revealed that the majority of the Arab tourists who visited Malaysia in this study were married with families which made up 77.7 percent (n=101) of the sample against 22.3 per cent (n=29) who were single. The ages ranged from 20 to above 60 years. The highest proportion was between the ages of 30 to 59 years which represents 65.4 percent (n = 85) of the total respondents followed by those aged 20 to 29 years or 30 percent (n= 39) and 4.6 per cent (n = 6) respondents over 60 years of age. It could be said from this finding that most of the Arabs tourists visiting Malaysia were among the youth to the middle aged groups compared to older groups

More than forty percent (43.8 percent, n =57) of the respondents were in the occupations classified as administrative, 40.0 percent (n=52) were in professional and technical occupations, and 5.4 percent (n=7) were students of higher institutions. The rest of the respondents were retirees (4.6 percent, n=6), sales and clerical, 3.8 percent (n=5), and others (2.3 percent, n=3). All in all, the highest proportion of respondents came from among the professional / technical and administrative (83.8 percent, n = 109). This result fitted with the result of the previous studies (Crompton, 1979; Yuan & McDonald, 1990; and Basala & Klenosky, 2001) which indicated that the pattern and frequencies of travelling are among those with high disposable income.

In regard to country of origin, the highest percentage of respondents were from Saudi Arabia (46.9 percent, n=61) followed by United Arab Emirates (13.1 percent, n=17) and Kuwait (9.2 percent, n=12) compared with other neighbouring countries such as Syria, Lebanon, Egypt, Iraq, Qatar, Oman, and Yemen. This result was in line with the Tourism Malaysia Report (2006) that the majority of Arabs coming to this country were from the oil producing countries in the Middle East region. In other words, the disposable income of people from these rich oil nations is higher as compared to other Arab nations. The small percentage of the Arab tourists (around 2 percent) from Iraq and Lebanon was probably due to the internal conflict and political instability in these countries.

3.2 Travelling pattern

Some significantly meaningful results were obtained related to the travelling pattern of the Arab tourists to Malaysia. It appeared that the main purpose of travelling was for a holiday (83.8 percent, n=109) compared to business purposes (8.5 percent, n =11), visiting friends and relatives (2.3 percent, n=3) and other purposes (5.4 per cent, n=7). The majority of them (88.5 percent, n = 115) were visiting this country for the first time, followed by 7.8 percent (n=10) visiting for the second time and 3.3 percent (n = 5) had visited more than three times. In view of the fact that the majority of Arab tourists visited Malaysia for the purpose of a holiday, it is not surprising to see 40.8 per cent (n= 53) of respondents in this study staying more than 10 nights over represented those who stayed between 7-9 nights (15.4 percent, n=20), 4-6 nights (32.3 percent (n=42), and fewer than 3 nights (11.5 percent, n= 15). Therefore, on average the length of stay among the Arabs

tourists in Malaysia was 6 nights. This period is considered by the economists to be good enough to generate a substantial amount of revenue to the country through various tourist activities (Pearce, 1983).

On travelling companion, 56.9 percent (n= 74) of the Arab tourists in this study travelled with their spouse and children, 23.1 percent, n=30 travelled with their spouse and relatives, 10.0 percent, (n=13) travelled with business associates, 5.4 percent (n=7) travelled with friends, 3.1 percent (n= 4) travelled alone and 1.5 percent (n=2) with other travelling companions. It could be contended that significant proportions of Arab tourists prefer to travel with companions as it probably provides them with security and eases some of the communication problems. This notion supports Polunin, (1989) who noted that travelling within a group provides security. It is also in line with Islamic teaching that encourages individuals especially women and children to travel with *muhrim* or blood relations. On the other hand, the major activities engaged in were sightseeing and visiting interesting places (80.8 percent, n = 105), visiting theme parks (10.0 percent, n = 13), shopping (6.9 percent, n=9) and other activities (2.3 percent, n =3).

3.3 Preferences in hotel restaurant food

In the context of this study, food preferences were simply defined as the selection of the type of food preferred by the respondents from choices available to them. In relation to this, the Western food was ranked as the most popular choice among the Arab tourists (rank 1). This was not surprising as Western food is internationally acceptable and served in most of the hotels. This was followed by Indian food (rank 2). The Indian food was favoured probably because it had a slight similarity with some of the Arab food. Surprisingly, in this analysis the Middle Eastern food was ranked third in the echelon (rank 3). However, when checking the number of hotels offering Middle Eastern food, only two hotels were found to be offering such food. Malay, Chinese and other food (rank 4) were also found to be slightly acceptable to the Arabs tourists though not as popular as Western, Indian and Middle Eastern food.

On other food attributes, factors related to quality of food (rank 1) were ranked first by the respondents followed by variety and choices of Arabic food (rank 2), menu for diet-conscious (rank 3) and provision for children in the menu (rank 4). What could be said of this result is that the Arab tourists were willing to spend as long as the quality of food met their expectations. In addition, they also expected to see some of the Arab delicacies including children's delicacies on the hotel restaurant menu.

3.4 Preferences in front office attributes

A few questions were posed to measure Arab tourists' preferences in front office attributes upon arrival at the hotel. Fast check-in (rank 1) was recognized as the most important attribute by the Arab tourists followed by friendly and personalized services (rank 2), courtesy displayed by bellmen and receptionists (rank 3), and ability of staff to communicate in Arabic (rank 4). From these ratings it could be said that the majority of Arabs tourists preferred to have fast check-in and to be allocated to their rooms, especially after an extensive and long-haul journey. Politeness and courtesy by the front office personnel were also expected by the Arabs tourists. Besides that they also preferred to have front office staff that could communicate or know a little bit of Arabic. All in all, these findings indicated that efficiency, fast service and friendlier staff are expected by most of the Arab tourists upon arrival at the hotel.

3.5 Qualitative data attributes

As previously mentioned, a small structured interview with the key informants of selected Arab attachés in Kuala Lumpur were undertaken to validate and strengthen quantitative results. The selected Arab attachés were the Royal Embassy of Saudi Arabia, the Royal Embassy of the United Arab Emirates, the Embassy of the State of Kuwait and the Embassy of the Syrian Arab Republic. Results showed that the four key informants from each embassy generally shared the same views with regard to the overall travelling pattern of the Arabs to Malaysia. Each of them mentioned that most of the Arab tourists frequently travel with family and the majority them are those from the middle aged groups as compared to the older groups. For instance, the key informant, the Saudi Embassy revealed that tourists from the Arab nation were generally middle-aged parents who preferred to bring their children along when travelling. He added that the older Arabs, especially among the Muslims were more likely to devote their life to God and probably were not really interested in travelling abroad except for pilgrimage purposes.

The key informant from UAE embassy emphasized that the majority of Arab women normally travelled with husband or families. Quoted *verbatim* he said that: "Through my observation, most women in Arab nations always travel with husbands or male relatives. Women are seldom allowed to travel alone. This is especially in the countries near to the Arab Peninsula". This information corresponded well with the quantitative result that there were only 10 percent of women respondents in this study compared to 90 percent of male respondents. In regard to occupations, the key informant of the Saudi Arabian embassy noted that the majority of Arab tourists were among those working for the private or government sector, and businessmen. The same view was given by the key informant of the Syrian and Kuwait embassies. This information again supports the quantitative results which revealed that the highest responses were for occupations of administration, professional and technical work.

On the reasons for visiting Malaysia, the key informants of the Saudi Arabian Embassy claimed that most of the Arabs travel for a holiday. He noted that the Arabs knew that Malaysia has beautiful scenery and a natural environment. For the newly married, they chose Malaysia as their honeymoon destination. He stated that before September 11, the United Kingdom and the United States had long been popular among the Saudis. However, since the incident, Malaysia has become popular among the Arab nations as this country shares the same religion. On the same note, the key informant of the Syrian Embassy commented that; *“Since the Syrian government has actively promoted tourism in the past 10 years, the mood of travelling and visiting overseas countries has increased among the Syrian and the Arab nations. Malaysia offers a lot of opportunity concerning the culture diversity, multiracial society, the ethnic minority and tourists can find the whole of Asia in one country and that is what they are looking for. They know that Malaysia is the Truly Asia thing. They can eat Chinese food, Indian food and Malay food in this country. The travelling pattern of the Arab peoples has changed. The Arabs or the Muslim peoples find difficulty in getting visas for vacations in America, United Kingdom and Europe. The Syrians do not need visas to come to Malaysia and this is one of the most encouraging things”*

With regard to the duration of stay, the majority of the Arab tourists were found to be staying in Malaysia for at least five days. This statement was given by most of the key informants. For example, the key informants of Saudi Arabia embassy noted that: *“.....as far as I know most Saudi tourists were here on holiday and they stayed in this country for at least five days”*. In terms of the activities engaged in, the information gathered from the informants supported the quantitative results which indicated that shopping is not a priority among the Arabs who are more concerned with exploring the country. For instance, key informant of the Syrian Embassy quoted: *“From the information I gathered, most of the Arabs want to see Kuala Lumpur and surrounding areas. It is nice to discover this Muslim country”*. The key informant of the UAE Embassy commented that: *“Arabs from UAE do not put shopping as their priority because they can find cheaper products of the same quality in their country. They go abroad for vacation and seeing the country. Of course, in the vacation they will bring back some souvenirs for the family and relatives”*.

All in all, the information gathered from interviews validated and strengthened the results given by the respondents in the closed ended questions. On the basis on these research findings, it appears that the pattern of Arab tourists coming to Malaysia is mostly for a vacation with spouse and children and the majority of them are visiting this country for the first time. As is the normal practice for every first time vacation, tourists are expecting the get the best experiences over their entire period of their vacation. In response to this, the government, local authorities, related agencies and the public should collectively portray a good image of Malaysia to the tourists. As such, all frequently visited areas by international tourists (historical places, national mosque, national monuments and museums) and other popular spots (airport, railway stations, public eating areas, theme parks, beaches and shopping complexes) should be well maintained and always in a pleasant condition.

As sightseeing is one of the major activities revealed in this study, the cleanliness of the city and surrounding areas therefore should be maintained all time. This is not to say that our local authorities are not concerned with cleanliness, but comments received from the international tourists indicate that they are not satisfied with the level of cleanliness in most of the major cities in Malaysia, especially Kuala Lumpur. Thus, the authorities need to make a greater effort than before to ensure the cleanliness of those places. Another issue of concern is related to public transportation. Although the government and local authorities have provided good public transportation, complaints about the inefficiency of the overall services, dissatisfaction with the dishonest taxi drivers and the reckless bus drivers, and the unfriendliness of public transport personnel still occur and have often been reported by the tourists. The information gathered from interviews with key informants in this study probably supports this notion. This issue is always being brought up in the local media, even by the politicians. Taking one example, Arab tourists complained that taxi fares sometimes were overcharged in Kuala Lumpur and were not equivalent to the distance. With this, the local authorities should take the necessary steps to provide a more efficient service by the local transport and enhance some of the human aspects such as courtesy, honesty, friendliness, knowledge and information through training and courses. Again, this is not to bluntly accuse the local authorities of never taking action on this issue, but it must be done continually. All in all, it could be said that if the matters raised were not being taken care of promptly and always, sooner or later the image of Malaysia in the eyes of Arabs and other international tourists will be tarnished and subsequently hinder the arrival of new tourists and reduce repeat vacations.

The result of this study also shows that the majority of Arab tourists visiting Malaysia are from Saudi Arabia, Kuwait, United Arab Emirates and Syria. With that pattern, the government through the Malaysian Tourism Boards needs to increase what they have done up until now to promote Malaysia to all those countries and make known to them what our country can offer them in relation to tourism products as well as business opportunities. Besides that, the needs, travelling pattern, culture, language and food of these countries need to be further studied so that we will understand what they expect when they visit Malaysia. In addition, other countries such as Iraq, Lebanon, Afghanistan, Turkey, Libya, Yemen and others cannot be ignored as they are also considered as potential markets for Malaysia despite the internal conflicts a number of these countries are still facing. Besides promoting Malaysia as a new tourist destination among the Arab nation countries, the government is also striving to establish this country as the educational hub for the Middle East region. It is

interesting to note that there were a number of university students who responded to this study. It is argued that university students besides having a holiday are probably coming with the intention of gaining a better understanding of our educational system before pursuing their study here. The interviews with a few Arab students in the International Islamic University presumably strengthened this notion. As evidence the Consul General of Saudi Arabia stated that more than 2000 students from this country are pursuing various fields of study now in Malaysia. In line with this, the government through the Ministry of Education put tremendous effort into organizing the educational expo in Dubai to introduce and promote undergraduate and postgraduate programs in Malaysia.

With regard to food choices, one of the significant findings revealed that besides other types of cuisine, home (Arab) cuisine was preferred by the Arab tourists. Nevertheless, most of the hotels in this study were found not to be offering Arab food in their restaurants. Based on this evidence, hotel operators need to understand in depth, or be more alert to the needs and demands of these groups of tourists pertaining to food. Besides Western and local food, the hotel operators should offer at least three or four of the most popular items of Arab cuisine such as *Shawarma*, *Kebab*, *falafel*, *Shish Biryani* on the menu, or have an Arab food promotion especially in the peak season when most of these tourists are visiting Malaysia. In line with this notion, some hotels in Kuala Lumpur have taken the initiative in incorporating a few Arab food items in the menu. They in fact hire cooks and chefs from the Middle East during the peak season just to cater to the Arab markets. This smart move has directly encouraged in-house Arab guests to patronise the restaurant and thus increase hotel revenue. In addition, since most of the travelling companions among the Arab tourists were family and children, it would better to include some children's food in the menu.

In relation to Arab tourists' preferences on front office attributes upon arrival at the hotel, the findings indicate that the majority of Arab tourists preferred to have fast check in, friendly and personalized services and courtesy from bellmen and receptionists. This requirement is, in fact in line with what has been obtained by many researchers in this field. Nevertheless, the issue that needs to be addressed is related to language, and from this study it is believed that most of the Arab tourists lack proficiency and understanding of the English language. This has created communication barriers especially in dealing with hotel employees and the public. Owing to these barriers, the Arabs might perceive those hotel employees and other personnel with whom they come in contact as not friendly enough, or less attentive towards them. If these matters are taken lightly by the hotel operators, in the long term it will eventually reduce room occupancy in those particular hotels. In relation to this, since Malaysia is starting to receive a majority of Arabs tourists it is suggested that the hotel operators need to make their premises known by providing personnel who are able to speak Arabic, particularly in the customer contact areas such as the front office and the restaurant. For instance, one or two personnel could be sufficient, or they could hire someone during the peak period. In fact, travel agencies and tour operators should also consider having such services in their operations. The ability to communicate in and to understand their language can have a profound effect on the hotel image and sustain the market. In sum, providing better service could mean return visits to that particular hotel in the near future could be assured.

Although, this study has made a significant contribution to the understanding of the Arab travelling pattern and preferences in hotel restaurant food and front office attributes, there are some flaws or limitations which could lead to further research. First and foremost, a limitation relates to samples used in this study. As only five hotels in the area of Kuala Lumpur's Golden Triangle participated in this study, the overall findings certainly cannot be generalised and represent the whole country. This restriction was due to budget constraints and limited time. Therefore, if more time and a larger budget were allocated, the replication of such research could be carried out in a broader scope with more hotels throughout Malaysia involved. Further research could also be carried out in various categories of hotels throughout the country. The second limitation relates to data analysis. The descriptive analysis undertaken by the researcher has given less statistical evidence to collaborate with the findings. The result would be stronger if a scientific approach to statistics, either a parametric or non parametric procedure, were employed in the data analysis section. We suggest that future research should move towards a more statistical analysis rather just a descriptive analysis. Finally, limitations pertain to the instrument. There were only a few item used to measure tourists' preferences in hotel restaurant food and front office attributes. More attributes pertaining to these variables could be used in future research.

4. Conclusion

From the overall implications of this study, it could be concluded that a strong relationship between government, local authorities, private agencies and hotel operators should be fostered to ensure that tourists' needs, especially in potential markets in this case Arab tourists, can be fulfilled. In other words, all the above-mentioned bodies should support one other to improve all types of services provided to the tourists. Failure to develop such a unity of approach would mean that the intention of the central government to see Malaysia as a world famous tourist destination, as well as other missions cannot be achieved.

References

Basala, L.S. & Klenosky, D.B. (2001). Travel style preferences for visiting a novel destination: A conjoint investigation across the novelty familiarity continuum. *Journal of Travel Research*, 40: 172-182.

- Cavana, B., & Dalahaye, B. (2001). *Applied business research: Qualitative and quantitative methods*. Brisbane: John Wiley.
- Crompton, J.L. (1979). Motivation of pleasure vacation. *Annals of Tourism Research*, 6(4): 408-424.
- Din, Kadir H. (1989). Islam and tourism – patterns, issues, and options. *Annals of Tourism Research*, 16, 542-563.
- Graburn, N.H. (1977). Tourism: The sacred journey in host and guests: *The Anthropology of Tourism*, In Valene Smith. (Ed). 17-31. Philadelphia: University of Pennsylvania Press.
- Hamarnah, A.A., & Steiner, C. (2004). Rethinking the strategies of tourism development in the Arab world after September 11, 2001. [Online] Available: <http://www.islamictourism.com>(Retrieved from June, 2005)
- Houellebecq, M. (2001). *Platform*. Original French title: Plateforme, Paris: Flammarion, 306-321.
- Malaysia Hotel Association. (2004). Malaysian Association of Hotels: Annual Report (2004).
- New Straits Time, Malaysia. (2007). Malaysia an ideal tourist's destination. (2007, March 8).
- Pearce, P.L., & Caltabiano, M.L. (1983). Inferring travel motivation from travellers' experience. *Journal of Travel Research*, 22, (Fall), 16-20.
- Polunin, I. (1989). Japanese travel boom. *Tourism management*, 10 (1): 4-8.
- Ritter, W. (1989). On desert and beaches: Recreational tourism in the Muslim world. *Tourism Recreation Research*, 14, (2), 3-10.
- Tourism Malaysia. (2003). *Annual report on profile of tourists by selected market*. Planning and Research Division.
- Tourism Malaysia. (2004). *Annual report on profile of tourists by selected market*. Planning and Research Division.
- Tourism Malaysia. (2006). *Annual report on profile of tourists by selected market*. Planning and Research Division.
- Yuan, S., & McDonald, C. (1990). Motivational determinants of international pleasure time. *Journal of Travel Research*, 4, Fall, 42-44.



An Intelligent E-commerce Recommender System Based on Web Mining

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Abstract

The prosperity of e-commerce has changed the whole outlook of traditional trading behavior. More and more people are willing to conduct Internet shopping. However, the massive product information provided by the Internet Merchants causes the problem of information overload and this will reduce the customer's satisfaction and interests. To overcome this problem, a recommender system based on web mining is proposed in this paper. The system utilizes web mining techniques to trace the customer's shopping behavior and learn his/her up-to-date preferences adaptively. The experiments have been conducted to evaluate its recommender quality and the results show that the system can give sensible recommendations, and is able to help customers save enormous time for Internet shopping.

Keywords: Recommender system, Web mining, E-commerce

1. Introduction

Nowadays, the advance of Internet and Web technologies has continuously boosted the prosperity of e-commerce. Through the Internet, different merchants and customers can now easily interact with each other, and then have their transactions within a specified time. However, the Internet infrastructure is not the only decisive factor to guarantee a successful business in the electronic market. With the continuous development of electronic commerce, it is not easy for customers to select merchants and find the most suitable products when they are confronted with the massive product information in Internet. In the whole shopping process, customers still spend much time to visit a flooding of retail shops on Web sites, and gather valuable information by themselves. This process is much time-consuming, even sometimes the contents of Web document that customers browse are nothing to do with those that they need indeed. So this will inevitably influence customers' confidence and interests for shopping in Internet.

In order to provide decision support for customers, one way to overcome the above problem is to develop intelligent recommendation systems to provide personalized information services. A recommendation system is a valid mechanism to solve the problem of information overload in Internet shopping. In the shopping websites, the system can help customers find the most suitable products that they would like to buy by providing a list of recommended products. For those products that customers buy frequently, such as grocery, books and clothes, the system can be developed to reason about the customers' personal preferences by analyzing their personal information and shopping records, thus produces the sensible recommendations for them. Therefore, it is of importance to develop the high efficient learning algorithm to capture what customers need and help them what to buy. To date, collaborative filtering has been known to be the most successful technique in analyzing the customer's shopping behavior. Collaboration filtering aims to identify customers whose interests are similar to those of the current customer, and recommend products that similar customers have liked. However, despite its success, the widespread use of collaboration filtering has exposed some problems, among which there are so-called sparsity and cold-start problems, respectively.

In order to overcome the limitations of collaboration filtering, the recommender system based on web mining is proposed in the paper. It utilized a variety of data mining techniques such as web usage mining, association rule mining etc. Based on these techniques, the system can trace the customer's shopping behavior and learn his/her up-to-date preferences adaptively. Therefore, the paper is organized as follows. Section 2 provides the details of the personalized recommender system, with the recommender process relevant to the system. Section 3 gives some experimental result about the recommender quality in our system, and Section 4 gives an overall summary.

2. The Personalized Recommender System

2.1 Overview of the recommender process

The main task of the recommender system is to acquire the customers' up-to-date preferences using web mining techniques, in order to provide decision support for their Internet shopping. Figure 1 gives an overview of the personalized recommender process of the system.

We only select some member customers as the target customers for providing recommender services, considering the efficiency of the system running and maintenance. The recommender process consists of three phases as shown in figure 1. After necessary data cleansing and transformed in the form usable in the system, target customer's preferences are mined first in phase 1. In this phase, how to trace the customer's previous shopping behavior effectively in the system is very important and can be used to make preference analysis. In phase 2, different association rule sets are mined from the customer purchase database, integrated and used for discovering product associations between products. In phase 3, we use the match algorithm to match customer preferences and product associations discovered in the previous two phases, so the recommendation products list, comprising the products with the highest scores, are returned to a given target customer.

2.2 Customer preference mining

This process applies the results of analyzing preference inclination of each customer to make recommendation. To achieve this purpose, the customer preference model is constructed based on the following three general shopping steps in online e-commerce sites.

- 1) click-through: the click on the hyperlink and the view of the web page of the product.
- 2) basket placement: the placement of the product in the shopping basket.
- 3) purchase: the purchase of the product — completion of a transaction.

A simple but straightforward idea of mining the customer's preference is that the customer's preference can be measured by only counting the number of occurrence of URLs mapped to the product from click stream of the customers. According to three sequential shopping steps, we can classify all products into four product groups such as purchased products, products placed in the basket, products clicked through only, and the other products. It is evident to obtain a preference order between products such that {products never clicked} < {products only clicked through} < {products only placed in the basket} < {purchased products}.

Supposing that c_{ij}^c is the total number of occurrence of click through of customer i across every product class j . Likewise, c_{ij}^b and c_{ij}^p are defined as the total number of occurrence of basket placement and purchases of customer i for products class j , respectively. c_{ij}^c , c_{ij}^b and c_{ij}^p are calculated from the raw click stream data as the sum over the given time period, and so reflect individual customer's behaviors in the corresponding shopping process over multiple shopping visits.

From the discussions above, the customer preferences can be acquired from the click stream data and expressed as the preference matrix $C = (c_{ij})$, which is denoted as follows:

$$C = \begin{bmatrix} c_{11} & c_{12} & \dots & c_{1n} \\ c_{21} & c_{22} & \dots & c_{2n} \\ \dots & \dots & \dots & \dots \\ c_{m1} & c_{m2} & \dots & c_{mn} \end{bmatrix} = (c_{ij})_{m \times n} \quad (1)$$

In formula (1), $i = 1, \dots, M$ (total number of target customers), and $j = 1, \dots, N$ (total number of product classes). In order to acquire each customer's preference about each product class, matrix element c_{ij} should be computed by formula (2), when considering the three shopping steps.

$$c_{ij} = \alpha \times \frac{c_{ij}^c}{\sqrt{\sum_{j=1}^n (c_{ij}^c)^2}} + \beta \times \frac{c_{ij}^b}{\sqrt{\sum_{j=1}^n (c_{ij}^b)^2}} + \gamma \times \frac{c_{ij}^p}{\sqrt{\sum_{j=1}^n (c_{ij}^p)^2}} \quad (2)$$

In the formula (2), α, β, γ represent the weight adjusting coefficient corresponding to the three shopping steps. It is evident that the weights for each shopping step are not the same. It is reasonable to assign the higher weight to the purchased products than those of products only placed in the basket. Similarly, the higher weight should be give to products placed in the basket than those of products only clicked through. Therefore, we set $\alpha = 0.25$, $\beta = 0.5$, and $\gamma = 1$. In fact, the formula (2) reflects preference order among products, and hence it is the weighted sum of occurrence

frequencies in different shopping steps.

2.3 Product association mining

In this phase, we discover valuable relationships among different products by mining association rules from the customer purchase transactions. Similar to the preference mining process, association rule mining is performed at the level of the product classes. Corresponding to three general shopping steps, the association rules can be generated from three different transaction sets accordingly: purchase transaction set, basket placement transaction set and click-through transaction set. For each transaction set acquired from Web logs, there are three phases to generate association rules: 1) Set minimum support and minimum confidence; 2) Replacing each product in transaction set with its corresponding product classes; 3) Generating association rules for each transaction set using Apriori.

After association rules are generated, the product association model can also be expressed by a matrix $P = (p_{ij})$, in which each element p_{ij} represents the association degree among the product classes in different shopping step. The matrix $P = (p_{ij})$, $i = 1, \dots, M$ (total number of product classes), $j = 1, \dots, N$ (total number of product classes) can be defined as the formula (3).

$$p_{ij} = \begin{cases} 1.0 & \text{if } i = j & \text{(within same classes)} \\ 1.0 & \text{if } i \xrightarrow{p} j & \text{(within purchase step)} \\ 0.25 & \text{if } i \xrightarrow{b} j & \text{(within basket placement step)} \\ 0.1 & \text{if } i \xrightarrow{c} j & \text{(within click-through step)} \\ 0 & \text{otherwise} \end{cases} \quad (3)$$

In the formula (3), the first condition indicates that a purchase of a product in a product class implies a preference for other product within the same product class. The second condition indicates that the degree of association in the purchase step is more related to the purchasing pattern of customers than those in the basket placement, so the association degree p_{ij} for purchase can be set 1.0, which is higher than that for basket placement. In the same manner, the association degree p_{ij} for basket placement can be set 0.25, while the association degree p_{ij} for click-through is set only 0.1.

2.4 Matching algorithm for recommendation

In the preceding sections, we have built the model of customer preferences and product association defined by preference matrix and product association matrix, respectively. The final step in the recommendation process is to score each product and produce the recommendation product lists for a specific customer. This score should reflect the degree of similarity between the customer preferences and the product association. There are several methods to measure the similarity, including Pearson correlation, Euclidian distance, and cosine coefficient. In the system, we chose cosine coefficient to measure the similarity. Hence, the matching score σ_{mn} between customer m and product class n can be computed as follows:

$$\sigma_{mn} = \frac{\sum_{k=1}^N c_{mk} p_{kn}}{\sqrt{\sum_{k=1}^N c_{mk}^2} \cdot \sqrt{\sum_{k=1}^N p_{kn}^2}} \quad (4)$$

In the formula (4), $C^{(m)}$ is a row vector of the $M \times N$ customer preference matrix C , and $P^{(n)}$ is a row vector of the $N \times N$ product association matrix P . Here, M refers the total number of target customers and N denotes the total number of product classes. So the matching score σ_{mn} ranges from 0 to 1, where more similarity between $C^{(m)}$ and $P^{(n)}$ result in bigger value.

All products in the same product classes have identical matching scores for a given target customer. However, because matching scores are computed at the level of product classes but not at the product level, the single products must be chosen and recommended to the target customer. In the system, the chosen strategy is adopted that for all products in the same classes, those products which were purchased in the latest period would be assumed to be the most popular and the more buyable products. Therefore, we use this choice strategy to provide the recommender services for the target customers.

The whole matching algorithm for recommendation can be expressed as follows:

Algorithm Recommender_generation():**Input:** customer preference matrix C , product association matrix P **Output:** recommended product lists**Begin**

- 1: Set the number of recommended products as n , the number of recommended product classes as k , such as $k < n$ and n/k is an integer;
- 2: Calculate the matching score σ_{mn} using the formula (4);
- 3: Select top- k product classes with the highest σ_{mn} as recommended product classes;
- 4: **for** each class **do**
- 5: elect top- n/k latest purchased products as the recommended products to target customer;
- 6: **end for**

End**3. The experiment**

One important issue for evaluating the recommender quality is the extent to which recommendations with higher recommender scores are accepted preferentially over recommendations with lower scores. We address this issue by comparing the distribution of scores computed from the formula (4) for accepted recommendations with the analogous distribution for offered recommendations. The results are shown in Figure 2. The scores for the accepted recommendations are based on 120 products accepted from 50 distinct recommendation lists. The distribution for the offered recommendations is taken from about 300 recommendations made to the customers who accepted at least one recommendation during the preliminary phase of system running.

Figure 2 shows that the scores of the accepted recommendations are higher than the scores of a large number of offered recommendations. For example, 76% of the products placed onto the recommendations lists have scores below 0.1, but only 22% of the accepted recommendations fall in this lower span. The mean scores for the offered recommendations are 0.072, while the mean scores for the accepted recommendations are 0.165. The difference between the two means is 0.093, falls well within the 95% confidence interval (0.089, 0.106) computing using t-test statistical method for the difference between means. These results illustrate that the score computed using the formula (4) is indeed a useful method of a previously unbought product's appeal to the target customer.

4. Conclusions

In this paper, we have developed a product recommendation system to provide personalized information services in making a successful Internet business. The characteristics of the system can be described as follow. First, the customer preference and product association are automatically mined from click streams of customers. Second, the matching algorithm which combines the customer preference and product association is utilized to score each product and produce the recommended product lists for a specific customer. The future work will include compare the suggested methodology in our system with a standard collaborative filtering algorithm in the aspect of buying precision and other recommender performance.

References

- Balabanovic M., & Shoham Y. (1997). Fab: content-based collaborative recommendation. *Communications of the ACM*, 40(3): 66-72.
- Huang Z, Zeng D, Chen HC. (2007). A comparison of collaborative-filtering recommendation algorithms for e-commerce. *IEEE Intelligent Systems*, 22(5): 68-78.
- Lawrence R.D., Almasi, G.S., & Kotlyar V., et al. (2001). Personalization of Supermarket Product Recommendations. *Data Mining and Knowledge Discovery*, 5(1-2): 11-32.
- Lee, J., Podlaseck, M., Schonberg, E., & Hoch, R. (2001). Visualization and analysis of clickstream data of online stores for understanding web merchandising. *Data Mining and Knowledge Discovery*, 5(1-2): 59-84.
- Lin, W., Alvarez, S.A., & Ruiz, C. (2002). Efficient adaptive-support association rule mining for recommender systems. *Data Mining and Knowledge Discovery*, 6(1), 83-105.
- Sarwar, B., Karypis, G., Konstan, J., & Riedl, J. (2000). *Analysis of recommendation algorithms for e-commerce*. Proceedings of ACM E-commerce Conference.
- Sarwar, B., Karypis, G., Konstan, J., & Riedl, J. (2001). Item-based collaborative filtering recommendation algorithm. Proceedings of the Tenth International World Wide Web Conference, pp.285-295.

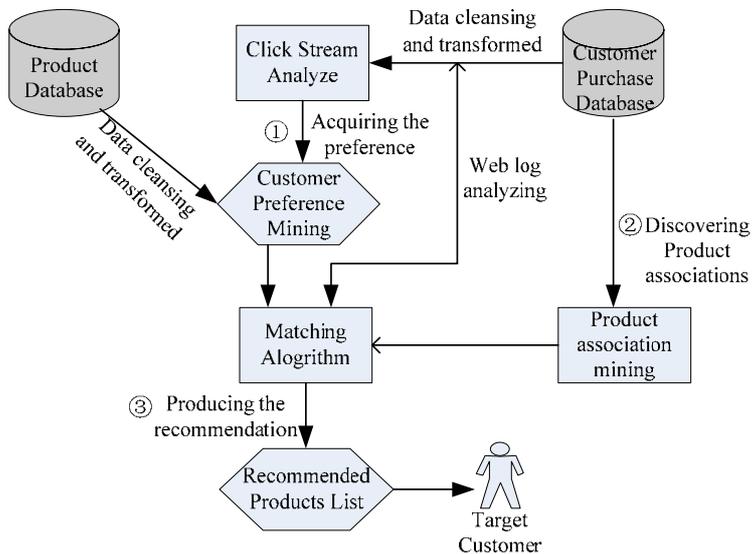


Figure 1. Overview of the recommender process of the system

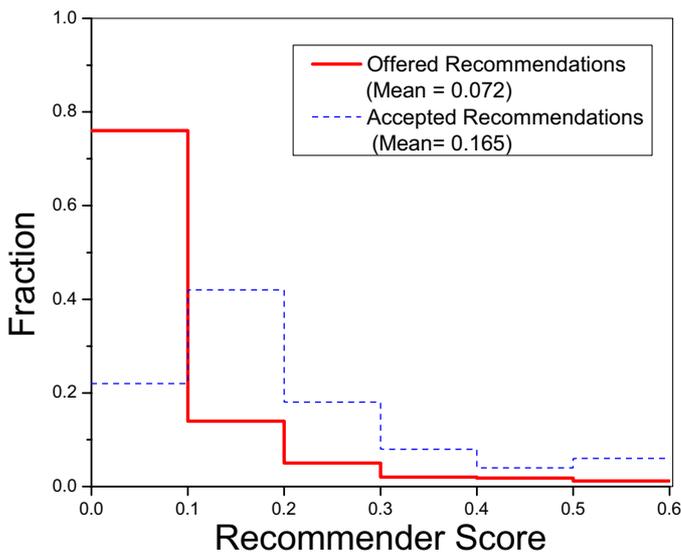


Figure 2. Distribution of scores for offered and accepted recommendations



The Construction of Business Ethics Based on Enterprise's Strategy

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Abstract

Operating a company by means of breaking the business ethics will bring itself in trap, and even affect the society, so it is imperative under the situation to comprehensively enhance the level of the business ethics for enterprise. Some advices about how to construct the business ethics respectively from three views including enterprise, government and consumer were discussed, and the solution about the business ethics based on enterprise's strategy was first brought into the interior decision-making system of the enterprise.

Keywords: Enterprise strategy, Business ethics, Enterprise, Government, Consumer

1. Introduction

With the development of the social division, the development of the relationship between enterprise and consumer becomes more and more mature. On the one hand, to acquire their own needed benefits, enterprise and consumer will cooperate to some extent, and on the other hand, enterprise tries to realize "profit maximization", but consumer hopes to purchase better quality products at good values, and both sides will oppose each other because of the conflict of benefit. In the opposing process, the advantages of organization and information of enterprise make consumer be in a passive status, and the problem of business ethics occurs before us.

At present, the ethic problems between enterprise and consumer mainly include the ethic problem in products, the ethic problem of pricing, the ethic problem of sales promotion and the ethic problem in service. By the drive of actual benefit, many enterprises are willing to accept wrongdoings, and more criticize others' immoral managements, and attribute their immoral managements to the big environment, and refuse assuming the moral responsibility for their own behaviors.

For the existences of these business ethics problems, the inevitability of them should be admitted first. Especially in the stage that China is constructing the market economy and implementing the reform of economic system, it seems inevitable for many enterprises to pursue the capital accumulations and ignore the ethics and morality. At the same time, the neglect of enterprises to the ethics, the deficiency of the ethics construction in the macro control of the government, the deficiency of the consumers' self-protective and legal consciousness, and the lack of the ethics construction of the whole society all induce the prominence of the business ethics to some extent.

2. The establishment of the harmonious three-party model based on the relationship between enterprise and consumer

Based on the opposite and uniform relationship between enterprise and consumer, the main problems about business

ethics were analyzed, and the result indicated that the reasons of these problems were mainly from government, enterprise and consumer. Whether enterprise can follow the business ethics effectively is decided by the degree that the enterprise management layer assumes the social responsibility and the stakeholders' cognizance and acceptance degree. The most ideal situation is that the company managers balance the strategic decisions of the company from consumer's view, and if the benefit conflict occurs, the managers try to find out a rational, objective and fair solution between enterprise and consumer. According to this hypothesis, the enterprise strategic model is established (seen in Figure 1).

In the model, the enterprise brings consumer's benefits into the making process of the enterprise's strategy, and in this process, enterprise consciously seeks a balance and restriction between the economic benefit and the business ethics in the interior of the enterprise, and reduces the lowest degree of the conflict between enterprise and consumer as far as possible in the decision-making process. For some problems that the enterprise can not solve or the conflicts that the interior decision can not balance, the relative departments of the government are expected to change the government function and harmonize between both sides. Taking the steel enterprise as the example, the interior decision-making when enterprise considers consumer's benefit and government's control, and the consumer's protection about their own benefits and the construction of business ethics will be concretely described as follows.

2.1 Contents of the business ethics decision

The management of enterprise is decided by the decision-making mechanism to large extent. In modern enterprise system, except for digging the interior drive of enterprise, stimulating the vital force of the enterprise decision mechanism, strengthening the harmonizing function and enhancing the efficiency of the enterprise decision-making mechanism, the enterprise decision-making mechanism should clearly understand the social responsibility of the enterprise, and introduce the ethic factors to make decision based on the social responsibility. The enterprise should not only consider the economic benefits brought by the decision, but consider the ethic influences for the environment, consumers and other stakeholders.

2.2 Business ethics decision model

According to above hypotheses and thoughts, the decision-making model in the economics is used to balance the economic system and the benefit system for the enterprise.

First, the immaterial factors such as brand, reputation, consumer's support and social benefit because of the business ethics are evaluated aiming at their economic values, and the concrete evaluation is made by professional assets evaluation institution.

Second, the economic benefits and social benefits of different combinations are accounted aiming at their economic values, the non-difference curves are defined, i.e. the different decision combinations can bring same economic values for the enterprise, and these curves are seen in Figure 2.

Third, according to the financial state, the asset capability, and owners and shareholders' investments, the enterprise budget line is confirmed to embody the investments of the enterprise in the constructions of the economic system and the ethic system. The enterprise budget line is seen in Figure 3.

Last, the enterprise budget line and the non-difference curves are combined to find out the equilibrium point of the decision of the enterprise for realizing the unification of the economic benefit and the social benefit (seen in Figure 4). In this process, the enterprise can reduce the conflicts between it and consumer to the lowest level in the interior.

Through above analysis, the conflicts between enterprise and consumer are brought into the interior decision-making of the enterprise, which can make the enterprise fully consider consumer's rights and interests. Though in the initial stage, this method will increase the costs of enterprise, but for a long time, this method will further reduce the costs and acquire better economic benefits.

Of course, various measures should be adopted by the enterprise. First, the enterprise should carry out its legal responsibilities well and enhance the employees' ethic consciousness and quality. Second, the enterprise should criticize the anti-ethic behaviors by certain system and measures. Third, the enterprise should emphasize the construction of business ethics on the strategic level, and take it as the powerful support of the enterprise culture. Fourth, the enterprise should implement comprehensive and effective performance management, and take the ethic index as an important part in the employee's assessments, and combine the assessment results with salary and promotion to ensure the construction of business ethics.

3. Conclusions

Though the construction of the enterprise is very important for the development of the business ethics, but the functions of the government and consumers should not be ignored too. The government and consumers are exterior factors to force the enterprise develop the activities accruing with the ethics, and the enterprise is the interior factor to make it consciously restrain its own behavior by the ethic rules in a series of activities when the ethic quality of the enterprise is enhanced. The exterior factors function by the interior factor, and after the exterior rewards and punishment measures

are implemented, the effects for the enterprise are finally influenced by the interior moral quality of the enterprise. In the present society of China, the ethic environment of the whole society has changed, multiple moral concepts exist together. The consensus of the ethics in the past closed society has been lost, and the subject consciousness of the enterprise is strengthened obviously. For the enhancement of the business ethics, both the exterior construction and the interior construction should be strengthened, and the interior construction of the enterprise should be actively strengthened from the exterior construction, and the ethic concept should be solidified as a moral faith from the low-level state to the high-level state, and go to autonomic morality from heteronomous morality.

References

Chen, Bingfu & Zhou, Zucheng. (2006). *An Introduction to the Business Ethics Theory*. Tianjin: Nankai University Press.

Chen, Hongbing, Feng, Lin & Yan, Liqun. (2002). The Interact Between the Ethics Principle and the Economic Principle in the Enterprise. *Journal of Chongqing University (Social Sciences Edition)*, No.2.

Gao, Hongye. (2004). *Western Economics*. Beijing: China Renmin University Press.

Liu, Hui. (2006). My Opinion on Building of Enterprise Ethic. *Metallurgical Economics and Management*, No.2.

Yuan, Longcheng. (2005). Though Over the Construction of Business Ethics in Chinese Enterprises. *East China Economic management*, No.7.

Zhong, Gengshen & Xu, Xiangyi. (2006). *Strategic Management*. Jinan: Shandong People’s Press.

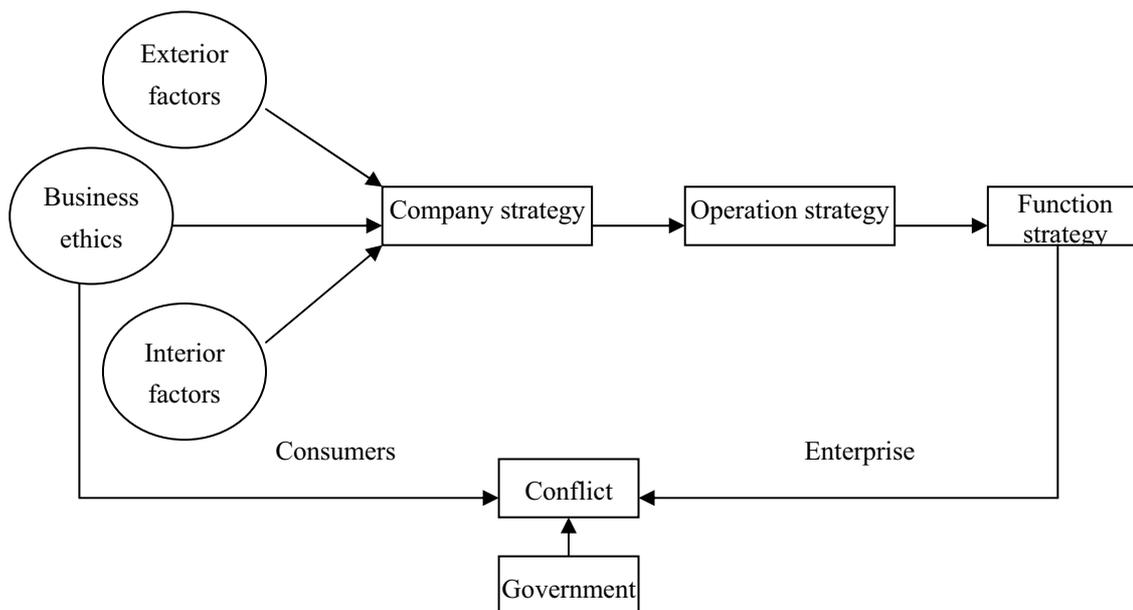


Figure 1. The Establishment of Three-Party Harmonious Model Based on the Relationship Between Enterprise and Consumer

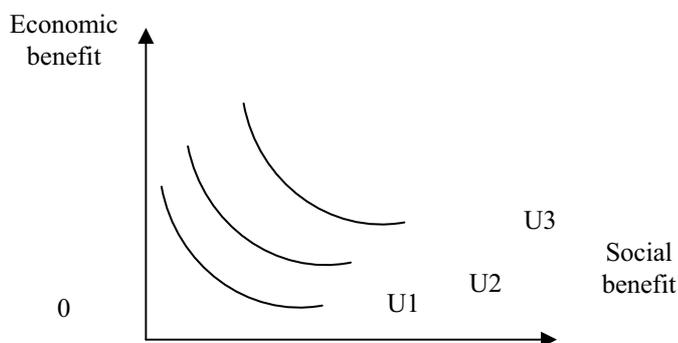


Figure 2. The Non-difference Curves of the Enterprise Economic Benefit and the Evaluated Social Benefit

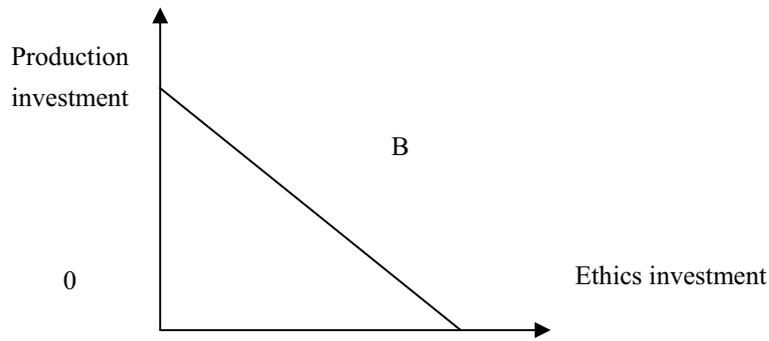


Figure 3. Budget Line of Enterprise

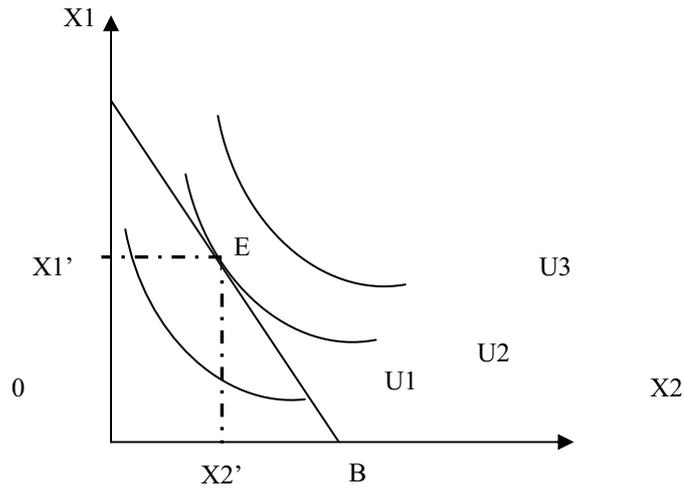


Figure 4. The equilibrium point of the enterprise economic benefit and social benefit



Linkage between Employee's Performance and Relationship Conflict in Banking Scenario

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Abstract

To enhance performance of employees of commercial banks, it is imperative to improve harmony, develop favorable relationship and alleviate relationship conflict among them. To ascertain the viability of assertion, sample of 450 individuals belonging to different commercial banks was selected. Questionnaire comprising three components were sent directly to the sample target. Part first relates to general information, second part consist of relationship conflict, and last part relates to the employee's performance. The study delineates that relationship conflict has significant impact on employees' performance. Their performance depletes ranging between 28 percent and 46 percent due to relationship conflict. The model is significant at the 95% of confidence level ($p < 0.05$) and there is negative relationship between relationship conflict and employee's performance. This study provides novel results regarding previously unexplored domain of relationship conflict and employee's performance. Relationship Conflict is dangerous for organizations employees, so top hierarchy strives to get rid of relationship conflict rather than relegating its resolution. Management in organization establishes redress grievances & interactive cell comprising senior, middle and lower level management. Special strategies may be adopted to lessen relationship conflict amongst the employees of an organization enabling organization to improve their performance. It is imperative to provide smooth functioning in the commercial banks due to their promising role in today's scenario of economic growth and imbued consumer's expectation. This paper is an endeavor to unveil factors impinges disagreement among employees and subsequently yielding the solution. Adoptions to these solutions being novel in nature would enhance employee's performance in commercial banks considerably.

Keywords: Conflict, Intra-group Conflict, Relationship conflict, Bank employee's performance

1. Introduction

Economic recession is gripping whole world; it come form United States of America to Asia, and Pakistan is one of them. It means countries' organizations are going to get adversely effected slowly. In this situation, people need to evaluate its effects and ferret out remedial measures. It is therefore candid opinion that recession news is likely to have negative impact on employees as well as organizations. When business is successful, their employees traditionally

become emotional, physically even spiritually. Conversely, if business is worsening, its employees spent most of time in tension and focusing on their future. Some time, it adversely affects their performance and become cause of conflict between workers and supervisors. Conflict is a state in which two or more parties have incompatible objectives and in which their perception and behavior commensurate with that incompatibility (Mack, 1965). Conflict is a foreseeable authenticity. It may not fade away nor ignored (Michael & Wayne, 2001; Medina, Munduate, Dorado, Martinez & Guerra, 2005). It is found in personal, group or organizational interaction.

Conflict is either “good or bad” and “sinful or immoral”. It assumes significance, once it is handled intelligently. When conflict is handled unskillfully and dissipatedly, it becomes bad and when it is handled morally and creatively, it ceases to be frightening and crippling, and results in growth, maturity, and empowerment for individual, group and organization. Conflict is a disagreement about issues between two or more persons, groups, nations and countries. Conflict occurs due to difference of perception, difference of ideas, difference of behaviors, difference of interest, different attitudes, religious differences, political differences and unjustified distribution of national resources. Conflict is not always negative. It depends how to handle the conflict. If you handle properly it can become source of development, otherwise it creates hostilities (Kigali, 2006). So it affects quality, performance and profit of organization. Conflict is essential for life and dynamic for team performance (Medina, et al., 2005). If managers ignore clash between co-workers, these clashes convert into personal and emotional conflict between them and in the long run, these clashes damages the organizational culture, worker moral and overall reduction of organization performance. There are three different point of view regarding conflict among employees in the organizations. First, traditionally, conflict must be avoided. Secondly, from human relations point of view, it is natural and need not to be negative rather possess potential to be a positive force to enhancing performance. Lastly, internationally, it can be positive force to develop auspicious relations and perform effectively.

In situation of conflict among employees, they seriously think about alternatives (Schwenk, 1990). Guetzkow and Gyr (1954) first time divided intra-group conflict in two types: relationship conflict and task conflict (Jehn, 1997, 1995; Pelled, 1996a; Simons and Peterson, 2000). Relationship conflict is pessimistically associated with emotions (De Dreu, and Van de, 2001), satisfaction (De Dreu and Van Viannen, 2001) and team effectiveness (Jehn, 1997). Relationship conflict is a perception of interpersonal incompatibility and it typically includes tension, annoyance and animosity among group members (Jehn, 1995; Simons, Peterson, 2000). It is a related to difference of relationship between team members. It is infertile, difficult to manage and likely to leave people with more pressures and less ability to manage them. Normally, it occurs between frontline workers and their supervisors. It can reduce creativity, innovation, quality, and performance of employees and organizations (Jehn, 1994, 1995; Amason, 1996; De Dreu & Van de, 1997; Friedman & Curral & Tsai, 2000; Michael et al., 2001; Passos & Caetano, 2005). Relationship Conflict also relates to conflict about personal taste, political preferences, values, and interpersonal style (De Dreu, Weingart, 2003). Relationship conflict negatively effects on team performance and it breaks personal and professional relations and it also produces tension between team members (Hackman & Morris, 1975; Wall & Callister, 1995).

Difference of opinion or divulgence from the standard norms breads conflict in an organization. Power sharing, beliefs, conviction behaviour variation and living pattern are some of the reasons which engender dichotomy among individuals as well as teams working in society (Varney, 1989). Relationship also experiences anxiety and at time quarrel among individuals due to emotional factors. Emotional approach could erupt due to divergence of belief, conviction, standards, experiences and disapproval by some of the people. Such like situation develops negative reaction and relations among the people associated with particular organization (De Dreu, and Van de, 2001). Relationship conflict creates negative work environment and impact adversely on working conditions. People become apprehensive and hold their forthright cooperation in discharge of their function. Organization cognizance of the negative fall out of the relationship conflict strives to block team work for the growth of organization (Robbins, 1974; Jehn, Chadwick and Thatcher, 1997; Kankanhalli, Tan and Wei, 2007). Once relationship conflict erupts, each individual's displays varying difference. In case conflict continues, it results in nervousness, rivalry, stress and discontents, which results into reduction in performance of employees in organization (Pondy, 1967). Divergence of thoughts, action and opinion results in sorting out flimsy occurrences. It depletes energy of people to resolve conflict or to counter its effect rather than spending time in achievement of organizational objectives (Simons and Peterson, 2000). Management endeavors to maintain harmony, cooperation and coordination in organization, in order to allow teams to function with their complete capacity. To achieve these objectives, conduct of survey is mandatory to find out situation in different entities of organization (Oliver, 1997). In the present era, attaining productivity and maintaining performance standards is the major concern for organization. Similarly, employees at large strive to remain focus towards their work and growth of organization because their reward is related to the success of organization (Jackson, and Schuler, 2007).

1.1 Significant and Objective of the Study

This study is focusing on commercial banks of Pakistan with respect to their employees who are working in a particular branch and employs to alleviate relationship conflict. Relationship conflict is related with interpersonal

incompatibilities. Management makes cogent decisions because they know that conflict is very important and it has significant impact on employee's performance. It's an era of competition in banking sectors, all banks are in pursuit to improve their services and products by according due importance to the customers. However, competition has also led to usurping small fries by the big ones. Large number of stakeholders transfers their loyalty from one bank to another. It had put the banks on toes to operate with improved performance. Conversely, there is no supposition of a "best way" to control conflict. The process of managing conflict to achieve constructive results is complex situation which becomes more pronounce for the organization success (Henkin & Cistone & Dee, 2000).

Bank management is offering Golden Handshake for reduction of their employees. This situation creates tension for all individuals which are working in banking sectors. And they also feel insecure in their jobs. After conducting preliminary data form banking sector, relationship conflict was seen among the employees who remain on culmination point of shifting from one bank to the other. The main objective of this study is to improve the performance of financial Institutions employees through alleviation of relationship conflict.

1.2 Problem Statement

Composition of personnel in the organization is of various segments of society with diversified experiences and backgrounds. Once focused is an organization objective, it is natural that difference of opinion among individual in general and groups in particular is likely to surface. Under the circumstances, it is accentuated to establish how the conflict among the members would affect on the employee's performance and to what extent some of the conflict can be absorbed as a course of normal activity. More specifically, this study embarks upon enhancing the performance of bank employees through alleviation of relationship conflict.

1.3 Hypothesis Development

Relationship conflict is related with poor decisions and correlated in ongoing groups, which create a prescriptive dilemma (Simons et al., 2000). Relationship conflict usually opposes dynamism that needs to be resolving (Friedman et al., 2000). Relationship conflict has significant relation with team performance and its satisfaction (Passos et al., 2005). It was negatively associated with individual's satisfaction (Jehn, 1995) and well-being (Dijkstra, Dierendonck, Evers, De Dreu (2005). Conflict is highly complex in decision making and accomplishment of production tasks. The existing literature provides strong support as regard to negative impact of relationship conflict on decisions, individual's satisfaction, affective reactions and well-being of the employees. On the basis of above literature, following hypotheses are be developed.

H₁ Relationship conflict has no significant impact on low level employee's performance

H₂ Relationship conflict has no significant impact on middle level employee's performance

H₃ Relationship conflict has no significant impact top level employee's performance

H₄ Relationship conflict has no significant impact overall employee's performance

2. Method

2.1 Sample

Pilot study was conducted taking sample from the targeted banks. Intention was to evaluate the performance of bank's employees with least relationship conflict and to measure such like work environment. Appreciative of the facts that there always exist uniformity as well as divergence therefore, effects of negative fall out are mitigated and positive efforts are appreciated. It was considered essential to evaluate the reliability of instrument and its efficacy, particularly in Pakistan scenario. A number of studies have been conducted with the Lusch and Serpkenci, (1990) and Cox's (1998) instruments however, its reliability under the work environment in Pakistan was a point to consideration. Consequently, 36 members of the population were chosen for the pilot study. It aimed to analyze the instrument reliability, evaluate the performance of employees under conflict relationship conflict as well as harmonized working condition. Cronbach Alphas was applied to obviate the possibility of overlapping of data.

Upon successful conduct of pilot study and satisfactory results achieved through the use of this instrument, main study was conducted. For the main study, over fifty branches of banks were selected. Of those 600 questions were sent to the population, 450 questionnaires were received for this study.

2.2 Instrument & Measures

Cox's (1989) instrument was used for measurement of relationship conflict (Friedman, et al., 2000; Medina et al., 2005). It is pertinent to mention that the scale used in this study is different than Jehu's (1995) scale of relationship conflict. This scale covers conflict in reality rather than opinion of the people about the conflict. Five point likert scale was used, 5 for strongly disagree whereas 1 for strongly agree. Cox (1998) scale proved its reliability of 0.91 whereas other scale of Medina et al., (2005) found a reliability of 0.81 for this scale. Table No 1 shows mean and standard deviation of each item of relationship conflict.

Lusch et. al., (1990) and Stathakopoulos (1998) scale comprising 17 items were used to determine the performance of employees in organization. This scale measures performance of employees' with respect to the peers in organization. For this purposes, 5 is used to measure the performance as performance above than peers whereas 1 measures performance below than peers. Additionally, self rating is accurate and precise in this scale. However, self rating as biased factor cannot be overlooked in general cases. This scale of Stathakopoulos (1998) finds reliability as 0.88 which is similar to 0.885 found in the study.

2.3 Procedure

The questionnaire was distributed among random sample of various branches of renounced banks in Pakistan. Mode of dispatch included in person delivery as well as through mail. Follow up visits were also under taken to get the work complete. Personal interaction with the Bank's Managers was established as and when it deemed necessary. Since the sample population was educated segment therefore, English language was used. However, in informal meetings, certain aspects were explained in native language Urdu too. Some of the questions in the instruments were asked in different manner to extract unbiased opinion of the employees. Confidentiality of personal information was guaranteed to avoid embarrassing situation for the employee among their colleagues. By and large questions were received within stipulated time frame. However, reminders were also sent to the target sample for early completion of the task.

3. Results and Discussion

To evaluate the results of the study regression test, mean standard deviation and regression was applied. Through regression test, R Square relationship of independent variable was analyzed. Impact of independent variable over dependent variable was measure through Beta Coefficient. However, relative importance was shown with the help of t-value. It could be deduced that regression analysis measures impact, importance and relationship between independent variable with dependent variable. To accrue the result of mean, standard deviation, regression and cronbach's alpha Statistical package for Social Sciences (SPSS) was applied.

According to Table No. 02, the regression analysis of managerial levels shows that the values of R Squares of lower, middle and top level employees are 0.573, 0.489 and 0.518 respectively. It shows that lower level employees perceived stronger association with relationship conflict and employee's performance. Therefore, overall model is significant at the 95% of confidence level ($p < 0.05$) and there is negative relationship between independent and dependent variables. The regression coefficient of relationship conflict is -.278, -.345 and -.457 of lower, middle and top level employees respectively. It means that top level employee's performance diminishes 45% due to relationship conflict, middle level employee's performance lessens 35% due to relationship conflict and lower level employee's performance condenses 28% due to relationship conflict. Results reveal that -14.528, -18.148 and -19.652 are t-value which divulge relevant importance of relationship conflict for lower, middle and top employee's performance.

In the Table No 3, the result of regression analysis for employee performance showing that the value of R-Square is 0.537 and the F-value is 78.294. The results are revealing that the model is significant at the 95% confidence level ($p < 0.05$) and there is strong relationship between independent and dependent variables. The regression coefficient of relationship conflict is -.413 in this model and significant, which means that it decrease employee performance by 41%. Results reveal that -11.428 are t-value which divulges relevant importance of relationship conflict for lower, middle and top employee's performance.

From the above results, it is evident that there is no significant difference between lower, middle, top levels employees' perception towards relationship conflict and their impact on performance. On the basis of these results we reject all H_1 to H_4 . It is evident that conflict has more negative and significant relationship with employee's performance. As regression analysis reveals, impact of relationship conflict are -0.413 on employee's performance and -0.278, -0.345 and -0.457 for lower, middle and top level employees respectively which shows the significance of this variable towards the employee performance.

4. Conclusion and Recommendations

Measurement of relationship aspect in the Banking sector is essential due to the sensitivity of employees' job. This study provided useful findings in this area of relationship conflict and Bank's employee performance. It was established that employee's performance is adversely affected between 28% and 46 % on account of relationship conflict. This model proved to be significant at 95% of confidence level ($p < 0.05$). However, negative relationship has been found between dependent and independent variable. This study revealed some of the essential facts that conflict relation exist in the sample institutes. Management strives to reduce the conflict by keeping employees focus towards their objectives and team work. A dedicated cell is established to discern conflict at its primary level and resolve the same as deemed essential. It was also found that Mangers at time becomes reluctant to interfere in personal conflict of employees. Moreover, employees at time don't feel comfortable interference of third party as they consider it as their private affair. Since relationship conflict adversely effect smooth functioning of organization therefore, it becomes mandatory that such like activity is addressed at gross root level, in order to preclude it adverse effect on overall performance.

Employee conflict doesn't restrict to the parties involved but transverse to other co-workers too. Employees in close vicinity of conflict origin, start passing information of conflict up and down, resultantly, it becomes organization conflict. Groups are created and people take side of one another. Employee conflicts rarely involve just two parties and often entangle and polarize others. When employees begin passing information back and forth and take sides, it ceases to become merely an individual conflict. Managers are usually hesitant to interfere in conflict. It also proved that conflict between two employees continue to exist and those two people don't like each other. Consequently, people involved in conflict share their thought with their colleagues and it engenders discomfort in work environment. It calls upon change of behaviour at large. For the safety and health reasons of employees, it is imperative that such like situation is controlled before it gets escalated and impedes organizational performance. Manger's capabilities to handle the situation also became prominent in certain cases therefore, grooming of employees along with the management could bring about better work conditions: hence, conflict resolution is considered essential to maintain healthy work environment.

References

- Amason, A. C. (1996). Distinguishing the effects of functional and Dysfunctional Conflict on Strategic Decision Making: Resolving a Paradox for top Management teams. *Academy of management Journal*, 39, pp.123-148.
- Cox, K. B. (1998). Antecedents and effects of intergroup conflict in the nursing unit", unpublished doctoral dissertation, *Virginia Commonwealth University*, Richmond, VA.
- De Dreu, C. K. W., Van de Vliert, E. (Eds) (1997). *Using Conflict in Organizations*, Sage, London.
- De Dreu, C. K. W., Weingart R. L. (2003). Task Versus Relationship Conflict, Team Performance, and Team Member Satisfaction: A Meta-Analysis. *Journal of Applied Psychology*, Vol. 88, No. 4, pp.741-749.
- De Dreu, C.K.W., Van de Vliert, E. M. (2001). Minority dissent and tem innovation: The importance of participation decision making. *Journal of applied Psychology*, 86, pp1191-1201.
- Dijkstra, M.T.M., Dierendonck, D.V., Evers, A., De Dreu C. K.W. (2005). Conflict and well-being at work: the moderating role of personality. *Journal of Managerial Psychology*, Vol.20, No. 2, pp. 87-104.
- Friedman, R. A., Tidd, S. T., Currall, S. C., Tsai, J.C. (2000). What goes around comes around: the impact of personal conflict styles on work conflict and stress. *International Journal of Conflict Management*, Vol. 11, pp.32-55.
- Guetzkow, H., Gyr, J. (1954). An analysis of conflict in decision-making groups. *Human Relations*, Vol. 7, pp.367-81.
- Hackman, J. R., Morris, C. G. (1975). Group task, group interaction process, and group performance effectiveness: a review and proposed integration, in Berkowitz, L. (Eds), *Advances in Experimental Social Psychology*, Academic Press, San Diego, CA, Vol. 8, pp.45-99.
- Henkin B. Alan, Cistone J. Peter. Dee R. Jay. (2000). Conflict management strategies of principals in site-based managed schools." *Journal of Educational Administration*, Vol.38, No.2, pp. 142-158.
- Jackson, E. S., Schuler, S. R. (2007). Managing individual performance: a strategic perspective, *Rutgers university*, New Brunswick, NJ.
- Jehn, K. A. (1994). Enhancing effectiveness: an investigation of advantages and disadvantages of value-based intragroup conflict. *International Journal of Conflict Management*, Vol. 5, No.3, pp.223-38.
- Jehn, K. A., Chadwick, C., Thatcher, S. M. B. (1997). To agree or not to agree: the effects of value congruence, individual demographic dissimilarity, and conflict on workgroup outcomes. *The International Journal of Conflict Management*, Vol. 8, pp.287-305.
- Jehn, K.A. (1995). A multimethod examination of the benefits and detriments of intragroup conflict. *Administrative Science Quarterly*, Vol. 40, pp. 256-82.
- Jehn, K.A. (1997). A qualitative analysis of conflict types and dimensions in organizational groups. *Administrative Science Quarterly*, Vol. 42. No.3, pp.530-57.
- Kankanhalli, A., Tan, B. C. Y. & Wei, K. K. (2007). Managing Conflict in Global Virtual Teams. *Journal of Management Information Systems*, Volume 24.
- Kiglai. (2006). Training Manual on Conflict Management, The National Unity and Reconciliation Commission, Republic of Rumanda.
- Lusch, F. & Serpkenci, R. A. (1990). Personal differences, job outcomes, and store performance: a study of retail store managers. *Journal of Marketing*, Vol. 54 January, pp 85-101.
- Mack, R. W. (1965). The Components of Social Conflict. *Socail Problems*, Vol. 22, No. 4, pp. 388-397.

- Medina J. Francisco, Munduate. L, Miguel, A. Dorado, Martínez Inés, Guerra, M. José. (2005). Types of intragroup conflict and affective reactions. *Journal of Managerial Psychology*, Vol. 20, No. 3/4, pp. 219-230.
- Michael F. DiPaola, Wayne K. Hoy. (2001). Formalization, conflict, and change: constructive and destructive consequences in schools. *International Journal of Educational Management*, Volume 15, Number 5, pp. 238-244.
- Oliver, R. L. (1997). *Satisfaction*, McGraw-Hill, Boston, MA.
- Passos M. A. & Caetano A. (2005). Exploring the effects of intragroup conflict and past performance feedback on team effectiveness. *Journal of Managerial Psychology*, Volume 20, Number 3/4, pp. 231-244.
- Pondy, L. (1967). Organisational conflict. *Administrative Science Quarterly*, Vol. 12, No.2, pp.296-320.
- Robbins, S. (1974). *Managing Organizational Conflict*, Prentice-Hall, Englewood Cliffs, NJ.
- Schwenk, C. R. (1990). Conflict in organizational decision making: an exploratory study of its effects in for-profit and not-for-profit organizations. *Management Science*, Vol. 36, No.4, pp.436-48.
- Simons, T. L., Peterson, R. S. (2000). Task conflict and relationship conflict in top management teams: the pivotal role of intragroup trust. *Journal of Applied Psychology*, Vol. 85, pp.102-11.
- Stathakopoulos, V. (1998). Enhancing the performance of marketing managers, Aligning Strategy, structure and evaluation systems. *European Journal of Marketing*, Vol. 32. 5/6 pp. 536-558
- Varney, G.h. (1989). *Building productive teams: As action guide and resource book*. San Francisco, CA: josey-Bass, Inc.
- Wall, J. A., Callister, R. R. (1995). Conflict and its management. *Journal of Management*, Vol. 21, pp.515-58.

Appendix

Table 1. Descriptive Analysis of Relationship Conflict Items

Relationship Conflict Items	Mean	Standard Deviation
The atmosphere here is often charged with hostility.	4.0241	1.4351
Backbiting is a frequent occurrence.	4.0135	1.4512
One party frequently undermines another.	3.9066	1.5148
There is an often feeling of hostility among parties.	4.0178	1.3114
Much "plotting" takes place "behind the scenes".	3.9816	1.2912

Table 2. Beta Coefficients, Standard error in parenthesis, t-Values in Brackets, and P-Values in italics

Management Level	Constant	Relationship Conflict	R Squares	F-Statistic
Lower Level Management	4.215	-.278	.573	79.542
	(.136)	(.034)		
	[27.415]	[-14.528]		
	<i>.001</i>	<i>.002</i>		<i>.004</i>
Middle Level Management	3.418	-.345	.489	48.472
	(.212)	(.075)		
	[7.451]	[-18.148]		
	<i>.005</i>	<i>.001</i>		<i>.006</i>
Top Level Management	5.741	-.457	.518	67.178
	(.184)	(.014)		
	[10.542]	[-19.652]		
	<i>.000</i>	<i>.007</i>		<i>.005</i>

Dependent Variable: Employee's Performance

Independent Variable: Relationship Conflict

Table 3. Beta Coefficients, Standard Error in parenthesis, t-Values in Brackets, and P-Values in italics

Dependent Variable	Constant	Relationship Conflict	R Squares	F-Statistic
Employees Performance	3.470	-.413	0.537	78.294
	(.134)	(.029)		
	[19.654]	[-11.428]		
	<i>.000</i>	<i>.002</i>		<i>.004</i>



Decision Orientations towards Shopping and Buying among Young-Adult Malays in the Universities

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Abstract

The learning processes that every consumer goes through would be the determining factors to the decisions a consumer makes when one is purchasing a product or paying for a service. Consumer educators and those involved with consumer interest studies in general consider the above statement as extremely obvious even though one might assume that consumers' learning and decision-making are a related phenomenon. In essence, such relationship has not been systematically explored in consumer research (Sproles & Sproles, 1990). As the number of product increases and the variety of goods available in the stores and shopping malls multiplies, this helps to broaden-up consumer choices. Similarly, with the availability of multi-component products and electronic purchasing capabilities not only it has broadened the sphere of consumer choice, it also adds complication in making a purchase decision. Based on the examination of the types of consumer decision-making styles in the literature, an instrument was developed to measure the "general orientations toward shopping and buying" and samples from undergraduate students from several universities in the northern region of West Malaysia were used.

Keywords: Consumer decision making style, Young-adult, Malay, Consumer style inventory

1. Introduction

Young adult consumers are very much drawn in with current trends as compared to other age groups. Typically, most young adult consumers are trendsetters among themselves as well as playing a role as trendsetters to the population at large. Previous studies have looked into several dimensions when examining the way the individual consumers learn during their consumption process (Martin & Bush, 2000). Several of these studies start-off from the foundation of social

learning theory, which proposes that a person learns common behaviors and attitudes from their previous experiences. Sproles (1985) as well as Sproles and Kendall (1986) used data from samples of young consumers in the United States to measure basic characteristics of consumer decision-making styles. They developed and validated a Consumer Styles Inventory (CSI) for this purpose. In order to establish generality of CSI, Sproles and Kendall (1986) recommend that it can be done by identifying and testing decision-making traits among different youth and adult groups. Socialization is a process that usually takes place within the family and may shape consumption patterns. As such, it may affect not only the present but also the future consumer well-being. The significance of young consumers is recognized when Ward (1974, p.2) defines consumer socialization as “processes by which young people acquire skills, knowledge, and attitudes relevant to their functioning as consumers in the marketplace.” Besides the process of socialization, the interrelationships between specific consumer decision-making styles and individual learning styles as documented by Sproles and Sproles (1990) are similarly important to consumer education.

2. Literature review

In general, consumer educators and those involved with consumer interest studies agree that the decisions made by a consumer to purchase products or services are based on a certain process of learning. Even though one might assume that consumers’ learning and decision-making are a related phenomenon, this relationship has not been systematically explored in consumer research (Sproles & Sproles, 1990).

Learning style is defined as “the way each person absorbs and retains information’s and/or skills” (Sproles, 1990). Every learner possesses an individual learning style, which is thought to be an enduring, patterned, and preferred mode of learning. Evolving from early work on cognitive style, several major approaches to measure and characterize learning styles have emerged (Fan et al., 1998). These range from approaches characterizing the cognitive aspects of learning, such as abstractness or concreteness in learning, to those that consider students’ preferences for teaching methods (lectures, labs, etc.) and environments (lighting, seating) (Fan et al., 1998). The central goal in understanding learning styles is to explore how the mind operates during the process of learning.

A consumer decision-making style is defined as “mental orientation characterizing a consumer’s approach to making consumer choices” (Sproles & Kendall, 1986). Relevant literatures suggest that consumer styles may be characterized by the lifestyle approach, the consumer typology approach, and the consumer characteristics approach (Bettman, 1979, Miller, 1981, Sproles, 1985). Based on these literatures, Sproles & Kendall (1986) reported the factor analytic validation of a Consumer Styles Inventory measuring eight basic characteristics of Consumer Decision-Making Styles: 1) Perfectionist, High-Quality-Conscious Consumer - a characteristic measuring the degree to which a consumer searches carefully and systematically for the best quality in products; 2) Brand-Conscious, Price-Equals-Quality Consumer - a characteristic measuring a consumer’s orientation toward buying an expensive, well-known national brands; 3) Novelty and Fashion-Conscious Consumer - a characteristics of identifying consumers who appear to prefer new and innovative products and gain excitement from seeking out new things; 4) Recreational and Shopping-Conscious Consumer - a characteristic measuring the extent to which a consumer finds shopping a pleasant activity and shops just for the fun of it; 5) Price-Conscious, Value-for-Money Consumer - a characteristic identifying a consumer with particularly high consciousness of sale prices and lower prices in general; 6) Impulsive, Careless Consumer - a trait identifying consumers’ who have a tendency of buying at the spur of the moment and appear to be unconcerned about how much he or she spends (or getting “best buys”); 7) Confused by Over Choice Consumer - a person perceiving too many brands and stores from which to choose and who are likely to experience information overload in the market; and 8) Habitual, Brand-Loyal Consumer - a characteristic indicating a consumer who repetitively chooses the same favorite brands and stores.

According to Hafstrom and Chung, (1992), decision making is more complex and even more important for consumers today than in the past. Consumers today are besieged by advertising, news articles, and direct mailings that provide an abundance of information, much of it with mixed messages. In addition, with an increase in the number and variety of goods, stores, and shopping malls, and the availability of multi-component products and electronic purchasing capabilities, thus broadened the sphere for consumer choice and have complicated decision making.

Sproles (1985) as well as Sproles and Kendall (1986) who developed and tested the Consumer Styles Inventory (CSI) have helped to add a new direction in decision-making research. Characteristics of decision-making styles, used in the CSI, can be useful in profiling an individual’s consumer style, in educating consumers, and in counseling families on financial management (Sproles & Kendall, 1986). A consumer decision-making style is “a basic consumer personality, analogous to the concept of personality in psychology” (Sproles & Kendall, 1986). They believe that measuring general orientations of young consumers toward shopping and buying can identify decision-making styles.

3. Method

3.1 Sampling Design

A sample of young-adult Malays from universities in Kedah, Pulau Pinang, and Perlis were used in the research reported in this paper. Samples picked from the faculty of business studies classes were used to develop the method of measurement young-adult decision making behaviors in this study.

To choose the sample for this study, probability random sampling was used. A probability sample is necessary if the sample is to be representative of the population (Reeves, 1992). Therefore, samples were picked at random based on the class list obtain from student affair department from the selected public Universities in the northern states of Peninsular Malaysia.

3.2 Population and sample size

The unit of analysis for this study is individual students attending their first degree programmed in Universiti Sains Malaysia, Universiti Teknologi MARA Perlis, Universiti Utara Malaysia and final year Diploma students from Universiti Teknologi MARA Kedah, and Universiti Teknologi MARA Pulau Pinang who have had an independent buying experience in purchasing goods without having any influence from their parents. The data used in this study were collected in a four months period, from University Technology MARA in Kedah (100 samples), Perlis (93 samples), and Pulau Pinang (106 samples), University Sains Malaysia, Pulau Pinang (101 samples), and University Utara Malaysia, Sintok, Kedah (104 samples). A total of 504 respondents were chosen from the five universities mentioned above.

College students were chosen as our sample for the following reasons: researchers have an easy excess to respondents as the researchers themselves are academic staff and it was not feasible to collect information from a representative sample of Malay consumers. Furthermore students from these five universities come from all over the country; hence, the sample is representative of young adult Malays in Malaysia (Fan et al., 1998).

To have a representative finding, the sampling technique used must be objective. This is an important effort adopted by most researchers in order to furnish a finding pertinent to the general (Maznah Wan Omar, 2008). To choose the sample for this study, a simple random sampling method was employed during the data collection procedure. The five universities vary in size and specialization. University Sains Malaysia (USM) specializes in social sciences and basic sciences. University Utara Malaysia (UUM) specializes in social sciences. University Technology MARA Pulau Pinang (UiTM Pulau Pinang) specializes in Engineering. University Technology MARA Kedah (UiTM Kedah) specializes in industrial arts and social science, and lastly University Technology MARA Perlis (UiTM Perlis) specializes in social sciences and basic science.

3.3 Data Collection

For this study, a survey method was employed. Surveys are a better source of primary data collection in marketing and social sciences in comparison to observation and experiments (Baker, 2001). Moreover, the survey method is put into use because it does not entail control over behavioral actions and mainly focuses on current events (Mokhlis, 2006). Questionnaires were randomly collected through a self-administered method with the help of the lecturers from all five Universities in the Northern Region of West Malaysia. Self-administered questionnaire permits the interviewer to have an opportunity to introduce the research topic and encourage the respondents to give their honest answers, administer complex questionnaires and simplify difficult questions (Maznah Wan Omar, 2008). A total of 700 questionnaires were distributed. However only 509 questionnaires were returned (73% return rate). In relation to that, only 504 questionnaires were usable for this analysis. The rest of the questions had missing values for more than one items asked.

3.4 Method of Analyzing Data

Data analysis proceeded in two steps following the method used by Hafstrom and Chung (1992); Sproles (1985) and Sproles and Kendall (1986). In the first step, factor analysis, the principle components method with Varimax rotation of factors, was performed to identify characteristics of consumer decision-making. For comparability with Sproles and Kendall's work (1986), an eight-factor solution was used.

Factor analysis is designed to identify a set of variables in terms of a smaller number of hypothetical variables or to explore underlying dimensions (Hair et al., 2006). Although it is desirable to have as many factors as possible in order to capture the optimum number of consumer decision-making style variations, it also is necessary to have satisfactory reliabilities for each factor to provide an adequate basis for generalizing to the population, assuming the sample is truly representative. In the second step, Cronbach's alpha, a conservative technique for assessing reliabilities for each factor (Carmines & Zeller, 1979) was used. For consistency, it was decided that reliability should not be below .4, the same level used by Hafstrom and Chung (1992) and Sproles and Kendall (1986).

4. Discussions

Reliability coefficients were used to test on the consumer style characteristics among young adult Malay consumers in UiTM Kedah. Only two style characteristics were below satisfactory level. The loading item was below .4. The Factor that should be rejected is Factor 3 (.2776) for Recreational-shopping Conscious and Factor 7 (.3831) for Habitual, Brand Loyal characteristic.

Respondents from UiTM Kedah were very conscious of the brand and price paid must equals to the Quality they received. They were a Perfectionist as well as High-Quality Conscious Consumer.

The Reliability Coefficient tested on all 8 Factors for consumers in UiTM Pulau Pinang indicates that two consumer Style Characteristics had a score below .4. The Factors are Factor 3 (.170), which stands for "Recreational-Shopping Conscious" and Factor 8 (.371), which stands for "Price Value Conscious" characteristic.

The Factor analysis done on consumers in UiTM Pulau Pinang indicates that they were Brand and Price Equals Quality Conscious consumer as well as "Confused by Over Choice"; nonetheless they were also a Habitual and Brand-Loyal consumer.

The Reliability Coefficient done on consumer's data from UiTM Perlis shows a score of above .4 for all Factors. Thus Factor 1 to Factor 8 was all accepted.

Factor analysis done on the same consumers data from UiTM Perlis indicates that consumers in UiTM Perlis were Brand and Price Equals Quality Conscious consumers, "Perfectionist" with "High-Quality conscious"; they were also a "Recreational shopper" and at the same time were "Confused by Over Choice". Nonetheless, they were concern about time when doing purchase and were also careless and being impulsive when purchasing. They were Brand-Loyal and Habitual consumers with high concern about the value of the price they pay for the product whenever they purchase a product.

The reliability coefficient done on the data of consumers from University Sains Malaysia indicates that Young Adult Malay from University Sains Malaysia (USM) were Brand and Price Equals Quality consumer. They were also a Perfectionist and High-Quality conscious consumer. Unfortunately they were "Confused by Over Choice" but were "Concerned about saving Time" when purchasing product. Nonetheless, they were Careless and Impulsive in buying.

Finally, the reliability analysis performed on 8 Consumer Style Characteristics for data on consumers from University Utara Malaysia shows a reading that is above .4 for all Factors. Therefore all the Factors tested were accepted.

Factor analysis done on respondents' data from University Utara Malaysia indicates that they were Brand Conscious and Price Equals Quality Consumer. The respondents' data indicates that Young Adult Malay from Universiti Utara Malaysia was a Perfectionist and was Highly Conscious about Quality. At the same time they were Recreational Shopping Conscious consumer and were confused by Over Choice. They were also Impulsive and Careless consumer with additional characteristics of Brand loyal and they buy product on habitual basis.

5. Conclusion

Decision-making styles of young adult Malay consumers from Universiti Teknologi MARA Kedah, University Teknologi MARA Perlis, University Teknologi MARA Pulau Pinang, University Sains Malaysia and Universiti Utara Malaysia show that the similarities that exist among consumers from 5 different Universities were; they are Brand Conscious and Price Equals Quality consumers.

Respondents who came from large universities like University Sains Malaysia, Universiti Teknologi MARA Perlis, Universiti Teknologi MARA Pulau Pinang and University Utara Malaysia were all confused by too many choices of product available to them. On the other hand, students whose university was situated far from big/large town like University Utara Malaysia and UiTM Perlis indicates that they were Recreational-Shopping conscious consumers.

The implications obtained from the findings were that socialization and environment do shape the purchasing patterns of consumers. Young consumers themselves formed an independent specialized market segment of its own for a variety of goods because they made up a large group of people in a population.

Lastly, young people do play a great role in consumer decision making because they are at an age level, where they have the capability and are economically able in making decision of their own in terms of what, how, when and where to buy.

References

- Baker, M.J. (2001). Selecting a research methodology. *The Marketing Review*, 1(3), 373-397.
- Bettman, J. Z. R. (1979). *An Information Processing Theory of Consumer Choice*. Reading, MA: Addison Wesley Publishing Company.
- Carmines, E. G. and Richard A. Z. (1979). *Reliability and Validity Assessment*. Beverly Hills, CA: Sage Publications.

- Fan, J. X. and Xio, J. J. (1998). Consumer Decision-Making Styles of Young Adult Chinese. *The Journal of Consumer Affairs*, 32(2), 276 -292.
- Hafstrom, C., & Chung. (1992). Consumer Decision-Making Styles: Comparison between United States and Korean Young Consumers. *The Journal of Consumers Affairs*, 26(1), 146-158.
- Hair, J.F.Jr., Black, W.C., Babin, B.J., Anderson, R.E., & Tatham, R.L. (2006). *Multivariate data analysis*. 6th Edition, Pearson International Edition, Pearson Prentice Hall.
- Martin, C.A., & Bush, A.J. (2000). Do Role Models Influence Teenagers' Purchase Intentions and Behavior? *Journal of Consumer Marketing*, 17(5), 441-454.
- Maznah Wan Omar. (2008). *Understanding the mediating effect of customer satisfaction on the relationship of salesperson behavior performance and customer loyalty*, Unpublished Phd Thesis, Universiti Sains Malaysia, 86.
- Miller, R. L. (1981). *Economic Issues for Consumers*. Third Edition, New York: West Publishing Company.
- Mokhlis, S. (2006). *The influence of religion on retail patronage behavior in Malaysia*, Phd Thesis, Universiti of Sterling, 190-308.
- Reeves, C.C. (1992). *Quantitative research for the behavior sciences*. New York, NY: John Wiley & Sons, Inc.
- Sproles, George B. (1985). From Perfectionism to Faddism: Measuring Consumers' Decision-Making Styles. *Proceedings. American Council on Consumer Interest*: 79-85.
- Sproles, G. B., & Kendall, E. L. (1986). A Methodology for Profiling Consumers' Decision-Making Styles. *The Journal of Consumer Affairs*, 20, 267-279.
- Sproles, K. E., & Sproles., G. B. (1990). Consumer Decision-Making Styles as a Function of Individual Learning Styles. *The Journal of Consumer Affairs*, 24, 134-147.
- Ward, S. (1974). Consumer Socialization. *Journal of Consumer Research*, 1, 1-14.

Table 1. Reliability Coefficients for Eight Consumer Style Characteristics for young adult Malay Consumers from Five Universities in the Northern Region of West Malaysia

Consumer Style Characteristics	Cronbach's alpha subscale of items loading above .4	Number of items used to compute Cronbach's alpha
Brand conscious (Factor 1)	.8345	11
Perfectionist (Factor 2)	.7735	7
Recreational-Shopping Conscious (Factor 3)	.2776	6
Confused by Over choice (Factor 4)	.4831	5
Time-Energy Conserving (Factor 5)	.6020	3
Impulsive (Factor 6)	.5338	4
Habitual, Brand Loyal (7)	.3831	3
Price-Value Conscious (8)	.5362	3

From the above table, data shows that the reliability coefficients for factor 1, 2,4,5,6 and 8 were .48 and above, indicating satisfactory levels of reliability. However, the alpha coefficients for factor 3 and factor 7 had lower reliabilities, indicating that they may not be real factors in identifying decision-making styles of Young-Adult Malays from the five Universities in the Northern Region of West Malaysia.



A Proposal for Burger King to Take Further Steps in Mainland China

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Abstract

Through an investigation involving people's attitude towards Burger King in mainland China, Qualitative analysis was made and some problems emerged such as the promotion deficiency. We rendered possible explanations and feasible suggestions in this paper.

Keywords: Analysis of the needs, 4P, Promotion, Direct-management

1. Introduction

Burger King Corporation is the second largest fast food hamburger chain in the world with more than 11,200 restaurants in all 50 states and 69 countries. However, Burger King entered Chinese market in 2005, which is 15 years later than McDonald's and 18 years later than KFC. Over the past three years, it has opened 12 restaurants in total, 2 of which are in Beijing, 9 in Shanghai and 1 in Nanjing. Although Burger King also adapts its menu in China, it has not localized its China menu as much as its rivals have. But it announced in June this year that it will open between 250 and 300 outlets in Mainland China over the next five years, including another ten in Shanghai.

Since KFC and McDonald play quite well in mainland China by attracting the kids, Burger King had better not to trouble itself in the same target market and as a result, its strategy in China is to chase younger, more individualistic diners in the country's big cities. So we decided to conduct a survey on how to attract more young people to Burger King in Mainland China and we send out the survey to college students. There are mainly four reasons why we choose college students as our respondents. Firstly, young and individualistic college students are part of Burger King's target people. Secondly, they are influencers and deciders. That is to say, they can influence their peers and can be influenced by their peers and finally make their own decisions. Thirdly, it is common of them to be the first ones to try new things and accept these new things. Moreover, it will be much easier and time-saving for us to conduct this survey to choose college students because of the limited time.

In our survey, we adopt questionnaire research method with qualitative questions focusing on four aspects, i.e. food, services, number and location of the outlets and promotion, in order to find out whether college students are satisfied or not on these aspects. Also, there are several sub-items in each aspect. The survey is in the Appendix.

2. Analysis of the Data

2.1 The sample

The target segment for the study is student population in various parts of China. Accordingly, the data was obtained from the survey conducted on 70 Chinese students. As shown in Figure 1, the 70 students could be classified based on their location.

Insert Figure 1 here

This geographical classification has a reasonable impact on the results observed and the recommendations based on our analysis. In spite of the population size of 70, it was observed that among the students from places other than Beijing and Shanghai, the awareness for Burger King is very low. Only 3 out of 30 knew about Burger King, but none of them had ever had a meal at Burger King. However everyone from Beijing and Shanghai had heard about Burger King and a sizeable proportion had a meal there. Figure 2 shows the proportion of the sample population who had a meal at Burger King at Beijing and Shanghai. 30 (21 from Shanghai and 9 from Beijing) had a meal at Burger King and therefore based on the feedback/survey data gathered from these 30 students, we continue our analysis.

Insert Figure 2 here

2.2 Perception of Burger King

It is observed that there is a strong correlation between the ratings given to various aspects of Burger King which are taken as representative of the Burger King's perception among the target segment. When asked to rate on the scale of 1 to 5 (1 for worse to 5 for best), the collective observations for the 30 students (who form the sample space for further analysis) are as shown in Figure 3.

Insert Figure 3 here

2.3 Analysis of the needs

The sample of 30 feedback/survey data regarding the need for promotions was collected and observed as shown in Figure 4. We can clearly see that almost everyone was for the need of promotions by Burger King. Varying degrees of needs for different forms of promotional campaigns were observed as can be seen in Figure 4. The feedback/survey data for promotional needs showed a strong correlation between Beijing and Shanghai. However, not surprisingly, the need for location differed quite a bit between the two cities. Figure 5 shows the same. In Beijing, there are only 2 outlets and also not in the heart of the city. Therefore along with the need for more outlets, better location was also more preferred.

Insert Figure 4 here

Insert Figure 5 here

2.4 Reflection on the 4 Ps

We can analyze the 4 Ps using the analysis of the feedback/survey data that we have gathered and presented.

Product – Figure 3 shows reasonably high levels of satisfaction (more at/above average) with respect to the food and services. The overall satisfaction level is also reasonably high.

Price – Figure 3 shows that except price all other attributes, observed to understand the perception of burger king, are reasonably high. Price alone shows the highest level of dissatisfaction among the other attributes.

Place – Figure 5 suggests that this is a serious issue as majorities aren't satisfied with the number and location of the outlets of Burger King.

Promotion – Figure 4 clearly indicates that this is a critical issue for the struggle of Burger King in China.

3. Problems and solutions

3.1 Common problems

There is very little promotion in China.

In accordance with the data, more than 90% of the responses in both cities reflect that there should be more promotion campaigns in China.

BK doesn't have TV commercials in mainland China, and they have just started to have internet ad recently in 2008.

At the same time, other fast food chains like KFC and McD are paying a great expenditure in advertising, delivering discount coupon, and many other kinds of promotion. But BK is so confidential that they believe with their good products, they can get the same success as in the U.S even without the promotions. But the result is not that satisfying. When it first entered China in 2005, people just think it's a new product by McD.

The restaurant number in China is too small.

BK entered China in 2005, and in the 3years followed, it only opened 12 restaurants in 3 cities in the mainland China, which is 9 in Shanghai, 2 in Beijing and 1 in Nanjing.

The price is comparatively high to college students.

From the general data, we can see that about 60% of people think that the price is fair, the rest 40% feel unsatisfied with it, and 0% people feel very satisfied.

When BK first entered the Chinese market, they tried to decorate their restaurants not as common fast food restaurants, but as the style of cafeteria, which is very quiet and romantic. They want to make it a place where people can get together and have a nice conversation or just a cup of drink. At that time, their target is the white color group, who may have a higher purchasing power. Now, they feel the young group is more promising and want to attract more young consumers, but the price level has not changed.

3.2 Specific problems

As we can see from the data, Beijing has more problems than Shanghai, and the main ones are people in Beijing want better location and more restaurants. There are only 2 restaurants in Beijing, and one is in the airport. Although Shanghai doesn't not have many either, but all of them are in the commercial centre of each district. So people don't feel difficult to find.

3.3 Common solutions

Increase the number of restaurants combine with more promotion campaigns

The basic problem we can see from the data is that Chinese people don't have too much access to BK, so the most urgent steps are to increase the number of the restaurant and choose better locations. When KFC first entered China in 1987, the Chinese fast food market is just like a virgin so KFC expanded modestly and carefully. However the Chinese fast food today in 2008 has turned into a "pub girl" which is much more mature. The Chinese are much more open to fast food and there have emerged lots of local fast food restaurants to make the competition rather fierce. Despite of the competition, most Chinese consumers are much more loyal to international fast food restaurants and KFC and MCD play quite well in mainland China. So BK can't wait any more and it should expand at a more aggressive speed. While opening more restaurants in mainland China, we should let people know more about this brand, that's why we should have more promotions. There are two ways to reach these objectives.

Change the way of doing business from direct-management to franchisee.

BK mainly focuses on the direct-managed restaurants in its development in Mainland China. This way affected their expansion to some extent. If they can adopt the franchisee mode in their new restaurants, as they usually did in other countries, it's easier for them to increase their number.

Make use of the specialties of college students.

College student is a very special group of people. They have very close contact with some typical kinds of media, such as internet, school broadcasting, etc. They also have many activities, such as football competition. In order to promote their food, BK can make use of these specialties to get the best effects at lowest cost in this target group. So, in the commercials it may public, the theme might be the energetic young people aging from 18-24. BK can use the young people's culture to build it image in mainland China.

3.4 Specific solutions

Although the problems of two cities are similar, they have their own characteristics, and we can choose different ways of doing business in these two cities, in order to better serve our customers.

3.4.1 Beijing

The problem of Beijing is obvious; we should choose better locations, which is mostly near the universities and in the commercial centers.

The data also shows that people in Beijing also want more discount coupon. There are about 60% people think there should more discount coupon in general, the percentage rate reaches 75% in Beijing. BK has a discount policy in Shanghai that each Tuesday, the hamburger is half the price as usual.

3.4.2 Shanghai

Shanghai is the commercial centre of China. There are lots of important conferences, competitions, and concerts in Shanghai every year. So the big environment is very suitable for the sponsorship promotion, which can help to reach a great many young people. For example, BK can help hold F1 which is quite popular in Shanghai, especially the younger generations.

References

Andrew A Caffey. "Franchise & Business Opportunities".

Annual Report of Burger King in 2007.

Harold Kestenbaum. "So You Want to Franchise Your Business".

Jack Stack, Bo Burlingham. (1994). "The Great Game of Business".

James P. Lewis. (2006). "Fundamentals of project management".

Ralph Massetti, Jr. (2007). "Is Your Business Right for Franchising?".

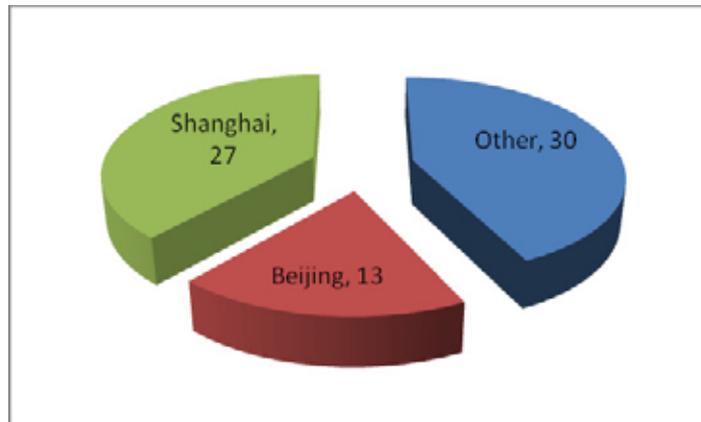


Figure 1.

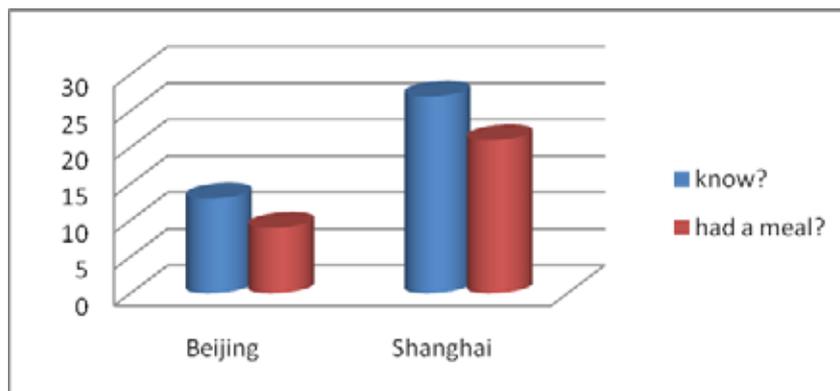


Figure 2.

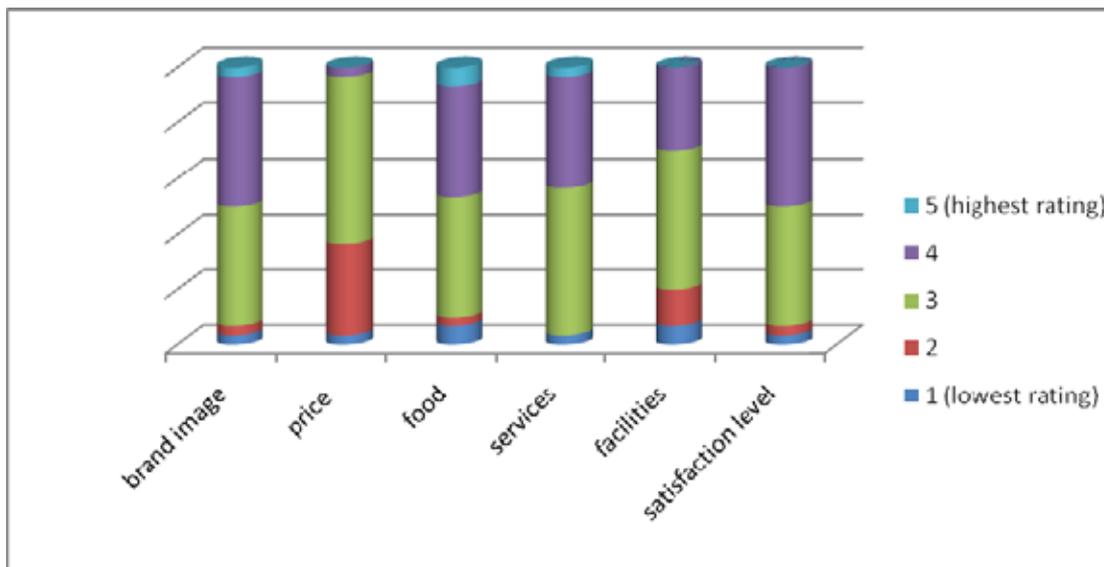


Figure 3.

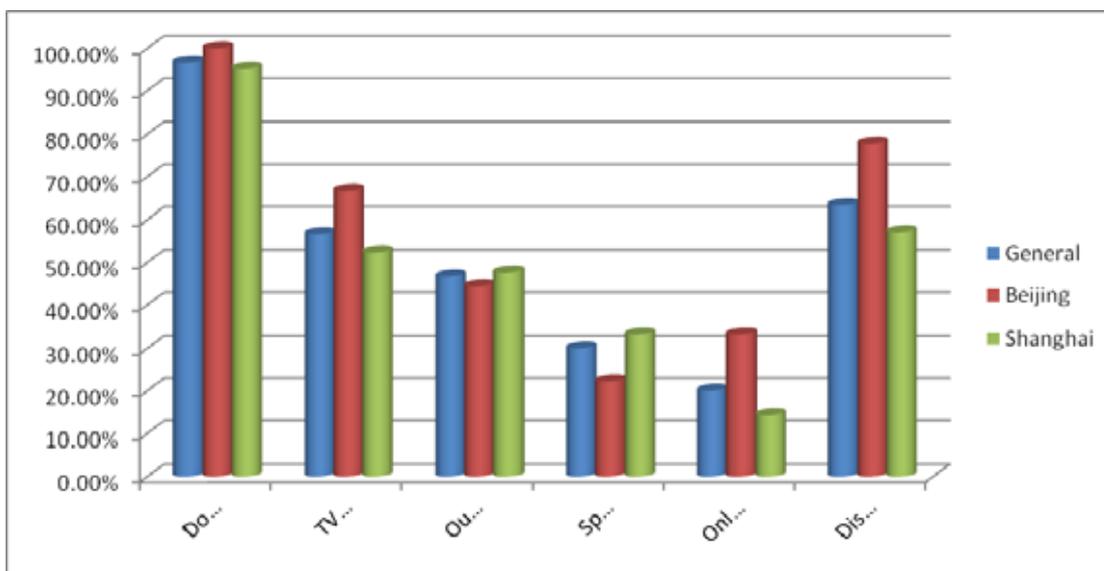


Figure 4.

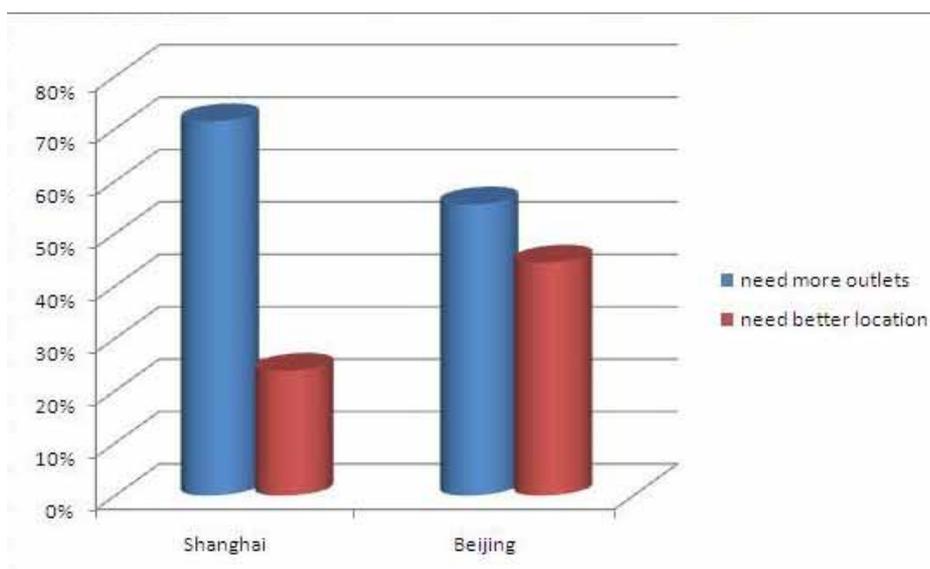


Figure 5.

Appendix

Customers' Satisfaction Survey of Burger King

Your opinions are of great significance to us

Do you know Burger King?

Yes **B) No**

Have you ever had a meal in Burger King?

Yes **B) No**

IF YOUR ANSWER OF QUESTION NO.2 IS YES, PLEASE CONTINUE THE FOLLOWINGS

What do you think of the brand image of Burger King?

A) Bad **B) Not good** C) So-so **D) Good** **E) Excellent.**

What do you think of the prices of Burger King?

Much too Expensive **B) A little Expensive** C) Fair **D) Cheap** **E) Very cheap**

How do you like the food offered in Burger King?

Bad **B) Unsatisfied** C) So-so **D) Satisfied** **E) Excellent**

Where should we improve about the food? (You may have more than one choice)

More kinds of menus **B) More local tastes food** C) Increase the amount of each dish

D) Nothing, it's already very good. **E) Others** _____

How do you like the services in Burger King?

Bad **B) Unsatisfied** C) So-so **D) Satisfied** **E) Excellent**

What do you think about the facilities for children & the disabled of the restaurant?

A) Bad **B) Unsatisfied** C) So-so **D) Satisfied** **E) Excellent**

Do you feel satisfied with the service speed (whether it's quick enough)?

A) Bad **B) Unsatisfied** C) So-so **D) Satisfied** **E) Excellent**

What do you think of the number and the location of the restaurants?

Both need improving

There should be more restaurants

The restaurants should have been better located

Both OK

Do you think Burger King needs more promotion campaigns to make it more popular in China?

Yes **B) No**

If your answer is yes, what kind of promotions would you like to see? (You may have more than one choice)

TV commercials **B) Outdoor advertisings** C) Online advertisings

D) More discount coupons. **E) Others** _____



A Review of Study on the Competing Values Framework

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Abstract

The Competing Values Framework (CVF) is one of the most influential and extensively used models in the area of organizational culture research. Compared with other models and scales, the CVF and its matched scale OCAI have better validity and reliability in the context of China, and are very convenient for practical operations. This article firstly introduces the development of the CVF, and discusses the meanings and prerequisites of different culture types in the CVF. Then the article briefly reviews some empirical studies using the CVF and OCAI, compares the CVF and OCAI with other major organizational culture models and scales, and finally points out future research areas for CVF's application in China.

Keywords: Competing values framework, Organizational culture, Effectiveness

1. The development of the CVF

The Competing Values Framework (CVF) was initially based on research to identify indicators of organizational effectiveness (Quinn and Rohrbaugh, 1983, p.363). Effectiveness is a central theme in the organizational literature whereas its definition is perennially controversial. In a literature review Campbell (1977) identified 30 different criteria of effectiveness. Quinn and Rohrbaugh (1983, p.365) held that the choices of particular criteria usually reflect personal values about the appropriate emphases in the domain of effectiveness. They invited 52 organizational researchers to order the criteria listed by Campbell (1977) and then derived three value dimensions: internal-external, control-flexibility, means-ends. They integrated the third dimension into the other two ones and established the CVF, as shown in Figure 1(Quinn and Rohrbaugh, 1983, p.369).

One may certainly argue that it is insufficient to measure organizational culture values by only two or three dimensions. But CVF does not attempt to explore the panorama of organizational culture. Rather, it looks at the value dimensions related to effectiveness. Moreover, this model can integrate most organizational culture dimensions proposed in the literature.

2. The connotations of the CVF

2.1 The meanings of dimensions in the CVF

Figure 1 illustrates the CVF. The first value dimension is related to organizational focus, from an internal, micro emphasis on the well-being and development of people in the organization to an external, macro emphasis on the well-being and development of the organization itself. The second value dimension is related to organizational structure, from an emphasis on stability to an emphasis on flexibility. Quinn and Rohrbaugh (1983, p.370) pointed out that these two sets of competing values are recognized dilemmas in the organizational literature. For instance, Denison and Mishra's (1995, p.209) case study illustrated that employee involvement activities can lapse into insularity and have a limited, or even negative impact on effectiveness, for the organization may overemphasize the internal integration and neglect the adaptation to the external environment. Similarly, the differing viewpoints in considering order and control versus innovation and change are at the heart of the most heated debates in sociology, political science, and psychology.

While many social theorists have emphasized authority, structure, and coordination, others have stressed diversity, individual initiative, and organizational adaptability.

The two dimensions of the CVF classify four models, each one containing a different set of effectiveness criteria. Quinn and Rohrbaugh (1983, p.371) named the four models as the human relations model, open system model, rational goal model, and internal process model, respectively. Quinn and Rohrbaugh (1983, p.375) suggested that to ignore criteria in any of the models is to have only a partial view of performance. In the administrative world, an effective organization may need to perform well on all four sets of criteria. However, at any given time there are likely to be tradeoffs between the criteria.

Sjoberg(1967) noted that organizations are plagued by contradictory functional requirements that are associated with the formation of mutually antagonistic arrangement that function to meet these requirements. Quinn and Cameron (1983, p.376) furthered this argument. They expected that at certain thresholds, these conflicts might become particularly exaggerated, often resulting in major reconfigurations of the coalitional structure and the dominant perceptions of what is success. The authors believe that under such circumstances, there takes place organizational culture change.

2.2 The implications of the four organizational culture types in the CVF

The four effectiveness criteria models in the CVF are also called four organizational culture types. Based on former organizational culture studies in the literature, Cameron and Quinn (2006, p.28) termed the four culture types as Clan, Adhocracy, Market, and Hierarchy, respectively. The implications of each culture type are summarized as follows (Cameron and Quinn, 2006, p.29-35):

2.2.1 The clan culture

The clan culture is full of shared values and common goals, an atmosphere of collectivity and mutual help, and an emphasis on empowerment and employee involvement. The authors contend that the clan culture is just the organizational culture defined by Wilkins and Ouchi (1983, p.472-474), which can be developed under certain conditions such as a relatively long history and stable membership, absence of institutional alternatives, thick interactions among members, etc.

2.2.2 The adhocracy culture

The adhocracy culture is like a temporary institution, which is dismissed whenever the organizational tasks are ended, and reloaded rapidly whenever new tasks emerge. The adhocracy culture is often found in such industries as filming, consulting, space flight, and software development, etc.

2.2.3 The market culture

The market culture focuses on the transactions with the environment outside the organization instead of on the internal management. The organizational goal is to earn profits through market competition. This concept originates from Ouchi's (1979, 1984) study on the market control system.

2.2.4 The hierarchy culture

The hierarchy culture has a clear organizational structure, standardized rules and procedures, strict control, and well defined responsibilities. This concept can be traced to the image of "bureaucracy" in Weber's (1947) early works on modern organizational management.

3. Prerequisite conditions of different culture types in the CVF

3.1 Relationships between organizational culture types and control mechanisms

Ouchi (1979) described three fundamentally different mechanisms through which organizations can cope with the problem of evaluation and control. The three were referred to as market, bureaucracy, and clan. In another research, using an ethnographic paradigm, Ouchi defined the extension of organizational culture within the concept of clan and drew attention to organizational features of "clans" (Wilkins and Ouchi, 1983). The authors term the clan mechanism as a narrowly defined organizational culture. In the authors' view, the CVF entirely covers the three control mechanisms mentioned above, and studies the generalizable organizational characteristics which are determined by such factors as task natures, industries, market environments, organizational structures, and control mechanisms, etc. Therefore, the authors term the four culture types in the CVF as the broadly defined organizational culture. Ouchi (1979, p.837-840) discussed the social and informational prerequisite conditions of each of the three control mechanisms (culture types).

3.1.1 The market mechanism

In a market mechanism, prices convey all of the information necessary for efficient decision-making. Given a frictionless price mechanism, the firm can simply reward each employee in direct proportion to his contribution. Such a mechanism requires a powerful information system (including accountants, computer experts, etc.) to price the labor or evaluate their performance.

3.1.2 The clan mechanism

When the transaction cost of pricing the labor is too high or when it is impossible to evaluate the performance (for example, the work with high degree of complexity or uncertainty), the organization has to adopt the clan mechanism. The clan mechanism demands a high organizational commitment which is obtained through internal socialization.

3.1.3 The bureaucratic mechanism

If the price requirements of a Market cannot be met and if the social conditions of the Clan are impossible to achieve, the Bureaucratic mechanism becomes the preferred method of control. Its features include close supervision by the superior and detailed rules and procedures, etc.

Ouchi (1979) argued that due to the high rates of turnover and a high degree of heterogeneity in modern society, the bureaucratic and market mechanisms become dominant. On the other hand, with the increasing interdependency and vagueness of technology, it gets more and more difficult to evaluate performance, forcing the organization to adopt the clan mechanism. Indeed, Ouchi (1984, p.202) contended that no single mechanism would control an organization; a large organization cannot succeed without a combination of teamwork and competition. This argument is consistent with Cameron and Quinn's (2006) view on the patterns of existence of the four culture types in the CVF.

3.2 Relationships between organizational culture types and organizational life cycles

There are close relationships between stages of development in organizational life cycles and the four culture types in the CVF. Quinn and Cameron (1983) reviewed nine models of organizational life cycles that had been proposed in the literature and derived a summary model of life cycle stages that integrates each of the nine models. This summary life cycle model includes four stages: entrepreneurial stage, collectivity stage, formalization and control stage, and elaboration of structure stage. Based on certain characteristics that typify organizations in different stages of development, they hypothesized that certain criteria of effectiveness in the CVF are important in particular life cycle stages but not in others. They also concluded that major criteria of effectiveness (thus with major organizational culture types - the authors) change in predictable ways as organizations develop through their life cycles.

In the entrepreneurial stage - typified by innovation, creativity, and the marshalling of resources - the strongest culture type appears to be the adhocracy culture. Organizations in the collectivity stage appear to be characterized by informal communication and structure, a sense of family and cooperativeness among members, high member commitment, and personalized leadership, which are associated with the clan culture. In the formalization stage, organizational stability, efficiency of production, rules and procedures, and conservative trends typify organizations. Culture types appear to be primarily the hierarchy culture and the market culture. In the fourth stage, elaboration of structure, the organization monitors the external environment in order to renew itself or expand its domain. The adhocracy culture seems to receive the most emphasis in this stage. A longitudinal case study made by Quinn and Cameron (1983) provided some evidence to support the hypothesized relationships between life cycle stages and culture types, which demonstrated the potential of the model in diagnosing and predicting organizational culture change.

4. Empirical studies using the CVF and OCAI

Based on the CVF, Cameron and Quinn (1999, 2006) developed a matched scale, the Organizational Culture Assessment Instrument (OCAI, including 24 items). Nowadays, as Kwan and Walker (2004) noted, the CVF has become the dominant model in the quantitative research on organizational culture. Numerous empirical studies have been published testing the validity and reliability of the CVF and OCAI.

4.1 Studies testing the validity and reliability of the CVF and OCAI

Howard (1998) used a sample drawn from 10 U.S. organizations to test the validity of the CVF. A Q-sort and multidimensional scaling analysis produced qualified support for a structure of organizational culture values consistent with the CVF. Lamond (2003) presented the results of a study of 462 managers' perceptions of their organizations and concluded that the CVF is a useful measure in an Australian context. It is noteworthy that Denison and Mishra (1995) used case studies and survey data to explore the relationship between organizational culture and effectiveness. The results provided evidence for the existence of four cultural traits in the Theoretical Model of Culture Traits. The dimensions and implications of the Theoretical Model of Culture Traits coincided with their counterparts in the CVF, thus validated the CVF as a powerful measure of organizational culture. Denison and Mishra's (1995:218-219) quantitative research also confirmed the relationship between organizational effectiveness and the four culture types in the CVF. Yet the Theoretical Model of Culture Traits is more complex than the CVF, and its sub dimensions have been challenged by some researchers (e.g., Wang, et. al., 2006).

4.2 Studies on the relationships between organizational culture and other variables

There has been extensive international research using the CVF to investigate the influence of organizational culture on organizational change initiatives and performance. For example, many published studies that deal with the implementation of total quality management (TQM) almost exclusively acknowledge the importance of cultural factors

on the success or failure of the venture. Sousa-Poza *et al.* (2001) explored the impact of cross-cultural differences on the implementation of TQM. Using the CVF to measure organizational culture, they found that in different regions (USA, Switzerland and South Africa), several distinct relationships between the dimensions of the CVF and TQM implementation exist. Al-Khalifa and Aspinwall (2001) investigated the relationship between organizational culture and TQM implementation in one of the Arab countries, Qatar. The results indicated that many organizations in the country were not characterized by just one culture type, but a mix of two, which did not match the cultural profile characteristics that support TQM. Their assessment of the current organization culture profile, using the CVF, highlighted where changes are needed to support a total quality approach.

The CVF are also used to examine the relationships between organizational culture and other key organizational variables, such as job satisfaction. Lund (2003) looked at the impact of organizational culture types on job satisfaction in a survey of marketing professionals in a cross-section of firms in the USA. The CVF was utilized as the conceptual framework for analysis. The results indicated that job satisfaction was positively related to clan and adhocracy cultures, and negatively related to market and hierarchy cultures. All these empirical studies have validated the CVF as a powerful instrument to assess organizational culture.

4.3 Empirical studies using the CVF and OCAI in the context of China

To date, the CVF have been extensively applied in the context of China. For example, Deshpande and Farley (2004) compared the impact of organizational culture on firm performance across several Asian countries, including China, Hong Kong, India, Japan, Thailand and Vietnam. Kwan and Walker (2004) attempted to demonstrate that the CVF can be used not only to represent the culture of an organization but also to serve as a basis upon which one organization can be differentiated from others. Their empirical study in Hong Kong successfully confirmed the validity of the CVF as a tool in differentiating organizations on the basis of the four culture types. Ralston *et al.* (2006) raised the question and provided empirical evidence regarding the status of the evolution of the state-owned enterprises in China today. They compared the state-owned enterprises to domestic private-owned enterprises and foreign-controlled businesses in the context of their organizational cultures. The results of their research partially support their hypothesis that the state-owned enterprises of today have substantially transformed to approximate a configuration desired by the Chinese government when it began the transformation a couple of decades ago to make them globally competitive. These empirical studies all tested the validity and reliability of the CVF and OCAI in the Chinese context.

5. A comparison of CVF/OCAI to other major organizational culture models /scales

There remains considerable debate regarding the measurement and dimensions of organizational culture (e.g., Detert *et al.*, 2000). Even so, Detert *et al.*'s (2000) integrative review of the literature identified eight common dimensions of organizational culture: the basis of truth and rationality in the organization, the nature of time and time horizon, motivation, stability vs. change/innovation, orientation to work/coworkers, isolation vs. collaboration, control vs. autonomy, and internal vs. external. To date, researchers have developed a variety of models and scales to measure organizational culture. Primary among these, besides the CVF and OCAI, are: the Theoretical Model of Culture Traits (Denison and Mishra, 1995), which is conceptually similar to the CVF, and its matched scale, the Organizational Culture Survey, including 6 items; the Organization Culture Inventory (Cooke and Rousseau, 1988), including 3 dimensions and 120 items; the Organizational Culture Profile (O'Reilly, Chatman and Caldwell, 1991), including 7 dimensions and 54 items; the Multidimensional Model of Organizational Cultures (Hofstede *et al.*, 1990), including 6 dimensions and 135 items; Values in Organizational Culture Scale (Zheng, 1990), including 9 dimensions.

Compared with the above models and scales, the CVF and its matched scale OCAI have the following advantages:

(1) Few dimensions but broad implications: The CVF includes only two dimensions whereas incorporates the essence of the eight commonly accepted dimensions mentioned above into its structure (Ralston *et al.*, 2006). The two dimensions of control vs. autonomy and internal vs. external are directly included in the CVF. Furthermore, three dimensions (stability vs. change; orientation to work/coworkers; isolation vs. collaboration) are explicitly combined in the theoretical model. In addition, the model also addresses, in principle, the other three organizational culture dimensions.

(2) Empirically validated in cross-cultural research: A large amount of empirical studies have established the reliability and validity of the CVF and OCAI (e.g., Howard, 1998; Ralston *et al.*, 2006).

(3) Most extensively applied in the context of China: Of the various organizational culture models, the CVF is the only one that has been extensively used with Chinese and Asian samples (e.g., Deshpande and Farley, 2004; Kwan and Walker, 2004).

(4) Most succinct: The questionnaire of OCAI includes only 24 items thus are very convenient for practical operations.

In summing up the study on the CVF, the authors conclude that the CVF and its matched scale OCAI are very suitable for quantitative research in a Chinese context, especially for studies on organizational culture change and on

identification of culture types related to organizational effectiveness. The CVF can also be used as a conceptual model to do some qualitative research to explore the reason and process of organizational culture change. In addition, it is a promising research field to study the prerequisite conditions of different culture types in the CVF and the relationships between organizational culture and other variables such as organizational effectiveness, employee satisfaction, etc. in the context of China. One may also expect to make a contribution towards modifying the CVF by doing such empirical studies.

References

- Al-Khalifa, K. N. and E. M. Aspinwall. (2001). Using the Competing Values Framework to Investigate the Culture of Qatar Industries. *Total Quality Management*, 12(4), 417-428.
- Cameron, K. and R. E. Quinn. (2006). *Diagnosing and Changing Organizational Culture: Based on the Competing Values Framework*. Beijing: China Renmin University Press.
- Cooke, R. and D. Rousseau. (1988). Behavioral Norms and Expectations: A Quantitative Approach to the Assessment of Organizational Culture. *Group and Organizational Studies*, 13, 245-273.
- Denison, D. R. and A. K. Mishra. (1995). Toward a Theory of Organizational Culture and Effectiveness. *Organization Science*, 6(2), 204-223.
- Deshpande, R. and J. U. Farley. (2004). Organizational Culture, Market Orientation, Innovativeness, and Firm Performance: An International Research Odyssey. *International Journal of Research in Marketing*, 12(1), 3-22.
- Detert, J. R., R. G. Schroeder, et. al. (2000). A Framework for Linking Culture and Improvement Initiatives in Organizations. *The Academy of Management Review*, 25(4), 850-863.
- Hofstede, G., B. Neuijen, et. al. (1990). Measuring Organizational Cultures: A Qualitative and Quantitative Study across Twenty Cases. *Administrative Science Quarterly*, 35(2), 286-316.
- Howard, L. W. (1998). Validating the Competing Values Model as a Representation of Organizational Cultures. *International Journal of Organizational Analysis*, 6(3), 231-250.
- Kwan, P. and A. Walker. (2004). Validating the Competing Values Model as a Representation of Organizational Culture through Inter-Institutional Comparisons. *Organizational Analysis*, 12(1), 21-39.
- Lamond, D. (2003). The Value of Quinn's Competing Values Model in an Australian Context. *Journal of Managerial Psychology*, 18(1/2), 46-59.
- Lund, D. B. (2003). Organizational Culture and Job Satisfaction. *Journal of Business and Industrial Marketing*, 18(3), 219-236.
- O'Reilly, C., J. Chatman, et. al. (1991). People and Organizational Culture: A Profile Comparison Approach to Assessing Person-Environment Fit. *Academy of Management Journal*, 34, 487-516.
- Ouchi, W. G. (1979). A Conceptual Framework for the Design of Organizational Control Mechanisms. *Management Science*, 25(9), 833.
- Ouchi, W. G. (1984). The M-Form Society: Lessons from Business Management. *Human Resource Management*, 23(2), 191-213.
- Quinn, R. E. and J. Rohrbaugh. (1983). A Spatial Model of Effectiveness Criteria: Towards a Competing Values Approach to Organizational Analysis. *Management Science*, 29(3), 363-377.
- Quinn, R. E. and K. S. Cameron. (1983). Organizational Life Cycles and Shifting Criteria of Effectiveness: Some Preliminary Evidence. *Management Science*, 29(1), 33-51.
- Ralston, D. A., J. Terpstra-Tong, et. al. (2006). Today's State-Owned Enterprises Of China: Are They Dying Dinosaurs Or Dynamic Dynamos? *Strategic Management Journal*, 27(9), 825-843.
- Sousa-Poza, A., H. Nystrom, et. al. (2001). A Cross-Cultural Study of the Differing Effects of Corporate Culture on TQM in Three Countries. *International Journal of Quality and Reliability Management*, 18(7), 744-761.
- Wang, Guoshun et. al. (2006). A study on organizational culture model: based on the improvement of Denison's model and an empirical study. *China Soft Science magazine*, 3, 145-150.
- Wilkins, A. L. and W. G. Ouchi. (1983). Efficient Cultures: Exploring the Relationship between Culture and Organizational Performance. *Administrative Science Quarterly*, 28(9): 468-481.
- Zheng, Boxun. (1990). The Assessment of Organizational Culture Values. *Chinese Journal of Psychology*, 32, 31-49.



Sales Analysis with Application to Sparkling Beverage Products Sales in Southern Thailand

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Abstract

Managers need to know about their business performance and how to gain rapid insight into fast-growth products and profit opportunities. This case study used monthly sales revenue from sparkling beverages of data collected routinely from 14 provinces of Southern Thailand during years 2000-2006. Linear regression models of log-transformed sales revenue per 1000 population were used to analyse per capita revenue and study product preference with respect to flavour and branch location. Population data was obtained from the 2000 Population and Housing Census of Thailand. The model contains quarterly effects and interactions associated with flavour-branch and branch-year. The average annual per capita consumption value rate was 297 baht for the population of 8.087 million residents in Southern Thailand. Branches in Samui and Phuket had higher rates than other branches. In addition, areas with different proportions of Muslims in their population had different beverage preferences.

Keywords: Sales revenue, Linear regression model, Sparkling beverages, Consumption rate, Product preference, Southern Thailand

1. Introduction

Generally, business owners and managers need to know about their sales trends and profitability, not only overall but by departments or products within each department. They also have to consider the potential of their business improvement from different areas, by gathering, classifying, comparing, and studying company sales data. Most managers don't have the time or expertise to analyse their sales data themselves. Nevertheless, there are many studies about sales analysis. In the case study of carbonated soft drink consumption and bone mineral density in adolescence by McGartland et al. (2003), adjusted regression modeling was used to investigate the influence of carbonated soft drinks on bone mineral density. Residual demand analysis (Higgins et al. 2005) could be applied to test whether carbonated soft drinks were a relevant product market under the Merger Guidelines. Goktolga et al. (2006) analyzed socio-demographic factors affecting a decrease in consumption of chicken meat because of Avian Influenza (Bird Flu) in Turkey using a multiple bounded probit model. Descriptive and multiple regression analyses (Probart et al. 2006) had some good features to identify the factors associated with the offering and sale of competitive foods and school lunch participation. Helasoja et al. (2007) used logistic regression to fit socio-demographic patterns of drinking and binge drinking in Estonia, Latvia, Lithuania and Finland, 1994-2002. Ratio analysis, historical trend analysis and linear regression analysis used by Bureau

(2007) were found to be useful for analyzing the factors and examining the opportunities critical to the success of the food and beverage industry in India.

This study illustrates methods for graphing and statistical modeling available to businesses and demonstrates how each can be implemented using freely available software. Linear regression models are used to see how well these methods can be applied to a case study in southern Thailand. From an academic perspective the study demonstrates how easily business analysis can be taught to both students and managers. From a managerial perspective, the study demonstrates that developing accurate analysis capability need not be expensive or overly time-consuming. The purpose of this study is to understand the main factors that influence sparkling beverage sales in Southern Thailand and to find the annual per capita consumption value rate. The study investigates the associations between product preference with respect to flavour, branch location and socio-demographic factors that are useful for planning and decision making. Our study aims are to find a suitable statistical model to describe the variation in quarterly sales data of a major sparkling beverage company in southern Thailand reported from 2000 to 2006.

Thailand is divided into four geographical regions. The southern region occupies about 14% of the total land area. There are 14 provinces in southern Thailand with a total area 71,798 square kilometers. Sparkling beverages are traditionally popular products in the south, although some consumers prefer more healthy beverages. Sparkling beverages are also primarily used as mixers for consumption with alcoholic drinks.

2. Methods

The outcome in this study is sales revenue. Determinants are flavour, branch location and quarterly period. Flavours were identified for five types of products, namely "Cola flavour", "Orange flavour", "Red flavour", "Green flavour" and "Lime flavour". Two types of returnable packages (10 ounce and 1 liter) and three types of non-returnable packages (1.25 liter, 2 liter and 325 ml) were identified. In our study area 20 branches were sampled from 14 provinces. Provinces with more than one branch were Surat Thani, Nakorn Sri Thammarat, Phang-nga, Chumphon and Narathiwat. Branch locations were grouped into 3 areas (Muslim, tourist and normal areas) based on product preferences and consumer behavior in each branch location.

Data for each month were available in computer files with records for sales revenue separated by flavour and branch location. Records from years 2000 to 2006 were stored in a MySQL database. SQL was used to create sales revenue data in baht by month, flavour and branch location. All graphical and statistical analyses were performed using R software (R Foundation for Statistical Computing, Vienna, Austria).

This quantitative research focused on using statistical graphics and statistical models, including linear regression, for analyzing sales revenue and its dependence on flavour, branch location and quarter. Sales revenue data generally have positively skewed distributions so it is conventional to transform them by taking logarithms. Cells with zero counts were adjusted to avoid the problems of taking the logarithm of zero.

Linear regression models of log-transformed sales revenue per 1000 population were used to analyze the sparkling beverage sales per capita revenue and to study the main factors including product preference with respect to flavour and packaging.

The annual per capita consumption rate was computed using sales revenue divided by the number of years and population obtained from the 2000 Population and Housing Census of Thailand.

The Southern Thailand market can be grouped by branches location and consumer preferences into tourist area, Muslim area and normal areas as shown in Figure 3.

3. Statistical model

The simplest linear model takes the additive form

$$Y_{ijk} = m + b_i + f_j + a_t + q_k \quad (1)$$

where Y_{ijk} is the natural logarithm of the quarterly revenue in 1000s of baht per 1000 population for branch i (b_i), flavour j (f_j), and quarter k (q_k) of year t (a_t). In this formula m is the overall mean of the log-transformed quarterly revenue.

Since this additive model does not allow for different flavour preferences in different regions, we also consider a more general model of the form

$$Y_{ijk} = m + c_{ij} + a_t + q_k \quad (2)$$

In this model c_{ij} is an interaction between branch and flavour (c_{ij}). Generalizing further, we also consider the model

$$Y_{ijk} = m + c_{ij} + d_{it} + q_k \quad (3)$$

Model (3) thus allows for interactions between branch-flavour (c_{ij}) and branch-year (d_{it}).

These statistical methods are described in further detail by Venables and Ripley (2002, chapter 6). After fitting the models, we plotted confidence intervals for parameters after back-transforming so that the parameter estimates were expressed in

terms of the original data, that is, in 1000 baht per 1000 population. To do this, it was necessary to incorporate an additional scale parameter for each factor to ensure that the mean revenue associated with each factor based on the fitted model matched the overall observed mean revenue.

4. Results

Figure 4 shows the overall distribution before and after transforming the data by taking natural logarithms of sales revenue per 1000 population. The sales revenue data were symmetry with homogeneously of variance. This log-normal distribution can be used to provide an estimate of consumption rate in each quarter.

From Table 1, the results indicate that Model (3) is the best regression model to use in this study because it has the highest r-squared value, which was very close to 1.

From Figure 5, it is clear that the residual plot of Interaction Model (3) was the most linear.

Figure 6 shows plots of sales revenue in baht (left panel) and per 1000 population (right panel) versus fitted value. The model predicts the proportions in the 2800 cells very well.

Table 2 shows an annual per capita consumption rate in each branch location compared with population in the corresponding catchment area. The average annual per capita consumption rate was 297 baht for the total population of 8.087 million residents.

Figure 7 shows sales revenue per 1000 population by branch location and flavour. Samui (Sm) and Phuket (Pk) branches had higher rates than the other branches, while Nakhon Sri Thammarat (Nk) branch had the lowest consumption rate.

Figure 8 shows sales revenue of each flavour grouped by branch location and consumer preferences for Muslim, tourist, and normal areas. Areas with different proportions of their population being Muslim, had different beverage preferences due to consumers preferring colour and lime products.

5. Discussion and conclusion

The log-transformed quarterly sales revenue trends can be modeled using linear regression. From this model, we found that quarterly effects and interactions associated with flavour-branch and branch-year are main factors that influence the sparkling beverage sales in southern Thailand.

We also found that the average annual per capita consumption value rate was 297 baht for the population of 8.087 million residents in southern Thailand. The annual per capita consumption rate can be used to find market opportunities which lead to greater share and growth in each area. Samui and Phuket branches, both tourist areas, had higher consumption rates than other branches. This may be because most tourists prefer these drinks over other types, are familiar with sparkling beverages. Nakhon Sri Thammarat (Nk) branch had the lowest consumption rate, thus this branch has an opportunity to increase their sales growth. This province also has the highest population in southern Thailand. A company would need to do the market development including more activities or promotions to drive volume and sales growth rate.

We studied the associations between product preference with respect to flavour, branch location and socio-demographic factors by grouping branch location into 3 types, namely tourist, Muslim and normal areas. Areas with Muslim population had different preferences compared with other areas because the Muslims prefer cola products and colour flavours (orange, red, green) of sparkling beverage as well. This is very useful fact findings for managers to know where is the right place to push each product in and to understand how to create more sales into each area.

Other studies have also used linear regression analysis (McGarland et al, 2003; Probart et al, 2006., and Bureau, 2007) but their studies did not take the location into account and did not include any analysis on per capita consumption rate. In our study, linear regression models were applied to both sales revenue and consumption rate analysis with application to a case study of sparkling soft drink products in southern Thailand. The statistical model used in this study was very suitable to answer our research questions and the results are very useful for managers to understand their performance, consumers needs in each branch location and opportunities to boot up the sales growth in each areas. Having the best model, managers can provide a useful basis for sales analysis, incorporating the results into their company plans and strategies. However, further study in this data will be expanded to more complex business forecasting.

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References

- Bureau. (2007). Indian Food and Beverages Forecast (2007-2011). [Online] Available: <http://www.bharatbook.com/detail.asp?id=50059> (January 12, 2008)
- Cox, D.R. & Wermuth, N. (1996). *Multivariate Dependencies-Models, Analysis and Interpretation*. London: Chapman & Hall.
- Goktolga, Ziya Gokalp., Gunduz, Orhan. (2006). The Analysis of Socio-Demographic Factors Affecting Decrease in Consumption of Chicken Meat Because of Avian Influenza (Bird Flu) in Turkey: Case of Multiple Bounded Probit Model. *Journal of Applied Sciences Research*, 2(12), 1350-1354.
- Helasoja, Ville et al. (2007). The sociodemographic patterning of drinking and binge drinking in Estonia, Latvia, Lithuania and Finland, 1994-2002. *BMC Public Health*, 7, 241.
- Higgins., Richard, S., Kaplan., David, R. and McDonald., Michel, J. (2005). Residual Demand Analysis of the Carbonated Soft Drink Industry. [Online] Available: <http://www.springerlink.com/content/h7n6w33821up1w24> (July 13, 2007)
- Kleinbaum, D.G., Kupper, L.L., Muller, K.E., & Nizam, A. (1998). *Applied regression analysis and multivariable methods*, 3rd ed, Duxbury Press, Pacific Grive, C.A.
- McGartland, C., Robson, P.J., Murray, L., Cran, G., Savage, M.J., Watkins, D., Rooney, M., & Roreham, C. (2003). Carbonated Soft Drink Consumption and Bone Mineral Density in Adolescence: The Northern Ireland Young Hearts Project. *Journal of bone and mineral research*, 18, 1563-1569.
- National Statistical Office. (2002). *The 2000 population and housing census, southern region*. Bangkok: Statistical Data Bank and Information Dissemination Division, National Statistical Office.
- Nichols, Donald. (2005). The Simple Regression Model. [Online] Available: <http://dnichols.wustl.edu/413sp2005/simple%20regression%20sp2005.pdf> (June 5, 2007)
- Probart C., McDonnell E., Hartman T., Weirich J., & Bailey-Davis L. (2006). Factors associated with the Offering and sale of competitive foods and school lunch participation. *Journal of the American Dietetic Association*, 106, 242-247.
- R Development Core Team. (2007). *R: A language and environment for statistical computing*. Vienna, Austria: R Foundation for Statistical Computing, Vienna.
- Syspro. (2007). Sales Analysis. [Online] Available: http://www.syspro.com/PDF/sales_analysis.pdf (March 24, 2008)
- Venables, W.N., & Ripley, B.D. (2002). *Modern Applied Statistics with S*. Springer. Queensland.
- Venables, W.N., & Smith, D.M. (2004). An Introduction to R. [Online] Available: <http://cran.r-project.org/doc/manuals/R-intro.pdf> (March 30, 2007)

Table 1. Result of fitting linear regression model

Model	R ²	df	RSS
1	0.913	2767	211.9
2	0.959	2691	100.7
3	0.973	2577	65.1

Table 2. Population (2000 census) of sparkling beverage branch locations and annual consumption in Southern Thailand

Branch	Symbol	Population (x 1000)	Annual consumption (Baht/population)
Nakhon Sri Thammarat (Exclude: Thung Song district)	Nk	1,375	92
Hat Yai	Hy	1,258	267
Surat Thani (Exclude: Phunphin and Samui district)	Sr	746	183
Narathiwat (Exclude: Kolok district)	Nv	600	69
Pattani	Pn	599	92
Trang	Tr	597	142
Phatthalung	Pl	501	84
Yala	Yl	418	172
Chumphorn (Exclude: Lang Saun district)	Cp	380	76
Krabi	Kb	338	169
Phuket	Pk	250	697
Satun	St	219	144
Phang-nga (Exclude: Takuapa district)	Pg	192	105
Ranong	Rn	162	208
Thung Song	Ts	148	325
Phunphin	Pp	91	428
Lang Saun	Ls	69	291
Kolok	Kl	65	386
Takuapa	Tk	44	583
Samui	Sm	35	1,424
Total		8,087	
Average annual consumption (Baht per population)			297

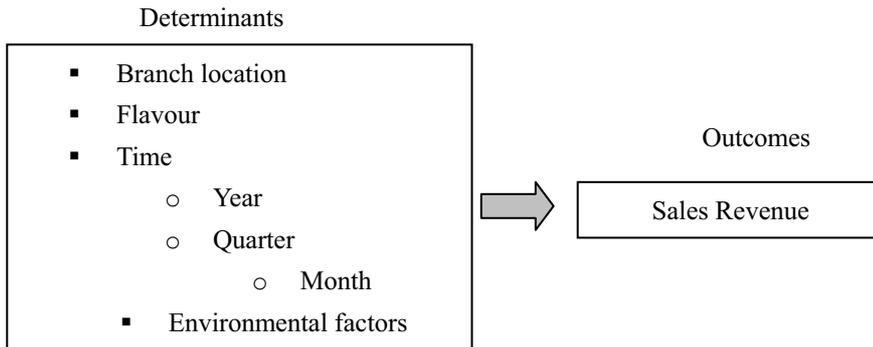


Figure 1. Data path diagram

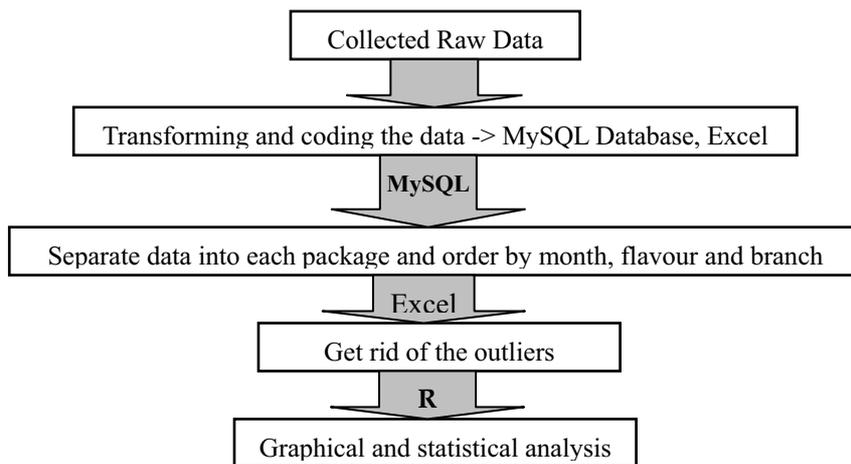


Figure 2. Data collection and management

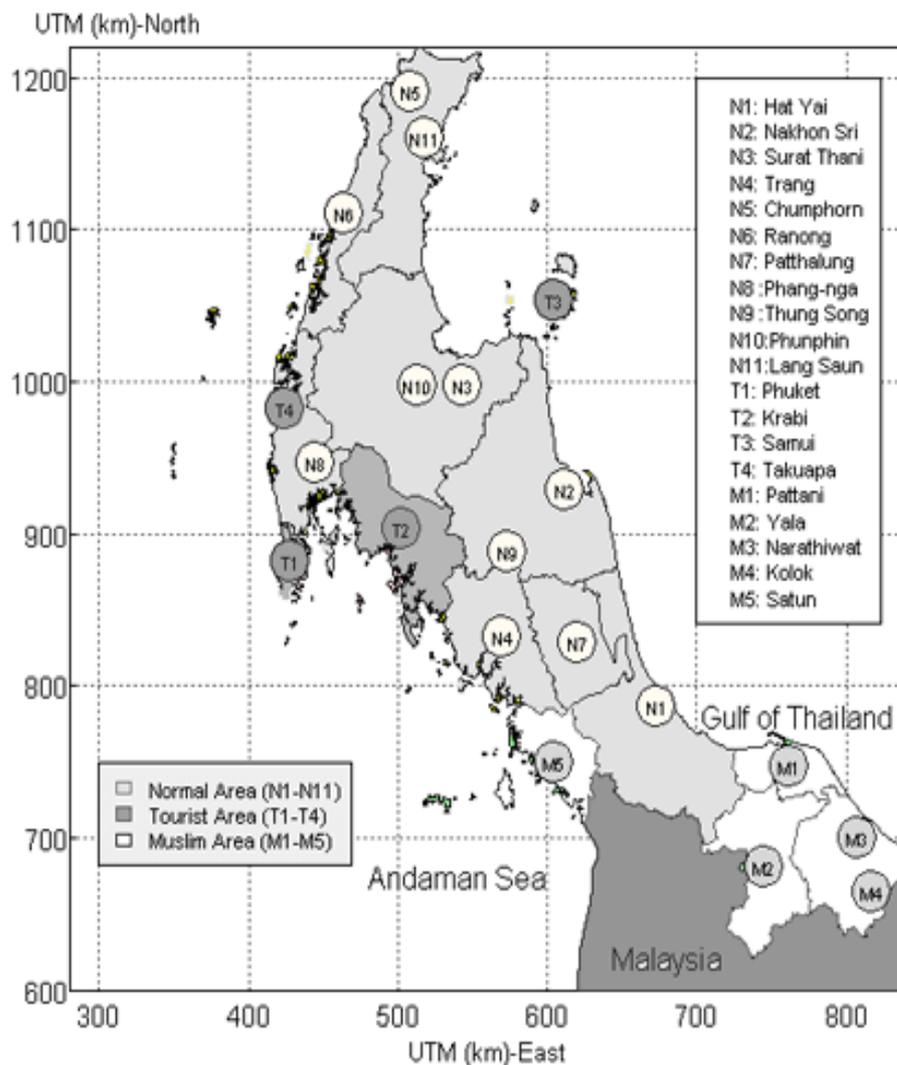


Figure 3. The locations of the branches and their definitions as tourist, Muslim or normal areas

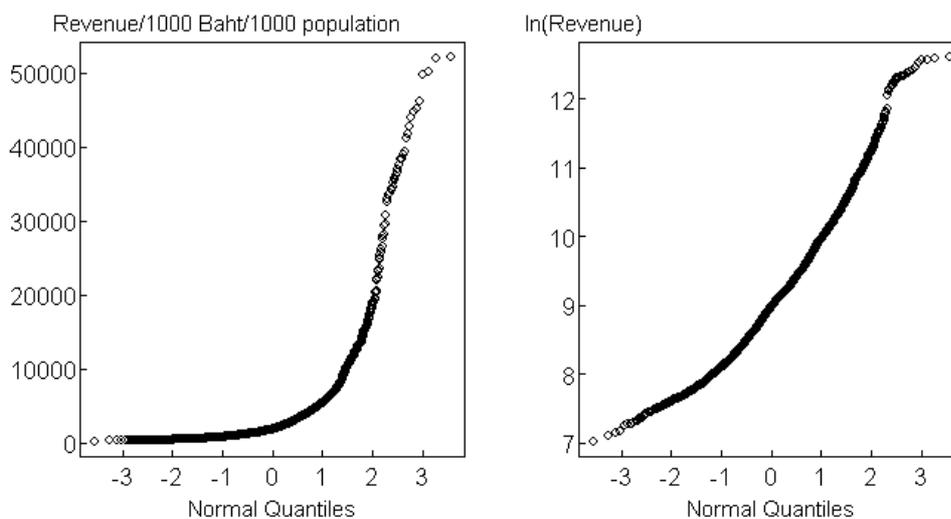


Figure 4. Sales revenue distribution before and after transforming to ln (Baht/1000 population)

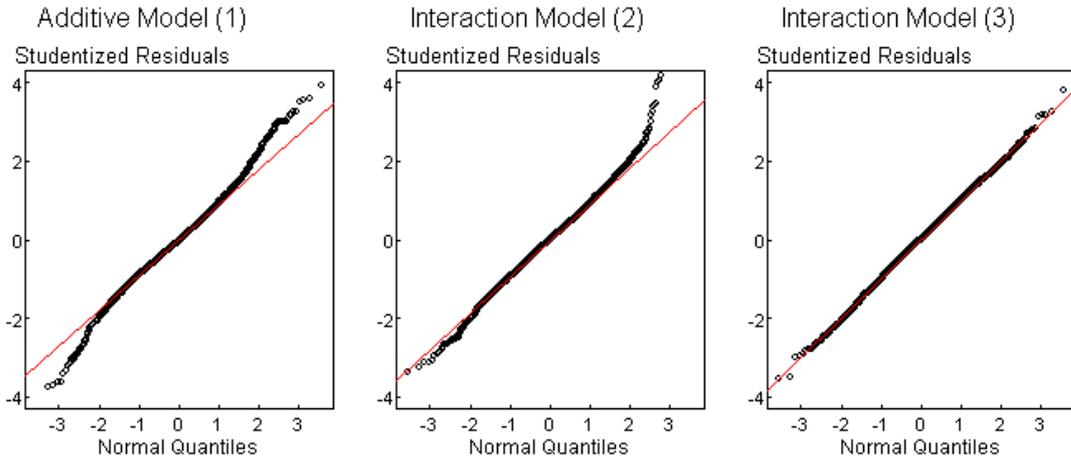


Figure 5. Comparison between residual plots for three models

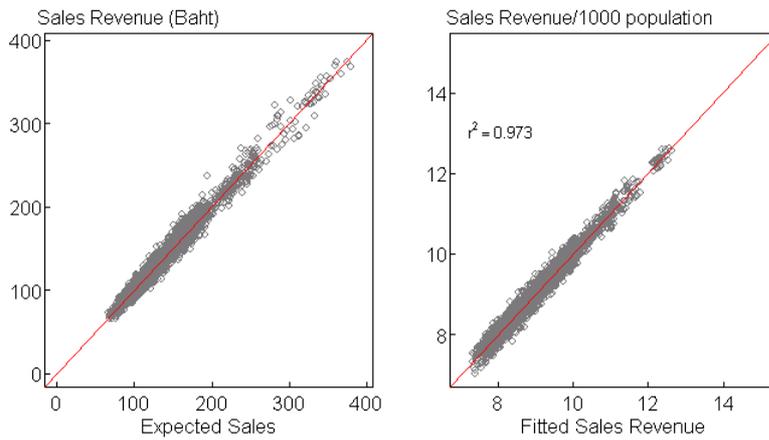


Figure 6. Plots of sales revenue and fitted values for Model (3)

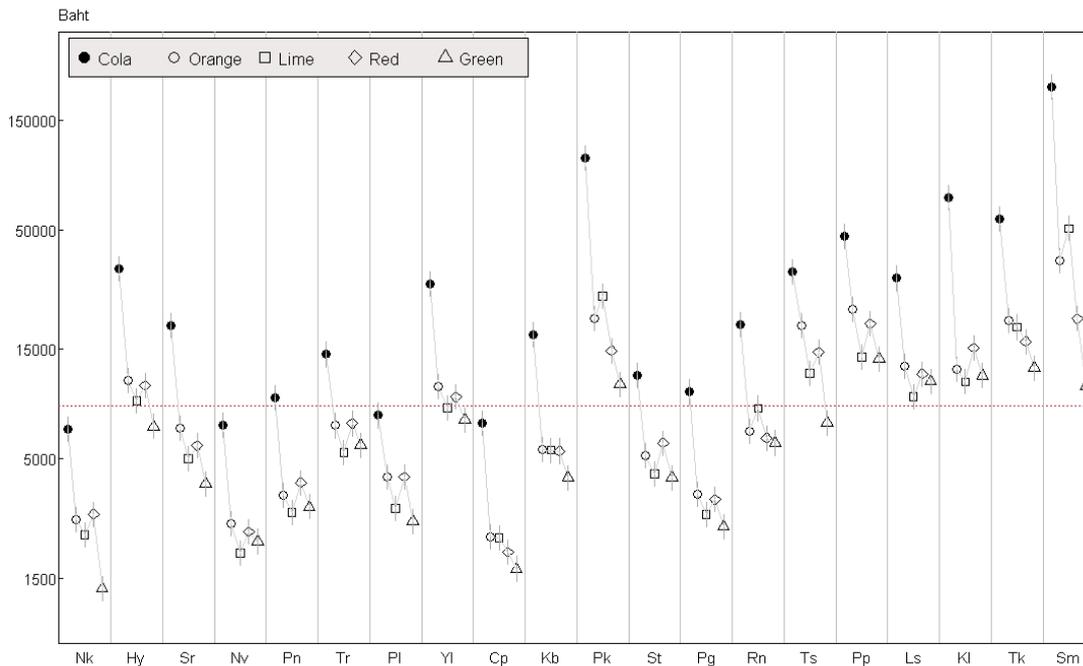


Figure 7. Sales revenue per 1000 population by branch location and flavour



Study on the Internal Audit for Listed Companies Based on Value-added View

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Abstract

As the function of internal audit is being cognizing deeply and changing, the function of internal audit in Chinese listed company governance is gradually being strengthened. Combining with the new definition of internal audit, the enterprise risk management frame and the re-oriented value-added aim of internal audit, the measures such as perfecting the corporate governance structure and implementing many measures about management audit oriented by internal control and risk management were proposed to promote the listed companies to reform the management, evaluate the risk and added values, and fully exert the value-added function.

Keywords: Internal audit, Value-added, Orientation

With the globalization of the economy and the quick development of the internationalized tendency of capital market, Chinese corporate governance structure is continually being perfected. As the important part of enterprise self-restriction mechanism, the internal audit needs to exert its important function for perfecting corporate governance, improving internal control mechanism and strengthening risk management. The definition and ERM frame about the internal audit from International Internal Audition Association (IIA) can offer development direction for the internal audit. The president of Chinese Internal Auditing Association, Mr. Wang Daocheng, pointed out that “the work of internal audit should actively explore and carry out the new way of management audit oriented by internal control and risk management (Wang, 2006)” for many times. So it is imperative under the situation to re-orientate the internal audit.

1. Orientation of internal auditing

In the up to date definition of internal audit, IIA pointed out that “internal audit is a kind of independent and objective affirming and consulting activity, and its targets are to add values and improve the operation of the organization. It evaluates and improves the effects of risk management, control and governance procedure, and helps organization to realize its target.” IIA defined the internal audit as a kind of value-created activity, and its final target is to help the organization to realize its target, i.e. creating values for shareholders and other stakeholders. The modern audit has developed from the financial audit of “independently evaluating activity” to the “guaranteeing and consulting activity to add values and improve the management of enterprise”. From initial fault-checking to helping manager better carry out their responsibilities, and to helping enterprise add values, the range of internal audit has be extended to risk management, internal control, corporate governance, perfecting the corporate governance structure and enhancing the management level of enterprise.

In the speech of “Tell the Whole World” in the 65th national conference of IIA of 2006, Stephen Geffett, the present of IIA, pointed out “internal audit is a very hot occupation, because it is very important to add the values of the organization (Stephen, 2006).” IIA made following explanations for the “adding values” in the definition, “the existence intention of the organization is to create values, or benefit the owners, other shareholders, consumers and clients of the organization. The mode that the organization offers value is to produce products or offer services, and sale these produces or services by means of resources”. The internal audit department is such a department which can add values for the organization. “Sarbanes-Oxley Act” defined the audit committee as the legal audit supervision department that the company must established, and concretely regulated the audit committee, which enhanced the status of the internal audit, and further increased the independence of the internal audit, and offered important platform to exert the value-added function of internal audit.

2. Problems existing in the internal audit of listed company

2.1 The cognition about internal auditing is deficient, and the status of the internal audit department is low and its independence is bad

One survey indicated that 67% internal audit departments in China were led by the chief accountant or the deputy general manager who charged the finance, and 33% internal audit departments were led by the general manager. Obviously, the power of the internal audit department led by the financial controller is low, and it can not independently supervise the financial controller, general manager and directors. And though the internal audit department directly led by the general manager can be independent from other audited functional departments, but it still can not independently supervise the general manager and directors. According to the rules of "Chinese Public Company Governance Standards" issued by China's Securities Regulatory Commission in Jan 2002, the directorate of listed company could establish the audit committee, and definitely regulated various functions of the audit committee. But in Chinese listed companies at present, many companies have not established the audit committee, which indicates that before the establishment of the audit committee has not been the compulsive rule, the decision-making layer of listed company still lacks in the internal audit, and the governance environment of the audit committee is still deficient.

This kind of concept lacking in cognitions about internal audit certainly will not guarantee the stabilization of the internal audit department and personnel, and the setup of audit department is basically parallel or lower than other departments and the audit department is led by the financial controller and the general manager, which can not effectively supervise the financial department, financial controller and directors. The lower leading layer certainly will induce the low status and bad independence of the audit department.

2.2 The standardization degree of internal audit is low

According to the audit laws and regulations, most internal audit departments of listed company established the bylaws about the audit work, but that is still far away from the standardized requirements of the audit work. Up to now, there is no one department which could really perform the quality checking of internal audit. Because of the deficiency of these basic criteria, and the coarse management of many years, the internal audit has been gotten into the strange circle that there are no laws to follow, and laws and regulations can not be followed, and qualities of audit works are intermingled, for example, the audit exceeds the responsible range, the operation procedure gets out of line, and the audit method and measure are improper, which can not only influence the efficiency and effect of audit but bring large audit risk.

2.3 The function and work range of internal audit is limited to some extent

It is the development tendency of modern internal audit that the function of internal audit turns from the financial target to the economic management target, which had been definitely regulated in the "Regulations about Internal Audit Works of Chinese Audit Administration". But the range of most internal audit departments and personnel is still limited in traditional economic supervision audit, and the subject is always the underling department (or secondary department) of the company, and the internal audit department can not effectively supervise the financial activities of the company, which is the result that the leader layer of the internal audit department is lower, and the function and work range of some internal audit departments is dominated by the managers' will, and the managers often artificially weaken the audit function, reduce or transfer the work range of audit, so the supervision and management function of internal audit can not be exerted effectively.

2.4 The quality of internal audit personnel can not adapt the requirements of auditing

Most internal audit personnel possess low quality in China, and they can not adapt the requirements of modern audit work. For the personnel learning experience, few internal audit personnel have bachelor's degree, and post graduate certificate can be counted on one's fingers. And many internal audit personnel come from financial and management departments in the department reforming and recombining processes and their professional abilities are relatively weak. For the personnel specialty, most audit personnel are graduated from traditional specialties such as finance and engineering, and the personnel of specialties such as law, computer and auditing are deficient seriously. For the work ability, most internal audit personnel only implement simple accounting evidence and account checking because of the professional and audit experiences, and the personnel who know well computer technology and legal knowledge have more deficient ability of applied audit ability. Above situations objectively make the internal audit personnel can not adapt the quick change of the auditing environment and reply various challenges.

3. Major measures to exert the value-added function of internal audit

3.1 Perfecting the corporate governance structure of listed company

The corporate governance structure of Chinese listed company has not been perfect at present, and to really establish effective internal audit system, the corporate governance structure of Chinese listed company must be perfected. First, the adjustment of Chinese listed company equity structure should be strengthened. The listed company should actively and stably adjust the equity structure and perfect the corporate governance structure under the guidance of national

macro policy. Second, the independent director system should be established and perfected. The directorate is the core of corporate governance, and the proportion of independent director in the directorate and the full exertion of their functions can mainly decide the efficiency of the directorate. Only the effective independent director system is established, the directorate can fully exert its function, and effectively instruct the internal audit of listed company. Therefore, according to the requirements of "Listed Company Articles of Incorporation" and "Listed Company Governance Rules", the listed company should establish and perfect the independent director system, and set up the listed company audit committee composed by most independent directors based on that, and the audit committee would harmonize the internal and external audit relations for the listed company, and enhance the participation degree of internal audit in the internal management of listed company.

3.2 Strengthening the internal control audit and improving the system and flow of enterprise internal control

At present, to push the internal control construction of enterprise and develop the internal control system audit has been the hotspot concerned by the enterprises. Chinese State-owned Assets Supervision and Administration had definitely require the central enterprises should establish and perfect the internal control system, and strength the supervision and checking of the implementation of internal control, and part central enterprises had been the efficiency evaluation experimental units for the internal control, and it also required that the enterprises listed in US should make the construction and evaluation of internal control well according to the "Sarbanes-Oxley Act". Taking the internal control frame in the COSO report of 1992 as the original version, the internal control includes control environment, risk evaluation, control activity, information communication and supervision. For the enterprises which internal control constructions can not achieve the requirements, the principles and chief accountant of these enterprises should assume corresponding legal responsibilities. Thus it can be seen that the internal control auditing is one of important contents of internal auditing.

The essential tenet of the internal control auditing is "to increase benefit and prevent risk", and according to the auditing concept of "giving priority to preventing and the prevention is better than correction", the emphasis of internal control should be the prevention and control of risk in advance, and properly give attention to the checking in the case and the supervision after the case, and establish the restriction and supervision mechanism giving priority to the prevention. To check, analyze and evaluate the internal control system, find out the weak part of the internal control system by scientific evaluation method, put forward the improved advices, and build up the system holes can perfect the internal control system and nip in the bud. The transfer of the control point can report and process the discovered violations of rules and regulations in time, and perish the abnormal events in the bud possibly and avoid potential risk loss. The development of the internal control audit can impel the management layer to establish and perfect the internal control system, strengthen the management, fully exert the function of the internal control system, and enhance the economic benefit of the company.

3.3 Giving priority to defend and control risks, developing the risk management audit and enhancing enterprise's ability to reply the risks

In the risk-oriented internal control times, the work emphasis of internal audit also changes from "control" to "risk". "Except for traditional internal control, the modern internal auditing more concerns effective risk management mechanism and perfect corporate governance structure (Wang, 2006)." In 2004, US National Commission on Fraudulent Reporting (it is also called Treadway Committee) put forward that the enterprise risk management was composed by eight mutually associated factors including control environment, target establishment, proceeding identification, risk evaluation, risk reaction, control activity, information and communication, and supervision in the "Enterprise Risk Management Frame". Different with five factors in COSO report of 1992, it classified the risk evaluation into target establishment, proceeding identification, risk evaluation and risk reaction, and it more emphasized the risk management. The risk management which transfers the control emphasis to the organization brings the change of internal audit content, and induces the transfer of the audit work center.

"Internal audit is the function of risk management, and it is the re-management of risk management (Zheng, 2006)." The financial audit is always the base, and the "control" is still important, but the risk management audit more gives attention to analyze, affirm and open out pivotal management risk and management risk. "The evaluation of the implementation and utilization degree of risk management could ensure managers to use proper governance and control to treat the risk, which can offer advices to reduce, transfer and abide risks for managers". The enterprises in the present market competition face many challenges, and especially some enterprises have weak independent innovation ability and R&D ability, and over depend on the foreign capitals, some enterprises lack in development power and stable market status, and some enterprises possess single product. These points are the risk points to block the development of enterprise. Therefore, the internal auditing should point out the real risks and potential risks in time, deeply know the operation, primarily evaluate and affirm the fixed risks, judge the importance, decide the important accounts which need to be audited, confirm the materials influencing the accounts, confirming important auditing domain, establish tables for key data information and control points for important operations, perform risk supervision and clues, and actively offer

advices and ideas for decision-makers.

3.4 Enhancing the conversion and utilization of auditing result, and strengthening the audit quality control

The audit quality is the lifeline of the audit work, but it is not the final target of the audit work. The target of audit is to help the company to discover and solve existing problems and enhance the economic benefit. If the discovered problems have not been modified, the labors paid by the auditors will be wasted, and even if the audit quality is higher, the values created for the company are nothing. To make the value-added function of audit to be exerted effectively, the company must pay more attention to the conversion and utilization of audit results, and form the closed-loop management of the audit work.

The listed companies must highly emphasize the conversion and utilization of audit results, and effectively translate the audit results into the enhancement of enterprise management efficiency and management benefit. And they also should pay attention to the problems discovered in the audit, adopt effective measures to modify and correct the faults, and reduce the occurrence rate of same kind of problem in the subsequent audit, until these problems are solved completely, then the management behaviors of the listed companies can be really improved. The internal audit should actively dynamically follow these problems, harmonize and supervise relative departments to correct these problems in time, and run the responsibilities of a few departments with bad corrected effects, and the internal audit should strengthen the subsequent audit power, continually enhance the conversion and utilization of audit results, and fully exert the value-added function of the audit.

Li Jinhua, Chinese chief auditor, pointed out that “the management and benefit of any one department are unending, and though it is unending to enhance the management level and benefit, so the work of internal audit is also unending (Li, 2006).” Therefore, the internal audit has extensive development space, and to confirm the orientation of the internal audit, convert audit results into productivity by pushing internal control audit and risk management audit under the guidance of value-added target, and promote enterprises to strengthen the management and enhance the benefit is not the demands of the situation, but the requirements of the time, which can fully embody the value-added value of the internal audit.

References

- Gu, Qi & Zhang, Xiangzhou. (2003). Three Dimension System View of Internal Control. *Accounting Research*, No.11.
- Li, Jinhua. (2006). A Speech on the 2nd Conference of the 5th Council of Chinese Internal Auditing Association. *Internal Auditing in China*, No.1.
- Stephen Geffett. (2006). Tell the Whole World. *Internal Auditing in China*, No.9.
- Wang, Daocheng. (2006). A Speech on the Symposium about Learning and Carrying out Audit Law. *Internal Auditing in China*, No.5.
- Wang, Guangyuan. (2006). Risk Oriented Internal Audit. *China Audit*, No.7.
- Yang, Youhong & Hu, Yan. (2004). Tentative on the Junction of Corporate Governance and Internal Control. *Accounting Research*, No.10.
- Zhang, Jun. (2004). Enterprise Internal Control under the Accounting Information System Environment. *Communication in Finance and Accounting*. No.5.
- Zheng, Yan, et al. (2006). Internal Audit Will “Make Enterprise Seem More Beautiful”. *Internal Auditing in China*, No.9.



An Analysis of the Factors Influencing the Efficiency of Public-owned Colleges Run by Private Agencies

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Abstract

The public-owned college run by private agencies is a type of higher education with Chinese characteristics. It should maintain its differences from major universities and colleges, and make the most of the brand advantages to promote its blood-production function, which will bring about a sustainable development, so that it can realize the maximum efficiency in school management. The main factors influencing the efficiency of public-owned colleges run by private agencies are: the way the college is operated and managed, the way the fund is raised and the way the property rights are defined, etc. The appropriateness of these factors is also discussed.

Keywords: Public-owned colleges run by private agencies, the Efficiency in school management, Influencing factors

Public-owned colleges run by private agencies are colleges owned or controlled by the government, established by regular institutions of higher learning with the approval of the administrative departments responsible for education under the State Council and are run by private agencies. According to statistics, more than 300 of public-owned colleges run by private agencies have undertaken the task of cultivating more than 30% of the undergraduates across the country at present.

1. The background of the appearing of public-owned colleges run by private agencies

1.1 Since China adopted the reform and opening-up policy, the living standard of people is improving, they are moving from the stage of getting rid of poverty to leading a well off life. On the basis of the guarantee of material live, they begin to pursue the enjoyment of spiritual life. Therefore, the demand for education becomes primary. Particularly, the fever of an undergraduate education is increasing day by day. Since a nine-year compulsory education has been made universal, the income of both urban and rural residents is growing and the competition in the job market is more and more intense, the flourishing demand for higher education is stimulated. According to the 98-99 annual development report made by the World Bank, 60% of all the urban and rural individual saving deposits are owned by 20% of the citizens. The major purpose of these deposits is children's education, for which they have demand, hope and their own criteria. With the sustained growth of GDP at the rate of higher than 7%, more and more people are entering a comparatively well off stage, and are heading for a well off one, and pursuing for higher education has become the strongest desire of the masses. Therefore, the original public colleges can not meet the increasing need for higher education. And this problem is sure to be more prominent.

1.2 By the end of the 20th century, our country's economic operations have entered upon a period in which the total demand is less than the supply, the economic is turning from consumption constraining to demand constraining pattern, and the domestic hot spot of growth is disappearing. As a result, to stimulate domestic demand by developing higher education has become the strategic decision. We have initiated a new economic structure of keeping public ownership in a dominant position and have diverse forms of ownership develop side by side. And higher education should adjust to the needs for diversification of the social and economical structure. At present, Public-owned Colleges Run by Private Agencies, as an exhibition of the innovative mechanism, are seeking actively the diversification of ways to achieve

public ownership and diverse forms of ownership in education.

1.3 The assessment indicators of educational modernization requires that the percentage of funds for education in GNP is 4.9% for world average, 5.1% for developed countries, 4.1% for less developed countries, but only 2.3% in our country. The basic situation of the country gave birth to the fact that 'poor countries run huge education systems', which means with 1.4% of the total funds for education, we are supporting an enormous education system consisting of 22.9% of the world's educated population. Our country can not afford to run higher education as in the case of compulsory education, owing to the limited financial capability of the government. As a result, it is necessary to find out new ways to develop higher education in this context.

1.4 *The 21st Century Action Plan for Educational Promotion* made by the Education Department has demanded people to push the enrollment rate of higher education to close to 15%, making a historical leap from elite education to mass education. The acceleration of the development of higher education is both inevitable and necessary, because the number of school-age youth and the demand for higher education is increasing. Our higher education is entering a new stage, in which it is accessible to the majority of young people. The acceleration of the popularization will surely promote the higher education greatly. Therefore, the original public colleges can not meet the increasing need for developing higher education.

1.5 People have confidence in public colleges and doubt private colleges. People have confidence in public colleges because of their long histories, rich cultural spirits, excellent teaching traditions and high reputations. It is also because that they are rich in resources of human, material and money. On the contrary, private colleges are doubted, and most people would rather send their children to public colleges or universities. However, public-owned colleges run by private agencies make the best use of the advantages of being public-owned, and overcome the disadvantages of being run by private agencies, turning the possibility into reality.

1.6 According to the 47th Article of the Private Education Promotion Law of the People's Republic of China for higher education, private colleges can accept donations from citizens, legal persons or any other organizations in accordance with the related laws and regulations. The government will grant preferential tax policies to these citizens, legal persons or any other organizations according to the related rules, and will commend them.

Article 51 Investors are remunerated reasonably from the balance, after the deduction of the cost, funds reserved for development and other necessary funds that should be collected according to related regulations. The detailed ways are determined by regulations of the State Council. Since higher education is a profitable social activity, and it has been provided with powerful pledge of related laws and regulations, we believe that it will attract more investment from the public.

Consequently, it can be seen that public-owned colleges run by private agencies are implementing the strategy of rejuvenating China through science and technology to achieve educational modernization and popularization of higher education, to meet people's increasing need for higher education, and to alleviate the shortage of teaching resources resulting from the ever-enlarging scale of higher education. Thus, public-owned colleges run by private agencies emerge in this background.

2. The concept of benefit of public-owned colleges run by private agencies

I think the value orientation of the concept of benefit of public-owned colleges run by private agencies is that educational activities must be in line with the interest of the nation and the society, its end-result lies in the development of the students.

'Benefit is an often used concept in the development of education, it is a comprehensive assessment about the profits of educational input and output, including direct and indirect profits, and political and cultural profits. That is to say, the benefit of education is integral and comprehensive.' Although educational activities are profitable, the purpose of running a school is different from starting an enterprise. Starting an enterprise aims profits and takes maximizing profits as the criterion. However, running a school has a different purpose, and it should be in consonant with the Education Act, which state that 'educational activities must be in line with the interest of the nation and the society', 'no organization or individual can run schools or other educational institutions with a purpose of making profits.' It can be understood as rules for educational value orientation. As public welfare undertakings, public-owned colleges run by private agencies have the purpose of educating and cultivating people, raising the educational level and advancing the teaching quality. In this process, primary importance should be attached to the efficiency and benefits of education in order to promote it, and to ensure a sound development of the students. One should never distort education for his own profits. Economic benefit should be put the 2nd place on this basis. Without certain economic benefit, colleges will lack the impetus for development, and will have difficulties to continue. However, ways of blind competition or violation of laws should not be taken. And we should follow the rule of social benefit, and put it the 3rd. If public-owned colleges run by private agencies are well run, more students will be willing to be enrolled in. As a result the reputations of these

colleges will improve, so that the employment outlook will be brighter, and finally the economic and social benefit will increase accordingly, thus forming a virtuous circle.

3. Factors influencing the efficiency of Public-owned Colleges Run by Private Agencies

Public-owned Colleges Run by Private Agencies have the advantages of brands, intelligence, resources and human, so being run in traditional ways does not meet the demands and is not in conformity with market rules in terms of the investment subject and the definition of the property rights. We need to regulate them and make them self-dependent. These colleges should make full use of the advantages of brands, while remaining their differences from major colleges so that they can maintain the momentum of development, and improve their efficiency. The main factors influencing the efficiency of public-owned colleges run by private agencies are: the way the college is operated and managed, the way the fund is raised and the way the property rights are defined, etc. To establish the right concept of efficiency and to maximize the teaching efficiency, it's necessary to discuss the propriety of the above factors further.

3.1 The relationships of between operation and scales of the public-owned colleges run by private agencies and the efficiency

Martin Trow, an American socialist, who formulated the theory of the popularization of higher education in *The Problem higher education faces in the transforming from elitism to popularization* in 1973. He holds that 'there are at least 2 ways to achieve the growth of popularized higher education. One is the expansion of traditional elite universities and their traditional functions, and the other is the transformation of the university system from elitism to popularization, in order to have more diversified functions, that are new at least to universities. As a result, more people can have the access to higher education'. The public-owned college run by private agencies is a good representative of the new ways of growth. As a new form and mechanism of education, it is still in the initial stage, and has a wide space for development and revolution. In term of economy, the purpose of the public-owned college run by private agencies is to list for funds for structural reform and form a mechanism meet the requirements of the society, and to attract social funds. Market-oriented operation, greater independence, more structural innovations and diversification of managing methods are emphasized since these colleges are run by private mechanism. Today, it is necessary to integrate the public-owned college run by private agencies to speed up its development. For example, they can merger and restructure small schools with single subjects and are overlapped, in order to make them more competitive.

From 1980 to 1990, Professor Min Weifang had been in charge of the study of the different forms of development and the efficiency of scale of Chinese higher education. The study shows that when other related variables are controlled, the smaller the average scale of schools, the higher the cost per unit (the cost of cultivating a student). And the cost per unit will decrease with the increasing of the average scale of schools. When the average number of students is 4000 to 5000, the rate of change of the cost per unit is close to 0. This indicates that higher education has meet the demand of the efficiency of scale as a whole. Therefore in practice, undersized investment should be avoided, because it can not help to achieve efficiency of scale. At the same time, the scale should be appropriate, because of the law of supply and demand. It should be understood that the demand for education is infinite, but the supply is finite. Success will come when conditions are ripe. So we should avoid blind expansion at the cost of the quality of higher education excessive enthusiasm.

3.2 The relationships between the way the fund is raised and the property rights are defined and the efficiency

According to the 5th Article of the Implementing Regulations of the Law on the Promotion of Non-Governmental Education, 'the sponsors of private schools can use money, objects, land use right and intellectual property as financing for running a school'. The diversification of the form of financing will inevitably lead to the pluralism of the role of the sponsors. And according to the Education Law and the condition of public-owned colleges run by private agencies, financing can attract joint-equity educational investment from the people, who can cooperate with enterprises and institutions. Major universities can become shareholders by making full use of their brand advantages as intangible assets. Elites among supervisors and teachers can also become shareholders for they have made great contributions to the development of the college with their intelligence. This in return will give full play to their initiative and creativity in management and teaching, thus will promote the development of the college, too.

'When scales of colleges expand further, and the assets have been accumulated to a certain amount, there certainly will emerge disputes among sponsors, managers and teachers about the ownership of the property. Most colleges don't have a sponsor, and find it hard to deal with the civil dispute independently, making the main university assume endless responsibilities. A sound market operation mechanism and motivating system is not able to take shape because the property rights are not clear. Many contradictions about personnel, benefit and assets may be aroused, including law suits.' Therefore, the property rights must be made clear, so that the roles of all the parties will be definite, and the legitimate rights and interests of the country, the main university the sponsors and the colleges will be defended. The responsibilities, rights and benefits of the sponsors, managers and teachers should be specified.

3.3 The relationships among the goal of training, the standard of talents and the efficiency.

An appropriate goal of training and standard of talents will contribute to the improvement of efficiency. Most public-owned colleges run by private agencies aim at cultivating international, versatile and practical talents, and they pay special attention to the cultivation of inter-disciplinary talents and specialties. We should emphasize not only the extension of knowledge, the variety of cultural backgrounds and the all-round ability of the students, but also strong professional abilities and the qualities to be competent for a job. The experience of talent models from private schools can be learnt from.

The social assessment system for talents from public-owned colleges run by private agencies should be established. The supervision of their order and their behavior should be strengthened to ensure the quality of the talents and the efficiency of the school.

3.4 The relationships among the specialties and the readjustment of the curriculum and the efficiency.

With the support of the main university and the private agencies, public-owned colleges run by private agencies blaze new trails in offering specialties by breaking the bonds of conventions when classifying the specialties, such as blurring boundaries between some specialties and grafting some of them. These colleges should also give prominence to the form of individuality in education, for example, to enroll students on a large platform, and to allow them to choose their specialties by themselves later. And these colleges should pay more attention to the development of the specialties and its close relations with the demand of the society and the market. It's better for public-owned colleges run by private agencies to avoid overlapping of specialties, copying the specialties of the main university or trying to be small and all-inclusive to form their own system. It's also necessary for them to avoid catering the market too much, or being shot-sighted, ignoring a sustainable development. Otherwise, it will result in low efficiency.

The management of education should follow the rules of education. And the supervising of the quality and the level of teaching should be strengthened. Public supervision should be carried out, including the supervision of the administration, the process and the result of the education. Following the principle of wide-in and strict-out, public-owned colleges run by private agencies must avoid teaching in a rough way and issuing diplomas recklessly.

3.5 The relationships among the personnel management and the development of teaching troops and the efficiency

Public-owned colleges run by private agencies embodying the characteristics of the private mechanism, should make the transformation of the mechanism as a core. By reforming personnel and distribution systems, these colleges can put the managing system in order, strengthen the awareness of position, and set post according to demand. They also can adopt a system of contract and pay wages according to the specific post. These will enable them to form a flexible incentive mechanism, and to create an institutional environment which will favor a faster growing of the elitists and will encourage them to make breakthroughs. At the same time, the stability of the teaching and managing staff must be optimized, and the quality of teaching must be improved, so that the teaching efficiency and the overall level will be upgraded.

When we are developing the teaching troops, importance should be given to a proper age structure and knowledge structure of the teachers. These days, in some public-owned colleges run by private agencies, the structure is single and aging, with low academic degrees and low social recognition on the whole. And in some others, the teacher-student ratios become extreme as they are expanding.

I propose to establish a regional teacher bank to allow higher education institutions to share teaching resources, including overseas teaching resources. On the basis of voluntary participation and mutual benefit, colleges and universities can improve the teaching level and efficiency by cooperating and complementing, and by interdisciplinary efforts and optimizing the overall capacity.

3.6 The relationships among resource utilization, financial managing system and the efficiency.

In the utilization of teaching resources, public-owned colleges run by private agencies make full use of the material and human resources of the main university. And with the operation of private agencies, they make use of, expand, liquidize and optimize these high-quality resources of higher education (material, human and intangible assets), and offer paid use of them. However, some of those colleges overuse the resources of the main university, this in the long run will undermine the sustainable development of the main university, including tainting its and reputation, destroying its brand and lowering its efficiency.

The core of financial management of public-owned colleges run by private agencies is to achieve their goals by raising and using the money of the right amount at the right time. In this process, the value of the college should be maximized, efforts of all parties should be coordinated, the money should be well allocated, risks must be evaded and the efficiency should be improved. We must reinforce the economic responsibility, because financial supervision is the fundamental guarantee of the efficiency, and can ensure that the financial management is going on smoothly in the college.

Public-owned colleges run by private are supposed to offer different financing channels, make full use of their own

resources and mobilize people of different classes to increase educational investment. The management of the colleges should not only benefit the proper utilization of the educational resources as a whole, to avoid duplicated waste resulting from self-seclusion, but also avoid the harmful tendency of seeking after high standards and extravagance. On the contrary, these colleges should maximize the efficiency by improving distribution and utilization.

References

- Guo, Xiaowen. (2006). Where Does Educational Industrialization Go. [Online] Available: <http://www.cvedu.com.cn/url/index.asp>
- Hu, Ruiwen. (2001). The Latest Developments In Higher Education In Our Country and The Problem Of Financing In Colleges Run by Private Agencies. *Journal of Zhejiang Shu Ren University*, (2).
- Martin, Trow. (1999). The Problem Higher Education Faces in the Transforming from Elitism to Popularization. *Foreign Materials on Higher Education*, (1).
- Min, Weifang. (1994). The Investment in Education and the Efficiency—The Study of Education Economics by Professor Min Weifang. *Peking University Journal: Philosophy and Social Science*, (4).
- Pan, Maoyuan. Forming a Comprehensive Concept of Efficiency In Education. *Pan Maoyuan's Collected Works about Higher Education*. University of Shantou: Publishing.
- Yang, Ming. (2000). How Far Is Chinese Education from Modernization. *The Study of the Development of Education*, (8).
- Zhu, Zhenguo. (2004). A seminar on the Prospect of Private Colleges. *Guang Ming Daily: Education Weekly*, 13 May.



Wisdom of Domestic Customers: An Empirical Analysis of the Turkish Private Airline Sector

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Abstract

Customer Satisfaction is one of the most important processes in airline industry and is recognized as key to the success of business competition which is the individual's perception of the performance of the service in relation to expectations. Customers have drastically different expectations and, the objective of airline marketing efforts in today's fast moving world is to maximize customer satisfaction. For this reason, airline marketers offer more products and services than ever before.

In the airline industry understanding what passengers need and expect is essential to providing desired service quality (Gilbert & Wong, 2003) and consequently to understand the airline's performance levels (Chen & Chang, 2005).

An in-depth review of related literature has revealed that a majority of travel researchers tend to define quality as meeting passengers' needs and expectations. Since customer expectations of service quality may vary at different stages in the service process, it has been strongly argued that in practice, most airlines measure passenger perceptions of their service offerings in order to evaluate and understand the airline's performance level without clear knowledge of passengers' expectations for service in each stage. Consequently, lack of understanding or misunderstanding such expectations could pose serious problems in resource allocation decisions. However, most airlines do not recognize the importance of this approach. Passengers' expectations are among the factors influencing the service decisions of airlines.

The primary objectives of this study are to determine customer expectations and satisfaction of private airline company service in Turkey. There is very limited literature on importance and satisfaction analysis private airline services. Based on a survey of 207 domestic passengers of four Turkish private airlines, this paper reveals passengers demographic profiles, behavioral characteristics, understanding of airline expectations and satisfaction levels with measured involve on twelve factors; convenience of schedules, on time performance, safety, types of airlines, price, comfort, food and drinks, personnel behavior, airline images, baggage services, flight network, cabin services.

Keywords: Customer satisfaction, Airlines, Turkish Private airline sector

1. Introduction

Understanding, creating, communicating, and delivering customer value and satisfaction are at the very heart of modern marketing practice. The customer, rather than marketing, is at the center of modern business philosophy, and customer service satisfaction is the primary aim. (Zeithaml, Bitner, 2000)

In the service quality and customer satisfaction literatures, expectations are interpreted differently. In service quality, expectations have a normative role, are based on past experience, and they provide the consumer's view of what should happen. In the customer satisfaction literature, expectations are usually linked to what consumers forecast, that is, they have a more predictive role and they relate to what will happen. The role of expectations in service quality is made more complex by theory suggesting that different levels of normative expectations exist (the customer's "zone of tolerance") and that the expectations associated with service quality and customer satisfaction interact (Zeithaml *et al.*, 1993, Dean, 2002)

Customer satisfaction has become a key intermediary objective in service operations due to the benefits it brings to organizations (Ranaweera, Prabhu, 2003) which in airline operations has become critically important. Dennett, Ineson, Stone, and Colgate (2000) suggest that as competition created by deregulation has become more intense, service quality in the airline industry has also received more attention. The delivery of a high level of service quality by airline companies became a marketing requisite in the early 1990s, as competitive pressures continued to increase. (Clemes, *et al*, 2008) In service industries such as the airline industry, the distinctive features of services require that managers understand customer needs and expectations, and keep promises. In service industries such as the airline industry, the distinctive features of services require that managers, particularly frontline managers, understand customer needs and expectations, and keep promises (Aksoy, *et al*, 2003).

As in other sectors, the problem in the airline sector is whether management can correctly perceive what customers want and expect. Expectations serve as a major determinant of a consumer's service quality evaluations and satisfaction (O'Connor *et al*, 2000). Moreover, expectations serve as standards or reference points for customers. In evaluating service quality, passengers compare what they perceive they get in a service encounter with their expectations of that encounter. Assessing passenger expectations is not a static exercise as passengers are becoming increasingly sensitive to quality. However, not all service dimensions are equally important to all passengers, because no two passengers are precisely alike, especially when demographics; purposes of travelling is considered. (Aktas, *et al*, 2007)

At this point, the "voice of the customer" should be taken into the design process using advanced techniques, such as experimental design, quality function deployment, and value engineering. After delivering the services, service providers should monitor how well the customers' expectations have been met (Pakdil, Aydın, 2007)

Previous research has demonstrated that satisfaction is strongly associated with re-purchase intentions Customer satisfaction also serves as an exit barrier, helping a firm to retain its customers (Fornell, 1992). Several studies have concluded that it costs more to gain a new customer than it does to retain an existing one (Woodruff, 1997)

In addition increasing customer satisfaction can lead to improved profits, lower marketing expenditures, and positive word-of-mouth communication (Reichheld, 1990). It can be a significant determinant of passengers' buying behaviors and crucial to the long-term survival of some airlines. (Park, 2007)

2. Private airlines sector in Turkey

Turkey is strategically positioned astride Europe, Africa and Asia. The Republic of Turkey shares a common border with nine other nations in the region. With a growing population, rapid urbanization, a healthy foreign tourism industry and an active regional commercial base, Turkey has witnessed a need to further develop civil aviation and airport infrastructure in the current decade Turkey, is larger than any country in Western Europe, Given its large size and growing population base, the residents of Turkey have come to rely on domestic and international air service.

The roots of the Turkish airline industry could be traced back to 1933, when Turkish Airlines (THY) was founded. Between 1933 and 1982, it was the only player in the Turkish airline industry. Until 1982, Turkish Airlines was the only airlines company operating in Turkey, and had no domestic competitors. In 1982, the market was deregulated. At that time competitors entered the airline market and began to operate domestic and international flights. However, the fierce competition left many bankrupt: of the 29 airlines established in 1982, 22 were soon bankrupted. (<http://www.byegm.gov.tr/>, 2009)

In 1983 Turkish Civil Aviation Law was enacted. This law provided the private sector the right to operate an airline and an airport. After that, a new era began for Turkish Civil Aviation and civil aviation activities grew rapidly. In 80's along with the growth of tourism industry worldwide air transportation industry also showed a growing trend. Many charter airlines were founded and started to operate Europe-Turkey tourist charter markets. Second half of the decade both Turkish Airlines and private charter airlines enlarged their fleets. At the end 2003, government changed air transportation politics and all restrictions on private airline companies to operate in scheduled domestic routes were lifted and domestic routes were opened into competition. Moreover, tax reduction was provided for domestic flights. This was the re-deregulation of the Turkish Air Transportation Industry. This re-deregulation has given private airlines an opportunity to enter domestic market and they have grown rapidly since. Therefore, airlines could offer 30-35% lower prices. This caused a huge demand for air transportation and market has grown. (Sengur, Sarilgan, 2005)

As can be seen table 1, today there are 14 private airline companies in Turkey. They have over 111 planes. But this does not reflect the number of seats, or the number of passengers. The number of seats in private companies is nearly 21.360 (<http://www.toshid.org>)

3. Research Methodology

Objective of the Study: The aim of this study is to determine the level of customer expectations and satisfaction in the private airline companies offering domestic flights.

Limitations of the Research: The research is limited by the questionnaire answered between the 7-31 of January, 2007 by 207 passengers. Data were collected from domestic passengers departing from Istanbul Sabiha Gökçen airport, İzmir Adnan Menderes Airport Malatya Erhaç airport and Antalya airport. This study is limited with four airline companies with the most seat capacities and aircrafts.

Research Method: Face-to-face interview is used for the research.

Research Medium: The research medium consists of 207 passengers. For sampling purposes, 207 was randomly selected from the domestic passengers between 7-31 of January and included in the questionnaire analysis.

Collection of the Research Data: A pilot work has been done with 15 passengers to learn about how good the questions in the questionnaire form serve for the objective of the research. According to answers to those questions, some modifications have been done in the questions. 207 usable questionnaires were gained in the research and Microsoft Office Excel and SPSS 13, 0 (Statistics Pack for Social Sciences) were used in the analysis.

Reliability Analysis of the Research: It is possible to say that the research is reliable as a whole, according to the coefficient of reliability $\alpha = 0,885$

4. Findings

As can be seen table 2, 59, 4 % of 100 subjects are male and 40, 5 % of them are female passengers. When the distribution of the subjects according to their age range is analyzed it can be seen that 15,2% of them are aged between 15-25, 54,8 % of them are aged between 26-35, 22,7 % of them are aged between 36-45, 5,8% of them are aged between 46-55 and 1,5 % of them are aged 56 or more than it. Consequently it is seen that passenger intensify between "26-35".

When the distribution of the members related to their education background is examined, it can be seen that 57 % of the members are graduates, 19, 3% of them are master's degree graduates and 5.8 % of them are doctor's degree graduates. When the proportion of the members who are graduates and postgraduates is analyzed in terms of the general sum a high proportion has been occurred as 82, 1 %.

When the monthly incomes of the members are examined, it has been seen that 36,23 % of them have monthly income as 1000-1999, 36,3% of them have monthly income as 2000-2999, 10 % of them have monthly income as 3000-3999, 7,9 % of them have monthly income as 4000- more than it.

As can be seen table 3, when we examine the airline company choices made by the passengers involved in the study for domestic lines, the passengers seem to prefer Atlas Jet Airlines by 23,7%, Pegasus Airlines by 12,1%, Sun Express Airlines by 9,1% and Onur Airlines by 7,3%. As can be seen in Table 2, Atlas Jet and Pegasus Airlines are ranked first and second respectively. That Atlas Jet and Pegasus Airlines offer innovations and a wide range of options in their services, that they offer graded and low price systems and that they have increased the number domestic routes in line with their customer satisfaction-oriented approaches are considered to be determinants of passenger choices in favor of these companies.

As can be seen table 4, when the factors affecting the passengers' expectations are analyzed it has been seen that a big part of the factors considered as effective on the passengers' expectations has been determined as convenience of schedules, ticket fares, convenience of flight line, airline images, ticket fares, on time performance, aircraft type, aircraft comfort, behavior of the staff, security, baggage services, flight safety, availability of online services, cabin cleanliness, meeting special requests in check-in and boarding "important" for the preferences.

However the factors such as security and flight safety have come into prominence much more in proportion to the others. Possibly, this is because of the impacts of the terrorist attacks.

It is found that the food and drinks have been considered "not important" factors by the passenger. This is expected result. Because food and drink is not important for the short flights

The airline companies offering service in domestic lines, therefore, should examine points affecting costs and get involved in some innovative and improvement actions and decrease costs reflected on tickets fares as much as possible. Considering suitability of fares based on the profitability of flight lines and customer demands, they should work to increase domestic line routes and frequency of flights. The findings from the current study indicate that passengers do not attach much importance to catering services. For this reason, airline companies should seek to reduce the costs in catering services. It could therefore be suggested that offering no catering services at all in short flight distances could minimize costs and reflecting minimized costs on ticket prices could maximize satisfaction levels of passengers, who cannot be satisfied by ticket fares.

5. Conclusion

In order for the airline companies operating in domestic lines to be able to determine the strategies suitable for their own operational structures, they should accurately identify expectations of the passengers they offer service to. As most of the airline companies offering services in domestic lines operate in the same routes and with similar tariff patterns and

capacities, retaining passenger attraction and loyalty seems to have become a critical requirement for companies to gain competitive advantage. For these airline companies, competitive advantage tends to focus on customers and on the level of satisfaction they seek. Accordingly, customers prefer the products and services by the airline companies which do satisfy them. Therefore, one of the key marketing strategies of the airline companies operating in domestic lines should be identifying customer expectations accurately and converting those expectations into satisfaction.

The airline companies offering domestic flights should be involved in more interaction with their customers by means of methods such as questionnaires or interviews designed to gauge customer expectations and satisfaction periodically and continuously. However, today competition is not only rife, but growing more intense constantly.

However airline companies need to understand their customers. They have to believe customers as core concept of their business: customer satisfaction is what guarantees the future of airlines and it is achievable by an adoption between their services and passengers' needs (Bozorgi, 2007)

References

- Airline Industry in Turkey. [Online] Available: <http://www.byegm.gov.tr/yayinlarimiz/NEWSPOT/1998/Sep/N7.htm> (March 10, 2009).
- Aksoy, S. Atilgan, E., Akinci, S. (2003). Airline services marketing by domestic and foreign firms: differences from the customers' viewpoint. *Journal of Air Transport Management*, 9, 6, 343–351.
- Aktaş, A. Aksu, A. Çizel, B. (2007). Destination Choice: An Important - Satisfaction Analysis. *Quality and Quantity*, 41, 2, 265-273.
- Bozorgi, M. (2007). Measuring service quality in the airline using servqual model: case of IAA, Master Thesis, Continuation Courses Marketing and e-commerce / 2007:046. [Online] Available: <http://epubl.ltu.se/1653-0187/2007/046/index-en.html>. (February, 2009).
- Clemes M. D. Gan C., Ka Tzu-Hui. (2008). An empirical analysis of customer satisfaction in international air travel. *Innovative Marketing*, 4, 2, 2008, 49-62.
- Dean A. M. (2002). Rethinking customer expectations of service quality: are call centers different? [Online] Available: <http://www.buseco.monash.edu.au/mgt/research/working-papers/2002/wp53-02.pdf> (February, 2009).
- Dennet, C.E., Ineson, M., Stone, G.J., and Colgate, M. (2000). Pre-Bookable Services in the Chartered Airline Industry: Increasing Satisfaction through Differentiation. *Service Industries Journal*, April, 20, 2, 82-94.
- Fornell, C. (1992). A national customer satisfaction barometer: The Swedish experience. *Journal of Marketing*, 56, 6-21.
- Ghada A., Mohamed A. R., Mekawy M. A. (2007). Managing tourists' needs and expectations: An empirical analysis of the Egyptian airline sector. *Tourism, an International Interdisciplinary Journal*, 55, 3, 277-296.
- Hawes, J. M. & Rao, C. P. (1985). Using importance-performance analysis to develop healthcare marketing strategies. *Journal of Health Care Marketing*, 4, 19–25.
- O'Connor, S.J., Trinh, H.Q., Shewchuck, R.M. (2000). Perceptual gaps in understanding patient expectations for health care service quality. *Health Care Management Review*, 25, 2, 7-23.
- Pakdil F., Aydın Ö. (2007). Expectations and perceptions in airline services: An analysis using weighted servqual scores. *Journal of Air Transport Management*, 13, 4, 229-237.
- Park Jin-Woo. (2007). Passenger perceptions of service quality: Korean and Australian case studies. *Journal of Air Transport Management*, 13, 4, 238-242.
- Ranaweera C. and Prabhu J. (2003). On the relative importance of customer satisfaction and trust as determinants of customer retention and positive word of mouth. *Journal of Targeting, Measurement and Analysis for Marketing*, 12, 1, 82-90.
- Sengun, Y., Sarilgan E. (2005). Turkish air transports industry evolution and current outlook. The second World congress aviation in the XXI st century. Kiev, 19-21 September.
- Turkish private aviation enterprises association. [Online] Available: <http://www.toshid.org/v2005/Filo.html> (March 9, 2009)
- Woodruff, Robert B. (1997). Customer Value: The Next Source for Competitive Advantage. *Journal of the Academy of Marketing Science*, 25, 2, 139-153.
- Zeithaml V., Leonard L., Parasuraman, A. B. (1993). The Nature and Determinants of Customer Expectations of Service. *Journal of the Academy of Marketing Science*, 21, 1, 1-12.
- Zeithaml V.A. Bitner M.J. (2000). *Services Marketing: Integrating Customer Focus across the Firm*. McGraw-Hill, Madison.

NotesNote 1. www.onurair.com.tr

Table 1. Private Airlines in Turkey

Airlines	Passenger Aircraft	Number of Seats
Ankair	1	165
Atlas Jet	12	1884
Best Air	3	580
Corendon	4	632
Freebird	5	980
Inter	3	647
Izair	3	396
KTHY	5	960
Mng Airlines	1	9
Onur Air	25(Note 1)	5760
Pegasus	17	2929
Saga	6	1113
Sky	10	1753
Sun Express	18	3552

Source: Turkish private aviation enterprises association

Table 2. Demographics'

Nationally	Frequency	Percent
<i>Turkish</i>	207	100%
<i>Other</i>	0	0%
Sexual	Frequency	Percent
Man	123	59,4%
Women	84	40,5%
Age	Frequency	Percent
15-25	31	15.0%
26-35	113	54.5%
36-45	47	22.8%
46-55	12	5,9%
55- more	4	%1.8
Education	Frequency	Percent
Primary school	2	0.9%
High school	35	17.0%
University	118	57,0%
Master	40	19,3%
Doctorate	12	5,8%
Monthly income(TL)	Frequency	Percent
0-900	20	9,66%
1000-1999	76	36,8%
2000-2999	75	36,23%
3000-3999	20	9,66%
4000- more	15	7.9%
Total	207	100%

Table 3. Passenger Choice of Airlines

Airlines	Frequence	Percent
Atlas Jet Airlines	94	23,7
Pegasus Airlines	48	12,1
Onur Airlines	29	7,3
Sun Airlines	36	9,1
Total	207	100,0

Table 4. Comparison of the Importance and Perceived Satisfaction Levels for the Customers

	Mean Expectations	Std. Deviation	Mean Satisfaction	Std. Deviation
Convenience of schedules	4,352	,60442	3,869	,78046
Ticket fares	4,217	,68697	3,961	,81160
Convenience of flight line	4,357	,60558	3,782	,87915
Airline Images	4,396	,65920	4,207	,68997
On time performance	4,608	,59653	4,241	,68946
Aircraft type	4,062	,80708	4,009	,75678
Aircraft comfort	4,275	,64351	4,077	,71991
Catering services	3,961	,78112	3,975	,81515
Paid catering services	3,439	1,05893	3,579	,94621
Behavior of the staff	4,473	,62163	4,188	,79943
Security	4,744	,43750	4,487	,62208
Baggage services	4,623	,55129	4,077	,83829
Flight Safety	4,850	,35770	4,594	,62284
Availability of online services	4,217	,86803	4,091	,80428
Cabin cleanliness	4,594	,49224	4,169	,80978
Meeting special requests in check-in and boarding	4,202	,85183	4,072	,76929
Total	66,07		65,37	
Threshold	4,129		4,086	

1= Exactly not important 5 =Exactly important 1= Exactly not satisfaction 5 =Exactly satisfaction



New Requirements and Challenges for Chinese University Presidents in the Construction of an Innovative Country

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Abstract

University presidents have become a special group worth studying. With the implementation of college education reform, some topics are discussed extensively such as the ideals, values, missions and obligations of the university. As a result, the special group closely related to the university's fate, university presidents, deserves a profound exploration. In this article, the germ of some ideas about their missions and obligations will be put forward.

Keywords: Innovative country, University president, Target orientation, Innovation ideas, Public images, Cultural atmosphere

It has been revealed in the history and the reality of the university that a university has to rely on its president's administrative ability to exist and develop as well as its teachers' creativity. Therefore, the issue of university presidents can not be neglected in any nation who puts much importance on the strategy of developing itself through that of universities. According to the experience of those world-class universities, an excellent president comes first on the list of important factors for the construction of a first-class university. With the establishment of the goal to construct an innovative country as well as the implementation of the strategy of building up the nation with independent innovations in China, how should we do to maximize the value of our university presidents.

1. Confirming the Target Orientation of University Development

When orienting the targets of university development, a variety of factors should be taken into consideration. Summed up, they may include educational regulations and policies issued by the government, public expectations on universities, educational resources which can be employed by universities and the competition situation of universities and so on. Target orientation just refers to an overall reflection and design based on the combination of all these factors. As for its specific content, a target system of a university can be established including targets in its function, academic development as well as its overall development level.

As far as the current situation is concerned, a large number of Chinese universities don't establish their missions and targets starting from their obligations for our society, the actual demands of the economic and social development of their regions, the development rule of the university as well as their own experience and conditions. For example, some universities establish improper targets of constructing well-known, first-class or distinguished universities; some only keep their eyes on research-oriented targets, comprehensive-university targets and doctorate education; some exert every effort to expand their universities as well as to build some luxurious buildings at the cost of a large sum of debt in spite of their inferior staff in quality as well as quantity, poor educational conditions and a severe shortage of funds. These excessive investments may become heavy burdens and sunk costs for universities in the future. All these above phenomena, along with high-level adulation, blind upward comparison, a shortage of individual characteristics and great casualty when dealing with people or things, are caused by the shortage of a right idea of target orientation. Therefore, a university president is expected to spend a large amount of time and energy in studying and confirming the missions and targets of his university first of all. In spite of their differences, world-class universities have it in common that they put great importance on individuality and specialty to find out their relative advantages, confirm their directions to break through then and finally achieve their overall development with their achieved breakthroughs.

2. Having Special Innovation Ideas

Choosing a university president actually means choosing his educational ideas. As the representative and main administrator of a university, a president is absolutely the core of the whole educational system of his university.

A quotation from the former president of Qinghua University, Yiqi Mei, is widely used, "Great masters, instead of splendid buildings, are important for universities." (Liu, Huang, 1994, p10) In my opinion, "great masters" here don't only refer to those academic masters, but the administrators themselves. To be more specific, school administrators are expected to establish innovation-oriented educational ideas, only with which are we able to create an academic environment for the coexistence of different schools of study, to truly realize academic freedom as well as theoretical innovations. It is also said by Vice President of Hong Kong University of Science and Technology that only with a well-known president will a university be able to attract well-known professors and then good students (Kong, 2004, P15). This claim gets support from some examples, such as Yuanpei Cai in Beijing University and Boling Zhang in Nankai University, who are well-known for their educational ideas.

University presidents represent their universities' spirits. Some legendary presidents throughout the history of higher education all over the world have challenged the outdated educational ideas and thinking stereotypes with their distinguished ideas, amazing vitality in reform as well as moral impel forces and have created a brand new educational environment, hence having an impact on the whole nation's ideological rituals and value orientation. Seen from the conversion of the role of a university president, the history of higher education development can be called that of university presidents' educational ideas. A qualified university president should have the following qualities: first, they should have strategic insights as educators to be aware of social demands, to understand the directions for academic development and to cultivate talents to the largest degree; second, they should have politicians' tact and means to put their ideas into practice. As is well known, modern universities are complex organisms, therefore, your idea is far not enough to coordinate conflicting opinions and interests in them or to seek for support from government or the society out of it. Determination, enthusiasm and political tact are indispensable to achieve something instead of only purchasing skin-deep harmony. Otherwise, no environment for university development can be created.

3. Publicizing and Improving Their Universities' Public Images

In the modern society, with universities regarded as the carrier for the style of our times, presidents are the representatives of the style of their universities. In the face of the media, they are expected not only to deliver their own educational ideas but to shape and publicize their universities' public images as a representative of their spirits and styles. They should even display their universities' profound spirits in science exploration and rich culture accumulation because, in most cases, the public is not impressed by the academic achievements of a university due to its distance from them. Instead, they are often interested in whether a university has rich cultural images and appeals to students in addition to their rankings in academic achievements and whether they can offer favorable employment and so on. As a result, it is of great significance for a university to show their attractions at all aspects to the society, which will exert influences in all sides, such as donations from the society and students' choices.

Meanwhile, we should realize that the present universities are no longer the former tower of ivory. Everything about a university, ranging from its policies to what teachers and students say and do, is exposed to the media and the public every day. In addition, the rapid development of modern communication technology has helped to break through the space and time limits of information transmission and spread, hence making it possible to spread every event at every corner to the whole world with Internet. It is this reform in transmission means that has made public opinion opener, more interactive, more real-time and more sudden. Without proper measures to some unexpected events, some incidents may evolve into negative opinions and social effects. Therefore, a university president is expected to be adjusted to the new situation to strengthen his external propaganda sense, to establish his university's positive public images by getting in touch with the media actively, to overcome crises and negative news elaborately and to improve his ability in leading public opinions in a favorable direction. To be more specific, on one hand, more attention should be paid to exerting the media's role in reaching common ground, reassuring people, clarifying facts and emotional counseling and so on; on the other hand, they should be good at supporting themselves with facts, data and instances, as well as some new media, such as Internet. Especially in the case of sudden and hot-button incidents, they should have quick reaction and proper measures to strengthen first-time information distribution, to earn public trust with objective, justified and detailed reports and to avoid the spread of rumors with the initiative of information transmission at hand.

4. Creating a Cultural Atmosphere to Stimulate Curiosity

Innovation is one of the cores of university spirit, which is just what most Chinese universities lack. With much importance put on the inheritance and reproduction of culture and knowledge in Chinese traditional education (including higher education), children are confronted with examination-oriented education from the very beginning, hence having a larger knowledge store than western children at the same age. However, an important aspect--- the cultivation of children's individuality and creativity--- has been neglected. In recent years, it has been pointed out by

quite a few educators in China and abroad that the lack of world-shaking achievements and contenders for the Nobel Prize is largely attributed to such traditional educational ideas and practice. Now that we have realized our shortcomings, it is time for us to change it.

Actually, Chinese students shouldn't be blamed for an inborn lack of creativity. It has been proved by the achievements of some Chinese students abroad that they are able to become creative talents with a favorable academic atmosphere provided. According to a report on Internet, nearly 300 Chinese overseas students graduating from Australia National University in 2006 are said to be very good by its president. Although they are not as willing to question their teachers as Australian students in the first semester, they have done quite well once they have been absorbed in such an atmosphere (2006).

The atmosphere mentioned by UNU president is the very cultural atmosphere in which students' curiosity will be stimulated. Honorary President of University of Alberta holds the same opinion, who is specially fond of an old saying said to have come from China--I will forget what you have told me; I will memorize what you have shown to me, I will understand forever what you have made me do myself. The cultural atmosphere in Oxford University is said to be like this: professors gather their students to their houses every week, where they just puff smoke to these students, and students will become mature scholars after four-year experience of that (2006). Zhaozhong Ding, a well-known Chinese American Physicist, once said that curiosity is the original drive for scientific researches. In his opinion, curiosity comes first when achieving a goal. A simple point is embodied in it: one will do something diligently if they are really interested in it and will not be bored a little no matter how hard it is. There is no passion without curiosity, hence no devotion.

Therefore, university presidents should try to stimulate students' curiosity and cultivate their enthusiasm for scientific research and creativity by encouraging them to study classical works, adopting the discussion method, welcoming students to take part in teachers' scientific research items, organizing all kinds of science and technology competitions and setting prizes in them.

University presidents have become a special group worth studying. With the implementation of college education reform, some topics are discussed extensively such as the ideals, values, missions and obligations of the university. As a result, the special group closely related to the university's fate, university presidents, deserves a profound exploration. However, our existing researches on them seem inadequate in depth and theoretical system. We hold to the belief that China's higher education will achieve new glorious goals with in-depth researches on this issue.

References

- (2002). *Zhaozhong Ding's Speech at Shanghai Jiao Tong University*. Wen Hui Newspaper. September 22nd.
- (2006). *Shortcomings Revealed in President Forum: What are Universities lacking in?*. [Online] Available: http://www.edu.cn/gao_jiao_news_367/20060719/t20060719_188981.shtml. July 19th.
- Kong, Xianduo. (2004). *My Ten Years in Hong Kong University of Science and Technology*. Peking University Press. p15.
- Liu, Shuli & Huang, Yanfu. (1994). *Selected Works of Yiqi Mei on Education*. People's Education Press. P10.



A Decision Model of Field Depot Location Based on the Centrobatic Method and Analytic Hierarchy Process (AHP)

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Abstract

Warehouse location is one of the most important logistics activities. The selection of the most effective warehousing mode has become a strategic study. This paper will introduce the factors influencing the decision process in selecting the warehouse locations based on gravity model approach and analytic hierarchy process. In the end, the author will summarize the methods and the results.

Keywords: Selection of Warehouse location, Centrobatic method, Analytic hierarchy process (AHP)

Warehouse location selection plays a very important and long-term role in corporate strategy. The selection result usually has direct impact on the mode, level, efficiency, and cost of service provided. Thus, warehouse location can potentially affect corporate profits and competitive advantage. It is safe to say that the study on warehouse selection will have significant effect on economy and society.

1. Analysis of factors in warehouse selection

1.1 Distribution of Sales location

To the retailing warehouse, its major customers are supermarkets and retailing stores. These customers are usually located in metropolitan cities with large population. To enhance the level of service while lowering the distribution transportation cost, the warehouses are normally built near the customers in the areas of suburbs

1.2 Transportation

The warehouse locations have to take into consideration the current and future availability of transportation as well as the transportation development in the neighborhood areas. It is best to select the place near the highways, national arteries, and express ways. Also the location could be near the train station and harbor if the transportation is carried out by rail or ship.

1.3 Land

The selection of land must be conducted in a way that complies to the regulations of rules set by municipal or other-level government. It is usually a good choice to locate the land in major distribution centers or economic development zones. If applicable, the decision of the location should be made based on the planning of these centers or zones. In addition, the potential increase in real estate value could also play a part in the selection process.

1.4 Natural environment

It is important to acquire the knowledge of the natural environment in order to reduce the risks involved in constructing the warehouse. For example, natural conditions could be the humidity, saltiness, precipitation, typhoon, earthquake, and river.

1.5 Policy environment

If there is supporting policies available from the government, the logistics will have very favorable condition to develop. These policies could include ones such as the favorable incentives for corporate (the supply of land and reduction of

tax), municipal infrastructure planning (the development of real estate, and road construction), the policies of promoting certain local industries. Especially tax reduction could mean direct reduction in the operational expenses.

2. The Application of Centrobatic Method

We assume that the ultimate goal is to reduce the cost of distributing the goods to their different destination, the formula is:

$$\text{MinTC} = \sum V_i R_i d_i \quad (0)$$

Note: TC----- Total Transportation Cost;

V_i -----Volume at Destination Point i

R_i ----- Rate of Transportation to at Destination Point i

d_i -----Distance from distribution centers to at Destination Point i

i----- Destination Point i

In the Coordinate Plane, the to-be-determined location of the warehouse is (X_0, Y_0) , then we have

$$X_0 = \frac{\sum V_i R_i X_i / d_i}{\sum V_i R_i / d_i} \quad (1)$$

$$Y_0 = \frac{\sum V_i R_i Y_i / d_i}{\sum V_i R_i / d_i} \quad (2)$$

Note d_i can be calculated from the following formula,

$$d_i = \text{SQR}[(X_0 - X_i)^2 + (Y_0 - Y_i)^2] \quad (3)$$

The process of calculating is as follows:

1. Determine the coordinates of individual destinations with a certain set of volumes and the rates of transportation;
2. Without the factor of distance, the initial destination point would be decided by the following Centrobatic Method

$$X_0 = \frac{\sum V_i R_i X_i}{\sum V_i R_i} \quad (4)$$

$$Y_0 = \frac{\sum V_i R_i Y_i}{\sum V_i R_i} \quad (5)$$

3. From formula 3, d_i could be derived from step 2;

4. With d_i known, coordinate (X_0, Y_0) can be calculated from formula (1) and (2)

5. With the revised (X_0, Y_0) , a new round of calculation

6. Repeat step 4 and 5 until variances of (X_0, Y_0) through the iterative process are within an acceptable range.

Assume the two choices of destination points A and B are known with related parameters, the calculation process could be finished through the Excel template in the appendix. To make the coordinates in the same Quadrant, we assume the warehouse location is $(0, 30)$. The result of the optimal coordinate is $(12.43288, 25.13579)$, please refer to the appendix for the result. This is in line with the choice A. Therefore, A should be the location for warehouse.

3. Determination of locations with AHP method

The first step is to set goals, namely determining point A and B. Then based on the experience of the decision maker, relevant factors influencing the goal should be identified out. These factors will be listed at the second layer below the goal. Now there is a need to determine the weights (priorities) of the 5 elements. Priorities will be compared in pairs, AHP will compare two of the 5 factors to assess the priorities. Consequently, every element will have its own weight relative to each other. Then the next step will analyze the overall results, arrive at a comprehensive weight, and assign each factor its degree of importance.

Insert Figure 1 here

Compare 5 elements in the second layer according to their degree of importance, a comparative matrix could be established.

Insert Table 1 here

Insert Table 2 here

Insert Table 3 here

Insert Table 4 here

In order to make judgment on consistency of the comparison results, it is needed to check the coefficient RI from the table Average Random Consistency

Insert Table 5 here

The consistency index is found 0 through calculation. Therefore the result is very satisfactory in terms of consistency.

The Weights of the five indexes:

5. Transportation

4. Policy environment

3. Land

2. Distribution of Sales location

1. Natural environment

A Comprehensive score:

$$5*0.372636+4*0.212191+3*0.164178+2*0.153579+1*0.099664= 3.8602$$

B Comprehensive scores:

$$5*0.351067+3*0.210635+4*0.197528+2*0.145624+1*0.095146= 3.5638$$

From the above, A scores higher than B does. Therefore A should be the best choice. Both approaches produce the same results that indicate A the best location. Therefore, the conclusion is A should be the place to build the warehouse.

As the important node in the network of logistics, the location selection is very important. We can not rely entirely on the complex mathematical model or on experience alone. Only by combining the two together, we can make reasonably sound decision in real life.

References

Guo, Meina & Li, Bo. (2007). Method of the Location Selection of Distribution Center. *Statistics and Decision*, 233,148-149.

Huo, Hong. (2004). Research on the Location Selection of Distribution Center. *Logistics Sci-Tech*, 102, 50-52.

Liu, Mingguang & Li, GaoYang. (2008). Research on the Location Selection of Distribution Center. *Modern Management Science*,271,76-77.

Yi, Fanglei & Xu, Yinfeng. (2005). Efficiency on Randomized Mathematic Model of Logistic System and Allocation of Its Distribution Center. *Operations Research and Management Science*,19-24.

Table 1. The Comparison of Each Factor in Selecting Warehouse a Location

Elements - elements of Comparison Matrix	Distribution of sales location	Transportation	Land	Policy environment	Natural environment
Distribution of Sales location	1.000	0.758	0.8334	0.4990	2.130
Transportation	1.320	1.000	5.102	2.521	3.210
Land	1.200	0.1960	1.000	2.024	0.6623
Policy environment	2.004	0.3967	0.4941	1.000	3..812
Natural environment	0.4695	0.3115	1.510	0.2623	1.000

Table 2. The Comparison of Each Factor in Selecting Warehouse B Location

Elements - elements of Comparison Matrix	Distribution of sales location	Transportation	Land	Policy environment	Natural environment
Distribution of Sales location	1.000	0.3287	9.1286	0.4537	0.9960
Transportation	3.042	1.000	3.142	3.001	2.402
Land	1.205	0.3182686	1.000	0.9794319	2.13
Policy environment	2.204	0.3332223	1.021	1.000	3.425
Natural environment	1.004	0.4163197	0.4694836	0.2919708	1.000

Table 3. Comparative matrix A after Homogenization matrix

Elements - elements of Comparison Matrix	Distribution of Sales location	Transportation	Land	Policy environment	Natural environment	Priority vectors
Distribution of Sales location	0.166847418	0.284727	0.093227	0.079127	0.196961	0.164178
Transportation	0.220238592	0.375629	0.570725	0.399759	0.296829	0.372636
Land	0.200216902	0.073623	0.111863	0.320949	0.061243	0.153579
Policy environment	0.334362226	0.149012	0.055272	0.158572	0.352496	0.209943
Natural environment	0.078334863	0.117008	0.168913	0.041593	0.09247	0.099664

Table 4. Comparative matrix B after Homogenization matrix

Elements - elements of Comparison Matrix	Distribution of Sales location	Transportation	Land	Policy environment	Natural environment	Priority vectors
Distribution of Sales location	0.118273	0.137169	0.618424	0.079237	0.100072	0.210635
Transportation	0.359787	0.417268	0.212857	0.524089	0.241334	0.351067
Land	0.142519	0.132803	0.067746	0.171046	0.214005	0.145624
Policy environment	0.260674	0.139043	0.069168	0.174638	0.344117	0.197528
Natural environment	0.118746	0.173717	0.031805	0.050989	0.100472	0.095146

Table 5. Average Random Consistency

Matrix size	1	2	3	4	5	6	7	8	9	10
RI	0	0	0.58	0.9	1.12	1.24	1.32	1.41	1.45	1.49

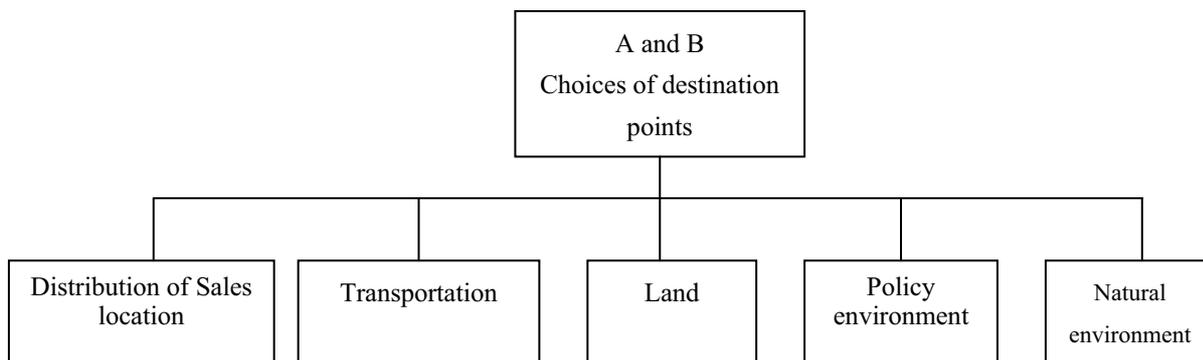


Figure 1. The factors of selection of warehouse location



Tourists' Satisfaction on Kilim River Mangrove Forest Ecotourism Services

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Abstract

Ecotourism is a revenue generator for many countries, especially those endowed with natural attractions. In order to sustain industry growth, its players are looking for essential factors contributing towards tourists' satisfaction. This paper presents findings of a micro study on Langkawi mangrove forest ecotourism site along the Kilim River estuary. Four theoretical models were constructed and analyzed using Structural Equations Modeling (SEM). The Baseline Comparisons, Parsimony Adjusted Measures, and the RMSEA were used to evaluate good model fit and Model 3 was found to fulfill that fit. The overall tourist satisfaction index was found to be 79.1 of a possible 100 points. Significant contributing factors towards tourists' satisfaction consist of marketing practices (42.1 percent), business ethics (23.9 percent), environmental management (14.5 percent), and business management/operational systems (7.8 percent).

Keywords: Tourist, Satisfaction, Ecotourism services, Mangrove forest, Structural equations modeling

1. Introduction

Ecotourism, one of the fastest growing segments within the travel and tourism industry, comprises about 20 percent of all tourist arrivals. This rapid global growth in ecotourism illustrates an increasing interest in nature and the environment. According to Arlen (1995), ecotourism grossed over \$335 billion a year worldwide, and attracted millions of interested tourists. In Malaysia, ecotourism is also a major revenue earner and had benefited the country, its natural areas, and local communities.

One of Malaysia's well-known eco-sites is Langkawi. Now a duty free geopark, it was listed by UNESCO as one of the Global Network of Geoparks on 1st June 2007. This serves as an impetus for it to develop further as an eco paradise. The forests and waters of Langkawi mangroves are home to species of monkeys, reptiles, birds and even dolphins. Langkawi provides ecotourism experiences such as nature walks, bird watching, jungle-tracking and mangrove tours in motorized boats. The eagle-feeding sessions at the mangrove swamps of the Kilim River have become one of the main tourist attractions.

This study seeks to gauge tourists' feedback on Langkawi's Kilim mangrove forests ecotourism tour services and to discover the contributing factors and their related elements leading to tourists' satisfaction. The four hypothesized factors having probable influence on tourists' satisfaction are business ethics, environmental management, marketing practices, and business management and operational systems.

2. Methodology

The data collected during the study relates to tourists' assessment and ratings on Langkawi mangrove forest ecotourism services. The basic information sought consists of dimensions related to business management systems, ethics, marketing, environmental management, and overall impact of ecotourism services.

The target population comprises tourists having recent experiences with Langkawi mangrove forest ecotourism ranging from December 2007 to January 2008. The sample subjects selected are tourists having prior engagement with the mangrove ecotourism service. Subjects were conveniently sampled at mangrove forest jetty points immediately after disembarking their chartered tours. Survey questionnaires were distributed to consenting tourists for immediate response. Sample subjects consisted of 454 males and 456 females with ages ranging from 20 to 50 years. Eighty-seven percent were Malaysians.

Data collection process covered a period of two months beginning early December 2007 and ended late January 2008. Responses regarding product, service, and their satisfaction level were measured using the Likert scales of 1 to 10. Tourists' responses on all the 34 statements made regarding respective independent and dependent variables were measured on the scale that range from 1 (strongly disagree) to 10 (strongly agree). The mean scores of each item of "1-10" are simultaneously converted to a scale of "0-100" to determine the index scores for the items based on the formula stated in Table 5.

Data analysis to test the overall fit of models to the data was done using the Structural Equations Modeling (SEM). The procedure follows Mulaik & Millsap (2000) four-step approach to modelling and deriving the best estimates for regression equations, squared multiple correlations (R^2), and path coefficients. The models used for testing are as in Figure 1, 2, 3, and 4. Step 1 involves performing factor analysis to establish the number of latent factors or components. The latent variables in SEM are similar to factors in factor analysis, and the indicator variables likewise have loadings on their respective latent variables. These coefficients are the ones associated with the arrows from latent variables to their respective indicator variables. By convention, the indicators should have loadings of .7 or higher on the latent variable. The loadings were used to impute labels to the latent variables, though the logic of SEM is to start with theory, including labelled constructs, and then test for model fit in confirmatory factor analysis. Step 2 involves performing confirmatory factor analysis to confirm the measurement model. This research tested the measurement model first, and only then tested the structural model by comparing its fit. Step 3 involves testing the structural model and step 4 relates to testing nested models to get the most parsimonious one. The goodness of fit tests determines whether a model will be rejected or accepted. Only upon acceptance will path coefficients of the model be analyzed and interpreted. In SEM, we want to prove that the null hypothesis should be accepted (we fail to reject the model) and is indicated by having the probability value equal or above 0.05. If the probability value (P) is below .05, the model is rejected. In situations where the chi-square test of absolute fit displays a probability value lesser than 0.05, the tests of relative fit will be used to assess model fit. AMOS output produced several model fit statistics designed to test or describe overall model fit. The indicators for relative fit of these fit statistics vary. The RFI coefficient should be close to 1 to indicate good model fit. In terms of IFI or delta2, the acceptable fit should range from 0.9 to 1.0. Values above 0.90 are considered acceptable fit. For Tucker-Lewis Index (TLI) or rho2, any value close to 1 indicates good model fit despite suggestions by Hu and Bentler (1999) that the value should be higher than 0.95. For comparative fit index (CFI) values above .90 are considered acceptable fit. For parsimony ratio (PRATIO), the closer the coefficient to 1.0, the stronger and more parsimonious the model fit. In terms of the root mean square of approximation (RMSEA), the general rule of thumb is that RMSEA should be below 0.05 or 0.06. The standardized regression weights of variables (measured and latent) in AMOS output will indicate variables having relatively high influence.

3. Results and Discussions

Based on the AMOS output, minimum identification for all four models was achieved. This implies adequate fit for collected data and "Minimum was achieved" message was evident in the output. Based on the rules of thumb on assessing model fit statistics, Model 3 fulfilled the baseline comparisons (rho1, delta2, rho2), the parsimony adjusted

measures (PRATIO), and the root mean square of approximation (RMSEA). Model 1 fulfilled all model fit statistics except the parsimony adjusted measures (the parsimony ratio, PNFI, PCFI) and the root mean square of approximation (RMSEA). Model 2 is the third choice since its RFI is a bit away from 1. Model 4 does not fulfill the RFI, IFI, TLI, CFI, and the PRATIO. Its RMSEA however, is below 0.6.

Tourists' overall satisfaction index (Table 5) was found to be 79.1 of a possible 100. This implies that tourists' rating on Kilim River mangrove forest ecotourism service is basically good. Specific strategies requiring improvements include enhancing overall service delivery, making service worth the money tourists paid, raising tourists' satisfaction level, ensuring ecotourism services exceeding tourists' expectations, and striving to be above the competitors.

Based on AMOS Output (Table 1), Marketing Practices was found to influence 42.1% towards customer satisfaction. Hence, an increase of one standard unit of marketing practices index is expected to help increase tourists' satisfaction by 42.1 standard units. This was followed in descending order by Business Ethics (23.9%), and Environmental Management (14.5%). Business management and operational systems influence only 7.8% towards customer satisfaction. The estimated influence of these four factors towards tourists' satisfaction is 65.3 percent.

4. Conclusions

Based on the above results, we infer that tourists are least concerned on how tour operators internally manage their services. This is evidenced in Table 1 whereby the business management and operational systems factor only influence 7.8% towards tourists' satisfaction.

Business ethics (Table 3) is relatively more important to tourists. It influences about 23.9% of tourists' satisfaction. Specific variables having significant contributions include effectiveness in addressing customers' safety (Q13) and providing services the best possible way (Q12). Variables requiring improvement include attending to customers' queries (Q11), providing receipts for money received (Q10), delivering activities exactly as advertised (Q9), treating all customers equally (Q8), meeting reasonable expectations of all customers (Q7), effectively addressing customers' comfort (Q14), ensuring products are in good working order (Q15), addressing travel ethics relating to minimal impact behavior for natural areas (Q16), and providing equipment, clothing, supplies that are suitable for areas being visited (Q17). These variables, if improved, will probably make more tourists remember and recommend Kilim mangrove ecotourism to others.

Marketing practices (Table 2) is another very important factor to tourists. It was found to influence 42.1% towards tourists' satisfaction. An increase of one standard unit of marketing practices will help to increase tourists' satisfaction by 42.1 standard units. Specific variables that provide significant contribution towards marketing practices include providing sufficient equipment (Q20), providing tips to tourists for their maximum enjoyment (Q21), and spending at least seventy-five percent of ecotourism activities within the natural areas (Q22). Specific areas requiring improvement include upgrading facilities (Q19), providing adequate transport (Q18), and increased personalized assistance in experiencing nature (Q23).

The environmental management factor (Table 4) contributed about 14.5% towards tourists' satisfaction. Specific variables providing high impact to this factor include measures undertaken to prevent irreversible danger to nature (Q27) and also provision for minimal disturbances towards wildlife (Q26). Variables requiring further improvement include efforts to prevent damage to the environment (Q28), garbage management (Q24), and waste management (Q25).

References

- Arlen, C. (1995, May 29). Ecotour, hold the eco. *US News and World Report*, 118, 61-63.
- Benitez, S. (2001). *Visitor use fees and concession systems in protected areas: Galapagos National Park case study*. Arlington, Virginia: Unpublished report prepared for The Nature Conservancy.
- Guide to Best Practice for Sustainable Tourism in Tropical Forests Lodging Businesses*. (2003). Conservation International, Ecuadorian, Ecotourism Association (ASEC) and Programme for Belize (Pfb). New York: Rainforest Alliance.
- Mulaik, S. A., & Millsap, R. E. (2000). Doing the four-step right. *Structural Equation Modeling*, 7, 36-73.

Table 1. Standardized Total Effects

Standardized Total Effects (Group number 1 - Default model)					
	Environmental_Management	Business_Management & Operational_Systems	Marketing_Practices	Business_Ethics	CUSTOMER_SATISFACTION
CUSTOMER_SATISFACTION	.145	.078	.421	.239	.000
Q17	.000	.000	.000	.714	.000
Q16	.000	.000	.000	.745	.000

Table 2. Variables in Marketing

Q23	<---	Marketing_Practices	.797
Q22	<---	Marketing_Practices	.809
Q21	<---	Marketing_Practices	.820
Q20	<---	Marketing_Practices	.835
Q19	<---	Marketing_Practices	.761
Q18	<---	Marketing_Practices	.777

Table 3. Variables in Business Ethics

Q11	<---	Business_Ethics	.767
Q10	<---	Business_Ethics	.751
Q9	<---	Business_Ethics	.770
Q8	<---	Business_Ethics	.723
Q7	<---	Business_Ethics	.725
Q12	<---	Business_Ethics	.787
Q13	<---	Business_Ethics	.791
Q14	<---	Business_Ethics	.777
Q15	<---	Business_Ethics	.784
Q16	<---	Business_Ethics	.745
Q17	<---	Business_Ethics	.714

Table 4. Variables in Environmental Management

Q28	<---	Environmental_Management	.781
Q24	<---	Environmental_Management	.764
Q25	<---	Environmental_Management	.786
Q27	<---	Environmental_Management	.811
Q26	<---	Environmental_Management	.845

Table 5. Index

BUSINESS MANAGEMENT & OPERATIONAL SYSTEMS			
Q1	Product maintenance	64.3	77
Q2	Customer service	66.6	
Q3	Safety measures	65.3	
Q4	Operational procedures observed	66.0	
Q5	Operational procedures effective	66.2	
BUSINESS ETHICS			
Q7	Meet reasonable expectations of all customers	66.9	79
Q8	treat all customers equally	66.5	
Q9	Deliver activities exactly as advertised	67.7	
Q10	Provide receipts for monies received	67.4	
Q11	Attend to customers' queries	68.1	
Q13	Address customers' safety effectively	67.7	
Q14	Address customers' comfort effectively	68.2	
Q15	Ensure product in good working order	67.5	
Q16	Address travel ethics relating to minimal impact	67.7	
Q17	Equipment, clothing, supplies are suitable	68.4	
MARKETING PRACTICES			
Q18	Adequate transportation	64.7	78
Q19	Provide relevant facilities	67.9	
Q20	Provide sufficient equipment	66.1	
Q21	Provide tips for maximum enjoyment	67.1	
Q22	Spent 75% of activities within the natural area	67.3	
Q23	Helped to experience nature	68.4	
ENVIRONMENTAL MANAGEMENT			
Q24	Garbage management	66.3	78
Q25	Waste management	67.1	
Q26	Minimal disturbance to wildlife	66.3	
Q27	Prevent irreversible danger to nature	66.6	
Q28	Prevent damage to environment	66.6	
CUSTOMER SATISFACTION			
Q29	Overall ecotourism service	66.6	79
Q30	Service is worth money paid	67.9	
Q31	Would certainly recommend to friends	67.5	
Q32	Service exceed normal expectations	68.1	
Q33	Service much better than competitors	67.7	
Q34	Overall satisfaction	69.3	

$$Index = \frac{v - 1}{9} (100 \%)$$

where v = mean score of item

Tourists' Satisfaction Indicator (ACSI): $[(Q_{29})(W_{29}) + (Q_{30})(W_{30}) + (Q_{31})(W_{31}) + (Q_{32})(W_{32}) + (Q_{33})(W_{33}) + (Q_{34})(W_{34})] \times 11.11$, where Q is the mean score for the item and W is the assigned weight for the item.

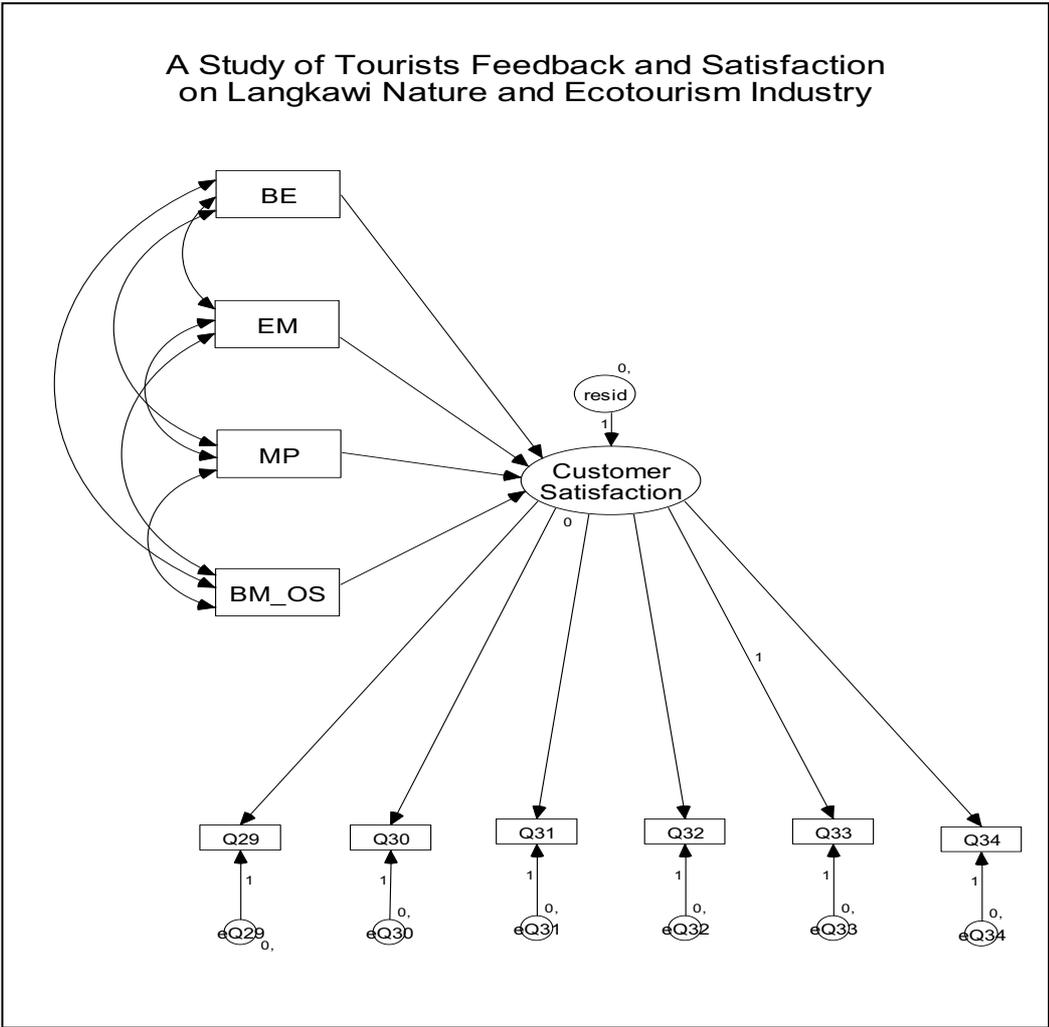


Figure 1. Conceptual Model 1

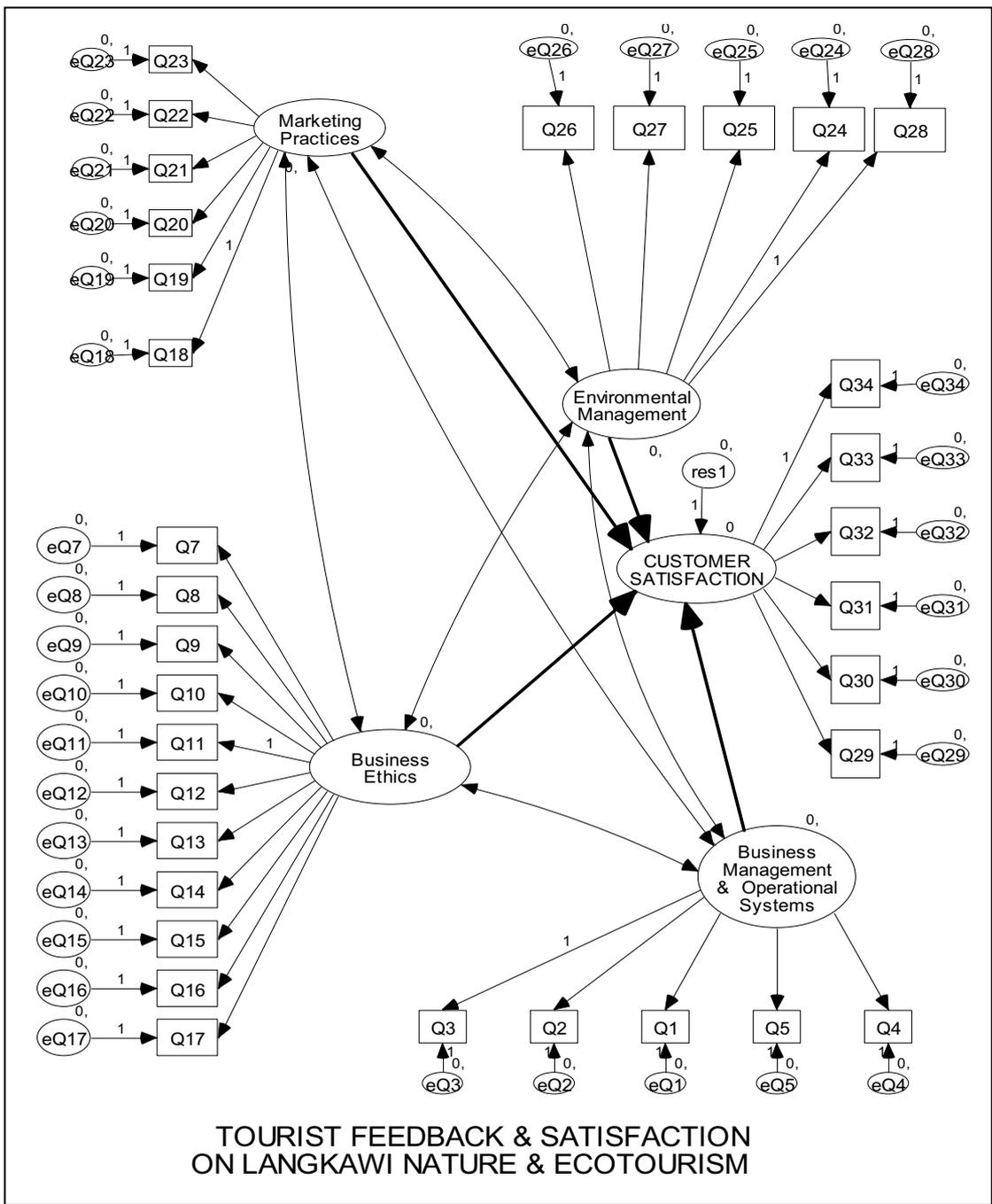


Figure 2. Conceptual Model 2

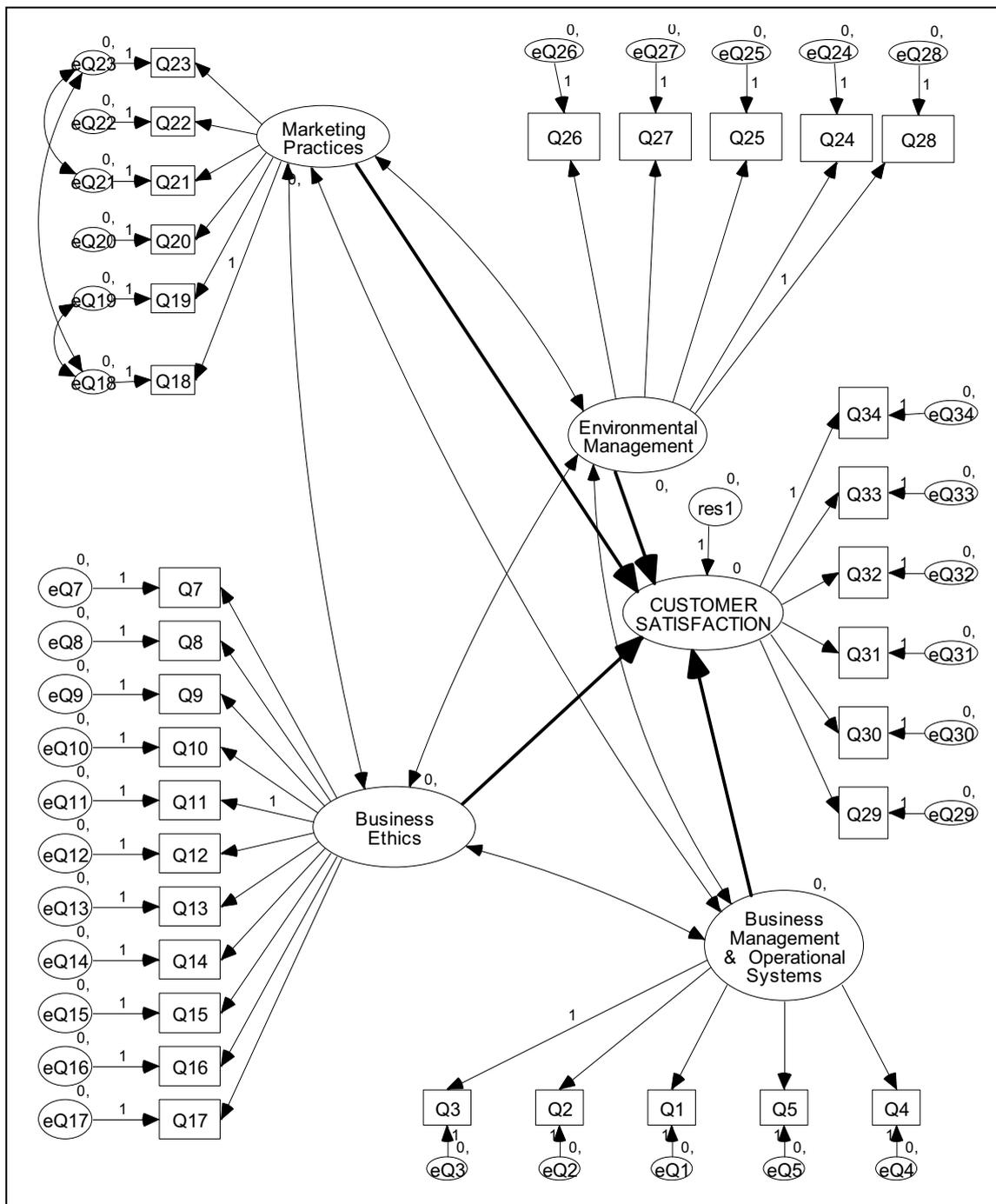


Figure 3. Conceptual Model 3

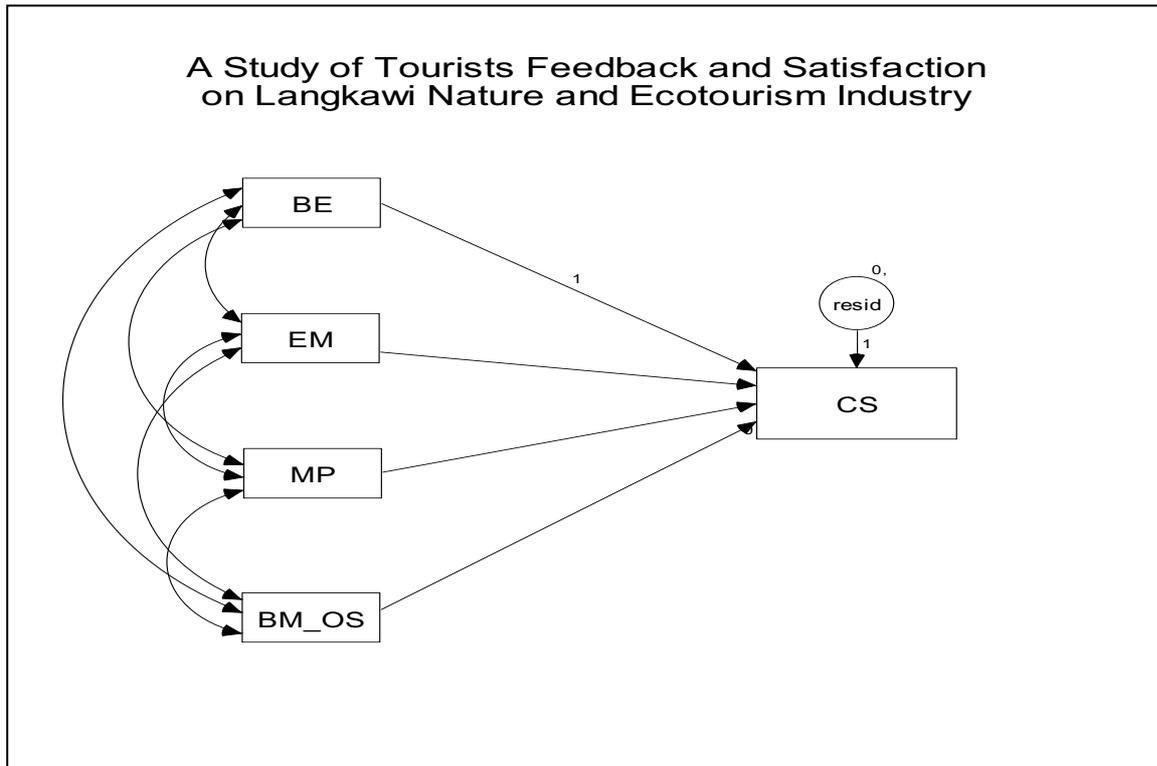


Figure 4. Conceptual Model 4



A Study on Enterprises' Employment Strategies with Labor Contract Law

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Abstract

The issuance and implementation of Labor Contract Law and Implementing Regulations of Labor Contract Law have exerted a direct effect on the establishment, fulfillment, change and termination of enterprises' labor contracts, hence influencing their employment forms and costs. Therefore, it has been an urgent and practical issue for enterprises' human resource management how to adapt their employment system to the new labor regulations. From the perspective of human resource management, this article aims at exploring into some possible legal problems during the course of recruiting, employing and dismissing employees as well as coming up with some suggestions on how to adjust and perfect the present employment system.

Keywords: Enterprise, Employment, Labor contract, Legal problems

1. Problems and Strategies of Enrollment

1.1 Strictly Conducting Enrolling Examination

As is laid down in Article 8 of Labor Contract Law, employing units have the right to learn about the information about laborers relevant to their labor contracts and laborers have the obligation to tell the truth. According to Article 91, an employing unit, hiring a laborer who hasn't terminated his contract with another unit and causing a loss to that unit, is committed to joint and several liability. With enrollment the first and most important section in employment, it is of vital significance to have a successful enrolling examination in order to enroll the most suitable people at proper cost and reduce the turnover rate. Since it is laid down in law, employing units are supposed to make good use of their right to know. By examining their would-be employees, they will reduce some potential legal risks as well as unnecessary replacement cost. Therefore, it seems dispensable to interview candidates and investigate their background information when enrolling new employees. To be more specific, enterprises can do something in the following five aspects:

- a. Identity, education background, qualification, working experience and so on. Since such information directly determines laborers' working capacity, an enrollment may fail finally if employees try to enter an enterprise by cheating.
- b. Whether having any disease or disability. Because some risks may be caused if an employing unit hires some people with health hazard, physical examination is quite necessary.
- c. Whether reaching the age of 16. Any employing unit who hires laborers younger than 16 years old has to bear the corresponding legal responsibility.
- d. Whether having any undue labor contract with other units. A certificate for the termination of the labor contract with former working unit may be asked for, whose original can be kept by the employing unit. As for those laborers who haven't terminated their labor contracts with their former units, a written certificate from their former units to allow the enrollment should be asked for in order to avoid some unnecessary joint and several liability.
- e. Whether having any undue prohibition agreement with other employing units. When enrolling advanced managers and technicians who are likely to have business secrets, enterprises are expected to have strict examination on whether they have any undue prohibition agreement with other employing units. They'd better make these people make written promises of having no prohibition agreement with other employing units in order to avoid some unnecessary risks.

1.2 Promptly Signing Written Labor Contracts

According to Article 10 of Labor Contract Law, a written labor contract is expected to be signed to establish labor relations. If no contract is signed at the establishment of labor relations, it is supposed to be signed one month from the

day of employment. Besides, it is laid down in Article 82 that any employing unit who doesn't sign written labor contracts with their laborers working for it longer than one month while shorter than one year should pay doubled salary to laborers each month.

If an enterprise decides to hire laborers after primary election, interview, second-round examination and physical examination, it should sign labor contracts with them promptly. Many enterprises, however, have a wrong idea that there is no labor relation if they don't sign labor contracts with laborers. Thus, they will pay less or no social insurance, dismiss employees at their own will and avoid legal responsibility even when employees resort to law.

Implementing Regulations of Labor Contract Law has clearly laid down that labor relations are established from the day of employment and that enterprises should pay doubled salary to laborers from the first day of the second month to the day before the end of one year. In addition, they also have the obligation to make up for their written labor contracts with laborers under the circumstance of open-ended contracts established.

As a result, enterprise should have their outmoded ideas renovated and develop the habit of establishing labor contracts before employment or no later than one month after employment. Meanwhile, they should abandon the idea of terminating their labor contracts with laborers at any time. Accordingly, even after the due time of a labor contract while the laborer is still working in the working unit, another labor contract should be signed within one month. As is laid down in Article 5 of Implementing Regulations of Labor Contract Law, if any laborer refuses to sign a written labor contract with his employing unit one month from the day of employment with a written notice from the employing unit, the employing unit should give him a written notice to terminate their labor relations, after which no financial compensation needs to be given to the laborer while his salary in accordance with his actual working hours should be given to him. Accordingly, enterprises should keep relevant evidence in this case, such as the written notice of signing a labor contract, in order to avoid some potential legal risks.

2. Problems and Strategies of Labor Force Management

2.1 Establishing and Perfecting Enterprise Regulations

Regulations are the law inside an enterprise, which exist in the whole employment process and serve as an important basis for an enterprise to exert its management as well as termination of contracts. For example, as for those laborers seriously against enterprise regulations, their labor contracts can be terminated according to Paragraph 2, Article 39 of Labor Contract Law. In addition, legal regulations serve as an important basis in the case of labor disputes. No enterprise will do without regulations. The content of enterprise regulations should be in accordance with law, so should the procedures of their establishment and announcement.

Article 4 of Labor Contract Law clearly lays down the legal procedures for enterprises to follow when establishing regulations. Three aspects should be attached importance to when enterprises establish or amend their regulations: first, legal procedures should be performed strictly and the written evidence of discussions and negotiations of worker representative assemblies or the whole staff should be kept. Second, enterprises should have legal examination on their former regulations, amend or delete those articles not conforming to law. Third, the publicity procedure should be conducted. A variety of publicity methods can be employed, such as putting up a notice on the bulletin board, distributing brochures to staff, training staff about regulations, organizing examinations about regulations and so on. In terms of burden of proof, relevant sign-in records and exam papers should be kept in case of any legal disputes.

2.2 Promptly Modifying Labor Contracts

According to Article 35 of Labor Contract Law, labor contracts can be modified if both parties agree on that. The written form should be taken when modifying a contract. In addition, both the working unit and the laborer should retain a copy of the new contract.

During the employing process, enterprises may have some adjustments in employees' positions, posts or salaries in accordance with changes in their production and operation. When these things occur, enterprise should have prompt negotiations with their employees to modify their labor contracts in order to avoid some potential disputes. Without agreement, enterprises cannot modify labor contracts at their own will in most cases. Therefore, enterprises should pay more attention to the following things to avoid unnecessary disputes:

- a. Detailed and normative post instructions should be established to clarify the duties, working contents and qualifications of different posts. In the case of business adjustments and changes of technical methods, these instructions should be modified promptly. In this way, a standard document to measure whether a laborer is qualified for a post is provided.
- b. It should be laid down in labor contracts that enterprises have the right to adjust their employees' posts, positions and salaries in some specific situations.
- c. It should be further clarified in relevant regulations that in what situations enterprises are able to adjust employees' posts, positions and salaries.

d. Detailed performance management system should be established and strictly conducted, according to which employees' assessment results are combined with their appointment. Relevant data and materials should be kept as the original materials for employees' position exchanges, adjustments and dismissal.

3. Problems and Strategies in Personnel Leaving

3.1 Properly Treating Personnel Quitting

Two conditions are laid down for laborers' quitting in Article 37 of Labor Contract Law: one is a 30-day prior notice; the other is a written notice. A laborer in the trial period is also required to give a notice three days in advance. Enterprises should allow their employees' application for quitting and transact the quitting process for them as long as the above two requirements are fulfilled.

Certainly, personnel quitting, especially that of those laborers at important posts, will affect the normal production and operation of enterprises and hence cause inevitable damages to them since they can hardly find an ideal replacement for the former laborers within 30 days. In real life, many enterprises give written notices refusing laborers' requests for quitting after receiving the written quitting notices of laborers. However, what they do is invalid, hence cannot defending their illegal actions. Some enterprises even try to retain their employees by distraining their documents or property. According to Article 84 of Labor Contract Law, in the case of legal personnel quitting, any employing unit who distrains his employees' documents or property will be ordered to return them with a time limit as well as a fine ranging from 500yuan to 2000yuan; enterprises are responsible for a compensation for the damages over laborers. In addition, according to Article 25 of Labor Contract Law, except specific training and business secrets, any employing unit is not permitted to make any agreement about laborers' liquidated damages. Therefore, it is vital for enterprises how to retain excellent employees. The following four points should be followed:

- a. Confidentiality sections should be included in the labor contracts with those laborers at critical positions and service agreements should be signed with those laborers attending technical trainings with the fees afforded by enterprises. As is laid down in Article 102 of Labor Contract Law, laborers who are against the above regulation to terminate their contracts or are against their labor contracts relevant to confidentiality sections and cause damages for enterprises should bear the compensation responsibility.
- b. Enterprises should exert a variety of methods to retain excellent personnel.
- c. A reserve system for managers at critical positions should be established to cultivate potential successors, hence preventing breaks caused by personnel quitting.
- d. A cadre exchange system should be established to conduct regular exchanges among departments or regions in order to cultivate employees' abilities at a series of relevant positions.

3.2 Legally Dismissing Employees

Enterprises are liable to dismiss their employees for different reasons. Legal reasons and procedures of blamable termination as well as unblamable one are listed in Labor Contract Law. Article 40 of Labor Contract Law lays down three legal situations for unblamable termination of labor contracts. Two things should be attached importance to in this case: first, the usual procedure has to be followed to terminate a labor contract, for example, as for those employees who are unable to do their former jobs after medical treatment period, they should be shifted to some other positions; as for those who are not qualified for their work, training or a transfer is necessary; in the case of great changes in objective conditions, labor contracts can be changed after negotiations with labors. Anyone who fails to follow the procedure will bear the risk of illegal termination of labor contracts and have to pay doubled compensation. Second, it must be thought over whether to terminate a labor contract by paying one extra month's salary or by giving a 30-day written notice.

Actually, both methods have the same cost. In the latter method, the enterprise still needs to pay the employee's salary in the 30 days from the distribution of the notice to the termination of the labor contract, which is equal to one extra month's salary. However, different risks exist for them. Since a lot of things are likely to happen during the 30 days, such as industrial injuries, diseases, pregnancy and accidental injuries, employment units may fail to terminate their labor contracts with their employees. If an extra month's salary is given to terminate a labor contract, no risk will exist. Enterprises should dismiss their employees accordingly.

In addition to full-time employment, enterprises can also turn to part-time employment or labor service dispatch in order to complete certain tasks. In spite of their freedom in flexibly choosing suitable employment forms, enterprises must understand and fully utilize some relevant labor regulations because strategic employment will effectively reduce enterprises' labor cost and improve their competitiveness.

References

Implementing Regulations of Labor Contract Law of PRC.

Labor Contract Law of PRC.

Zhang, Zhijing. (2006). *Labor Contract Law*. Fudan Press.

Zhao, Shuming. (2007). *Human Resource Management*. Beijing Normal University Publishing Group.



Design of the Electric Power Market Operating Model for Excess Electric Energy Consumption in Inner Mongolia

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Abstract

The Inner Mongolia Autonomous Region of China possesses abundant primary energy sources, and the quick developments of coal and electric power industry have established stable base for the high-speed growth of the economy of the autonomous region. Under the premise that the Inner Mongolia region pushed the electric power market oriented reform and established the electric power trading market, the basic principles to construct the electric power market in Inner Mongolia were discussed, and the market mode, market characters, market subject and trading mode in various phases of the grading reform were designed, and the trading type and the trading flow of the present reform phase were described in detail in the article. The research result of the article could be used for references to push the electric power market reform in Inner Mongolia Region.

Keywords: Inner Mongolia, Electric power market, Operating model, Excess electric energy consumption

1. Introduction

The Inner Mongolia Autonomous Region with abundant primary energy sources such as coal, wind energy and solar energy is located in the north of China, and its economy has kept sustainable and quick development for many years, and the quick developments of the coal industry and the electric power industry establish stable base for the high-speed growth of the regional economy. The Inner Mongolia Electric Power Co. Ltd possesses special status, and it is the exclusive electric grid enterprise directly under the Autonomous Region independent of State Grid Corp. of China and China Southern Power Grid Corp. Ltd. And the level of on-grid price is relatively low, and the price distribution is relatively centralized, so the purchase and sale price difference is small. Inner Mongolia is the important province with electric power output, and the electric power exchanges are very frequent between the Inner Mongolia Grid and the North-China Grid and the Northeast-China Grid.

It is very necessary to establish the Inner Mongolia Grid Electric Power Trading Market. First, it is the effective approach to promote the economic development of Inner Mongolia, consume surplus electric energy and realize the harmonious win-win among power generation enterprises, grid enterprises and electricity consumers. Second, it can promote the electric power export of Inner Mongolia to optimize the electric power allocation in the North-China even the whole China. Third, it is the necessary condition to establish the electric power trading platform and promote the healthy and orderly development of larger consumer directly-purchasing electricity. Fourth, it is the important composing of the North-China regional power market and the national electric power market. Therefore, it is necessary and feasible to start the multilateral electric power trading market in Inner Mongolia.

2. Construction principles of Inner Mongolian electric power market

The construction principles include following the socialistic market economy law and the development law of electric power industry, using the experiences in foreign and domestic electric power markets for references, actively cultivating the subjects of the market, establishing fair, standard and high-effective electric power trading platform, constructing "power generation enterprises orientated, large-consumer oriented and out-of-regions" Inner Mongolia grid electric power trading market, organically combining with the national and regional electric power markets, exerting the basic function of the market-allocated resources, promoting the sustainable and harmonious developments among economy,

environment and electric power industry in Inner Mongolia, and realizing the optimized allocation of Inner Mongolia electric energy in the North-China even the whole China.

(1) Constructing the Inner Mongolia grid electric power multilateral trading market quickly, actively participating in the regional electric power market, actively cooperating with the construction of national electric power market, and developing the electric power market of Mongolia.

(2) Carrying out the scientific outlook on development, and establishing the market mechanism which makes for the development of “saving energy, economic and environmental protection” electric allocation and the electric energy trading.

(3) Organically combining with the present policies of China, and establishing and perfecting the power price mechanism.

(4) Based on the regional electric power market, developing the out-of-regional electric power market.

(5) Giving attention to various interests, and fully mobilizing various parties’ enthusiasms to participate in the construction of the electric power market, and promoting the win-win among electric generation enterprises, grid enterprises and consumers.

(6) Totally designing and gradually implementing the market construction from simple to complex, stably pushing the construction, and realizing the link with the regional and national electric power markets.

3. Total objective and grading tasks

3.1 The total objective of the electric power multilateral trading market of the Inner Mongolian Grid

The total objective includes cultivating the “electric power generation enterprise oriented, large consumers oriented and out-of-region oriented” opening electric power market, driving the construction of the Inner Mongolia electric power energy base and the implementation of the energy conversion development strategy in virtue of the market mechanism, promoting the resource optimization allocation of Inner Mongolia electric energy in the North-China even the whole China, establishing fair, standard and high-effective Inner Mongolia electric power trading platform, Developing the electric power trading with multiple forms such as out-of regional electric energy trading, electric power generation rights trading and large consumer directly purchasing electricity trading, carrying out national and autonomous regional policies about “replacing small enterprises by large enterprises, energy conservation and emission reduction” by the market means and promoting the experimental unit of large consumer directly purchasing electric power to be developed orderly, and realizing the win-win among electric power generation enterprises, grid enterprise and consumers, establishing opening, transparent, orderly and competitive Inner Mongolia electric power multilateral trading market according with the system characters of the autonomous region and the Inner Mongolia grid to guarantee the harmonious and sustainable development of Inner Mongolia economy, environment and electric power industry.

3.2 The grading objective of the electric power multilateral trading market of the Inner Mongolian Grid

Based on above total objective, according to the basic principles of uniform layout, totally design and gradually implement, according to the total deployment of national electric power system reform and the grading construction objective and task of North-China regional electric power market, Combining the actuality of the Inner Mongolia Grid, the grading construction objectives of the Inner Mongolia Grid electric power multilateral trading market are seen in Table 1.

4. Primary design of the electric power market operating model

4.1 Competitive trading type

The concrete classification of the trading type is seen in Figure 1.

4.1.1 Electric energy trading out of the autonomous region

Out-of-regional electric energy trade means the electric energy trade between the Inner Mongolia Electric Power Co., Ltd and other grid enterprise out of the autonomous region, and it includes trans-provincial transmitting/receiving electricity trading, trans-regional transmitting/receiving electricity trading and transnational transmitting/receiving electricity trading.

The market subjects in the out-of-regional electric energy trading include the Inner Mongolia Electric Power Co., Ltd and other electric power generation enterprises (sets) with market admittance. The trading can be organized by two sorts of mode. For the first mode, according to the demand, price, electric power transmission of the out-of-regional electric power market, the electric power corporation mainly purchases the electricity quantity of local regional electric power generation enterprises, and sell to other grid enterprise, and it is the primary electric energy trading mode among regions, i.e. the annual contract electric energy trading. For the second mode, the electric power corporation acts as an agent of in-grid electric power generation enterprises to participate in regional and national electric power market competition,

and sells surplus electricity quantity to the grid enterprises out of the region, and this mode is mainly used in the temporary electric energy trading and the market competition trading.

The multilateral trading mode and the centralized price bidding mode are adopted in the out-of-regional electric energy trading which gives priority to the former and gives supplement to the latter.

According to the actual demands of the trading, the cycle of the out-of-regional electric energy trading can be divided into the long-term trading (one year or above one year), the middle-term trading (season or month) and the short-term trading (week or day) and the real-time trading.

(1) Multilateral out-of-regional electric energy trading

The multilateral out-of-regional electric energy trading is organized by the season or the month.

According to the demands of the out-of-regional grid, the electric power trading center negotiates with the out-of-regional grid trading center to confirm the tie line export electricity price and the trading electricity quantity, and then respectively negotiates with various electric power generation enterprises (sets) which want to participate in the out-of-regional electric energy trading and confirm the actual transacted electricity quantity and the transacted on-grid electricity price in the out-of-regional electric energy trading according to the transacted the tie line export electricity price and the trading electricity quantity.

(2) Out-of-regional electric energy centralized price bidding trading

When the multilateral out-of-regional electric energy trading can not fulfill the demands, the electric power trading center will organize the centralized competitive out-of-regional electric energy trading. Aiming at the transacted electricity quantity deficiency of the out-of-regional electric energy trading, the electric power trading center organizes the electric power generation enterprises (sets) with market admittance to unilaterally bid, and the transacted electricity quantity of the electric power generation enterprises (sets) are confirmed by the electric power generation quotation ranking method which takes the lowest electricity purchasing costs as the objective.

4.1.2 Electricity generation rights trading

The electricity generation rights trading means to realize the non-gratuitous assigning and assigned substitutive trading behaviors of electricity quantity among electric generating sets by the market mode. The electricity generation rights trading can be implemented among all electric power generation enterprises with market admittance, and the enterprises of both parties assign part or all electric power generation rights by signing the electric power rights trading agreement to replace the electric power generation enterprises (sets) to complete the electric power generation tasks of the assigned electricity quantity index. The trading center should encourage the high-efficiency and environment-protective sets to replace the low-efficiency and high-pollution sets, and encourage electric generating sets with the water and electricity and other renewable energy sources to replace the coal steam-electric sets.

In the first stage of the Inner Mongolia grid electric power multilateral market, the non-gratuitous transferors of the electric power generation indexes mainly include the small-sized coal steam-electric sets listed in "the Eleventh Five-year Development program" by Inner Mongolia Autonomous Region Government. With the continual development of the multilateral electric power trading market, the electric power generation trading will be extended to the substituted trading of "replacing small-size by large-size, and replacing low energy consumption by high energy consumption" among coal steam-electric sets, the "water-coal replacement" trading between water electricity sets and the coal steam-electric sets, and the electric power generation replacement trading because of the grid blocked.

The multilateral trading mode and the centralized price bidding mode are adopted in the electric power generation trading which gives priority to the former and gives supplement to the latter.

The electric power generation trading is divided into the annual multilateral electric power generation rights trading, the monthly multilateral electric power generation rights trading, and annual centralized price bidding electric power generation rights trading and the monthly centralized price bidding electric power generation rights trading.

(1) Multilateral electric power generation rights trading

The multilateral electric power generation rights trading can be arranged according to following priority, i.e. trading among different electric power generation sets in same one electric power generation plant, trading among different electric power generation plants in same one electric power generation enterprises, and trading among different electric power generation enterprises.

The electricity quantity and price in the electric power generation rights trading are consulted by both parties independently or coordinated by the electric power trading center, and assessed by the grid safety and confirmed. Both dealing parties report the transacted electricity quantity and price to the electric power trading center, and the report contents will be as the balance references after being confirmed.

(2) Centralized price bidding electric power rights trading

The trading price of the centralized price bidding electric power rights is confirmed by the market competition, i.e. the both dealing parties of the electric power generation rights declare the “electricity quantity-price” curve of the purchased and sold electric power rights, and the intersection point between the demand curve and the supply curve is the trading price of the centralized price bidding electric power rights. The minimum electricity quantity of each board lot electric power rights trading will be confirmed according to the actual situation.

4.1.3 Large consumer directly purchasing electricity trading

The electricity purchasing subjects in the large consumer directly purchasing electricity trading are the large-sized industrial electric power consumers with market admittance, and the sales subjects are the electric power generation enterprises (sets) with market admittance. The multilateral trading mode and the centralized price bidding mode are adopted in the large consumer directly purchasing electricity trading which gives priority to the former and gives supplement to the latter.

(1) Multilateral large consumer directly purchasing electricity trading

Under the organization of the electric power trading center, the large consumers and the electric power generation enterprises (sets) negotiate the directly purchasing electricity quantity and the directly purchasing electricity price, and after the electricity quantity and the electricity prices are checked by the grid safety department, three parties including “electric power generation enterprises, grid enterprises and consumers” sign the barter contract together.

In the first stage of the Inner Mongolia electric power multilateral trading market, the large consumer directly purchasing electricity trading adopts the mode that the electric power trading center openly lists the tradable directly purchasing electricity resources on the electric power trading platform, and multiple large consumers and electricity generation enterprises participate in the trading, and three parties including large consumer, electric power generation enterprises and the Inner Mongolia Electric Power Co., Ltd sign the large consumer directly purchasing trading contract through multiple parties’ (both parties’) negotiation. This mode can be convenient for more large consumers in larger range and electric power generation enterprises to know the trading information and participate in the directly purchasing electricity quantity trading, and it can ensure the implementations of large consumer directly purchasing electricity contract and the healthy and orderly large consumer directly purchasing electricity trading market.

(2) Large consumer directly purchasing electricity centralized price bidding trading

When the large consumer directly purchasing electricity multilateral trading can not fulfill large consumers’ demands or new demands of large consumer directly purchasing electricity are added, the centralized price bidding mode will be adopted.

For the large consumer directly purchasing electricity centralized price bidding trading, in the initial stage, the form that large consumers declare demands of electricity quantity and generation producers unilaterally declare the trading price is adopted, and the large consumer purchasing electricity price will directly link with the on-grid electricity price depreciation extent of the generation producers. With the market oriented construction of the electric power multilateral trading, the form that the power generation enterprise (sets) and large consumers bilaterally quote prices in different periods will be adopted. To uniform the quoted price, contracting parties quote the price on the grid, and the transacted price is the price balanced in the large consumer centralized price bidding market.

4.1.4 Day-ahead simulation trading

The competitive sets participating in the day-ahead market simulation declare price data to the trading center, and the trading center adopts the node marginal electric price method to confirm the electric prices in various periods of the day-ahead market, and simulate clearance and balance.

4.1.5 Assistant service compensation mechanism and simulation trading

In the initial stage of the Inner Mongolia electric power multilateral trading market, assistant services will continually perform the assistant service compensation mechanism confirmed by the present assessment method about the synchronization electric power pant scheduling management of Inner Mongolia Grid, and the total objective is that the decrease and reduction of the electricity quantity are basically balanceable with the encouraging electricity quantity. As the multilateral trading market laws of electric power are continually perfected, the assistant service market simulation operation should be properly started.

4.2 Trading flow

The trading flow is seen in Figure 2.

5. Conclusions

By means of the electric power trading platform, Inner Mongolia Grid could develop the multilateral trading of electric

power, which accords with the national situation, regional situation, and Chinese present correlative policies about administration, financial tax, investment, price and grid management system, the market strategy of “giving priority to the grid electric power balance, and actively developing the out-of-regional (including trans-province, trans-region and trans-nation) electric energy trading of Inner Mongolia Grid”, makes for the harmonious and sustainable development of local economy, environment and electric power industry and could realize the win-win among multiple parties. Therefore, it is necessary and feasible to start the electric power trading market for Inner Mongolia Grid. The electric power market operating mode in the near future was designed primarily in the article, which possesses driving function and practical meanings for the promotion of Inner Mongolia electric power market oriented reform.

References

- Energy Sources Department of Inner Mongolia Development and Reform Commission. (2007). Developing the Wind Power and Improving the Inner Mongolia Electric Power Energy Structure. *Northern Economy*, No.9.
- Fu, Ruibin & Fu, Ruixia. (2004). Analysis of the Macro Environment of the Inner Mongolia Electric Power Industry. *Inner Mongolia Science Technology and Economy*, No.5.
- Huang, Yujun & Ren, Ze. (2007). Analysis, Countermeasures and Advices of Inner Mongolia Electric Power Industry Development Tendency. *Northern Economy*, No.12.
- Li, Hanfang, Tan, Zhongfu & Luan, Fengkui. (2008). Regional Electricity Market Factors and Market Performance Evaluation Model. *Electric Power Automation Equipment*, No.3.
- Zhang, Zhonghui, Yu, Zhimin & Wang, Yu. (2008). Analyze Roughly about the Power Market Pattern and the Operations Model. *Science & Technology Information*, No.2.

Table 1. Grading construction objectives of the electric power multilateral trading market of Inner Mongolia Grid

	The first phase (2008.6-2010)	The second phase (2011-2015)	The third phase (2016)
Market model	The finite electricity competition market including part sets and part large consumers	Part electricity day-ahead auction market and assistant service market	Wholesale competition market, retail competition market and financial electricity market
Main characters	Major multilateral (bilateral) trading, and assistant auction trading	Expanding the proportion of the competition electricity The day-ahead market price becomes into the important economic signal Gradually implementing the apex-vale electricity price Establishing scientific and reasonable electricity transportation and distribution price mechanism and promoting the electric energy trading trans-provincial, trans-regional and trans-national Enriching and perfecting the season trade	The bilateral quoted price is implemented in the day-ahead market Adopting flexible and high-efficient trading mechanism Financial electricity trading
Market subject	Inner Mongolia Electric Power (Group) Co., LTD Power generation enterprises (sets) with market admittance Large consumers with market admittance	Extending the power generation enterprises with market admittance and large consumers purchasing electricity directly	Power generation enterprises (sets) with market admittance, retail dealers and electric power users
Trading type	Out-regional electric energy trading Power generating rights trading Directly purchasing electricity trading by large consumers Day-ahead market and assistant service market simulation operating Real-time balances and distribution according to the demands	Properly starting the day-ahead market Establishing assistant service market Real-time market simulation and operation	Starting the real-time market Developing the financial electricity products trading

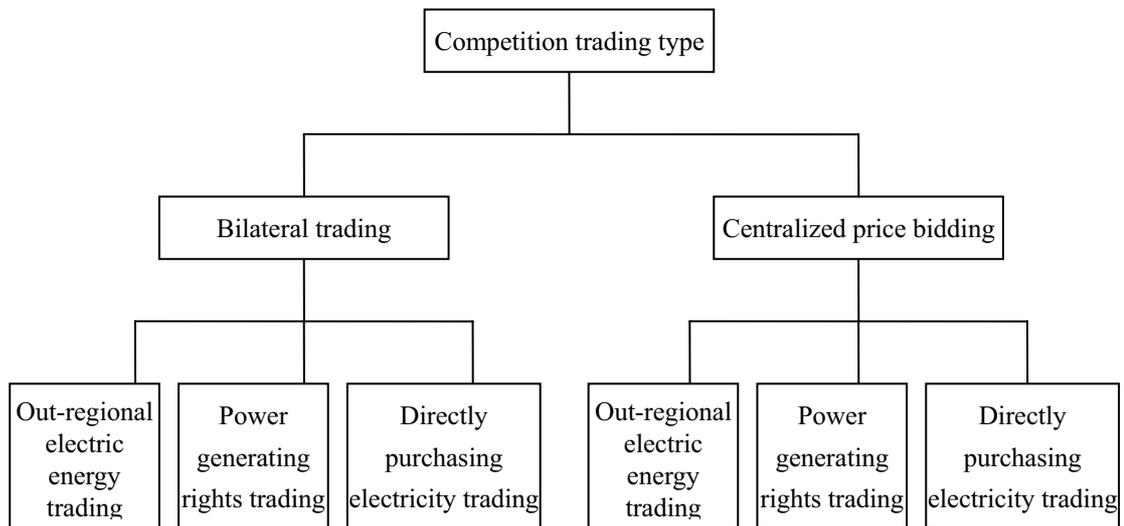


Figure 1. Electric Power Multilateral Trading Structure of Inner Mongolia Grid

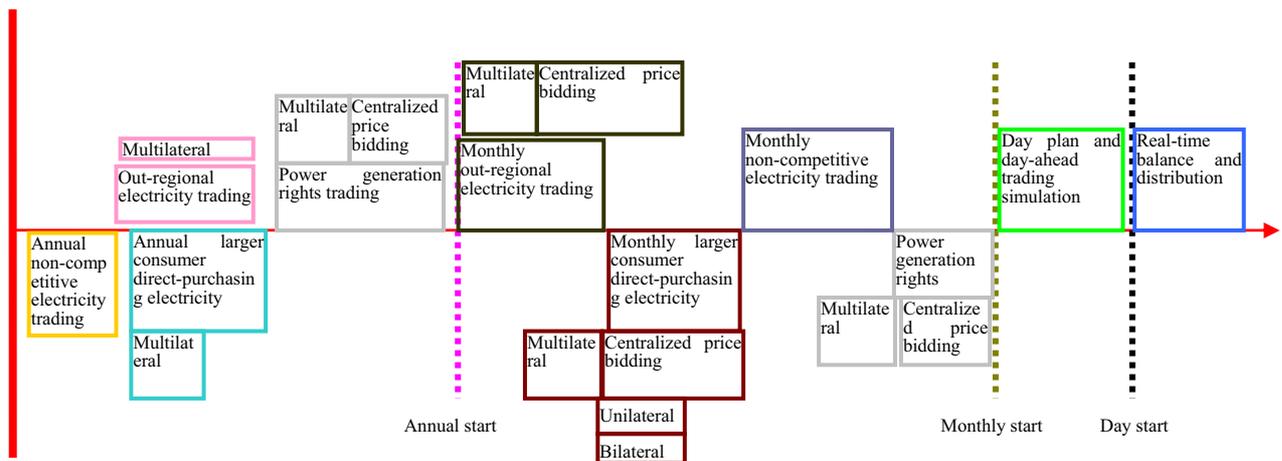


Figure 2. Electric Power Multilateral Trading Time Sequence of Inner Mongolia Grid



Quality Practices as a Moderator in Technology Transfer Performance

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Abstract

Absorptive capacity is one of the factors that determines the success of technology transfer. It improves one's ability to assess the current and future needs of firms and leads them to make better choices. At the same time, quality movement in firms also has a similar vision; to make firms move forward in a competitive way. The objective of this paper is twofold. First, was to determine the association between absorptive capacity and technology transfer dimensions. Secondly, this study was conducted to determine the moderating role of firms' quality practices in the relationship between firms' absorptive capacity and technology transfer performance. Data was collected from Malaysian firms through mailed questionnaires. With a response rate of 32%, data was analyzed using multiple hierarchical regression and Chi Square method. The results showed quality process interacts significantly with knowledge diversification and transformative capacity during the integration stage. Moreover, the addition of a moderating variable increases the prediction of technology transfer performances. The result suggests firms' investment in quality practices improves the process of transferred technology.

Keywords: Quality practices, Technology transfer, Absorptive capacity, Malaysia

1. Introduction

The study on technology transfer covers various disciplines and topics such as the process, the barriers, the opportunities and the modes of technology transfer (Reisman, 2005; Zhao & Reisman, 1992). However, lack of studies focused on absorptive capacity and quality practices make it deems necessary to study on these aspect. Absorptive capacity ensures that through transferred technology, development, growth and spillover benefits firms and country. At the same time, as quality movement is inherent in many organizations, it should play an important aspect in ensuring the transfer works well. Firms invest in quality programs or activities as it contributes to firms' performance by creating, sustaining and dictating a firm's competitive advantage. Hence, recipient firms should consider the impact of transfer performance with both the absorptive capacity and the quality movement in force.

This paper is organized as follows; after introduction, this paper will present the rationale of this study, followed by literature review, research design, findings and discussion of this study. Finally, it concludes with implications and

suggestions for future research.

2. Research rationale

Technology transfer is not a new phenomenon. Since the 1960s Malaysia has been involved in technology transfer activities when the government began to focus on industrialization aspects. The labor-intensive-export orientation industrialization (L-EOI) period introduced between 1961 and 1980 focused on extensive use of labor in the manufacturing sector to stimulate foreign participation in local firms (Suhaimi & Yusof, 2006). Since then, there has been a growth of technology transfer activities in the form of foreign direct investment, licensing and technical assistance. The MITI report (2001) and Lai & Yap (2004) study also suggest that historically, during 1989-2001, foreign technology inflows to Malaysia were mostly for electronics industries using those channels. Global Competitiveness Report (2002) also shows that Malaysia came second after Singapore with a technology transfer index of 1.08 as compared to 1.95. This data is parallel with findings by Lee & Tan (2006) who discovered that Malaysia comes second after Singapore in terms of technology transfer.

The study on Malaysia's ability to capitalize on the benefits of technology transfer was conducted by a few authors (Abibullah et al., 1994; Y. W. Lai & Narayanan, 1997; Narayanan & Rasiah, 1992; Norlela Ariffin & Figueiredo, 2004; Zainal, 2004). They focused on many perspectives such as the human resource aspects, general overview of transfer practices and technological capabilities. However, their findings were inconclusive. For example, a study by Norlela Ariffin & Figueiredo (2004) found that there is a certain level of capabilities that local firms have achieved. Nevertheless, a study by Zaidah et al. (2007) showed that MNCs are reluctant to transfer the key technological knowledge to Malaysia. Furthermore, Suhaimi & Yusof (2006) indicates that Malaysia was unable to produce indigenous technology. The other study by Jegathesan et al. (1997) and Lall (2002) also suggested that Malaysian workers were unable to adapt and conduct sophisticated repairs due to limited theoretical knowledge which disallow the locals to conduct operation independently from the technology providers. These studies support previous studies by Narayanan & Wah (1993) and Zainal (2004), which indicate locals are still at a low level of technological activities. Yet, in order to be useful, the real test of transferred technology is on its contribution towards the development of the industry and the country (Ganesan & Kelsey, 2006).

3. Literature review

Absorptive capacity is important in establishing technology transfer activities in firms. In a study by Mowery et al. (1996) and Kneller (2002), it is suggested that absorptive capacity would contribute to firms ability in adopting a particular technology. Madanmohan et al. (2004) suggested that the extent of firms' absorptive capacity will determine their level of participation in the technology transfer process and the type of technology that they can operate efficiently. Meanwhile, studies (Adams & Lamont, 2003; Garud & Nayyar, 1994; Zahra & George, 2000, 2002) had also discussed on transformative capacity, which could enhance absorptive capacity. Thus, the elements of absorptive capacity are not restricted to a firm's ability to identify, assimilate, transform and exploit the external knowledge, it also includes its internal "ability to continually redefine a product portfolio based on technological opportunities created within a firm" (Garud & Nayyar, 1994). Based on that argument, this study includes them as an absorptive capacity construct.

In addition to firms' absorption capacity, firms' internal factors might contribute in explaining the success of the transferred activities. As future quality-oriented initiatives are affected by firms' routine and practice in quality initiatives (Lenox & King, 2004), quality practices could explain the level of transferred technology that are being influenced by firms' absorption capacity. Yet, there is limited understanding and empirical evidence on the role of quality practices in strengthening the transfer process. Studies (Elsey & Fujiwara, 2000; Heinbuch, 1995) on quality practices used quality as the technology that is transferred. The measurement is more on whether the quality process is transferred successfully or encountered difficulties.

In addition, much of the quality study research attempts to address the quality issue only in terms of meeting customers' needs and also in achieving firms' objectives. In contrary to the argument that suggests that if technology is of better quality then it will lead into quality transferred technology, though some studies indicate other directions. Studies by Bennet & Hongyu (2004) showed that customers' perceptions differ on the quality of the transferred technology while Story & Loroz (2005), who studied the role of technology and technology congruence on consumers' perceptions, discovered that a cue for quality is seen in both an absolute sense (i.e. higher technology means higher quality) as well as with regard to brand congruity (i.e. brands are more trusted in their production of extensions of similar technology). Whereas, several studies also indicate that the technology transferred must incorporate the aspect of quality. For example, in a study by Quazi & Bartels (1998) on the application of Total Quality Management (TQM) in firms, TQM were suggested to affect the international technology transfer and intra-firm transfer. Other studies (Correia et al., 2003; Ivarsson & Alvstam, 2005) showed that assistance from the providers could be beneficial.

Therefore, the objectives of this study are to identify the association between firms' absorptive capacity and the performance of transferred technology and secondly to determine the moderator effect of quality practices on the

relationship between absorptive capacity and technology transfer performance.

4. Method

4.1 Sample

This study focused on the Electronic and Electrical manufacturing firms in Malaysia. A list of the company names were obtained from the Directory of Foreign Affiliated Companies in Malaysia (2007) and the Japan Related Companies yearbook 2007 (JETRO). From the population of 525 firms, a sample of 226 (43%) was solicited. The following steps were used:

A telephone call was made to each firm to confirm their address and the person-in-charge of production so that the letter will arrive to the right person. A production manager or research and development manager or general manager were the people who were expected to answer the questionnaires as they were responsible on the production line and most probably involved in the transfer of technology.

A questionnaire package was mailed to the respective person. The package included a cover letter that explained the study objectives and to request participation, with a questionnaire and a return stamped envelope.

Upon receiving the completed questionnaire, a token of appreciation was mailed to each respondent.

A reminder letter was sent to the non-respondents with a new completed questionnaire package. A grace period of one month was allowed between the first batch of questionnaires, and the first, second and third reminder.

The response rate was 32% from the sample size. The questionnaires were administered from March to September 2008. 35 questionnaires were received between March and June 2008. Besides the reminder letter, other follow-up actions were undertaken such as telephone calls and also personal visits to the factories in order to increase the response rate. The actions resulted in receiving another 38 responses.

4.2 Questionnaire design

There were few variables in this study. Questions for technology transfer performance variables were adapted from Szulanski (1996). There were four sections, namely the initiation stage, the implementation stage, the ramp-up stage and the integration stage. These four sections covered the activities that lead to transfer of technology where it includes the process of choosing the technology and the problems that are associated with the transfer until the transferred technology was materialized and satisfactorily done. The initiation stage included the activities that make firms decide to be involved in receiving technology; the implementation stage was when firms took action to make the transfer real; the ramp-up stage was when firms handled any problems and issues related to the transferred activities and the integration stage was on evaluation of the transferred technology. There were 20 questions related to the technology transfer dimension.

For the absorptive capacity construct, the dimensions used were adapted from Nieto & Quevedo (2005). The section consisted of four sections, which were links between firms and its surroundings, level of knowledge and experience, diversification of knowledge structure and strategic posture. These terms were to reflect the four dimensions of absorptive capacity namely, the ability to identify, assimilate, transform and exploit the external knowledge as discussed in previous literatures. As previous literature has demonstrated that transformative capacity would concurrently enhance absorptive capacity, allowing their dimensions were also considered here. Eight questions from Garud & Nayyar (1994) were adapted making a total of 31 questions under absorptive capacity dimensions.

The questions on quality practices were adapted from two parts, namely quality training and quality tools and process. The purpose of using training as an element in the quality practices is because it is mostly associated with TQM performance consequences (Powell, 1995) and it enhances understanding of quality movements in organizations (Elsey & Fujiwara, 2000). Only through training are the staffs able to appreciate quality practices in the organization. In addition, as process quality management also includes improvement, quality control and evaluation practices in an organization, the use of tools and techniques, and preventive maintenance were considered. Eight questions were included under the quality process construct. Hence, there were a total of 59 questions in the questionnaires, excluding four questions on firm demographic factors such as the firm ownership, firm size, ways firms received technology and their revenues.

Even though sample size was less than 100, factor analysis is permissible. Moreover, sample size is not important especially with high communalities (MacCallum et al., 1996; MacCallum et al., 2001). Therefore, the questions were factor analyzed using several criteria. There should be at least three variables for each factor as suggested by Jae-O Kim & Mueller (1978). The factor loading should be more than 0.63 following Comrey & Lee (1992) as mentioned in Tabachnick & Fidell (Tabachnick & Fidell, 2007) who suggested that loading of 0.71 was considered excellent, 0.63 was very good, 0.45 as fair and 0.32 as poor. Thus, if the loading for each item was less than 0.63, the item was deleted from the construct. Moreover, in determining the factorability of the dimensions, the Bartlett's test of sphericity has to be significant and the Kaiser-Meyer-Olkin Measure of sampling adequacy has to be more than 0.50 in order to be acceptable (Hair et al., 1998). Result of factor analysis shown in table 1.0 produced two acceptable dimensions under

technology transfer performance, three acceptable dimensions under absorptive capacity and one dimension for quality practices. Table 1.0 shows the results.

Insert Table 1 here

5. Results and discussion

The data was analyzed using SPSS version 13.0. The majority of the respondents were male (85%) holding positions such as manager (52%), senior managers (21%), and engineers (14%). In terms of number of employees the firms had, 43.8% had employees between 101 to 500, 26% of the firms had employees between 1001 to 5000, 20.5% had employees between 501 to 1000, 5.5% of the firms employed 100 or less employees and only 2.7% had employees more than 5000. 69.9% of the firms were owned fully by foreign participation. Table 2.0 shows the details.

Insert Table 2 here

A majority of the firms (82.2%) received technology from training provided by their parent company, while 57.5% received transfer of technology through the purchase of machinery and equipment. 31 firms (42.5 %) conducted contract manufacturing or OEM, 22 firms (30.1%) were involved in some form of technology transfer agreement, 20 firms (27.4%) received technology through conducting sub-contract works and only 10 firms (13.7%) received technology through specialist attachment. There were also firms that received technology from their client company. In terms of technology transfer channel, 41.7% were involved in technological assistance, 34.3% were engaged in management and supporting agreements and 26.4% were under licensing, trademark and patent. The findings are similar to Lai & Yap (2004) study who found that technical assistance, licensing, trademarks and patents are the major channel of technology transfer to Malaysian E&E firms.

A six-point Likert scale was used on the questionnaire with 1 indicating strongly disagree and 6 strongly agree. From the descriptive statistics, the mean for technology transfer stage was 4.53 with a minimum scale of 2 and a maximum scale of 4. This indicates that on average the respondents are somewhat agreed on the process of technology transfer stages where the highest level of agreement was somewhat agree, as denoted by scale 4. Looking into details for each of the technology transfer stages, for the implementation stage, the highest scale respondents chose was agree (5) with a mean of 4.70 while for the integration stage, the highest score was 6 (strongly agree). Thus, most of the firms concurred with the technology transfer stages that they are involved in.

Meanwhile, for absorptive capacity, the mean was 4.53 (agree) with a minimum scale of 3 (somewhat disagree) and a maximum scale of 5 (agree). Both knowledge diversification and transformative capacity had a minimum scale of 1 (strongly disagree) with a maximum scale of 5 (agree) and 6 (strongly agree), respectively. For strategic posture, the mean was higher at 5.54 (strongly agree) as compared to knowledge diversification (4.28) and transformative capacity (3.78). These indicate most firms concentrated on strategic issues and less focused on transformative capacity. This situation might reduce firms' ability for future development at faster rate. The mean for quality process was 4.82 (agree) indicating quality practices are inherent in majority of the firms. Overall, the mean for the major variables was between 3.78 and 5.54. Table 3.0 shows the mean and standard deviation for all the variables.

Insert Table 3 here

The Pearson correlation showed there was an association between absorptive capacity and technology transfer performance. Even though none of the absorptive capacity dimensions were found significant with the implementation stage, transformative capacity and knowledge diversification were significant in both technology transfer performance composite and the integration stage. The strength between knowledge diversification and the integration stage was moderate (0.25). The same goes for the association between transformative capacity and the integration stage ($r = 0.29$). The results that showed absorptive capacity does not have any relationship with implementation stage is worrisome as lacking in such ability at the initial stage of technology performance will lead to future in-capabilities to perform independently. The situation can be interpreted in such a way whereby most of firms that are at implementation stage could not proceed to integration stage. This is indicative of lack of technological capabilities as mentioned by few authors such as Jegathesan et al. (1997), Lall (2002), Narayanan & Wah (1993) and Zainal (2004). The presence of foreign participation in the firms could contribute to the phenomena especially for those that have majority foreign-controlled investment. The moderate association between knowledge diversification and transformative capacity with integration stage indicates both factors are important to evaluate the transferred technology. Thus, firms should focus in developing various knowledge and invest in shelved technologies.

As the purpose of this paper was to determine quality practices as the moderator, steps suggested by Sharma, Durand & Gur-Arie (1981) were used. The data was analyzed using multiple regression analysis (MRA). Several steps were involved. The data was regressed in three blocks. The first blocks included only the predictors, the second block was on the moderator variable and the third block included the interaction between the moderator and each of the predictors. Table 4.0 portrays the MRA on absorptive capacity dimensions and implementation stage using quality process as the moderator. The F value under step 1, step 2 and step 3 in Table 4.0 indicates that the quality practice has no moderating

effect on absorptive capacity dimensions or the implementation stage. Furthermore, all the Beta coefficients were not significant. Hence, further analysis was not required.

Insert Table 4 here

A similar step was done on the integration stage. However, for the integration stage in Table 5.0, different results were discovered. Here, the quality process has a moderating effect with $\beta = 0.423$. The interaction between quality process and knowledge diversification is significant at a 90% confidence level while the interaction between strategic posture and quality process is significant at a 95% confidence level with a β of 16.5 and 30.5 respectively. There is a significant F change of 0.000 (step 1 and step 2) and 0.003 (step 3). The R^2 increased from 33% under step 1 to 49% in step 2 and 61% in step 3. As there was a significant change in R^2 , there was a significant moderator effect on the absorptive capacity-technology transfer relationship.

Insert Table 5 here

Since the interaction between the moderator and predictors was significant, a correlation test was required to ascertain the type of moderators of the quality process in the relationship between the criterion and the predictor. A correlation between quality process and integration stage showed a significant correlation with an r of 0.544 at $p \leq 0.001$ significance level. Hence, the quality process was a quasi-moderator. Further explanation on the moderator variable was achieved through the plotted graph in Figure 1.0. The plotted graph showed a positive correlation between knowledge diversification and the integration stage in firms with high quality processes. However, firms that have low quality processes had a low integration stage that increased slowly with the increase in knowledge diversification. Similarly, firms that have high quality processes also increased their ability to integrate technology with the increase in strategic posture. However, even though the strategic posture was high, the integration stage reduced when the quality process was low. In other words, the relationship between strategic posture and the integration process is negatively correlated in firms with low quality processes.

Insert Figure 1 here

The results of this study were encouraging. Even though the Pearson correlation indicated an association between several dimensions of absorptive capacity and the integration stage only, it showed that quality process was important in improving the transfer stage. Through the graphs, high quality process was beneficial in the integration stage given high knowledge diversification and high strategic posture. This means that investment in the quality process will help in the integration of technology. It supports the existence of firm's knowledge diversification and their strategic posture. Hence, firm's investment in quality process should be encouraged as it promotes the technology transfer process.

The end result of transferred technology is important as it will have a positive effect on the firm and the country. There are implications that many implementations of technology decisions were made by the parent company as the majority of the respondents were foreign-controlled firms. In previous studies (Hobday, 1996; Mohd Nazari, 1999), local competencies were regarded as vital but there was evidence that managerial decision-making was somewhat restricted. Thus it supports study by Sinani & Meyer (2004) who concluded that foreign presence affects spill-over. This might explain the lack of relationship between absorptive capacity and the implementation stage. Even though no moderator effect was found during the implementation stage, the quality practice became a quasi moderator during the integration stage. This suggests that firms should continue to invest in quality practices in order to enhance the technology transfer process.

6. Conclusion

Findings of this study contribute to the management discipline in two areas. First, it indicates that transformative capacity is part of absorptive capacity dimension as discovered under factor analysis. Second, it integrates the role of absorptive capacity and the moderator effect of quality process to technology transfer. The managers should build-up the absorptive capacity aspects such as knowledge diversification, strategic posture and transformative capacity. By doing so, the firms could increase its absorption capacity on the transferred technology. This will ultimately increase the indigenous capabilities which lead to more innovation and spillover.

The findings present new empirical results that support the building of absorptive capacity and quality process in firms. Hence, firms need to pay attention on absorptive capacity from the initial stage of technology transfer which is during the implementation stage. This stage will help the firms to benefit from the transferred technology as it charts the journey forward. Ignoring absorptive capacity at this level would impede further success in recipients firms to become independent from the providers. As the goal of technology transfer is to obtain the technology that will eventually enhance its development, firms with high absorptive capacity from the early stage of technology transfer would lead to better capabilities. Simultaneously, when firms invest in quality process, it benefits more from the transferred technology. Thus there is more reason for firms to invest in quality process.

Since this study focused on E&E firms with a limited sample size, further studies could be done on all manufacturing

firms with regard to the quality practices effect on technology transfer performance. Perhaps a comparison with those that practice quality and those who do not could also be carried out. This will produce more insights into achieving better transferred technology.

References

- Abibullah Haji Samsudin, Morshidi Sirat, & Kamarulazizi Ibrahim. (1994). *Pemindahan teknologi dalam industri elektronik di Malaysia*. Kuala Lumpur: Dewan Bahasa Pustaka.
- Adams, G. L., & Lamont, B. T. (2003). Knowledge management systems and developing sustainable competitive advantage. *Journal of Knowledge Management*, 7(2), 142-154.
- Bennett, D., & Hongyu, Z. (2004). International technology transfer: perceptions and reality of quality and reliability. *Journal of Manufacturing Technology Management*, 15(5), 410-415.
- Correia, E., Lisboa, J., & Yasin, M. (2003). The effectiveness of quality efforts in the Portuguese business culture: An empirical investigation. *Cross cultural management*, 10(2), 24-36.
- Elsy, B., & Fujiwara, A. (2000). Kaizen and technology transfer instructors as work-based learning facilitators in overseas transplants: A case study. *Journal of Workplace Learning*, 12(8), 333-341.
- Ganesan, S., & Kelsey, J. (2006). Technology transfer: international collaboration in Sri Lanka. *Construction Management and Economics*, 24, 743-753.
- Garud, R., & Nayyar, P. R. (1994). Transformative capacity: Continual structuring by inter-temporal technology transfer. *Strategic Management Journal*, 15, 365-385.
- Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate data analysis* (5th ed.). New Jersey: Prentice-Hall International Inc.
- Heinbuch, S. E. (1995). A case of successful technology transfer to health care. *Journal of Management in Medicine*, 9(2), 48-56.
- Hobday, M. (1996). Innovation in South-East Asia: lessons for Europe? *Management Decision*, 34(9), 71-81.
- Ivarsson, I., & Alvstam, C. G. (2005). Technology transfer from TNCs to local suppliers in developing countries: A study of AB Volvo's truck and bus plants in Brazil, China, India and Mexico. *World Development*, 33(8), 1325-1344.
- Jae-On Kim, & Mueller, C. W. (1978). *Factor Analysis-Statistical Methods and Practical Issues* (Vol. 07-014). London: SAGE Publications Ltd.
- Jegathesan, J., Gunasekaran, A., & Muthaly, S. (1997). Technology development and transfer: Experiences from Malaysia. *International Journal of Technology Management*, 13(2), 196-214.
- Kneller, R. (2002). Frontier technology, absorptive capacity and distance: The University of Nottingham.
- Lai, M.-C., & Yap, S.-F. (2004). Technology development in Malaysia and the Newly Industrializing Economies: A Comparative analysis. *Asia-Pacific Development Journal*, 11(2), 53-78.
- Lai, Y. W., & Narayanan, S. (1997). The quest for technological competence via MNCs: A Malaysian case study. *Asian Economic Journal*, 11(4), 407-422.
- Lall, S. (2002). *FDI and development. Research issues in the emerging context*. In B. Bora (Ed.), Foreign Direct Investment. Research Issues (pp. 325-345). London: Routledge.
- Lee, H. H., & Tan, H. B. (2006). Technology Transfer, FDI and Economic Growth in the ASEAN Region. *Journal of the Asia Pacific Economy*, 11(4), 394-410.
- Lenox, M., & King, A. (2004). Prospects for developing absorptive capacity through internal information provision. *Strategic Management Journal*, 25, 331-345.
- MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods*, 1(2), 130-149.
- MacCallum, R. C., Widaman, K. F., Preacher, K. J., & Hong, S. (2001). Sample size in factor analysis: The role of model error. *Multivariate Behavioral Research*, 36(4), 611-637.
- Madanmohan, T. R., Kumar, U., & Kumar, V. (2004). Import-led technological capability: A comparative analysis of Indian and Indonesian manufacturing firms. *Technovation*, 24, 979-993.
- Mohd Nazari, I. (1999). *Foreign firms and national technological upgrading: The Electronics industry in Malaysia*. In K. S. Jomo, G. Felker & R. Rasiah (Eds.), Industrial Technology Development in Malaysia (pp. 21-37). London and New York: Routledge.
- Mowery, D. C., Oxley, J. E., & Silverman, B. S. (1996). Strategic alliances and inter-firm knowledge transfer.

Strategic Management Journal, 17(Winter Special Issue), 77-91.

Narayanan, S., & Lai, Y. W. (1993). Human resource constraints on technology transfer: An empirical analysis of the electronics and electrical sector in Penang, Malaysia. *The Singapore Economic Review*, 38(2), 155-165.

Narayanan, S., & Rasiah, R. (1992). Malaysian Electronics: The changing prospects for employment and restructuring. *Development and Change*, 23(4), 75-99.

Nieto, M., & Quevedo, P. (2005). Absorptive capacity, technological opportunity, knowledge spillovers and innovative effort. *Technovation*, 25, 1141-1157.

Norlela Ariffin, & Figueiredo, P. N. (2004). Internalization of innovative capabilities: Counter evidence from the electronics industry in Malaysia and Brazil. *Oxford Development Studies*, 32(4), 559-583.

Powell, T. C. (1995). Total Quality Management as competitive advantage: A review and empirical study. *Strategic Management Journal*, 16(1), 15-37.

Quazi, H. A., & Bartels, F. L. (1998). Application of TQM principles in the international technology transfer process of industrial production plants. *British Journal of Management*, 9, 289-300.

Reisman, A. (2005). Transfer of technologies: A cross taxonomy. *The International Journal of Management Science*, 33, 189-202.

Sharma, S., Durand, R. M., & Gur-Arie, O. (1981). Identification and analysis of moderator variables. *Journal of Marketing Research*, 18(3), 291-300.

Sinani, E., & Meyer, K. E. (2004). Spillover of technology transfer from FDI: The case of Estonia. *Journal of Comparative Economics*, 32(3), 445-466.

Story, J., & Loroz, P. S. (2005). Technological congruence and perceived quality of brand extensions. *Journal of Product and Brand Management*, 14(7), 438-447.

Suhaimi Mhd Sarif, & Yusof Ismail (2006). The search for indigenous technology within Malaysian economic policies. *Journal of Technology Management and Entrepreneurship*, 5(2), 71-87.

Szulanski, G. (1996). Exploring internal stickiness: Impediments to the transfer of best practice within the firm. *Strategic Management Journal*, 17(Winter Special Issue), 27-43.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using Multivariate Statistics* (5 ed.). Boston Pearson.

Zahra, S. A., & George, G. (2000). Absorptive capacity: A review and re-conceptualization. Paper presented at the Academy of Management Proceedings, 1-6.

Zahra, S. A., & George, G. (2002). Absorptive capacity: A review, re-conceptualization and extension. *Academy of Management Review*, 27(2), 185-203.

Zaidah, M., Md. Zabid, A. R., & Murali, S. (2007). Strategic roles of foreign multinational subsidiaries in Malaysia. *International Journal Management and Decision Making*, 8(2/3/4), 268-289.

Zainal, A. S. (2004, 3-7 April). Technology transfer and the roles of firm-host government coordination: An empirical analysis based on Japanese-affiliated manufacturing firms in Malaysia. Paper presented at the IAMOT 2004, Washington D.C.

Zhao, L., & Reisman, A. (1992). Toward meta research on technology transfer. *IEEE Transactions on Engineering Management*, 39(1), 13-21.

Table 1. The dimensions discovered before and after factor analysis

Before factor analysis	After factor analysis
Absorptive capacity Ability to identify external knowledge Ability to assimilate Knowledge diversification Firms strategic posture Transformative capacity	Absorptive capacity Knowledge diversification Firms strategic posture Transformative capacity
Technology transfer performance Initiation stage Implementation stage Ramp-up stage Integration stage	Technology transfer performance Implementation stage Integration stage
Quality Practices Quality training Process Management	Quality Practices Quality process

Table 2. Demographic data on the respondents

Variable	Frequency (n=73)	Percent (Total 100%)
Gender:		
Male	62	85
Female	11	17
Position held:		
Director	2	3
Senior Manager	15	21
Manager	38	52
Assistant Manager	8	11
Executives/Engineers	10	14
Number of employees:		
100 or less	4	5.5
101 -500	32	43.8
501-1000	15	20.5
1001-5000	19	26
5001 and above	2	2.7
Types of ownership:		
Fully local	6	8.2
Majority foreign	10	13.7
Majority local	6	8.2
Fully foreign	51	69.9

Table 3. The mean and standard deviation of major variables

Construct	Mean Standard Deviation
Absorptive Capacity	4.53
Knowledge diversification	0.54
Strategic posture	4.28
Transformative capacity	0.80
	5.54
	0.51
	3.78
	0.95
Technology transfer stage	4.53
Implementation stage	0.63
Integration stage	4.36
	0.97
	4.70
	0.70
Quality practice	4.82
	0.75

Table 4. The moderating effect of quality process on the relationship between absorptive capacity dimensions and the implementation stage

Variable	Standardized Beta		
	Step 1 Without interaction	Step 2	Step 3 With interaction
Knowledge Diversification(KD)	-0.61	-0.057	0.023
Strategic Posture (SP)	-0.347	-0.356**	-0.370**
Transformative Capacity (TC)	0.047	0.004	0.051
Quality Process (Qp)		0.167	0.041
KD x Qp			-0.310
SP x Qp			0.180
TC x Qp			-0.027
R ²	0.150	0.176	0.241
Adjusted R ²	0.058	0.069	0.093
R ² Change	2.513	1.661	1.473
Significant F Change	0.068	0.203	0.233

*** - Significant at 0.01

** - Significant at 0.05

Table 5. The moderating effect of quality process on the relationship between absorptive capacity dimensions and integration stage

Variable	Standardized Beta		
	Step 1 Without interaction	Step 2	Step 3 With interaction
Knowledge Diversification(KD)	0.524***	0.416	0.401***
Strategic Posture (SP)	0.116	0.103	0.102
Transformative Capacity (TC)	0.045	0.013	-0.115
Quality Process (Qp)		0.423***	0.225
KD x Qp			0.165*
SP x Qp			0.305**
TC x Qp			0.166
R ²	0.326	0.488	0.612
Adjusted R ²	0.250	0.419	0.532
R ² Change	8.183	16.406	5.202
Significant F Change	0.000	0.000	0.003

*** - Significant at 0.01

** - Significant at 0.05

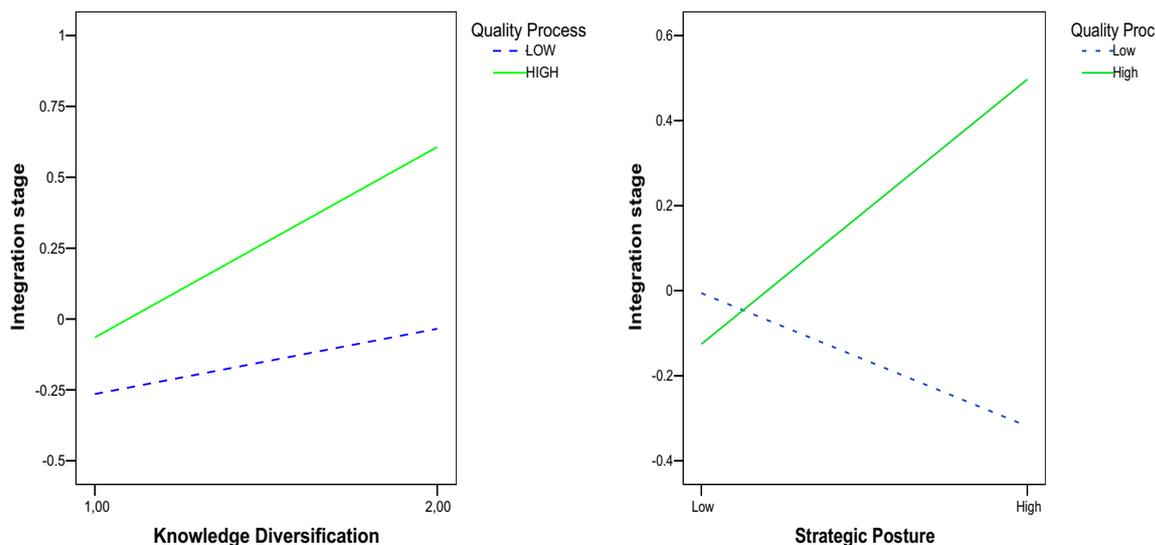


Figure 1. The relationship between (a) knowledge diversification and integration stage and (b) strategic posture and the integration stage with quality process as the moderator



The Agricultural Co-operatives in China

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Abstract

Along with China's reascent way, there are some obstacles blocking the way to achieve the development goal, especially the problems in rural areas. From the reality of our country, the experiences of other countries, and the plan for our whole nation, we can come to the conclusion that the agricultural co-operatives is the key to solve the problems and realize our goal.

Keywords: Institutional economics, Development, The agriculture co-operatives

1. The extreme need of the Agricultural Co-operative system

1.1 China's remarkable development and the role of agriculture

The past few years have witnessed a remarkable development in our country. During the 20-odd almost thirty years since China's reform and opening to the outside world, income level of the Chinese people has been ever increasing and our personal assets have been continually growing. Houses, cars, computers, stock and travelling abroad have become the main contents of the people's investments or consumption in the daily life. In 2003, China's gross domestic product (GDP) of the year topped the 10 trillion Yuan level to reach 11,689.8 billion Yuan, up by 7% over the previous year at comparable prices. China became world's third largest economy in 2007. What is more, by the year 2020, the U.S. National Intelligence Council predicts, China will be an economic powerhouse, vying with the United States for global supremacy.

Learning from the history and reality, we can find that agriculture is the very base of a nation; agriculture feeds its people, and agriculture counts most when we talk about the stability of a country. By comparing Indices of Gross Domestic Product in China Statistical Yearbook since new China, a rule stands out showing that the development of agriculture has something to do with the economic fluctuations cycles. That is, agriculture is crucial to the industrial growth, and even the whole economy (Lin and Zhang, 2001, p.50).

1.2 Severe social problems in China

The development of agriculture plays an important role in our bloomy economy. Nevertheless, there are problems blocking the way of its developing which we can never ignore. Quite a few exists in rural area, and we really need to do something to fix them. In this article, we will give a system, the agricultural co-operatives, to tell how this system to solve these problems. Let us think about that, what kind of problems are we facing to build the "well-off" society, especially in rural areas?

Problem No. 1: The income gap is becoming larger and larger. According to a report by the National Development and Reform Commission, China's economic growth has not reached all of its citizens, especially in rural areas. After rapid expansion since 2003, the income gap in China has reached the second most serious "Yellow Light" level in 2005, or alert level, says an article on state media. "Unless effective measures are taken, the gap may drift further to the dangerous 'Red Light' level in the next five years," says the article in Study Times, quoting from a research report of the Ministry of Labor and Social Security.

The widening income gap in China has become a focal issue in China and aroused the concern of foreign researchers, says the article in the Xinhua Newspaper of 2005, which is run by the Party School of the Communist Party of China Central Committee. It says the United Nations Development Program released statistics that show the Gini coefficient, a

statistical measure of inequality in which zero expresses complete equality while one expresses complete inequality, has reached 0.45 in China; 20 percent of China's population at the poverty end accounts for only 4.7 percent of the total income or consumption; 20 percent of China's population at the affluence end accounts for 50 percent of the total income or consumption. The article says the income gap, which has exceeded reasonable limits, exhibits a further widening trend. If it continues this way for a long time, the phenomenon may give rise to various sorts of social instability. "It's worth noting that according to experience in many countries and regions, social contradictions will increase as per capita GDP grows from the 1,000 US dollar level to the 3,000 US dollar level. China is precisely in this period," says the article. "Decision makers should not turn a blind eye to the big income gap". Chinese economist Wu Jinlian said "inequality of opportunity" is the root cause of the income gap, and Zhou Xiaochuan, governor of the People's Bank of China, China's central bank, said efforts at facilitating urbanization and setting up a social security system were keys to narrowing the income gap.

Problem No. 2: Cultivable land is becoming increasingly insufficient. China has the largest population all over the world, and the number is still growing. Though its Area of Territory is 9,600,000 sq.km, its Area of Cultivable Land is 1,300,400 sq.km (China Statistical Yearbook of 2008), which is far from enough. According to statistics, China's average per capita amount of arable land is less than 1.5 acres, equaling to only one-fourth to one-third of the world average. What's worse, in the process of accelerating industrialization, which had been emphasized for a long time, our environment was damaged a lot, and some even could not be restored (Lin and Zhang, 2001, p.51). National Bureau of Statistics of China says that the net decrease of the arable land in the whole country during 1978 to 1998 is 4,419,000 hectares, reduced by 4.5 percent (Hu and Sun, 2003, p.161).

Problem No. 3: The utilization of cultivable land is low on average, to a certain extent, aggravating environmental problems. Farmers are this kind of people who are directly connected with field and depending on field. For various reasons, most of them are not well educated. Not all of them know much about scientific farming, and what they usually do is seeking for more land to farm starvantly, or over-use their fields for personal benefits blindly.

The Cultivable Land only occupies about 13.54 percent of our Total Land Area, and the rest is not fit for farming (China Statistical Yearbook of 2008). If the peasants change the rest into farming lands, no doubt that the environment will be badly damaged. No matter it is over-use their fields, or exploitation of new lands which is not for farming, our mother nature has lost a lot. The total soil erosion area is increasing, and most of the soil is from the cultivable land, though we are trying to control the situation. Grassland degradation problem is brought to us and growing more and more serious. Desertification is coming nearer and nearer by the speed of surpassing 1000 sq.km per year. We make little contribution to prevent ecosystems from damage and retrogression (Hu and Sun, 2003, p.162).

1.3 The good examples

From all the above, we may come up with this question, "Why should our country meet with all these kinds of problems while developing by leaps and bounds, but other developed countries' are not so obvious and severe?" Yes, maybe we can benefit from their experience. Let me take our neighbor----Japan for instance.

Agriculture of Japan used to be of low degree organizing character typically, with 1.47 hectares for per rural family, and 70 percent of farmers were not able to use their fields fully. This sort of organization was doomed to be abandoned in the process of agricultural commercialization. After the World War II, Japan has finished its agricultural modernization while developing to be the second-biggest economic powerhouse. Though many questions still exist, Japan has managed to shift agricultural disaster after war to a total new stage of agriculture's development, which is mechanized, technological, socialized. In this progress, specialized co-operative organizations are critical: it speeds up the march on agricultural developing way, and maintains its economic development bloomy and healthy.

The objective reality makes China and Japan have many things in common: with large population comparatively, their cultivable lands are in gravely shortage; the Chinese organizing degree in rural areas is relatively low with features of "dispersed, weak, small, and poor" (Hong and Yu, 2006, p.187), just like what Japan used to be; the development of both countries are taking off, but the income gap between urban area and rural area is bothering China, which also bothered Japan years ago; even the environmental issue are common in both of them. No doubt that Japan has set a really positive example of adopting the agricultural co-operatives to promote the degree of healthy development. Since the agricultural co-operative system is able to benefit Japanese, we may take the agricultural co-operative system into consideration as a means to settle the social problems and help the economy in our country develop healthily.

So, what is the agricultural co-operative system indeed? The agricultural co-operatives, is a co-operative organization among farmers. It is forming with the development of agricultural economy, and the consequence of farmers' stronger and stronger need for improving status in open market exchange. Farmers in the agricultural co-operatives, a new agricultural industrial organization, establish rules themselves, contribute their own money willingly, serve themselves, and form a democratic working environment. The co-operative economy can date back to over 150 years ago, and the Agricultural Co-operatives is well developed in the main capitalistic countries. We can say that The Agricultural

Co-operatives is a key modality of modern agriculture. It is the modern corporate system of agriculture.

2. The Agricultural Co-operative system in the early years of New China

New China in the early years had set up the Agricultural Co-operative system. Although it failed eventually, we can learn many things from the failure.

2.1 The background

After the War Against Japanese Aggression and the War of Liberation., the People's Republic of China got stuck in impoverishment, underdevelopment, and ignorance. Besides, development of the commodity economy had been delayed for many years. What's more, China was peered and threatened by the imperialist powers while the political situation was not that stable at the same time. The situation then we were in was that both internal and external "troubles" existed. Under these circumstances, we set up the Agricultural Co-operative system following Soviet Union's methods (Xu, 1995, p.26).

The original wish was good, but we did not use it in a proper way, so it failed. During the mid- and late 20th century, guided by radical and erroneous ideas, the agricultural co-operative economy was by degrees starting from the mutual-aid teams and then the producers' elementary co-operatives, then the advanced co-operatives, and finally it was involved in the people's commune movement frantically, whose characteristic was "large in size and collective in nature". In this way, the cooperative economy deviated from its standards and expectations, going astray. The action led to the food and clothing problems in the poor areas, led to slackness for working, and even led to the doubt about socialism. It prevented the proceeding of our society to a certain extent.

2.2 The experience can be learned

Seeking for the reasons why the system failed, we can conclude in one sentence, that is, we did not conform to the laws governing the socio-economic development. Just like mentioned, the years when China had stepped the way of being independent not that long, almost everything needed to be reformed, and something was deeply rooted. The self-sufficient natural economy has come into being for over two thousand years. In these natural and traditional villages, peasants were accustomed to cling to old ideas, old life style and old farming mode. Just that life style made the peasants fatuous, weak, sick and selfish. To transform this kind of reality, the government then took economic measures as well as political strong measures. Accordingly, people then felt that they were chained from limbs to hearts. They did not know what to do, and their passion dimmed. This system was ultimately abandoned (Zhang, 1996, p.23-26).

The following few years, people were scared to recall the years when they were in the co-operative system, and they even did not want to talk about it. The days were just like a nightmare. But, we cannot always think in this way. Though we had tried this way, and it failed, we must summarize the experiences. It mainly because the backward state of our productive forces then was not fit for agricultural co-operatives. And we should always keep it in mind that before we set up a system, we have to follow the order of nature. What is the most important when we say that it is the right time to set up the agricultural co-operatives, is that productive forces now has significantly enhanced, and we have all the conditions to adopt the Agricultural Co-operative System. The fact is that the agricultural co-operatives is gradually well accepted.

3. The current situation of the Agricultural Co-operative system

3.1 The commercial need of Agricultural Co-operative system

The main situation of agricultural product selling is "one bucket of products is carried to market in hand; two buckets of products are carried to market on the shoulder; and more products can be given to the brokers who will come to collect them". Agricultural products enter markets through vendors, state-owned and collectivity-owned enterprises and agricultural market leaders. Vendors often squeeze prices and hurt farmers, especially when the prices are low, farmers' benefits will be greatly damaged. State-owned and collectivity-owned enterprises run at low efficiency and high costs. The buy-sell relationship between market leaders and farmers in fact shows the farmers' dependence on enterprises, which determines the inharmonious and asymmetric interests. There are no legal and regulated organization chain among farmers, enterprises and production base, so there are no interest communities that bear risks and participates interest together. As a result, farmers do not have stable income. In short, peasants can neither protect themselves in the market trade nor associate to compete fairly with other non-peasant economic organizations in the market economy without the organizations representing peasants' interests.

3.2 The benefits and satisfactions

What comforts us is that in the process of agricultural commercialization, more and more peasants are realizing that it is crucial to develop agricultural co-operative system, and establish economic co-operative organization, and in fact, these people do benefit (Hong and Yu, 2006, p.188).

In Xinxing, a county seat of Guangdong Province, there is a famous company named “Wenshi Food Aggregative Corporation”. It used to be a henery run by a local person. Since 1983, the peasants in that place have joined in that company, basing on the co-operative system, that is, the peasants are guided by the company, and the company and peasants should work together like a unit to face economic competitions. In the process of 10 years’ developing, the small henery in former days had changed into a large corporation engaged in many industries, such as agricultural production, scientific study, trading and so on. As shareholders, the peasants really have earned a lot. At present, the company has many filiales in or out form Guangdong Province, and the scale is still expanding. A good future can be expected (Luo, 2005, p.359).

3.3 More and more participants

Farmers, in growing numbers, are involved in the cooperative system, believing this system is capable to bring them benefits confirmedly. In the areas developed relatively early and good such as Shangzhi, Linkou and Mishan of Heilongjiang Province, many associations and organizations are integrating into new, large-scale economic co-operative organizations such as the Agricultural and By-product Selling Association. Generally speaking, in the thousands of peasant associations in Heilongjiang Province, although there are not many well-organized, well-functioned, and effective ones, they are attracting more and more peasants like snowballing, and impact more and more peasants and districts to associate to extend the market. Peasants often say “what to feed, what to grow and who to sell to, are up to the organization.” The organization they are referring to is the peasant economic co-operative organization (Hong and Yu, 2006, p.190).

3.4 The good impact on solving social problems

By studying and analyzing the theories and examples of this system, we can obviously find that this kind of system is solving some problems which were mentioned in the beginning.

The agricultural co-operative system is trying to bridge the income gap. The income gap we talk about is the income gap between urban and rural areas. The developing pace is shooting ahead and income increase accordingly. However, it is the features, “dispersed, weak, small, and poor” that stop farmers from being rich in such an unparalleled developing environment. “Dispersed” means that the majority is single farmer production, and decentralized production and management. “Weak” means that there is lack of economic cooperative organization and service agencies; therefore, farmer’s anti-risk ability is weak. “Small” means that single farmer’s business is small in scale, production and sale volume. “Poor” means that peasants are deprived in economic strength, personal quality, and education and information degree (Hong and Yu, 2006, p.187). The adoption of the agricultural co-operatives can change these features. Once an economic cooperative organization is set up, the farmers will work together and face the competition from the outside world. To enhance their ability to reply to the competition, the farmers are needed to attend school. Accordingly, because they are united to an organization which is large and strong, they are not dispersed, weak, and small any more; because they are re-educated, they are not poor any more. So, if the features which block their way to be rich have been removed, their step towards reluctant future will be much quicker. Therefore, the income gap is being bridged, and it is possible to realize the dreams of facilitating urbanization and setting up a social security system, and the “equality of opportunity” can be seen.

Problem No. 2, “cultivable land is becoming increasingly insufficient” and problem No. 3, “the utilization of cultivable land is low on average, to a certain extent, aggravating environmental problems”, can be combine to one which concerns about increasing the efficiency and the effectiveness of producing. First of all, peasant organizations’ principle of recognizing and respecting peasants’ rights and wishes, motivate peasants’ enthusiasm to work harder for themselves and for the organization. Secondly, agricultural co-operative organizations are able to adjust, organize and allocate technologies, information funds and lands, minimize production, management and circulation cost, and maximize economic effectiveness and peasant income (Hong and Yu, 2006, p.190). They will take the cost they will pay about entironmental demolishment into consideration. In this way, the lands are not that insufficient, and then the environmental problems will not be so severe. Thanks to the co-operative system, these problems can be dealt with.

4. Actions government should take

Quite a few people have seen the profit the agricultural co-operative system brought. The prospect of the agricultural co-operatives is brilliant, but we can never slacken our attention. We must keep in mind that organizing peasant is one of the important rural problems. Organizing peasant to product and enter the market is a crucial problem of rural economy. The 16th Party Congress emphasized that we must improve the degree of organization in peasant’s market entry, and reduce the income gap between urban and rural areas. President Hu, on Central Rural Work Conference held in January 2003, stated that one outstanding point of deepening rural reform is to develop agricultural product industry association and professional co-operative organization, to establish and improve the agricultural socialization service system, and to increase the extent to which peasants enter the market. This means that increasing the organizing degree is a key to promote agricultural industrialization and deepening rural economic mechanism reform (Hong and Yu, 2006,

p.187). Then, what should our government do?

First of all, promote, deepen and broaden the development of market economy in our country. It is the requirement of the agriculture's developing. Only in the market economy, can the farmers who are in this system make decision independently, and be motivated.

Secondly, increase the communication between the peasants and the government. Under the current market economy, because the macro management of rural economic organizations is gradually weakened, there is a shortage of peasant-government communication, and there are difficulties for peasants to get economic and market information diffused by the government. Then, it is a necessary for government to get closer to the peasants, to tell what they want know, and offer what they need (Hong and Yu, 2006, p.187).

Thirdly, constitute laws fitting for the operation of the co-operative system. The progress of this system calls for a law to protect the members' profit in the organization. If so, more and more people will be a member of it.

Fourthly, foster more people who have a good knowledge of cooperative economy, including the officers. We should pay more attention to the leaders of cooperative organizations. It is them that matters the prospect of the agricultural co-operatives.

These are the relative things about the agricultural co-operatives in our country. I believe this system will bring a lot benefit to our country, if we use it in a proper way, in a practicing but learning way. Let it expand through all the China where it fits, and let us pray for it, for the brilliant future.

References

- Feng, Hong, & Yu, Jialin. (2006). Consideration on the Organization of Peasant Market Entry. *Chinese Journal of Northeast Agricultural University*, 3, 187-191.
- Hu, Hanhui, and Ning, Sun. (2003). *Industry Analysis on Sustainable Development*. Nanjing: Southeast University Press.
- Income gap in China reaches alert level. (2005). [Online] Available: http://www.chinadaily.com.cn/english/doc/2005-09/20/content_479472.htm (16 Aug. 2008).
- Income gap in China widens in first quarte. (2005). [Online] Available: http://www.chinadaily.com.cn/english/doc/2005-06/19/content_452636.htm (22 Jul. 2008).
- Li, Yongtao, and Li, Dongming. (2005). The experience learned from Japanese Agricultural Co-operatives. [Online] Available: http://www.shac.gov.cn/hwzc/hygl/200508/t20050803_133581.htm (11 Nov. 2007).
- Lin, Shanlang, and Zhang, Guo. (2001). *China Development Report*. Beijing: Chinese Academy of Social Sciences Press.
- Luo, Biliang. (2005). *New Institutional Economics*. Taiyuan, Shanxi: the Economics Press.
- Supersized! China's economy booms. (2005). [Online] Available: http://findarticles.com/p/articles/mi_m0EPF/is_18_104/ai_n9532753 (16 Aug. 2008).
- The Theory of the Agricultural Co-operatives. (2006). [Online] Available: <http://www.studa.net/Profession/060207/11560282.html>. (21 Jan. 2008)
- Xu, Jingyong.(1995). An Analysis of Lessons from China's Agricultural Co-operatives Movement. *Jiangnan Forum*, 3, 26-30.
- Zhang, Letian. (1996). The research of People's Commune System. *Journal of East China University of Science and Technology*, 12, 23-30.



Application Research of CMM in Real Estate Enterprise Management

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Abstract

This paper analyzes the application feasibility of CMM(Capability Maturity Model for Software) in real estate business management, and builds the CMM of real estate enterprises, It includes five levels, which describes respectively the business management ability levels for real estate enterprises of different levels of maturity. Through the application of the model, it indicates that CMM can help continue upgrading the management capacity of real estate enterprises.

Keywords: CMM, Real Estate Enterprises, Management capacity, Continuous upgrading

In recent years, the Chinese real estate industry has seen a huge increase in price and a rapid growth in total quantity, However, there exists a problem of low management level, poor project operational capacity and lack of core competitiveness in the developmental mode of the Chinese real estate enterprises(Chen, Linjie, 2007, pp. 75-77). Although there are quite a few studies on how to improve management skills in the real estate enterprises, the research about continuing to enhance the capacity of the real estate business management is relatively rare and lack of interoperability. The paper attempts to use CMM (Capability Maturity Model) to study how the real estate enterprises can continue enhancing the management capacity.

1. The necessity for real estate enterprises to enhance management capacity

The level of corporate governance of the real estate business depends on management capacity, which includes advanced applications of management thought, increasing quality of management, and standardized management system applied and the resulting establishment of the various optimal distribution of resources. The necessity for real estate business to enhance management capacity lies in that it helps to realize the best allocation of resources in the real estate business, improve market competitiveness and achieve large-scale, intensive and scientific development. A real estate enterprise is in fact a "system integrator" or an organizer whose task is to integrate the elements such as capital, land, design, engineering, environment and other resources into product and to realize market value to maximum extend by means of demolition, planning, design, construction, marketing planning, advertising, marketing and other services. The core content of the work of real estate business management is to allocate rationally these resources and factors, mobilize the creativity of the staff in these enterprises and realize the maximization of the utility of enterprise resources. Many enterprises are managed extensively and in low level. The crux of the problem can be analyzed from a point of view of management, such as lack of internal coordination mechanisms, deficiency of a unified and effective cooperation mechanism, and estrangement between departments which can easily cause a conflict of interests; Another example is that inadequate attention is given to intangible cost factors such as time, trust and willingness to cooperate and a lot of manpower, material and financial resources will have to be used when problems arise, the hazards of which has an continuously enlarged "bullwhip effect". at the entire value chain (Guo, Jindan & Wang Shan, 2008, pp. 103-106)For a single real estate project, to enhance the real estate business management capacity will help ensure the project quality, timeliness, as well as the effectiveness of the final product; For the synthesis development of a real estate enterprise, to do so can necessarily lead to the construction of competitive advantages such as cost, product quality, brand as well as the advantages of marketing services, and make real estate enterprises develop more classic products and create larger revenue, which allows the businesses to integrate existing resources better, optimize the development environment, and continue to improve their comprehensive competitiveness.

2. The idea of CMM applies to the real estate business management skills to enhance

2.1 Capability Maturity Model and the main purpose

CMM (Capability Maturity Model for Software, CMM) is designed in 1986 from Carnegie Mellon University's Software Engineering Institute. CMM provides a framework of step-by-step process of the evolution of the ability, the ladder is divided into five bands evolving level: the initial level, repeatable level, defined level, managed level and Optimize level. Each level provides a level of software process improvement, software implementation of each process

depends on the level of some of the key process of the key domains of practice to achieve the Software Capability Maturity upgrading (Yang, Yiping, 2001, pp. 18-51). CMM's core is the idea of a continuous improving process, pointing out how a software organization to form a mature, there is the law of the software must process through the evolution of the way to improve, for the organization of software process improvement in a step-by-step and the steady development of the model. CMM can process assessment, capacity assessment, process improvement, and now is widely used in the software industry at home and abroad, many scholars tried to invoke this model to other areas, such as enterprise project management, enterprise marketing, enterprise knowledge management and University research management some of which have made some good results.

2.2 CMM applies to management of real estate feasibility analysis

Application of CMM key activity in real estate business management processes and software has a similar process. Real estate business management processes and software process are the surface activity of the two very different, but the nature of existence on the two shares many common features, reflected in: (1) Real estate business management activities of "process" characteristics. Real estate management activity is a process consisting of a variety of activities, including project SWOT analysis, environmental study area, the regional market positioning, market positioning project, the project early, refining the concept of project development, brand image and extend the project design VIS, building style and layout planning, unit design, construction such as construction, as well as more than 20 marketing aspects, which can be seen as a general process; At the same time, which in turn contains a number of separate "mini course", such as the early stage of the project also includes auction land, land acquisition, demolition and other activities. (2) The uniqueness of real estate activity process. The process of real estate development activity is highly intellectual activity, real estate developers are in fact "systems integrator", whose housing product is a product of intellectual activity. This software process is quite similar to the process of real estate development and even can be seen as a process of special software. (3) The object of the real estate business management - real estate development projects in a time of uncertainty, investment in high-risk and cost of non-controllable. Although the real estate business management at the development project is usually given the time constraints, but in actual operation, the developer often delays to submit products. And real estate development project cycle length, by the economic situation, market conditions, factors such as monetary policy impact, the project has a high-risk investment, cost is also relatively difficult to control. These are simultaneously faced by software process, it is these common features that make the real estate business management capability maturity model as a possible set up. Adapting CMM in the real estate business management, and the use of "continuous improvement" can be used to increase business management skills gradually.

3. Real estate business management construction and connotation of the CMM

3.1 Construction of the real estate business management CMM

The subject of real estate companies in building management capability maturity model, have made reference to the Capability Maturity Model, according to the real estate business management process itself, as well as the characteristics of China's real estate enterprise management mode of operation, builds business management Capability Maturity Model of real estate companies. From the level, the model is divided into the initial management class, the experience management class, system management class, fine management and innovation management class, each with different levels of management differences and maturity characteristics, as shown in figure(1).

Insert Figure 1 here

3.2 Connotation of the real estate business management CMM

Figure (1) we can see that the real estate business management CMM connotation in four aspects: First, the principle of "continual improvement", advocated by the real estate business management skills of "continuing to upgrade," this is a gradual adjustment in the management process rather than replaced. Second, coarse-to-fine continuous upgrading of management capacity is respected, and gradually realizes the standardization, the management of the process of refinement. From the original extensive management to institutionalized, standardized, to achieve quantified and standardized management, upgrade management capabilities are the symptoms. Third, focus on visualization of the extent of the management process and continuous improvement. From the initial "black-box method," the management of the entire process of the final visualization, visualization capabilities can continuously improve. Fourth, innovation is the highest goal. The model of the first few levels are continuing the process of standardization and institutionalization, but the most senior management to promote continuous innovation, the endless pursuit of innovation, this is the real estate business management capabilities of the highest goal.

4. Real estate business management applications CMM

Prior to the application of this model, the real estate business thought leadership must be unified, application-level in accordance with each set of key practice of the specific comparison, evaluation and improvement, see table (1).

Insert Table 1 here

4.1 The initial class

At this level, the real estate business management processes are chaotic. In Real estate projects throughout the design, implementation, control and the various stages of decision-making tend to rely on the experiences of one or some of the personal. Although in certain projects or certain aspects of the project and primary sporadic use of project management, but plans are often inadequate implementation of the project to carry out random and unpredictable, the risk of projects is relatively large, business administration department only after the project was completed in order to assess whether the project successfully developed. At the initial level because of low management capacity, management will be more mistakes, but not to a major critical errors in the decision-making, project selection and positioning to the right, the project investment to science.

4.2 Experience management class

The real estate companies achieving this level have begun to take the initiative to the experience of successful projects in accordance with norms of various types of development projects, and in accordance with the experience of the successful implementation of norm-making process begin. This can effectively control a single project risk, improve the efficiency of the development, and expand the role of successful experience. But in the real estate business management there is not a unified management solution repeatable. At this time the key is to refine the successful experiences, especially the concept of successful project development, the promotion of the project group. Philosophy is the soul of real estate development, the core is constant development and customer value creation, providing the potential demand. Clearly want to face the market, carefully select projects, to do planning and design, architectural design, environmental landscape design integration, the use of high-tech products to develop real estate.

4.3 System management class

Implementation of development projects of different types of unified management. Explore different types of development projects and the definition of common and institutionalized. At the same time, formulate management model of different projects by different types of projects for their own characteristics. Formulate and implement a staff training program to ensure that managers are able to do the knowledge and skills requirements of jobs. At specific projects, may be to institutionalize the process of tailoring the standard. The cost of various projects, such as the cycle is under control and can track the quality of projects. At this time, the real estate business management has been able to achieve integrated management of development projects in different types of levels, and gradually the standardization of management processes. At this time the key is the management system, a mechanism should be flexible, the structure, mechanism, management system will affect the results, management capabilities are important guarantee. Therefore, it is necessary to improve the internal governance structure, remodeling business management system, set up to adapt to the real estate business enterprise development system. In the management model on knowledge management model to be used with the platform, and constantly improve the real estate project management process, improve the operational efficiency of the real estate business.

4.4 Fine management class

At this level, the different types of project management processes are integrated to quantify, and get to be understood and controlled. This means that the aim to quantify the process, many process enough data into the process database. Can realize the real estate business management process analysis and development of new processes and results, risks and the quality of the product must have the reliability of prediction and control. At this time the key is to optimize the flow of real estate business, it will be reengineered from the edge of the support of the core ability of the strategy finally starting to support and business-to-business value chain with pre-work (the investment decision-making and get to land), product research and development (real estate planning and design), construction projects (building construction), marketing (the promotion of real estate sales) and property services. ECRS analysis can be used from the Eliminate, Combine, Rearrange, Simplify four areas to maximize the value-added implementation proceeds. The refinement of the marketing services and refinement of cost management should be focused. Cost management to carry out a full range of analysis and research, know the cost of the action took place to seek to reduce costs due to a new breakthrough, such as with the scientific and technological progress, the proportion of building and installation costs downward trend, but housing-related planning, design, service such as the rising cost. It is necessary to act according to circumstances, the concept of innovation full cost management, cost control put into conscious acts of each person with management to create cost advantages(Chen, Linjie, 2008, pp. 36-39).

4.5 Innovation Management class

Model at this level is the most advanced, management innovation has become the most important characteristics of the process. How to optimize the management, prevention of possible defects, and explore the process of improving and promoting the success of management innovation are the most important activities. Layer at this level is endless. The real estate business management near this level of capability maturity level has been able to achieve all kinds of near-optimal allocation of resources, to ensure that the project greatly the quality and timeliness of the finish, as well as

the effectiveness of the final product. At this time the key factors of production are to be carried out of the new combination, and continuously in real estate development activity in the introduction of new theories, new ideas, new processes, new methods, the new system, access to resources, the effect of the use of new and effective management of implementation the purpose of the resources available to increase the potential for wealth creation. Real estate business productivity used matrix forms of organization are the organizational structure, the productivity of new real estate business organizational forms are the use of modern information technology to set up a network-based forms of organization, can expand the real estate business and the division of responsibilities between external collaboration, use of social resources on the rapid development of the existing (Chen, Linjie, 2007, pp. 1-4).

4.6 Model test results

At the practical application of process management capabilities to enhance the process of continuous improvement is a continuous process, can not be achieved overnight, one-step, this is a long process. Moreover, different enterprises have different circumstances and different key factors, must be continuously enriched with experience, the key to the process of setting appropriate domain, the key aim of practice and maturity, so that the efficiency of real estate's largest enterprise management. Real estate business management skills to enhance the level of maturity are endless, enterprises should be committed to the continued application of the model and update the Capability Maturity goals and key processes such as domain. According to SEI statistics, software enterprises in the introduction of CMM management, labor productivity growth of 35% and the average error rate of an average reduction of 39%. CMM management and real estate business the way it should be gradual, through the details, and partial improvement from quantitative to qualitative changes, real estate companies using CMM management, the effectiveness of its management should be a gradual move forward.

5. Conclusion

This article applies CMM to improve real estate enterprise management capabilities, builds a real estate business management CMM, the real estate business management skills will be graded situation and point out that the real estate business management skills to enhance the key factors to achieve the real estate business management skills so that The purpose of continuous improvement. However, over the real estate business management skills description CMM is the basic form of this model, it is necessary to improve this model, but also in-depth study in specific real estate business management on improving the basic process at all levels of the model on the domain and the key processes critical practice.

References

- Chen, Linjie. (2007). Problems and Countermeasures in the Development of Chinese Medium and Small Real Estate Enterprises. *Construction Economy*, 5, pp. 75-77.
- Chen, Linjie. (2007). Research on the Capability Evaluation of Independent Innovation of Chinese Real Estate Industry. *Science Technology and Industry*, 12, pp. 1-4.
- Chen, Linjie. (2008). Study on China's Real Estate Industry Development Strategy in the Background of Rising Costs. *Construction Economy*, 7, pp. 36-39.
- Guo, Jindan & Wang, Shan. (2008). Multidimensional Tactics of Value Chain Optimization under the Strategic Perspective-Taking Real Estate Enterprise as the Example. *Construction Economy*, 4, pp. 103-106.
- Yang, Yiping. (2001). *Software Capability Maturity Model CMM method and its application*. Beijing: Posts & Telecom Press, pp. 18-51.

Table 1. Real estate business management maturity characteristics of CMM key practice

Maturity Level	Management differences	Maturity characteristics	Key Process Areas or key practice	Remarks	
	Innovation management class	Optimize the management of change	Improvement of the management process has been institutionalized, achieve continuous improvement	The new combination from factors of production (productivity), the introduction of new theories, new ideas, new processes, new methods, the new system, access to the new results from resources using	Continuous Improvement
	Fine management class	Organizational capacity management	Quantitative management, various types of projects management process have been integrated, quantified, understood and controlled	Optimize business processes in real estate business and focused the fine marketing service and the fine cost management	Depth to Improvement
	System management class	Process Management	Standards, various types of project management process can be defined and understood and followed the institutionalization of	Management system, a mechanism should be flexible and adapt to set up businesses in real estate enterprise development system; the platform for knowledge management to be used to management model, and improve the management of the process of real estate projects	Steady Improvement
	Experience management class	Project Management	There is plan and discipline, project management method has been applied to similar projects	Refining the successful experience of successful projects such as the development of ideas, which is promoted to the project group	Initial Improvement
	The initial class	Chaotic management	Random unplanned job	Bad management, but the project decision-making to be accurate, such as project location, project investment	No Improvement

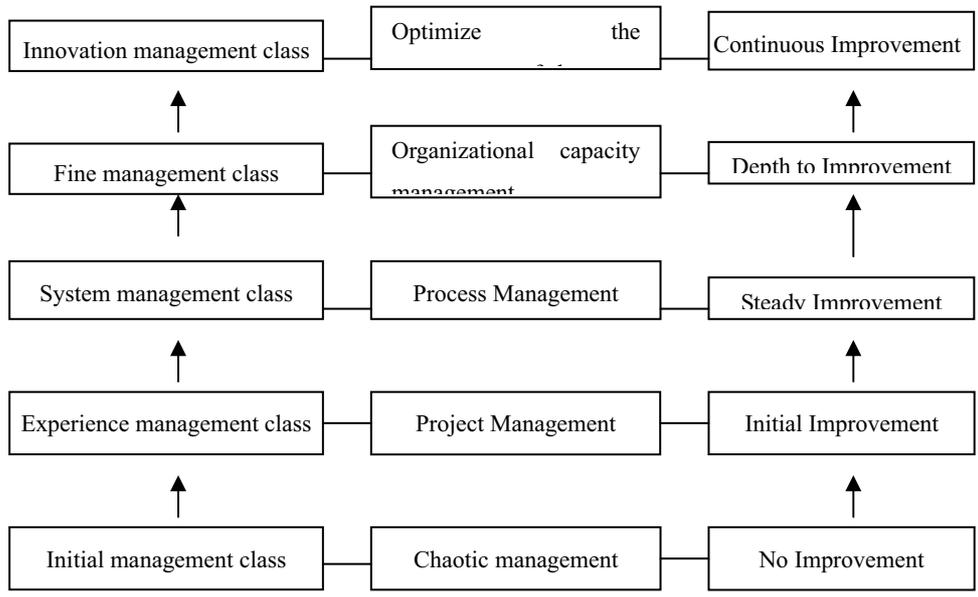


Figure 1. The CMM of real estate Enterprises management capacity



Emotional Intelligence and Organizational Citizenship Behavior as Antecedents of Students' Deviance

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Abstract

This study examines the influence of personal factors, emotional intelligence and organizational citizenship behaviors on deviant behaviors. The data are taken from 263 undergraduate business students from a public university located on the northern region of Peninsular Malaysia. The findings of this study indicated that sportsmanship and emotional intelligence significantly and negatively associated with deviant behaviors. Our results also indicate that male students and those with lower academic achievement had significantly higher level of deviant behaviors. In the last section, we discuss these results and identify limitations and future research agenda.

Keywords: Emotional intelligence, Organizational citizenship behaviors, Deviant behaviors, Student

1. Introduction

Deviant behaviors such as cheating and scholastic dishonesty are commonplace in educational institutions (Becker, Rundall & Ulstad, 2009; Zimny, Robertson & Bartoszek, 2008). This situation is of particular concern given that students' moral actions while in university are considered predecessor to their ethical actions after college (Lawson, 2004). There is a growing need to not only promote students' academic achievement but also to emphasize on improving the students' values, norms, competencies and positive work habits for their meaningful future career. In

business circles, untruthful incidents and behaviors among employees at managerial and technical levels are noticed over the world in recent years (Celik, 2009). Deviant behavior is behavior that is a recognized violation of cultural norms. Employees' deviance results in extensive organizational losses. Harper (1990), states that employees engaged in some of the following behaviors: computer fraud, theft, vandalism, sabotage, absenteeism and embezzlement. Deviant behavior among college students may include substance abuse, social deviance, and school-related deviance. Highly deviant students have been shown to experience a variety of negative consequences in terms of academic performance and relationships. It is generally established fact that people do not take action untruthfully as soon as they turn into managers. Since ethical behaviors are shaped partly in educational institutional (Celik, 2009), study on students' deviant behaviors are worth pursuing to continuously identify ways to restrain the behavior. Increasing moral problems in the business world have driven many educational institutions to look for possible factors that influence moral attitudes. Hence, the aim of this study is to evaluate some potential antecedents of deviant behavior among university students. More specifically, we will look at whether personal factors, emotional intelligence (EI) and organizational citizenship behavior (OCB) are associated with organizational and interpersonal deviance.

This article is organized as follows: Following this introduction is a literature review on deviant behavior. This will be followed by an explanation of the study's research method and sample selection. Finally, the results are presented along with conclusions and possible implications for academic institutions.

2. Literature Review

2.1 EI and deviant behavior

Robinson and Bennett (1995, p. 556) describe deviance in the workplace as 'voluntary behavior that violates significant norms and in so doing threatens the well-being of an organization, its members or both'. Voluntary or chosen behavior would indicate that the employee is not motivated to conform and/or is motivated to act against established organizational norms. Organizational norms are defined by basic moral principles, formal and informal organizational polices and system (Bennett & Robinson 2000). There are two forms of deviance as identified by Bennett and Robinson (2000) that are organizational deviance which is non personal and is aimed at harming the organization and interpersonal deviance which is interpersonal and detrimental to individuals. Behaviors within each of these types of deviance vary from relatively slight acts to more harsh acts.

Of late, EI has attracted a lot of interest in the academic literature (Charbonneau & Nicol, 2002; Ciarrochi, Deane & Anderson, 2002). EI may be defined as 'the set of abilities (verbal and nonverbal) that enable a person to generate, recognize, express, understand, and evaluate their own, and others, emotions in order to guide thinking and action that successfully cope with environmental demands and pressures' (Van Rooy & Viswesvaran, 2004, p. 72). People identify their own emotions accurately when they, for example, know that they are irritated with another person or embarrassed. Those with high level of EI are able to control and avoid themselves from doing such misbehaviors that will harm the organization they work with. Research suggest that people with high levels of EI engage less in deviant behaviors (Petrides, Frederickson & Furnham, 2004) than those with low EI. Similarly, Eisenberg (2000) states that low trait of EI may be a key factor in a variety of deviant behavior. Liau, Liau, Teoh and Liau (2003) found that EI was linked to deviant behaviors among secondary school students. Previous research have also found that higher scores of EI are associated with higher quality interpersonal relationships (Brackett, Warner & Bosco, 2005), academic performance and social competence (Brackett, Rivers, Shiftman, Lerner & Salovey, 2006) and important workplace outcomes such as stress tolerance and peer and/or supervisor ratings of interpersonal facilitation (Lopes, Cote, Grewal, Cadis, Gall & Salovey, 2006). Lower scores are linked with drug use, alcohol consumption and deviant behavior (Brackett, Mayer & Warner, 2004).

Based on the above-mentioned studies and theoretical discussion we can reckon that EI might have an influence on deviant behavior.

2.2 OCB and deviant behavior

The basic mechanisms explaining why the individuals' level of OCB may influence deviant behavior can be drawn from the general cognitive consistency theory. The cognitive consistency theory (Festinger, 1957) proposes that individuals try to sustain harmony between their behaviors, beliefs, and attitudes. There is an inclination for individuals to seek consistency among their cognitions. The term cognition as used by Festinger pertains to any knowledge, opinion, or belief about the environment, about oneself, or about one's behavior.

Why OCB should be related to deviant behavior? To better understand these effects, we must examine the nature of OCB and deviant behavior. Since the practice of citizenship behavior is discretionary, a good organizational citizen can be considered as an all-round giver – the ones who are not only good in accomplishing prescribed duties such as attending classes and submitting assignment but also assist those around them by helping others students, being good sports or exhibiting high levels of civic virtue and conscientiousness. In addition, an active behavioral involvement in a social group (e.g. helping other students and educators, always willing to lend a hand or stand for inconvenience at

university) should also reflect the students' positive attitudes in various aspects and a strong organizational identification. In contrast, students who are not socially integrated will be less attached to the university (Tsui, Egan & O'Reilly, 1992).

On the other hand, deviant behaviors are regarded as undesirable and are potentially harmful to one's colleague, work groups and organizations. Since, OCB reflects voluntary behavior that is beneficial to universities, whereas deviant behavior is considered as resentment toward the university, we would expect that OCB and deviant behavior to be adversely related, consistent with the cognitive consistency theory. The positive attitude and behavior as reflected through a high level of OCB should be aligned consistently and shape other attitudes and behavior, for example, by having lower deviant behaviors. As an individual's OCB decreases, that individual's tendency to engage in deviant behavior increases. The distinct nature of OCB and deviant behaviors suggest that a high level of deviant behaviors are incompatible with a high level of citizenship behavior but is not inconsistent with low level citizenship behavior. Given the relative support for the cognitive consistency theory across a variety of situations and the underlying principle of cognitive consistency that people value harmony among their feelings and behaviors, it is predicted that this theory would provide a support for the OCB and students' deviant behaviors. A limited study has also supported a negative relationship between OCB and deviant behaviors. Bennett and Robinson (2000) found that conscientiousness and courtesy were significantly related to organizational and interpersonal deviance.

Given the above, we propose that students' deviance can be predicted by OCB.

2.3 Personal factors and deviant behavior

Research has also explored the impact of a wide range of individual factors such as gender, age, personality traits and employees' perceptions of unfairness on the occurrence of deviant behavior (Martinko, Gundlach & Douglas 2002). Younger peoples and males tend to be more prone to engage in overt acts of deviance (Harris & Ogbonna 2002) and will overuse display rules by faking and engaging inauthentic behavior (Grandey, Dickter & Sin 2004). Research has confirmed that students' who are more attached to teachers, more devoted to school, and have stronger beliefs in the school's norms will exhibit higher academic achievement and less deviant behavior (Payne, Gottfredson & Gottfredson, 2003). Studies of parenting also found that low family income and maternal hardship impede children's cognitive and social competence. Moreover, parents in poor living environments have difficulty defending their children, increasing the likelihood that children will incline into school give up, early sexual experience, use of drugs and other deviant behavior (Evans, 2004).

Based on the above-mentioned studies and theoretical discussion we can reckon that some of the personal factors such as gender and academic achievement might have an influence on students' deviance.

3. Methodology

3.1 Sample

This research involved a cross-sectional survey design. The subjects were recruited from a public university located on the northern region of Peninsular Malaysia. The sample for this study consisted business students. These voluntary surveys were administered in the classroom after the class ended and completed the survey. Students were assured of confidentiality. Overall, a total of 263 students participated in the survey, although the actual sample size varies depending on the variables involved in the various analyses. Approximately 23 percent of participants were males and 77 percent females. The mean age is approximately 22.3 years.

3.2 Measurement

The independent variable of the present study is OCB. Each of the five constructs: altruism, courtesy, sportsmanship, conscientiousness and civic virtue included items describing specific behaviors. These dimensions have been conceptualised by Organ in 1988 and selected for this study because they have been most frequently examined by researchers (LePine, Erez & Johnson, 2002; Schnake & Dumler, 2003). Overall, there were 20 items adapted from Podsakoff and MacKenzie (as cited in Niehoff & Moorman, 1993). The wording of the items was modified to accommodate the context of the present study. Each dimension of OCB was scored by obtaining the average rating of its component items. The scales have been found to have sufficient levels of reliability and validity (Podsakoff & MacKenzie, 1994). The second independent variable, that is, EI was measured using Self-Report Emotional Intelligence Test by Schutte, Malouff, Hall, Haggerty, Cooper, Golden and Dornheim (1998) comprises of 33 items. Deviant behavior was measured using 14 items adapted from Aquino, Lewis and Bradfield (1999). This measurement comprises of two categories, where item 1 to 6 were measured on interpersonal deviance and item 7 to 14 were measured on organizational deviance. All items were rated on five-point Likert scales. Respondents were also required to report background information such as gender, cumulative grade point average (CGPA), current semester and family income. Bivariate correlation was used to test the relationship between the study variables. Multiple regressions were utilized to test the main effect of each OCB dimensions and EI on students' organizational and interpersonal deviance.

4. Data Analysis and Results

Descriptive statistics such as maximum, minimum, means, standard deviations, and variance were obtained for interval-scaled independent and dependent variables. The results are shown in Table 1. From the result, it may be seen that the mean on organizational deviance and interpersonal deviance were rather low (1.64 and 2.10). The mean on sportsmanship is about average (3.08) whereas the means on courtesy, civic virtue, altruism and conscientiousness and emotional intelligence are perceived as somewhat enriched. The minimum of 1 indicates that there are some who do not engage in deviant behaviors at all and the maximum of more than 4 indicates that some are seriously engage in organizational and interpersonal deviance. The variance for all variables is not high indicating that most respondent are very close to the mean on all variables.

Insert Table 1

The effects of personal characteristics on subjects' deviant behavior were analyzed using t-test analysis. The results are shown in Table 2. For family income and CGPA, both variables are split at the median into lower and higher. For semester, students pursuing first to third semester are categorized as lower semester whereas students at the semester four to six are categorized as higher semester. Results of t-tests found that there is a significant difference between male and female on both organizational and interpersonal deviance. Male students reported significantly higher organizational and interpersonal deviance. In term of CGPA, students' with lower CGPA reported significantly higher interpersonal deviance than students' with higher CGPA. There were no significant differences on both deviant behaviors based on semester and family income.

Insert Table 2

Table 3 shows the means and standard deviations for the 14 items measuring the deviant behaviors. Overall, all the item means are below the mid-point of 3. The highest means were 2.85 (gossiped about my lecturer) and 2.47 (made an obscene comment or gesture at a classmate).

Insert Table 3

The intercorrelations of the variables are shown in Table 4. Internal consistency is stated in parentheses. The Cronbach-alpha range from .68 to .85, which suggested the specified indicators are sufficient for use (Nunnally, 1978). As can be seen from Table 4, the measure of both deviant behaviors significantly correlated with sportsmanship and EI. The negative relationship indicates that high sportsmanship levels and EI were more likely to result in low deviance among students. Civic virtue, courtesy, altruism and conscientiousness were not significantly related to deviant behaviors. The intercorrelations were also inspected for multicollinearity. All correlation coefficients were below .70. Therefore, variable redundancy did not appear to be of concern (Nunnally, 1978).

Insert Table 4

To test whether OCB dimensions and EI influence organizational deviance, a multiple regression analysis was done. The results of regressing the six independent variables against organizational deviance can be seen in Table 5. As can be seen, the set of independent variables accounted for approximately 12% of the variance in students' organizational deviance. However, only EI ($\beta = -.17$, $t = -2.45$, $p < .05$) and sportsmanship ($\beta = -.28$, $t = -4.59$, $p < .01$) were significantly and negatively related to student deviance.

Insert Table 5

To test whether OCB dimensions and EI influence interpersonal deviance, another regression analysis was done. The results of regressing the six independent variables against interpersonal deviance can be seen in Table 6. As can be seen, the set of independent variables accounted for approximately 8% of the variance in students' interpersonal deviance. However, only sportsmanship ($\beta = -.26$, $t = -4.15$, $p < .01$) was significantly and negatively related to students' interpersonal deviance.

Insert Table 6

5. Discussion and Conclusions

The main objective of the present study was to examine the relationship between various facet of OCB and EI on students' deviance. The present study found that sportsmanship significantly and negatively related to both, organizational and interpersonal deviance. The finding of this study is generally consistent with a previous research by Bennett and Robinson (2000). The results show a clear tendency for students' deviance to be elevated when sportsmanship is weak. This is consistent with the study's predictions. Employees' who exhibit low level of sportsmanship are more likely to engage in deviant behaviors. It appears that sportsmanship is the OCB dimension that benefits the general organization (e.g. avoid complaining or willing to face difficulty) rather than specific individuals. The implication is that a student's who exhibits good sportsmanship by not always finding fault with what university is doing not focusing on what is wrong with his/her situation, not neglecting in work coordination, not complaining about

trivial matters or making a “mountain out of molehills” is more likely to have lower tendency to engage in deviant behaviors than those who do not exhibit sportsmanship. A student’s who dislikes complaining, does not indulge in petty grievances or rail against real or imagined slights, reflects that the person is willing to face hardship together with the university, and has high organization attachment or identification. This study contributes to the deviance literature by providing a new evidence of the effect of sportsmanship on deviant behaviors. The present study found no support for the effect of other OCB dimensions on deviant behaviors. It is possible to speculate that since the bivariate analysis showed a weak correlation between these variables and deviant behaviors, this relationship is not strong enough to hold up in the multivariate analysis. Based on the result for this study, it is also proved that there was a significant negative relationship between emotional intelligence and interpersonal deviance. In other words, when emotional intelligence is high, the tendency of deviant behavior to happen is low. This result was in line with the previous finding from Petrides et al., (2004) and Deshpande and Joseph (2005). Respondents with low EI were less likely to perceive such behaviors as gossiping the lecturer and made an obscene comment or gesture at a classmate as unethical. These results suggest that people with low EI relatively have lower moral standards. Additionally, the findings of this study that found male tend to engage in more deviant behaviors is consistent with some previous study (e.g. Harris & Ogbonna, 2002). The finding that students’ with lower CGPA reported higher levels of deviant behavior is interesting. Probably those who do not excel at their study may have higher tendency to engage in some forms of deviance as ways to improve their academic performance. This is also in line with Payne, Gottfredson and Gottfredson (2003) arguments that students’ who are more closed to teachers, more dedicated to school, and have stronger beliefs in the school's norms will demonstrate higher academic achievement and less deviant behavior. What makes the present findings especially appealing is the nature of the variables, which concerned behaviors of ‘real-world’ significance. If deviant behavior can be tackled in advance, we may be able to shaped graduates with improved values and norms. Perhaps the insertion of trait EI measures and sportsmanship in assessment studies and intervention programs aim at undergraduates might lighten deviant behavior. Ethical behaviors are universal values and should be internalized through the educational process. Character building should therefore be supported by guides and norms within appropriate learning environment. Educators, administrators and parents should take the responsibilities. The content of professional disciplines such as business management should be enhanced by courses on religiosity, ethic and philosophy so that university students could deal with the complex future working situations. Helping students to understand their own personal ethical viewpoints and related effects of EI and sportsmanship may better prepare students for future employment. This study intensifies the important role that EI and sportsmanship may have in alleviating deviance among students. Several limitations constrain the interpretation and application of the study’s findings. The aim of this study to explore the deviance among students from one university is also a weakness. Future studies may be benefited from an exploration of a wider range of students at different universities. The reader is cautioned to recognize the limitations of relying on self-reported data. This may carry a bias of general method variance. In this study, limitation about costs prevented the used of larger size of sample. Most of the previous research examining deviant behavior has focused on samples of employees. Future research need to expand this study to samples of students. Another interesting area of future research is the impact of some demographics factors as moderators. Researchers may also conduct longitudinal study to provide strong evidence of the association between current deviant behavior and future workplace deviant of same group of respondents.

References

- Aquino, K., Lewis, U., & Bradfield, M. (1999). Justice constructs, negative affectivity, and employee deviant: A proposed model and empirical test. *Journal of Organizational Behavior*, 20, 1073-1091.
- Becker, D., Rundall, J., & Ulstad, I. (2009). The ethic of care and student cheating. *The Journal of American Academy of Business*, 14, 204-209.
- Bennett, R.J. & Robinson, S.L. (2000). Development of a measure of workplace deviance. *Journal of Applied Psychology*, 85, 349-572.
- Brackett, M. A., Mayer, J. D., & Warner, R. M. (2004). Emotional intelligence and its relation to everyday behavior. *Personality and Individual Differences*, 36, 1387-1402.
- Brackett, M. A., Rivers, S. E., Shiffman, S., Lerner, N., & Salovey, P. (2006). Relating emotional abilities to social functioning: A comparison of self-report and performance measures of emotional intelligence. *Journal of Personality and Social Psychology*, 91, 780-795.
- Brackett, M. A., Warner, R. M., & Bosco, J. S. (2005). Emotional intelligence and relationship quality among couples. *Personal Relationships*, 12, 197-212.
- Celik, C. (2009). Perceptions of university students on academic honesty as related to gender, university type and major in Turkey. *The Journal of American Academy of Business Cambridge*, 14, 271-278.
- Charbonneau, D., & Nicol, A.A.M. (2002). Emotional intelligence and leadership in adolescents. *Personality and*

Individual Differences, 33, 1101-1113.

Chickering, A. W., & Reisser, L. (1993). *Education and identity* (2nd ed.). San Francisco: Jossey-Bass.

Ciarrochi, J.V., Deane, F.P., & Anderson, S. (2002). Emotional intelligence moderates the relationship between stress and mental health. *Personality and Individual Differences*, 32, 197-209.

Deshpande, S., & Joseph, J. (2005). The impact of emotional intelligence on counterproductive behavior in China. *Management Research News*, 28, 75-85.

Eisenberg, N. (2000). Emotion, regulation, and moral development. *Annual Review of Psychology*, 51, 665-697.

Evans, (2004). The Environment of Childhood Poverty. *American Psychologist*, 59, 2, 77-92.

Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford, CA: Stanford University Press.

Giacalone, R.A. & Greenberg, J. (1997). *Antisocial Behavior in Organizations*. Sage, Thousand Oaks.

Grandey, A.A., Dickter, D.N., & Sin, H.P. (2004). The customer is not always right: customer aggression and emotion regulation of service employees. *Journal of Organizational Behavior*, 25, 397-418.

Harper, D. (1990). Spotlight abuse-save profits. *Industrial Distribution*, 79, 47-51.

Harris, L.C., & Ogbonna, E. (2002). Exploring Service Sabotage: The antecedents, types and consequences of front-line, deviant antiservice behaviors. *Journal of Service Research*, 4, 163-183.

Jackson, A., & Davis, P. G. (2000). *Turning points 2000: Educating adolescents in the 21st century*. New York: Teachers College Press.

Lawson, R.A. (2004). Is classroom cheating related to business students' propensity to cheat in the "Real World"? *Journal of Business Ethics*, 49, 189-199.

LePine, J.A., Erez, A., & Johnson, D.E. (2002). The nature and dimensionality of OCB: A critical review and meta-analysis. *Journal of Applied Psychology*, 87, 52-65.

Lopes, P. N., Cote, S., Grewal, D., Cadis, J., Gall, M., & Salovey, P. (2006). Evidence that emotional intelligence is related to job performance and affect and attitudes at work. *Psicothema*, 18, 113-118.

Liau, A. K., Liau, W. L., Teoh, G. B. S., & Liau, M. T. L. (2003). The case for emotional Literacy: The influence of emotional intelligence on problem behaviors in Malaysian secondary school students. *Journal of Moral Education*, 32, 51-66.

Martinko, M., Gundlach, M., & Douglas, S. (2002). Towards an integrative theory of counterproductive behavior. *International Journal of Selection and Assessment*, 10, 36-50.

Niehoff, B.P., & Moorman, R.H. (1993). Justice as a mediator of the relationship between methods of monitoring and organizational citizenship behavior. *Academy of Management Journal*, 36, 527-556.

Nunnally, J.C. (1978). *Psychometric theory*. New York: McGraw-Hill.

Payne, A.A., Gottfredson, D.C., & Gottfredson, G.D. (2003). Schools as communities: the relationships among communal school organization, student bonding, and school disorder. *Criminology*, 41, 749-777.

Petrides, K.V., Frederickson, N., & Furnham, A. (2004). The role of trait emotional intelligence in academic performance and deviant behavior at school. *Personality and Individual Differences*, 36, 277-293.

Podsakoff, P.M., & MacKenzie, S.B. (1994). Organizational citizenship behaviors and sales unit effectiveness. *Journal of Marketing Research*, 31, 351-364.

Robinson, S., & Bennet, R. (1995). A typology of deviant workplace behaviors: A multi-dimensional scaling study. *Academy of Management Journal*, 38, 555-572.

Sackett, P.R. (2002). The structure of counterproductive work behaviors: Dimensionality and relationships with facets of job performance. *International Journal of Selection and Assessment*, 10, 5-11.

Schnake, M.E., & Dumler, M.P. (2003). Levels of measurement and analysis issues in organizational citizenship behavior research. *Journal of Occupational and Organizational Psychology*, 76, 283-301.

Schutte, N.S., Malouff, J.M., Hall, L.E., Haggerty, D.J., Cooper, J.T., Golden, C.J., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences*, 25, 167-177.

Tsui, A.S., Egan, T.D., & O'Reilly, C.A. (1992). Being different: Relational demography and organizational attachment. *Administrative Science Quarterly*, 37, 549-579.

Van Rooy, D.L., & Viswesvaran, C. (2004). Emotional intelligence: A meta-analytic investigation of predictive validity

and nomological net. *Journal of Vocational Behavior*, 65, 71-95.

Zimny, S.T., Robertson, D.U., & Bartoszek, T. (2008). Academic and personal dishonesty in college students. *North American Journal of Psychology*, 10, 291-312.

Table 1. Descriptive Statistics for the Study Variables

Variables	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Organizational deviant	261	1.00	4.75	1.64	.60	.36
Interpersonal deviant	259	1.00	4.50	2.10	.70	.50
Altruism	262	1.00	5.00	3.25	.54	.29
Courtesy	262	1.00	5.00	3.49	.58	.34
Sportsmanship	262	1.00	5.00	3.08	.62	.38
Conscientiousness	262	1.00	5.00	3.23	.69	.48
Civic virtue	262	1.00	5.00	3.30	.67	.45
Emotional intelligence	253	2.91	4.85	3.72	.33	.11

Table 2. Differences in Deviant Behaviors by Personal Factors

Personal characteristics	Mean			
	Organizational deviance	t-value	Interpersonal deviance	t-value
Male	1.85	3.16**	2.31	2.58*
Female	1.58		2.04	
Lower CGPA	1.70	1.46	2.25	2.87**
Higher CGPA	1.59		1.20	
Lower semester	1.70	1.05	2.17	.71
Higher semester	1.61		2.10	
Lower family income	1.68	1.50	2.09	.11
Higher family income	1.57		2.10	

Table 3. Mean and Standard Deviations for Deviance Items

No.	Question	Mean	SD
1	Made an ethic, racial, or religious slur against a classmate.	1.70	1.04
2	Swore at a classmate.	1.94	.98
3	Refused to talk to a classmate.	1.75	.93
4	Gossiped about my lecturer.	2.85	1.23
5	Made an obscene comment or gesture at a classmate.	2.47	1.12
6	Teased a classmate in front of other students.	1.88	1.04
7	Intentionally arrived late to class.	2.19	1.11
8	Called in sick when I was not really ill.	1.69	.88
9	Took undeserved breaks to avoid work during class.	1.72	.91
10	Made unauthorized use of university property.	1.52	.84
11	Left class early without permission.	1.24	.71
12	Lied about the number of hours I worked on assignments.	1.55	.77
13	Worked on a personal matter on the group project instead of doing for my group.	1.64	.79
14	Purposely ignored my lecturer's instruction.	1.56	.83

Table 4. Intercorrelation Between Study Variables

Variables	1	2	3	4	5	6	7	8	9
Altruism	-	(.73)							
Courtesy	.44**	-	(.68)						
Sportsmanship	-.08	-.11	-	(.71)					
Conscientiousness	.17**	.34**	.01	-	(.78)				
Civic virtue	.38**	.42**	-.04	.46**	-	(.77)			
6. Emotional intelligence	.28**	.47**	.03	.20**	.31**	-	(.85)		
Organizational deviance	.10	.01	-.31**	-.08	.02	-.14*	-	(.82)	
Interpersonal deviance	.03	.02	-.28**	-.06	-.06	-.09	.61**	-	(.79)

** p<.01 *p<.05

Cronbach alphas in parentheses

Table 5. Regressions of OCB Dimensions and EI on Organizational Deviance

Variables	β	t	Sig.
Altruism	.10	1.47	.14
Courtesy	.02	.21	.84
Sportsmanship	-.28**	-4.59	.00
Conscientiousness	-.09	-1.36	.18
Civic virtue	.06	.75	.45
Civic virtue	-.17**	-2.45	.02

*p<.05 **p<.01

R² .12

Adjusted R² .10

F value 5.62**

Table 6. Regressions of OCB Dimensions and EI on Interpersonal Deviance

Variables	β	t	Sig.
Altruism	.03	.45	.65
Courtesy	.04	.56	.58
Sportsmanship	-.26**	-4.15	.00
Conscientiousness	-.02	-.26	.79
Civic virtue	-.06	-.83	.41
Civic virtue	-.09	-1.25	.21

*p<.05 **p<.01

R² .08Adjusted R² .06

F value 3.62**



Performance Evaluation of SMEs of Bangladesh

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Abstract

In the context of Bangladesh, the development of Small and Medium Enterprises (SMEs) can be considered as a vital instrument for poverty alleviation and ensure the rapid industrialization. In this paper the authors have tried to identify the problems of SMEs of Bangladesh. The performance of SMEs of Bangladesh especially in terms of employee turnover rate, quality assurance, allocation of funds, marketing activities have been found significantly below the international standard. The sector gets negligible support from government. The rate of development of SME is not up to the expectation. In order to overcome the problems a few suggestions for the development of SMEs are given by the authors.

Keywords: SME, Finance, Employee, Capital

1. An overview of SME

1.1 SME: around the world

According to the European Union (2003) SMEs are defined as enterprises which have at most 250 employees and an annual turnover not exceeding 50 million Euros. Further there is the distinction of small enterprises — they have fewer than 50 staff members and less than 10 million Euros turnover — and micro-enterprises (less than 10 persons and 2 million Euros turnover).

According to the World Bank (2006) medium enterprises are defined as enterprises which have at most 300 employees and an annual turnover not exceeding 15 million US dollars. Further there is the distinction of small enterprises — they have fewer than 50 staff members and up to 3 million US dollars turnover — and micro-enterprises have up to 10 persons and \$100,000 turnover.

In the UK, sections 382 and 465 of the Companies Act 2006 define a SME for the purpose of accounting requirements. According to this a small company is one that has a turnover of not more than £5.6 million, a balance sheet total of not more than £2.8 million and not more than 50 employees. A medium-sized company has a turnover of not more than £22.8 million, a balance sheet total of not more than £11.4 million and not more than 250 employees. It is worth noting that even within the UK this definition is not universally applied.

In the USA, the definition of small business is set by a government department called the Small Business Administration (SBA) Size Standards Office. The SBA uses the term “size standards” to indicate the largest a concern can be in order to still be considered a small business, and therefore able to benefit from small business targeted funding. The concern cannot be dominant in its field, on a national basis. It must also be independently owned and operated. Unlike the UK and the European Union which have simple definitions applied to all industries, the US has chosen to set size standards for each individual NAICS coded industry. This variation is intended to reflect industry differences in a better way. The most common size standards are

500 employees for most manufacturing and mining industries

100 employees for wholesale trade industries

\$6 million of annual receipts for most retail and service industries

\$28.5 million of annual receipts for most general & heavy construction industries

\$12 million of receipts for all special trade contractors

\$0.75 million of receipts for most agricultural industries

Breaking down the SME definition, Industry Canada defines a small business as one that has fewer than 100 employees (if the business is a goods-producing business) or fewer than 50 employees (if the business is a service-based business). A firm that has more employees than these cut-offs but fewer than 500 employees is classified as a medium-sized business. (www.about.com)

In India the Small Scale Industries (SSIs) are industrial undertaking in which the investment in fixed assets in plant and machinery, whether held on ownership terms or on lease or by hire purchase does not exceed Rs. 10 million. The Small Scale Service And Business (Industry related) Enterprises (SSSBs) are industry related service and business enterprises with investment in fixed assets, excluding land and building up to Ps. 1 million. (Ministry of trade and Industry, Government of India)

According to the SME bank of Pakistan, SME means an entity, ideally not a public limited company, which does not employ more than 205 persons (if it is manufacturing concern) and 50 persons (if it is trading/service concern) and also fulfils the following criteria of either 'a' and 'c' and 'c' or 'b' and 'c' as relevant; (a) A trading/service concern with total assets at cost excluding land and buildings up to Rs 50 million. (b) A manufacturing concern with total assets at excluding land and buildings up to Rs 100 million. (c) Any concern (trading, service or manufacturing) with net sales not exceeding Rs 300 million as per latest financial statements.

1.2 SME in Bangladesh

Different countries and organizations define SME differently. The Government of Bangladesh has categorized SME into two broad classes

Manufacturing enterprise

Non Manufacturing activities

1.2.1 Manufacturing enterprise

Manufacturing enterprises can be divided into two categories;

Small enterprise : an enterprise would be treated as small if, in current market prices, the replacement cost of plant, machinery and other parts/components, fixtures, support utility, and associated technical services by way of capitalized costs (of turn-key consultancy services, for example), etc, excluding land and building, were to up to Tk. 15 million;

Medium enterprise : an enterprise would be treated as medium if, in current market prices, the replacement cost of plant, machinery and other parts/components, fixtures, support utility, and associated technical services by way of capitalized costs (of turn-key consultancy services, for example), etc, excluding land and building, were to up to Tk. 100 million;

1.2.2 Non-manufacturing activities (such as trading or other services)

Non-manufacturing activities can be divided into two categories;

Small enterprise: an enterprise should be treated as small if it has less than 25 workers, in full-time equivalents;

Medium enterprise: an enterprise should be treated as small if it has between 25 and 100 employees.

According to Bangladesh Bureau of Statistics different enterprises are defined as;

	<u>No. of employees</u>
Micro	0-9
Small	10-49
Medium	50-99
Large	Above 99

The Ministry of Industries, Government of Bangladesh has been identified following 11 booster sectors;

Electronics and electrical

Software-development

Light engineering and metal-working

Agro-processing/agro-business/plantation agriculture/ specialist farming/tissue-culture

Leather-making and leather goods

Knitwear and ready-made garments

Plastics and other synthetics

Healthcare & diagnostics

Educational services

10) Pharmaceuticals/cosmetics/toiletries

11) Fashion-rich personal effects, wear and consumption goods.

2. Review of Literature

With respect to the SME sector of Bangladesh, foreign and national experts undertook some studies. Some of the notable ones are; Uddin (2008), Chowdhury (2007), Miah (2007), Ahmed (2006), MIDAS (2004), ICG (2003), Hallberg (2002).

Uddin (2008) has stated that the economic efficiency and overall performance of the SMEs especially in the developing countries are considerably dependent upon macroeconomic policy environment and specific promotion policies pursued for their benefit.

Chowdhury (2007) highlighted that in context of Bangladesh SME is characterized by Low capitalization and limited assets, geographical diversity and high mortality, poor credit knowledge, very limited access to formal source of credit, cash intensity in transactions, very limited record keeping habit, poor financial disclosure on account of tax issues, high risk perception has led to high borrowing costs.

In a study about SME sector of Bangladesh Miah (2007) stated that the major constraints for SMEs are lack of adequate investment, lack of modern technology, high rate of interest on bank loans, irregular/inadequate supply of power, poor physical infrastructure and high transportation cost, poor information about market opportunities and requirements, inadequate availability of raw materials, lack of skilled technicians and workers, lack of research & development facilities, fierce competition, absence of effective and transparent legal system, difficulties in accessing technology, credit constraints, low access to business services, constraint of quality of human resources, low awareness, low lobbying capacity, rapid changes in policy environment.

Ahmed (2006) observed that availability of finance is a major constraint to formation and growth of SMEs in Bangladesh. Banks are reluctant to expand their SME credit portfolio because they do not consider SME lending an attractive and profitable undertaking. This is so because SMEs are regarded as high risk borrowers because of their low capitalization, insufficient assets and their inability to comply with collateral requirements of the banks. Administrative costs are also higher because close monitoring and supervision the SME operation becomes necessary.

A study (2004) by Micro Industries Development Assistance and Services (MIDAS) revealed that sources of finance are mostly friends and family member in case of SME. MIDAS tried to identify the sources of funds of SMEs. These are:

<u>Sources of funds</u>	<u>Percentage of finance</u>
Informal sector	41%
Family members	20% (interest free)
4% (with interest)	
NGO	17%
Bank	18%

According to Hallberg (2002), a stable macro-economy, an open trade and investment regime, and a competitive financial sector are argued to be most essential ingredients for a vibrant private sector. But with a law and order situation below the optimum level, corruption well above the level of acceptance and unstable political situation, the domestic environment of Bangladesh does not come to any help, rather hinders the prosperity of SME in this country.

3. Objectives of the Study

In this paper we have tried to identify the factors that influence the development and growth of the SME sector of Bangladesh. Thus the specific objectives of the study are as follows:

To appraise the present situation of SME in Bangladesh.

To identify the problems of SME in Bangladesh.

To recommend solutions to overcome the problems.

4. Methodology

This is basically a desk research. Most of the data has been collected from secondary sources. So the researchers work has been based on published information and data available in any form such as books, journals, magazines, newspapers etc. devoted to SME sector. Secondary information has been collected from Ministry of Industries, SME foundation, Bangladesh Bureau of Statistics, MIDAS, Financial Institutions and from other SME related organizations. Relevant

articles and literature in this context has also consulted. In this article we have analyzed the data of last six years of SMEs of Bangladesh. We have tried to analyze the performances of SMEs by applying simple statistical analysis i.e., growth percentage, average etc.

5. Present Scenario of SME

In 2003 the International Consultancy Group (ICG) of the UK, in collaboration with the Micro Industries Development Assistance and Services (MIDAS), conducted the National Private Sector Survey of Enterprises in Bangladesh. The survey results drew the conclusion that there were approximately 6 million Small and Medium Enterprises (SMEs), which included enterprises with up to 100 workers employing a total of 31 million people, equivalent to 40 per cent of the population of the country of age 15 years and above. The survey also found that the industrial structure of SMEs consisted of primarily wholesale and retail trade and repairs (40 per cent), production and sale of agricultural goods (22 per cent), services (15 per cent), and manufacturing only (14 per cent). Thus the survey brought out the fact that the large untapped potential for expansion in manufacture and production could be exploited (or contributing more significantly to the national economy. Another vital findings of the survey under discussion was that SMEs contributed BDT 741 (\$ 12.5) billion i.e. nearly 25 per cent of the GDP (BDT 2,996 billion) in 2003. It is reflected from this survey that enterprises employing 2-5 workers contribute 51 percent share of the total SME contribution to the economy, followed by 26 percent by those having only one worker and 10 per cent by those having 6-10 workers. For LDCs like Bangladesh, SMEs are a highly cost-effective route for industrial development.

It is observed from Table-1 that micro enterprises run by up to 10 workers contribute the most which is 86% of the total contribution from SMEs to GDP of Bangladesh. It is also observed that micro enterprises run by more than 21 workers contribute about 7% of total contribution from SME to GDP of Bangladesh.

Table-2 provides the information regarding sector wise contribution of SMEs to GDP. It is reflected from the table that manufacturing sector contributes the highest contribution in GDP i.e., 38%. It is also observed from the table that agriculture and wholesale and retail sector contribute more than 22 percent in the GDP of Bangladesh.

Table-3 shows the growth pattern of SME. It is observed that during 2001-2002 to 2004-2005 in every financial year the growth rate of SME is about 7%. In 2005-2006 the growth rate was 9.21%. The highest growth was in 2006-2007 i.e., 10.28%

Table-4 shows the growth pattern of manufacturing sector. It is observed that the average growth during 1972 to 2005 was 6.4%. During 2001-2002 to 2006-2007 the highest growth was in year 2006-07 i.e., 11.19%. It is also observed that during 2002-2003 to 2005-2006 in every financial year the growth of manufacturing sector was more than 6%.

6. Problems

At present SME sector is facing a lot of problems in Bangladesh. Some major problems are as follows;

6.1 Resource scarcity

In Bangladesh scarcity of raw materials hinder the ability of SME to be export oriented and limits its ability to reach more advanced stages of international business.

6.2 High employee turnover

Due to limited growth of SME most of the skilled employees leave SMEs. Levy (2003) observed that SMEs are knowledge creators but poor at knowledge retention.

6.3 Absence of modern technology

One of the main barriers for the development of SME in Bangladesh is inadequate technologies. Many SMEs have failed to adopt modern technology.

6.4 Poor physical infrastructure

Inadequate supply of necessary utilities like electricity, water, roads and highways hinder the growth of SME sector. Moreover unfavorable geographical conditions increase the transportation cost.

6.5 Financial constraints

Availability of finance hinders the growth of SMEs in Bangladesh. Bangladeshi bank considers SMEs as high risk borrowers because of their inability to comply with the bank's collateral requirements. Only about 15-20% of the owners of SMEs own any immovable property. Bankers issue loan on the basis of ownership of immovable property as collateral risk. As a result it automatically excludes rest 80% SME's from the list of privileged clients of the banks. Whatever collateral SME's can manage gets used up in talking the term loan leaving them with no means to seek working capital loans from banks. Because of low access to institutional financing SME's rely on inefficient financing services from informal sources.

6.6 Lack of uniform definition

In Bangladesh the definition of SME has changed overtime in different industrial policy announced by the government in different year. Absence of uniform definition makes the formulation and implementation of SME policy difficult.

6.7 Lack of information

Miah (2006) has observed that SMEs have very limited use of information technology (IT). Accounting package is used by 1-2% of the SMEs. The use of computers is revealed by say 15% of the SMEs, while the use of the Internet for business purposes applies to say 8-10% of SMEs.

6.8 Lack of entrepreneurship skills

Conservative attitude towards risk, lack of vision, ability to make plan and implementing those hinder the growth of SME in Bangladesh.

6.9 Participation of women entrepreneurs

Equality of opportunity is a major problem for SME. Female entrepreneurs are treated discriminately. They are not well represented in business organization. Government does not provide adequate institutional assistance for women entrepreneurs.

6.10 Access to Market and lack of awareness regarding the importance of marketing tool

For SME, owing a retail space is very expensive in the major cities in Bangladesh. As a result many customers are not interested to buy products and services from SMEs. Because they can't judge the quality until they physically examined the product.

Most of the cases SMEs in Bangladesh are not able to use the Integrated Marketing Communication (IMC) tools. But these tools play the role of important stimulus to motivate the customers and retain them. The country does not have enough marketing capability and resources to invest in marketing.

6.11 Bureaucracy

Wang (1995) observed that the inadequate government supports are top ranking constraints for SMEs. Unnecessary layers of Bureaucracy and red-taps reduce the competitiveness of SME and raising the cost of transactions and operations.

6.12 Absence of transparent legal system

The absence of an effective and transparent legal system discourages SMEs in exploring into risky ventures of business. There are a number of unnecessary formal requirements to start and run business that create high compliance costs and become barriers to SME development, growth and market entry.

6.13 Lack of commitment to innovation and customer satisfaction

Ernesto (2005) stated that to keep in pace with international competition, firms of all size are challenged to improve and innovate their products processes constantly. But in Bangladesh SMEs are still not relating the importance of satisfying and retaining customers by offering novel and desired benefits.

6.14 Lack of quality assurance

Govt. has failed to frame a national quality policy, provide adequate support systems and establish a national quality certification authority. As a consequence SME of Bangladesh has failed to ensure the quality of their products and services both in local and international market.

6.15 Lack of research and development facilities

It is observed that investment in R&D is still negligible in.

6.16 Fierce competition with the cheaper foreign goods

Fierce competition with the cheaper goods of China, Taiwan, Korea, India, and Thailand also pose threat to SME in Bangladesh.

7. Suggestions

In order to overcome the above mentioned problems the following suggestions are recommended;

7.1 Government must have to take adequate measures to ensure the uninterrupted supply of raw materials for SME.

7.2 Government needs to take appropriate measures to fix the minimum salary/wages of the employees of SME. That will help to minimize the employee turnover.

7.3 Government and financial institution may provide adequate finance for modernization and technological advancement.

7.4 Development of infrastructure is essential for the optimum growth of SME. So government of Bangladesh needs to take appropriate policy strategy for the infrastructure development of Bangladesh.

7.5 Government, financial institutions and Non Government Organizations (NGOs) may take necessary steps to ensure uninterrupted financial support to the prospective SMEs in Bangladesh.

7.6 Due to the absence of uniform definition the policy formulation and implementations are not possible. Government should take initiative to develop a uniform definition of each category of SMEs.

7.7 Govt. of Bangladesh should take the initiative to develop web pages exclusively for SME and an integrated SME database. It will reduce the barriers to SME access to global market.

7.8 In order to ensure the retention of skilled workforce the government should make the entrepreneurial career attractive by minimizing the uncertainty.

7.9 In order to encourage women entrepreneurship govt. may;
involve women entrepreneurs in policy formulation and implementation.
arrange funds for women entrepreneurs.

provide necessary training to women entrepreneurs in rural and urban area of Bangladesh.

7.10 SME foundation may take appropriate marketing tools to popularize their products.

7.11 For minimizing red tapes and accelerating the growth of SME government may provide one roof service under the SME foundation.

7.12 Appropriate legal framework is necessary to ensure the development of SME of Bangladesh.

7.13 In this era of intense competition continuous planning and quality improvement act as a prerequisite for the survival of SMEs. In order to improve the quality SMEs can follow the Just in Time (JIT) philosophy and use Total Quality Management (TQM) and can ensure the improvement of quality and productivity at a time.

7.14 Government should establish a credible certification authority especially for SMEs. So that this sector can obtain a technical evaluation of the quality of their products within a shortest possible time. The certification of the authority should be world wide accepted. Govt. may also provide assistance to SMEs during the certification process and promote the importance of product certification for international acceptance among the SMEs.

7.15 Research and Development (R&D) is must for the development and growth of SME. So government must have to invest in R&D for ensuring the intensification of SME of Bangladesh.

7.16 Restriction may be imposed on import of SMEs' products which are available in Bangladesh.

8. Conclusion

Small and medium enterprises (SMEs) act as a vital player for the economic growth, poverty alleviation and rapid industrialization of the developing countries like Bangladesh. SMEs are significant in underlying country's economic growth, employment generation and accelerated industrialization. Government of Bangladesh has highlighted the importance of SME in the Industrial Policy-2005. SME has identified by the Ministry of Industries as a 'thrust sector'. As the SME sector is labor intensive, it can create more employment opportunities. For this reason government of Bangladesh has recognized SME as a poverty alleviation tool. SME also foster the development of entrepreneurial skills and innovation. Along with poverty alleviation SME can reduce the urban migration and increased cash flow in rural areas. As a result it will enhance the standard of living in rural areas.

Performance of SMEs in Bangladesh is significantly found below the level of international standard. Although government of Bangladesh has taken some initiative to ensure the growth of SME but those steps are not enough at all. But government shows its positive attitude towards this sector. Bangladesh government should continue to give more focuses on some areas, such as arrangement of finance, provide infrastructure facilities, frame appropriate legal framework, establish national quality policy etc.

From the sequence of our analysis it seems that for the economic development of Bangladesh SME can play a vital role. We are quite optimistic that if the above mentioned suggestions are implemented then the growth of SME sector in Bangladesh will be accelerated.

References

- Ahmed, M.U., Mannan, M.A., Razzaque, A., and Sinha, A. (2004). *Taking Stock and Charting a Path for SMEs in Bangladesh*, Bangladesh Enterprise Institute, Dhaka.
- Alam, M.S. and Ullah, M.A. (2006). SMEs in Bangladesh and Their Financing: An Analysis and Some Recommendations. *The Cost and Management*, Vol. 34, No.3.

Chowdhury, F. (2007). *Customized Form of Finance for SMEs*, Seminar Proceedings, National SME Development Program for OIC Member Countries, FBCCI, Dhaka.

Ernesto, R.W. and Hansen, N. (2005). Innovation in Large versus Small Companies: Insights from the US Wood Products Industry. *Management Decision*, Vol. 43, No. 6.

Hossain, N. (1998). *Constraints to SME Development in Bangladesh*, Seminar Proceedings, University of Maryland at College Park, USA.

Levy, M., Loebbecke, C. and Powell, P. (2003). SMEs, Cooperation and Knowledge Sharing: the Role of Information System. *European Journal of Information System*, Vol. 12.

Miah, M.A. (2006). Key Success Factors for National SME Development Program; Lessons for OIC Member Countries from Bangladesh Experience, *SME Foundation*, Dhaka, Bangladesh.

Mintoo, A. A. (2006). SMEs in Bangladesh. *CACCI Journal*, Vol. 1.

Report of Asian Development Bank (ADB). (2002). Strategic Issues and Potential Response – Small and Medium Enterprise Development and Export Expansion. *Asian Development Bank (ADB)*, Dhaka.

Singh, R.K., Garg, S.K. and Deshmukh, S.G. (2006). Comparative Study on Strategies of Indian Small, Medium and Large Scale Organizations. *South Asian Journal of Management*, Vol. 14, No. 3.

SME Cell. (2005). *Policy Strategies for Development of SME*, Ministry of Industries, Government of People's Republic of Bangladesh.

SME Policy Strategies. (2005). *Publication of Government of People's Republic of Bangladesh*.

Uddin, S.M.N. (2008). *SME Development and Regional Economic Integration*, Seminar Proceedings, Joint Regional Workshop held in Tokyo, Japan.

Wang, J.C. and Tsai, K.H. (1995). Strategies to Lift R&D Expenditure in Taiwan. *Journal of Industry Studies*, Vol. 2, No.1.

Table 1. Contribution of SMEs in the GDP on Bangladesh

Numbers of workers	Total Contribution to GDP (Taka)	Percentage of Total contribution
0-1	193 996 555 714	26
2-5	379 663 897 358	51
6-10	73 120 983 681	10
11-20	45 183 240 157	6
21-50	33 960 498 076	5
51-100	15 138 922 373	2
Total	741 064 097 360	100

Source: ICG/MIDAS Survey, 2003

Note: US \$ 1 = BDT 69.00

Table 2. Sector wise contribution of SME in GDP of Bangladesh (Taka)

	Total Contribution to GDP (Taka)	Percentage of Total Contribution
Agriculture	177 729 637 637	24
Fishing	32 872 674 464	4
Manufacturing	282 344 700 575	38
Construction	7 196 460 200	1
Wholesale and Retail trade and Repairs	171 335 861 390	23
Hotels and Restaurants	28 599 263 975	3
Transport, Storage and Communication	8 950 171 356	1
Real state, Renting and Business activities	13 771 436 794	2
Education	151 808 506	1
Health and Social Work	2 743 049 893	1
Other Service activities	15 632 094 785	2
Total	741 327 159 609	100

Source: ICG/MIDAS Survey, 2004

Note: US \$ 1 = BDT 69.00

Table 3. Growth Pattern of SME

Year	Growth Percentage of Small Enterprises
2001-02	7.69
2002-03	7.21
2003-04	7.45
2004-05	7.93
2005-06	9.21
2006-07	10.28

Source: Bangladesh Economic Review 2006-2007

Table 4. Growth Pattern of Manufacturing Sector

Year	Growth Percentage of Manufacturing Sector
1972-2005	6.4
2001-02	5.48
2002-03	6.75
2003-04	7.10
2004-05	8.19
2005-06	10.77
2006-07	11.19
2015	Expected Growth 15

Source: Bangladesh Economic Review 2006-2007



Study on the Coupling Mechanism of Urban Spatial Structure and Urban Traffic Organization

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Abstract

From the angle of the high relationship between the traffic organization and urban spatial structure, the geographic concept, coupling, was proposed in the article, and the coupling mechanism of urban spatial structure and traffic organization was studied primarily based on the analysis of the connotation of the coupling, and the coupling function of main associated factors between the urban spatial structure and traffic organization was analyzed.

Keywords: Urban spatial structure, Urban traffic organization, Coupling mechanism, Factor coupling

There were many relative researches about the urban spatial structure and traffic organization in the world, and the general opinion was that the close relationship existed between the urban traffic system and the urban land utilization, and selective analysis was made for the relative factors (Cervero, 2003, p145-163), or the development mode was proposed (Filion, 2007, p501-524). Some scholars further proposed that the cycle function of mutual association and restriction should exist between two parties, and both feedback loop and the empirical research result were proposed (Yan, 2004, P.643-652 & Mao, 2004, P.76-80 & Yan, 2006). These opinions all reflected the close relationship between the urban space and the traffic organization. From the research angle of long term, the coupling between the urban spatial structure and the traffic organization will be analyzed based on above research direction.

1. Definition and connotation of the coupling of urban spatial structure and traffic organization

1.1 Definition of the coupling of urban spatial structure and traffic organization

The coupling of urban spatial structure and traffic organization is defined by the phenomena that the urban traffic organization (including traffic structure and traffic space organization) and the urban structure join up because of high association (Han, 2007). The result of coupling can not only generate the material entity, but reflect the characters of immaterial flow. Based on that, the coupling development mode of urban spatial structure and urban traffic organization means the development mode which uses the coupling relationship between urban spatial structure and traffic organization for references, takes the mutual supported harmonious status of traffic organization and urban spatial structure as the target, improves the mutual cooperation of urban spatial structure and traffic organization, and accordingly realize the orderly development of urban space.

1.2 Connotation of the coupling of urban spatial structure and traffic organization

The coupling has the meanings in time and space. For the space, the fully combining and closely allocating of urban centers and main traffic nodes in the space distraction are the spatial premise to realize both coupling efficiency. The road organizations formed by different traffic vehicles make the framework of urban spatial structure. The change of traffic vehicles also makes the quick development of the suburb impossible, and the underground, overhead high speed roads and ground overpasses make the town space develop from the plane to the solid.

For the time, the coupling state of leading traffic mode and urban spatial structure through traffic infrastructures (including stations and road networks) needs longer time, i.e. the close allocation of traffic infrastructures and urban

nodes makes the leading traffic mode and urban spatial structure gradually form mutual supported state. In addition, the transformation from one kind of coupling state to another kind of coupling state is not transilient (Pan, 2002, P.17-40), so facing many obstacles from economy, society, technologies and politics, the transformation of coupling needs a quit long term to be gradually realized.

2. The coupling mechanism of urban spatial structure and traffic organization

2.1 Urbanization is the essential reason of the traffic mode change

When the urbanization process develops to certain degree and the extension of urban scale achieves certain extent that the urban economic living can only be ensured by the traffic vehicles, the interior urban traffic system can be generated, and corresponding traffic vehicles will occur and gradually develop (Liu, 1998, P.78-83). One important aspect of continual urbanization is that the population centralizes to the city continually, and the high population density will occur gradually, which will certainly increase the traffic demand to large extents. When the demand and supply of traffic achieve certain degree, original traffic mode will not adopt the sustainable develop of the city, and the advancement of the traffic technology will be extended extensively, and new traffic mode will replace the old traffic mode and reduce the pressure of the traffic demand.

2.2 Urban spatial structure decides the spatial distribution of the vested traffic mode and traffic network to large extents

The urban spatial structure is formed under the principle that the sites with different urban functions are distributed in certain space, and human traffic flow is the transfer in different functional sites. Therefore, the urban spatial structure decides the flux, flow and mode selection of human trip, and further decides the mode composing of urban traffic and the organization base of traffic space. The general urban traffic organization mode is to adopt the mass public traffic mode in the main direction of human trip, design the urban trunk road and bus routes, set up bus stations and the transport hubs of various vehicles transfer in the centralized functional sites, and perfect the urban traffic network. Once the urban functional space changes, the spatial allocation of various functional cites will change, and the happening cites, attracting cites, happening intension and attracting intension of original residents' trips will change, so the flow, flux and mode selection of trip will change, which will break original traffic balance and form new traffic balance. Therefore, the urban functional allocation mode is the base to form the urban traffic organization mode, and it can provide the development space and the objective necessity of the urban traffic organization. The change of urban functional allocation mode objectively requires the use of advanced traffic mode and the development and perfection of traffic spatial organization (such as the extension of bus lines, the increase of road net density and the perfection of infrastructure), and drives the change of the urban traffic organization mode.

Different traffic modes require different spatial organizations. The car traffic mode requires that the road construction is the first factor, so this mode can be utilized in any cities, but the distribution of the trunk roads should be consistent with the main passenger flow. MRT needs high requirement of infrastructure construction, and large construction costs, and sufficient passenger flow to support the management costs, so this mode can only be adopted in the cities with large passenger flow and good economic development level. So the spatial allocation of MRT stations will be largely influenced by the allocation of the nodes with large passenger flow in the urban spatial structure, and accordingly influence the line allocation of MRT.

2.3 Urban traffic organization will largely influence the urban spatial structure

First, when the traffic mode is confirmed, the extension of the urban space is limited and perfect traffic spatial organization will make the space flow more free, so the traffic accessibility of the geographical shift will be changed. Because of different geographical requirements of different urban functions, the change of traffic accessibility can decide the advantage and disadvantage of the urban micro geography, and decide the geographical shift selection of the functional sites on the micro layer, and further instruct the spatial distribution of urban functions, and strengthen or adjust original urban spatial structure. Second, the advancement of traffic mode provides technical premise for the spatial extension of urban function, and makes people arrive to farther places in the same time, which equals to reduce the spatial distance between two places. Under the situation that the traffic mode changes, perfect traffic spatial organization works in traffic mode, which can influence the geographical shift selection of functional sites through changing the geographical traffic accessibility in the larger spatial range, and redistribute and recombine urban economy, culture and business, and lead the spatial centralization and diffusion of different urban functions, and finally improve the formation of new urban spatial structure.

Of course, different traffic mode will generate completely different influences to the urban spatial structure. For example, comparing the car traffic and the MRT, the "door to door" advantage of the car traffic makes its regional accessibility far higher than MRT, and MRT is completely restrained by the spatial distribution of infrastructure. Therefore, the car traffic mode can make the urban nodes to be distributed in broader space. The classic geographical shift theory can better explain the relationship among different land utilization functions and intensions and different traffic geographical shift grads. In the function of land utilization economic cost, it is a necessary tendency to develop

the far low-density land with low land utilization cost.

Comparing with the “freedom” brought by the car traffic, MRT can follow people’s mentality including convenient trip and few transfer, and successfully restrict more people around the station, and make the urban space to be extended with high density when it bring people accessibility. Taking the development of business center and track traffic as the example, based on the influence of traffic accessibility, the urban space has the self-organizational space character and relative effect around the station (the optimal site of traffic accessibility), and as the traffic geographical advantageous region, the urban center node is also the region with high-intention development centralizing many non-habitation functions such as business and office. MRT can mainly fulfill the mass transport demands which can not be fulfilled by the general traffic because the urban center node is developed by the high-intention, and it can provide effective infrastructure support of the urban center, especially improve the development of the retail function of the urban center. On the one hand, the passenger flow in the stations of MRT is abundant, which can bring sufficient business passenger flow for the business center and improve the development of business. On the other hand, the stations of MRT couple with various urban nodes, which can provide passenger flow for MRT and ensure the normal operation of MRT. For example, the stations of MRT combine with various urban centers, and the traffic network can fully integrate with the urban public center network system, and the coupling region of each station will be the important node in the whole spatial structure system, and each node can be the comprehensive platform to offer high accessibility, and the advanced public service establishments with different classes (including business and office) will be allocated in this region at the same time.

From above analysis, the urban spatial structure and the urban traffic have the relationship of interactive feedback (seen in Figure 1), and in the long development process of the city, both parties harmonize continually and finally form different development modes with different characters by coupling. The usual mode is the mixed mode integrating the “low-density development-car traffic” mode with the “high-density development-public traffic” mode, and at present, many Chinese cities are trying to turn from the mixed mode to the “high-density development-public traffic” mode.

3. The coupling functions of main associated factors between urban spatial structure and traffic organization

The association of urban spatial structure and urban traffic organization roots in the spatial difference of traffic demand and supply, which also decides some factors in the urban spatial structure directly associates with some factors in the urban traffic organization.

3.1 Point-point coupling: the coupling of the urban functional sites distribution and the traffic infrastructure distribution in the center city zones

People flow in various functional sites and perform different activities in different functional sites, such as home, work site or school. The spatial distribution difference of functional sites decides the spatial difference of traffic demand, so in the process that the supply fulfills the demand, the spatial difference of the high traffic demand in the center urban region and the traffic demand distribution will certainly make the traffic infrastructure to be allocated in the geographical shift with large passenger flow, which will largely influence the public traffic station and junction with large passenger flow. The geographical shift of traffic infrastructure usually is the distributing center of passenger flow, so the spatial distribution of traffic infrastructure will strengthen or adjust the spatial distribution of functional sites in reverse.

3.2 Line-line coupling: the coupling of the urban spatial extension direction and the traffic infrastructure oriented function

High-density population in the quick urbanization term makes the urban centers can not bear the heavy load, and generate the demand to extend to the exterior. The urban extension possesses reasonable direction, but its function and population redistribution must depend on the directional function of traffic infrastructure, and only convenient traffic can attract large numerous of population diffuses along the ideal layout direction of the city. Therefore, the extension direction of urban space decides the extension direction of traffic infrastructure, and the leading function of traffic infrastructure is also the necessary measure for the effective extension of the city.

3.3 Face-face coupling

First, it is represented by the coupling of the urban spatial extension scale and the accessibility of traffic technology. The innovation of traffic technology offers the feasibility for the urban spatial extension, and the physical accessibility of traffic technology objectively decides the reasonable space of the urban extension on the technical layer, i.e. the urban spatial scale. And the extension degree of the urban space decides the actual accessibility of traffic technology. In the process that the urban space is continually extending under the support of traffic technology, the physical accessibility is gradually turning to the actual accessibility.

Second, it is represented by the coupling of the urban land development density and the traffic infrastructure network. Different land development densities decide the spatial differences of traffic infrastructure networks. In the process of

urban spatial extending and structure recombining, the different demands of the leading traffic mode to the passenger flow will decide the spatial distribution of traffic infrastructure network, and influence the land development density.

Third, it is represented by the coupling of the urban functional allocation and the urban traffic organization. In a long development process, the urban functional sites will form the urban functional allocation which is the base to form the urban traffic organization mode. At the same time, the urban traffic organization mode will restrict and lead the urban functional allocation (Han, 2007, P.106-110).

4. Conclusions

In a word, the urban spatial structure respectively associates with relative factors of urban traffic organization (the distribution of center traffic infrastructure, the leading function of traffic infrastructure, the accessibility of traffic technology and the traffic infrastructure network) from four aspects including the distribution of urban functional sites, the direction of urban spatial extension, the scale of the urban spatial extension and the development density of urban land (seen in Figure 2). The interactive feedbacks of these factors in a long term are performed simultaneously, and in the mutual coupling process of these factors, the coupling of urban spatial structure and urban traffic organization can be formed and perfected.

China is in the period of economic transformation, and the urban development mode and the traffic mode are in the transformation correspondingly. To reasonably and orderly develop Chinese city and traffic, it needs to study the coupling mechanism of urban spatial structure and traffic organization, and grasp the coupling function of associated factors, which will certainly improve the coupling development of Chinese urban development and traffic construction.

References

- Cervero, Robert. (2003). Road Expansion, Urban Growth, and Induced Travel. *Journal of the American Planning Association*. Spring2003, Vol. 69 Issue 2. P.145-163.
- Filion, Pierre & Mcspurren, Kathleen. (2007). Smart Growth and Development Reality: The Difficult Co-ordination of Land Use and Transport Objectives. *Urban Studies*, Mar2007, Vol. 44 Issue 3. P.501-524.
- Han, Feng. (2007). *Study on the Coupling Development Mode of the Urban Spatial Structure and Traffic Organization*. Changchun: Thesis of Northeast Normal University.
- Han, Feng. (2007). Study on the Harmonious Development of the Function Location Mode and Traffic Organization Mode in Major Cities. *Social Science Journal*, No.2. P.106-110.
- Liu, Bin & Long, Jiang. (1998). Study on the Development Stage and Characters of the Urban Track Traffic. *Journal of Shanghai Tiedao University*, No.19(10). P.78-83.
- Mao, Jiangxing & Yan, Xiaopei. (2004). Study on the Mutual Relationship between Urban Transport and Urban Space Pattern in Guangzhou. *Geography and Geo-information Science*, No.6. P.76-80.
- Pan, Haixiao. (2002). *Quick Traffic and Town Development in Major Cities: A Study of International Experiences and Shanghai*. Shanghai: Tongji University Press. P.17-40.
- Yan, Xiaopei & Mao, Jiangxing. (2004). The Mutual Relationship between Urban Transport System and Land Use in Highly-densely Developed Cities: A Case Study of Guangzhou. *Acta Geographica Sinica*, No.5. P. 643-652.
- Yan, Xiaopei, Zhou, Suhong & Mao, Jiangxing. (2006). *Traffic System and Land Utilization in Highly-densely Developed Cities*. Beijing: Science Press.

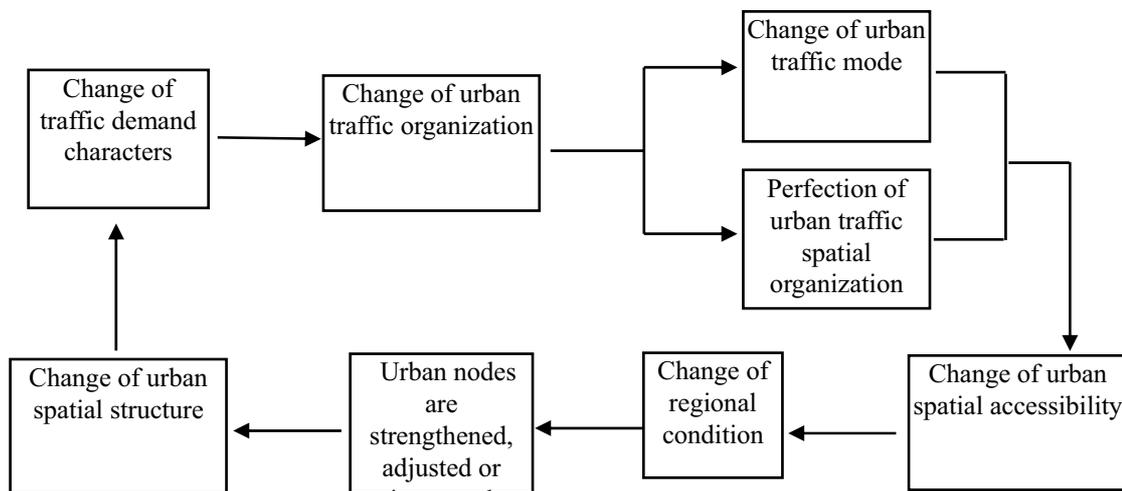


Figure 1. The Coupling Mechanism of Urban Spatial Structure and Urban Traffic Organization

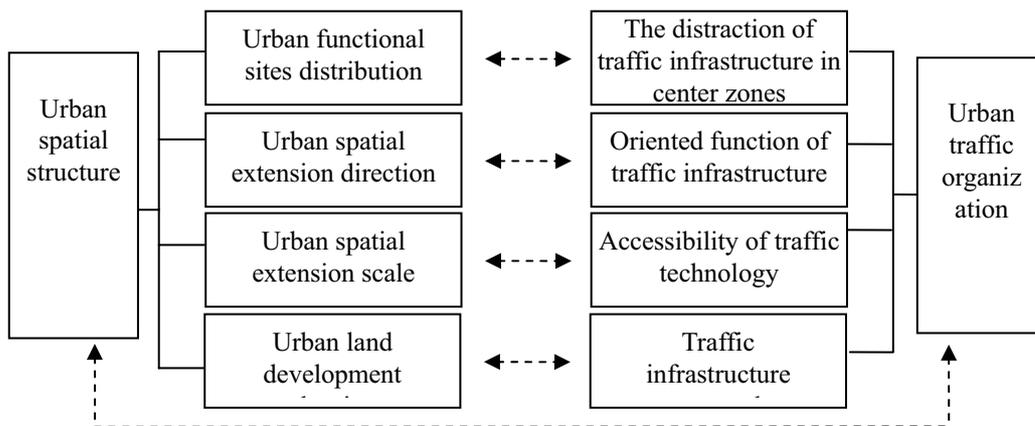


Figure 2. The Coupling of Main Factors between Urban Spatial Structure and Urban Traffic Organization



Moderating Effects of Subordinates' Competency Level on Leadership and Organization Citizenship Behavior

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Abstract

This paper seeks to examine the relationship between leadership styles and organization citizenship behavior within Malaysian companies. The main motivation for the study is to find out how a superior can achieve a greater understanding of the appropriateness of certain leadership styles when dealing with different subordinates' competency level. Although there have been several studies that explored the relationship between leadership styles and citizenship behavior, hitherto there has yet a study carried out to examine the moderating effect of subordinates' competency level on such relationship. Based on the literature review the moderating effect of subordinates' competency level is explored in order to develop the proposed framework of the study. Based on the framework, propositions linking leadership styles, subordinates' competency level and organizational citizenship behavior are developed.

Keywords: Leadership, Competence, Organizational Citizenship Behavior

1. Introduction and Objective of the Study

The objective of this study is to examine the effects of leadership styles on subordinates' organizational citizenship behavior. A moderating variable - subordinates' competence level - is investigated to find any moderating effects on organizational citizenship behavior when subjected to different leadership styles. This study purports to examine the relationship between these variables in the Malaysian settings. The main motivation for the study is to find out how a superior can achieve a greater understanding of the appropriateness of certain leadership styles when dealing with different subordinates' competency level. While such a relationship has been examined before, there has yet been a study that investigated the role of subordinates' competence level as a moderator.

The findings of this study should shed some light on how superiors could better achieve their objectives of maintaining positive organizational citizenship behavior among their subordinates. This research should be particularly interesting as it is to be conducted in the Malaysian setting of diverse social and organizational cultures. It should provide a glimpse of how Malaysian "organizational men" respond to different leadership styles as social behavior is normally entrenched and "given" in a particular society. The research is also important in that it addresses the vexing question confronting our industrial society: how do we enrich the skills of our managers so that they can act with greater proficiency given that their contributions are derived through people and from their dealing with people and especially their subordinates. One way of looking into this issue is from the "leadership" perspective of interpersonal interactions that occur across organizational levels as characterized by the phrase "superior-subordinate relationships".

Our interest in the issue of interpersonal relationships is driven by our conviction that sound superior-subordinate relationship is crucial to organizational success; and furthermore it is consistent with the humanistic and cooperative work environment sought by contemporary managers. Positive interpersonal relationship at workplace should enhance positive organizational citizenship behavior (OCB) among the employees. Subordinates with high levels of OCB are more likely to be committed to the organization (William & Anderson, 1991; Smith, Organ & Near, 1983). Therefore, it is worthwhile for the superior to be aware of the existing leadership style in work situations and how it promotes

subordinates' OCB. Negative outcome may lead to organizational dysfunction such as decline in work performances, absenteeism and high turnover (Lamude, 1994; Motowidlo, 2003). According to Graham (1988) and Podsakoff, MacKenzie, Moorman and Fetter (1990) superior's leadership and subordinates' OCB are inter-related. Inappropriate leadership styles may trigger negative consequences, which might further increase the sensitivity and susceptibility to misunderstanding, which in turn decreases the subordinates' OCB. Thus, prevention of subordinates' negative outcome is important *vis-a-vis* different leadership styles. The mismatch might precipitate an unending and potentially disruptive vicious cycle that many organizational leaders are wont to avoid and therefore the need to address their styles and the attendant consequences more rigorously.

1.1 Research Questions

The major research question is to find out the leadership styles employed by superiors in the Malaysian companies and how these styles affect subordinates. This research should also provide insight about the appropriateness and effectiveness of each style as it pertains to specific situation (Yukl, Kim & Falbe (1996). The key advantage to the examination of these associations is the maximization of organizational outcomes.

Thus, this study seeks to answer the following research questions:

- Are there any significant differences in subordinates' organizational citizenship behavior when subjected to different leadership styles?
- Can subordinates' competence level moderate the relationship between leadership style and organizational citizenship behavior?

2. Theoretical Framework and Literature Review

This section attempts to provide the theoretical foundation for the study. A review of the literature is undertaken to define and discuss interactions among the three variables - leadership styles, OCB and subordinates' competence levels (see Note 1).

2.1 Leadership Styles

Past researches have extensively studied transactional leadership as the core component of effective leadership behavior in organizations. This was prior to the introduction of transformational leadership theory into the literature (Bass, 1985; Burns, 1978; House, 1977). Transactional leadership is based on exchange relationship where subordinates agreed with, accepted, or complied with the superior in exchange for rewards, resources or the avoidance of disciplinary action (Podsakoff, Todor & Skov, 1982; Podsakoff, MacKenzie, Moorman & Fetter, 1990).

More recently, much empirical work has focused on transformational leadership, in particular on the extent to which transformational leadership augments the effect of transactional leadership in explaining various outcomes such as leader effectiveness (Hater & Bass, 1988), subordinate satisfaction (Seltzer & Bass, 1990) and subordinate effort (Bass, 1985). These earlier studies are of particular relevant for this proposed research as the extant literature suggests that (1) transactional and transformational leaders employ different kinds of influence strategies to obtain follower conformity, and (2) transactional and transformational leaders elicit different patterns of follower conformity (Kelman, 1958; Howell, 1988; Tichy & Devanna, 1986).

This emergent genre of leadership study advocates that transformational leaders can motivate followers to perform beyond the normal call of duty. Additionally, transformational leadership finds considerable empirical support where such leaders have been found to have produced leadership effects such as high level of follower motivation, satisfaction, and commitment (Reimers & Barbuto, 2002; Deluga, 1988; Lok & Crawford).

2.2 Organizational Citizenship Behavior (OCB)

The construct of OCB was introduced by Bateman and Organ (1983) by drawing upon the concept of super role behaviors as presented by Katz and Kahn (1966). Examples of employees OCB include: accepting extra duties and responsibilities at work, working overtime when needed, and helping subordinates with their work (Masterson, Lewis, Goldman & Taylor, 1996; Organ, 1988). Determining why individuals engage in OCB has occupied a substantial amount of research attention in both organizational behavior and social psychology (Brief & Motowidlo, 1986; McNeely & Meglino, 1994). Most research on OCB has focused on individual antecedents. For example, past researches have suggested that there is a relationship between OCB and a host of outcomes, such as satisfaction (Bateman & Organ, 1983); commitment (O'Reilly & Chatman, 1986); perceptions of fairness (Folger, 1993; Martin & Bies, 1991; Moorman, Rohit & Zaltman, 1993; Tepper & Taylor, 2003); and perceptions of pay equity (Organ, 1988).

2.3 Subordinate's Competence

According to Boyatzis (1982) "competency" can be defined as "an underlying characteristic of an individual which is causally related to effective or superior performance." A related perspective here is the notion that competencies are related to the willingness and ability of the employee to use his/her capacities in specific situations (Spencer, 1983).

Competencies are factors that contribute to the high levels of individual performance, and hence, organizational effectiveness (Armstrong, 1999). McClelland (1973) who saw competencies as a component of performance associated them with important life outcomes and as an alternative to the traditional trait and intelligence approaches to predicting human performance. Competencies used in this way refer to broad psychological or behavioral attributes that are related to successful outcomes, be it on the job or in life in general.

3. Hypothesized Relationships

3.1 Leadership Styles and OCB

Graham (1988) suggested that the most important effects of transformational leadership behavior should be on extra-role behaviors that exceed the requirements of in-role expectations. These extra role behaviors are best articulated by the OCB construct (Organ, 1988; Deluga, 1995; Organ & Konovsky, 1989; Podsakoff et al. 1990. OCB is a behavior, largely discretionary and seldom included in formal job description. This behavior is said to be able to promote efficient and effective functioning of the organization (Organ, 1988). Transformational leaders motivate followers by getting them to internalize and prioritize a larger collective cause over individual interests. Individuals who are intrinsically motivated to fulfill a collective vision without expecting immediate personal and tangible gains may be inclined to contribute toward achieving the shared workplace goal in ways that their roles do not prescribe. These individuals make these contributions because in performing these acts their senses of self-worth and self-concepts are enhanced. Individuals for whom this link between the interests of self and others has not been established are less likely to make these largely discretionary, non-tangibly rewarded contributions.

Results of past researches show that transformational leadership has been consistently linked to followers' higher level of OCB (Bass, 1985; Organ, 1988; Podsakoff et al., 1990; Howell & Avolio, 1993; Lowe, Kroeck & Sivasubramaniam, 1996; Geyer & Steyrer, 1998; Wang, Law, Hackett, Wang, Chen, 2005; Schlechter & Engelbrecht, 2006; Boerner, Eisenbeiss, Griesser, 2007). On the other hand, the relationship between transactional leadership and OCB has been less empirically examined. In any case, Graham (1988) suggests that the instrumental compliance to obtain rewards required by transactional leadership may suggest a reduction in OCB when working for a transactional leader. Bass and Avolio (1990) lend support to this view for they found that transactional leadership is negatively associated with followers' level of OCB. Thus, it may be hypothesized:

Hypothesis 1a: Transformational leadership style is positively correlated with OCB.

Hypothesis 1b: Transactional leadership style is negatively correlated with OCB

3.2 Leadership Styles and Subordinates' Competence

Past research done by Dockery and Steiner (1990) concluded that subordinates' ability affects the leadership style. According to these authors, the rationale is that a transformational leader would want to give more latitude and support to subordinates who have high ability and perform well. The finding implies that superior's exercise of leadership styles can be affected by subordinates' competence level. It can be conjectured then that if the subordinates' competence level is high, the superior may exercise transformational leadership, and that when subordinates' competency level is low, the superior may be expected to adopt transactional leadership. One possible explanation is that a superior who lacks confidence in his/her own capabilities may feel threatened by highly competent subordinates. Thus, the following hypotheses are advanced:

Hypothesis 2a: Transformational leadership style is positively correlated with subordinates' competency level.

Hypothesis 2b: Transactional leadership style is negatively correlated with subordinate competency level.

3.3 Subordinate Competence and OCB

The concept of competency refers to applied knowledge and skills, performance and the behaviors required to complete a task very well (Armstrong & Baron, 1995). With regard to subordinate competency the concept implies that subordinates must be able to perform their role effectively (Armstrong, 2000). OCB is an individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system (Organ, 1988), and this behavior is a matter of personal choice. It has been proposed that OCB links performance and job satisfaction in a meaningful way (Organ, 1988; Moorman, 1991). This is well argued by Boyatzis (1982) who placed the concept of competency firmly in the context of effective performance from the outset. He further enhanced the inherent conceptual importance of higher levels of performance by defining competencies as those characteristics that differentiate superior performance from average and poor performance.

Another study by Tremblay (2000) concluded that the perception of a high level of autonomy and influence on the work and the possibility of using competencies have a strong independent positive influence on the mobilization of discretionary behaviors. Complimentary to this, Dio's (1979) research established that subordinates' competency leads to a higher quality of decision and greater achievement and efficiency. In the same vein, Garavan and McGuire (2001) add that competencies can be liberating and empowering, arguing that if employees are provided with a broad degree of

self-control and self-regulation, they will work towards the fulfillment of organizational objectives. In addition, Dennison (1984) argues that once employees are empowered, they will psychologically perceive meaningfulness, competence, self-determination and impact, which will lead to organizational effectiveness (Lee & Koh, 2001). These types of competencies are those possessed by knowledge workers, who are increasingly being regarded as the critical resource of the firm (Drucker, 1993). Thus, this study proposes the following related hypotheses:

Hypothesis 3a: Subordinates' competency level is positively associated with OCB.

3.4 Leadership Style, Subordinates' Competence and OCB

A more recent study by Pillai et al. (1999) examined the relationship between transformational and transactional leadership, procedural justice and distributive justice, trust in organizational obligation, OCB, and satisfaction from work. He found that an indirect relationship exists between transformational leadership and OCB. In another study, MacKenzie et al. (2001) examined the effect of transformational and transactional leadership on marketing personnel's performance at an insurance company. Their study suggests that transformational leadership has higher influence on performance than has transactional leadership. This finding supports the assumption that the transformational leadership, as compared to transactional leadership style, has a stronger relationship with in role performance and with OCB.

Locke and Schweiger (1979) and Locke et al. (1980) studied group member knowledge and competence in the context of participative decision making (PDM) and performance. Based on their studies, they have come to view competence as a potential moderator variable. Their position would be strengthened if it could be shown that participation enhances the performance of more competent employees but fails to accentuate the performance of less competent personnel. There is an alternative view of the influence of competence on this relation: Supervisors may permit their more competent (and more productive) employees to participate in decisions that affect them. In this scenario, competence (and performance) would determine the level of PDM for each subordinate. Thus, the following hypotheses are advanced.

Hypothesis 4a: Transformational leadership style is positively correlated with OCB. This relationship is moderated by the subordinates' competency level.

4. Methodology and Research Design

4.1 Sampling Design

The data is to be obtained through survey questionnaire. This method is chosen because it provides certain advantages such as convenience, accessibility and minimal costs. The sampling population will be generated from the master list of factories registered with the Federation of Malaysian Manufacturers (FMM). We will only include manufacturing companies with the number of employees greater than 35 in our sample; this limitation in size is imposed to reflect our belief that a more formalized structure and system of supervision are likely to exist and functioning in firms of certain size. The sample size will be set to 350 respondents comprising executives, managers and professionals in Malaysian manufacturing companies. As a group they represent the more educated people who are in turn more aware of the types of leadership styles displayed by their superiors. The stratified random sampling procedure will be used in selecting the sample from the larger database.

4.2 Research Instruments

Each of the measurements of the relevant constructs is discussed in this section as follows.

4.2.1 Leadership Styles

Podsakoff, MacKenzie, Morrman & Fetter's (1990) Transformational Leadership Behavior Inventory (TLI) will be used to measure the leaders' behaviors in this study. The scale measures six dimensions of transformational leadership which includes articulating a vision, providing an appropriate model, fostering the acceptance of group goals, having high performance expectations, providing individualized support, and providing intellectual stimulation. This scale comprises 14 items relating to transformational leadership. For transactional leadership, it will be measured by a four-item contingent reward behavior scale that assesses the degree to which a leader provides positive feedback, such as recognition, informal rewards and approval, contingent on high performance levels. Contingent punishment will be assessed with three items. Previous research has shown these two scales possess good psychometric properties (Podsakoff, Todor, Grover & Huber 1984; Podsakoff & Organ, 1986; Podsakoff, Niehoff, MacKenzie & Williams, 1993; Podsakoff, MacKenzie & Bommer, 1996).

4.2.2 Organizational Citizenship Behavior (OCB)

OCB scale will be measured using a 7-item scale developed by Smith, Organ and Near (1983). Respondents will be asked to indicate the frequency in which they had engaged in the various citizenship behaviours.

4.2.3 Subordinates' Competence Level

Wagner and Morse's (1975) self-reported measure of individual sense of competence will be used to measure the employee's task competence in lieu of a more direct measure of competence level. Thirteen items are extracted from their larger pool of items for use based upon their factor loadings as reported in Wagner and Morse (1975). A sample item states, "I honestly believe I have all the skills necessary to perform this task well." All items are scaled on 7-point agree-disagree rating scales. Evidence pertaining to the reliability and predictive validity of this measure is located in several sources (Morse, 1976; Tharenou & Harker, 1984; Wagner & Morse, 1975).

4.3 Data Analysis Procedure

The statistical analysis to be employed in this study will include the correlation analysis, moderated regression analysis, and analysis of variance (ANOVA).

5. Conclusion

This study is motivated to find out how a superior can achieve a greater understanding of the appropriateness of certain leadership styles when dealing with different subordinates' competency level. Evidences from past researches suggest that when the superior has a choice in selecting leadership styles, he/she would be more inclined toward the transformational style, rather than transactional leadership, in order to achieve greater subordinates' OCB. It has also been suggested that, it is important that the superior must adopt the appropriate leadership styles to manage their subordinates in order for them to perform beyond their call of duties. The moderating effect of subordinates' competence level will also be investigated and it is expected to shed light on how this variable strengthen or weaken the interaction between leadership styles and OCB. In an attempt to solicit subordinate super-ordinate effort in the organization, OCB is included as an outcome variable of this study. Correlation should exist to highlight the relevant leadership style in promoting subordinates' OCB in the organization.

References

- Armstrong, M. & Baron, A. (1995). *The Job Evaluation Handbook*. Institute of Personnel Development, London.
- Bass, B. M. (1985). *Leadership and Performance Beyond Expectations*. Free Press, New York.
- Bass, B. M. (1990). From transactional to transformational leadership: Learning to share the vision. *Organizational Dynamics*, 18(3), 19-6.
- Bass, B. M. & Avolio, B. J. (1990). Transformational leadership: A response to critiques. In M.M Chimer & R. Ayman (Eds.), *Leadership Theory and Research: Perspectives and Directives* (pp 49-80). New York: Academic Press.
- Bateman, T. S. & Organ, D. W. (1983). Job satisfaction and the good soldier: The relationship between affect and employee "citizenship". *Academy of Management Journal*, 26, 587-595.
- Brief, A. P. & Motowidlo, S. J. (1986). Prosocial organizational behaviours. *Academy of Management Review*, 11, 710-725.
- Boerner, S, Eisenbesiss, S.A. & Griesser, D. (2007). Follower behavior and organizational performance: The impact of transformational leaders. *Journal of Leadership and Organizational Studies*, 13(3): 15-26.
- Boyatzis, R.E. (1982). *The Competent Manager: A Model for Effective Performance*, John Wiley, New York, NY.
- Burns, J. M. (1978). *Leadership*. Harper and Row, New York, NY.
- Bycio, P., Hackett, R. D. & Allen, J. S. (1995). Further assessments of Bass's (1985) conceptualization of transactional and transformational leadership. *Journal of Applied Psychology*, 80, 468-478.
- Deluga, R. J. (1995). The relationship between trust in the supervisor and subordinate organizational citizenship behavior. *Military Psychology*, 7, 1-16.
- Dennison, D. (1984). Bringing corporate culture to the bottom line. *Organizational Dynamics*, 13, 4-22.
- Dio (1979). Participative decision making: a comparative study. *Industrial Relations*, 18, 295-309.
- Dockery, T.M. & Steiner, D.D. (1990). The role of the initial interaction in Leader-Member Exchange. *Group & Organization Studies*, 15(4), 395.
- Drucker, P. (1993). *Post-capitalist Society*, Butterworth-Heinemann, Oxford.
- Folger, G. (1993). Justice, motivation, and performance beyond role requirements. *Employee Responsibilities and Rights Journal*, 6(3), 239-248.
- Garavan, T. & McGuire, D. (2001). Competencies and workplace learning: Some reflections on the rhetoric and the reality. *Journal of Workplace Learning*, 13(4), 144-63.
- Geyer, L. & Steyrer, J. M. (1998). Transformational leadership and objective performance in banks. *Applied*

Psychology: An International Review, 47, 97-420.

Graham, J. (1988). Transformational leadership: Fostering follower autonomy, not automatic followership. In J. Hunt, B. Baglia, H. Dachler & C. Schriesheim (Eds.), *Emerging Leadership Vistas*. Lexington Books: Lexington, MA; pp 73-79.

Hater, J. J. & Bass, B. M. (1988). Superiors' evaluations and subordinates' perceptions of transformational and transactional leadership. *Journal of Applied Psychology*, 73, 695-702.

Howell, J.M. & Avolio, B.J. (1993). Transformational leadership, transactional leadership, locus of control, and support for innovation: Key predictors of consolidated-business-unit performance. *Journal of Applied Psychology*, 78, 891-902.

Katz, D. & Kahn, R. L. (1966). *The Social Psychology of Organizations*. New York: Wiley.

Kelman, H. C. (1958). Compliance, identification and internalization: Three processes of opinion change. *Journal of Conflict Resolution*, 2, 51-60.

Lamude, K. G. (1994). Supervisors' influence tactics for handling managers' resistance. *Psychological Reports*, 75, 371-374.

Lee, M. & Koh, J. (2001). Is empowering really a new concept? *Journal of Human Resource Management*, 12(4), 684-95.

Locke, E.A, Feren, D.B, Mccaleb, V.M, Shaw, K.N & Denny, A.T. (1980). The relative effectiveness of four methods of motivating employee performance. In K. Dunchan, M. GruneBerg & D. Walls (Eds.), *Changes in working life* (pp. 363 – 388).

Locke, E.A & Schweigner, D.M. (1979). Participation in decision making: One-more look. In B.M. Staw (Ed.), *Research in organization behaviour* (pp. 265-339)

Lowe, K. B., Kroeck, K. G. & Sivasubramaniam, N. (1996). Effectiveness correlates of transformational and transactional leadership: A meta-analytic review of the MLQ literature. *Leadership Quarterly*, 17, 385-425.

Masterson, S. S., Lewis, K., Goldman, B. & Taylor, M. S. (1996). Integrating justice and social exchange: The differing effects of fair procedures and treatment on work relationships. *Academy of Management Journal*, 43, 738-748.

McClelland, D.C. (1973). Testing for competence rather than for intelligence. *American Psychologist*, 28(1), 1-14.

O'Reilly, C. & Chatman, J. (1986). Organizational commitment and psychological attachment: The effects of compliance, identification, and internalization on prosocial behavior. *Journal of Applied Psychology*, 71(3), 492-499.

Organ, D. W. (1988). *Organizational Citizenship Behavior: The Good Soldier Syndrome*. Lexington, MA: Lexington Books.

Organ, D. W. & Konovsky, M. (1989). Cognitive versus affective determinants of organizational citizenship behavior. *Journal of Applied Psychology*, 74, 157-164.

Podsakoff, P.M., Mackenzie, S.B. & Bommer, W.H. (1996). A meta-analysis of the relationships between Kerr and Jermier's substitutes for leadership and employee job attitudes, role perceptions and performance. *Journal of Applied Psychology*, 81, 380-399.

Podsakoff, P. M., MacKenzie, S. B. Morrman, R. H. & Fetter, R. (1990). Transformational leader behaviors and their effects on follower's trust in leader satisfaction and organizational citizenship behaviors. *Leadership Quarterly*, 1, 107-142.

Podsakoff, P. M., Todor, W. D., Grover, R. A. & Huber, V.L. (1984). Situational moderators of leader reward and punishment behaviors: Fact or fiction? *Organizational Behavior and Human Performance*, 34(1), 1-63.

Podsakoff, P. M., Todor, W. D. & Skov, R. (1982). Effects of leader contingent and non contingent reward and punishment behaviours on subordinate performance and satisfaction. *Academy of Management Journal*, 22, 810-821.

Schmidt, S. M. & Kipnis, D. (1984). Manager's pursuit of individual and organizational goals. *Human Relations*, 37, 781-794.

Schlechter, A.F. & Engelbrecht, A.S. (2006). The relationship between transformational leadership, meaning and organizational citizenship behavior. *Management Dynamics*, 15(4), 2-16.

Seltzer, J. & Bass, B. M. (1990). Transformational leadership: Beyond initiation and consideration. *Journal of Management*, 16(4), 693-703.

Spencer, L.M. (1983). *Soft Skills Competencies*. Scottish Council for Research in Education, Edinburgh.

Tharenou, P. & Harker, P. (1984). Moderating influence of self-esteem on relationships between job complexity, performance, and satisfaction. *Journal of Applied Psychology*, 69(4), 623-632.

Tremblay, M. (2000). Organisational and individual determinants of a typical employment: The case of multiple jobholding and self-employment, IQRC, Montreal.

Wagner, F.R. & Morse, J.J. (1975). A measure of individual sense of competence. *Psychological Reports*, 36, 451–459.

Wang, H., Law, K.S., Hackett, R.D., Wang, D. & Chen, Z.H. (2005). Leader-member exchange as a mediator of the relationship between transformational leadership and followers' performance and organizational citizenship behavior. *Academy of Management Journal*, 48(3), 420-432.

Williams, L. J. & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behavior. *Journal of Management*, 17, 601-617.

Yukl, G. A., Falbe, C. M. & Youn, J. Y. (1993). Patterns of influence behavior for managers. *Group and Organizational Management*, 18, 5-28.

Notes

Note 1. Theoretical model depicting interactions involving leadership style, subordinate competence and OCB.

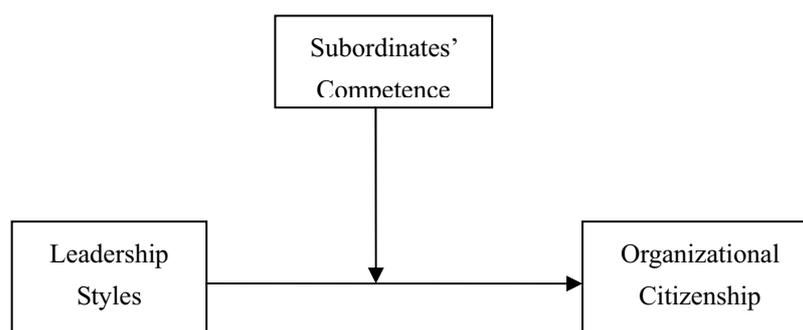


Figure 1. Proposed Model of Leadership Styles and Interactions



Does Tourism Contribute Significantly to the Malaysian Economy? Multiplier Analysis Using I-O Technique

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Abstract

The objective of this paper is to examine the contribution made by tourism sector through deriving multipliers in terms of output, income, employment, value added, and import for the Malaysian economy using input-output techniques. Normal and ratio multipliers were measured to demonstrate the contribution made by tourism industry and its linkages with the other sectors of the economy. International tourist expenditure makes highest contribution in generating output since output multiplier is seven times higher than import multiplier. The lower value of import multiplier represents that the amount of leakage that occurs as a result of tourist expenditure is not significant. It is also evident from the results that secondary effect of tourist expenditure is found to be higher in generating output and value added. The lower value of secondary effect on income and employment suggests that tourism industry is relatively labour-intensive in nature. The multiplier analysis is found to be effective in appropriate policy making for the tourism industry. However, multiplier analysis of tourism industry of Malaysia possesses that this industry is contributing significantly to the economy and proves as a potential sector to enhance economic growth towards a developed nation by 2020.

Keywords: Tourism, Input-output technique, Multiplier, Malaysian economy

1. Introduction

Malaysia is well endowed with abundance of natural resources particularly suitable for sustainable tourism. Tourism industry maintains its sustainability through its economic viability. Increasing attention has been given by the Malaysian government to develop sustainable tourism as an alternative source of foreign exchange to remedy the balance of payment deficit during 1980's. Tourist expenditure is not only contributing significantly to the direct tourism related sectors but also generating ripple effects on other sectors of the economy. Thus, tourism stimulates the economic progress of developing economies and its importance is gaining widespread recognition. Unlike many developing nations, tourism industry is now considered as one of the important engines of development for the Malaysian economy receiving vital focus in the government's industrial strategy. The development allocation for this industry has been increasing over the years. It has been increased from RM605.5 million in the 7th Malaysian plan to RM1009.0 million in

the 8th Malaysian plan period, experiences 60% increase in its allocation (EPU, 2001). In the 9th Malaysian plan period, the allocation reached to RM1367.0 million (EPU, 2006).

Tourism department officially begun in 1959 was transformed to Tourism Development Corporation (TDC) in the early 1970's, the beginning of 'new era' for the Malaysian tourism industry. The recognition also came following a phenomenal growth rate experienced by the industry since the late 1960s (Din, 1984; Wong, 1986). TDC was formed in 1972 under the Ministry of Trade and Industry (MITI), which was responsible for the coordination, development, and promotion of domestic and international tourism (Din, 1984; Wong, 1986). During the period of 1970s, government efforts to develop tourism was set off to several development objectives such as, increasing foreign exchange earnings, increasing employment, and income levels, fostering regional development, diversifying the economic base, and increasing government revenue (Khalifah and Tahir, 1997). The concentrated effort was given to the development of basic infrastructure for tourism in that period. Tourism industry accrued higher priority from the government in 1980s when traditional export sectors faced a decline in their performance due to global recession. Government supports for tourism continued with the establishment of the Ministry of Tourism and Culture in 1987 later renamed as the Ministry of Culture, Arts, and Tourism (MOCAT) in 1990. The industry has had full support in terms of funding, planning, coordination, regulation and enforcement (Musa, 2000) with formation of MOCAT which was upgraded to the Ministry of tourism in 2004 to coordinate, direct, and ensure that all tourism development initiatives and programs were implemented according to National Tourism Master Plan in line with the government's objective to encourage and accelerate the domestic private sector and stimulate the tourism sector to lead the growth of the economy.

The industry not only creates considerable high multiplier effects and linkages in the economy, but also fosters national integration and unity" (GOM, 1991). If this trend of tourism growth in Malaysia continues, it may surpass manufacturing sector, which, since 1987 has been the country's engine of growth. The revenue earned from international tourism has a pivotal role that directing Malaysian economy to higher growth (Sadi and Bartels, 1997).

Malaysian economy's current account balance remains relatively resilient with manufacturing and tourism taking the lead. Tourism industry is currently the second largest foreign exchange earner, after manufacturing. Tourism receipts increase significantly over the last three decades. Increase in tourism receipts in 1982-2007 periods was about 42 folds on an average of 12.42 per cent annually with an average annual growth of 17.58 per cent. Tourism receipts increase with the increase in tourist arrivals. For instance, tourists' arrivals have increased from 2.7 million in 1982 to 13.3 million in 2002, and to 20.97 million in 2007 with an average annual growth rate of 10.17 per cent (Figure 1).

In the service account of the balance of payments, the share of tourism revenue in total earnings increased from 32.7 percent in 2000 to 43.0 percent in 2005. According to Economic Report 2007/2008, gross tourism earnings have increased to RM38.2 billion in 2006, responsible for 6.7 per cent of nominal GDP. During 2003-2007 periods, tourism industry contribution to GDP has increased from 5.6% to 7.4%. Furthermore, this industry also plays a pivotal role in increasing the living standard of low-income groups.

Malaysia is on the verge of a tourism boom and tourism industry contributes to socio-economic development and quality of life. Tourism and hotel industry in Malaysia showed an upward trend until the onset of financial crisis in 1997, SARS and the US-Iraq war in 2003 (Poon and Low, 2005). Within these world consequences, tourism sector was not that jeopardised like other sectors of the Malaysian economy. It can be envisaged that this industry will continue to be a major source of growth and a key driver in the development of services sector during the 9th Malaysia Plan period (2006-2010). The tourism industry has come a long way since its inception in 1959 with only a Tourism Department back then. Today, half of a century later, the industry has reached to such a magnitude to become the second highest foreign exchange earner to the national economy experiencing tremendous growth from year to year (Figure 1).

This paper hopes to gain more current and applicable information about the economic contribution of international tourism through estimating tourism multipliers for the Malaysian economy, to strengthen the basis for making informed decisions concerning tourism development. A better understanding of the economic contribution of tourism can be achieved by examining the tourist industry in terms of income, output, employment, value added and import multipliers that will assist policy makers in appropriate planning.

The initial injection of tourist expenditure has direct, indirect (production induced), and induced (consumption induced) impacts on the local economy. This process of multiplier effect of tourist expenditure continues until money goes out of the circulation in the form of leakages through savings, taxes, and imports. This ripple effect in an economy is termed the 'tourism multiplier' (Wanhill, 1994). Therefore, estimating tourism multipliers will provide insights about the contribution made by different sectors of the tourism industry in the Malaysian economy. In tourism economics, examination of the economic impact has usually been based on multipliers derived from input-output (I-O) analysis (Sinclair, 1998; Wagner, 1997). The measurement of multipliers (output, income, employment, value-added and import) shows the effect of a unit increase in tourism expenditure on other production sectors of an economy. With the expansion of tourism, which sector demand more inputs or factors of production from other sectors and magnitude of

these changes can be illustrated by estimating tourism multipliers. In estimating tourism multipliers this paper uses input-output technique that perhaps measure the significance of tourism industry for the Malaysian economy.

2. Literature review

Development of tourism multipliers using input-output technique carried out by researchers drawn an attention only after 1960's with one of the prominent literature in estimating the economic impact of tourism in Missouri state economy was carried out by Harmston (1969). Since then, estimation of economic significance of tourism industry is playing a vital role in tourism economics. Most importantly, the determination of multipliers of tourist expenditure was the major concern constituted one of the most researched issues (Sinclair, 1998). Estimation of the multipliers of tourism was conducted by researchers at state or county level (Bryden, 1973; Archer, Shea and Vane, 1974; Armstrong, Daniel and Francis, 1974; Liu and Var, 1983; Liu, 1986; Fassenmaier et.al., 1989; Teisl and Reiling, 1990; Vilaplana, Pai and Hushak, 1991; Archer, 1995; Andrew, 1997; Martin, 2004) and nation-wide level (Diamond, 1976; Archer, 1985; Ruiz, 1985; Heng and Low, 1990; Khan, Seng, and Cheong, 1990; Kweka, Morrissey, and Blake, 2001; Durbarry, 2002; Crespo and Diaz, 1997; Khan, Phang, and Toh, 1996; Tohamy, 2001). Most of the previous empirical studies adopted input-output technique to evaluate the total economic impact of tourist expenditure and concentrated on estimating multiplier values of tourism for different countries using input-output analysis. The previous empirical studies emphasized on estimating output and income multipliers only. Kweka et.al. (2003) measured the economic potential of tourism in Tanzanian economy using input-output technique. The major drawbacks of their analysis are they only represent the direct and indirect effect of tourism. Another drawback of their exercise is that they only consider hotel and restaurant sector as the only tourism related sector. One of most recent study was conducted by Rashid and Bashir (2004) on the Malaysian tourism industry using primary input partial multipliers. The principle weakness of input partial multiplier is that it does not consider household sector in estimating induced effect, thus their study failed to analyse income and employment effect accurately. Therefore, this study considers the direct, indirect, and induced multiplier effects to overcome the shortcomings of Rashid and Bashir (2004) study, where household consumption and income vectors are included in the Leontief matrix.

This paper is organized according to the following details. Section 1 describes the background of tourism in Malaysia, followed by summary of the previous studies are evident in section 2. Input-output techniques is used to determine the direct, indirect, and induced multiplier effects of tourists expenditure in terms of output, income, employment, value-added, and import were outlined in section 3. Section 4 is devoted to results and discussions. In section 5, some policy implications are addressed with conclusion.

3. Methodology

There are a number of methodologies developed to determine the multipliers. The most widely used approach is the input-output technique. The major strength of input-output analysis is that it provides detailed information on direct, indirect and induced effects of visitor spending on all economic measures for different industries in the local economy (Loomis and Walsh, 1997). Therefore, in order to satisfy the aforementioned objectives, the methodology employed in this paper is based on Leontief input-output techniques where structure of an economy is analyzed in terms of inter-relationships between economic sectors (e.g. Miller and Blair, 1985). The input-output technique of a particular economy represents the flow of goods and services among its different industries for a particular time period. In the framework of input-output technique, the relationships between economic sectors can be described in a system of linear equations where total output produced by each sector is either consumed as an intermediate input by other sector, or, sometimes internally by the producing sector itself, or, by the final demand sector, or both. The presentation of the flow of goods and services could be expressed either by physical units or in money terms. To define, let there be an economy with n -producing sectors and a final demand sector. Total output of sector i will be:

$$X_i = \sum_{j=1}^n x_{ij} + F_i \quad (1)$$

where, X_i = gross output of sector i ; X_{ij} = the sales of sector i to sector j ; F = the final demand vector; $i= 1, \dots, n$

Let a_{ij} be the technical (input) coefficient which represents the amount (value) of sector i 's output needed to produce one unit (one Ringgit) of sector j 's output; thus, using the assumption of constant production coefficient, we get:

$$a_{ij} = x_{ij}/X_j \quad \text{or} \quad x_{ij} = a_{ij} X_j$$

Which means that the total value of purchases of goods and services by sector j from sector i is $a_{ij} X_j$.

Therefore, for a given target of final demand on goods and services, F , this relation defines how much each producing sector must produce in order to satisfy a particular bundle of final demand on goods and services, i.e., Equation (1) in reduced matrix form can be written as:

$$X = AX + F \quad (2)$$

Solving the equation (2) can be found as:

$$X = [I - A]^{-1} F \quad (3)$$

In Equation (3), X is the output vector; I is an identity matrix and $[I - A]^{-1}$ is the total requirement matrix or mostly known as the Leontief inverse matrix.

The general solution of Equation (3) determines how much each sector of the economy must produce in order to satisfy a given level of final demand. It is mandatory that $[I - A]$ should be a non-singular matrix meaning that the determinant of $[I - A]$ does not equal to zero to have a unique solution in the form of $[I - A]^{-1}$. When the Leontief inverse matrix is assumed to be $[I - A]^{-1} = Z$, then z_{ij} 's stand for the elements of the Leontief inverse matrix. Each element of the $[I - A]^{-1}$ shows the direct and indirect requirements of output of sector i per unit of final demand.

4. Multiplier Analysis

Central to any analysis related to measure the contribution of an activity are economic multipliers, which are derived from the inverse coefficients or total requirements table. In developing multipliers related to tourism sectors in the Malaysian economy, the following procedures are followed. First, Malaysian input-output transaction table is aggregated to 52 sectors. Followed by, the construction of direct requirements matrix. Then, direct and indirect requirement matrixes construction is done. In step four, we develop the direct, indirect, and induced requirement matrix. Tourism multipliers are derived in step five.

The 94X94 sectors of Malaysian economy transactions table has been aggregated into 52X52 sectors. Average expenditure patterns of tourist have been allocated to the relevant industrial input-output categories taken from 52X52 sectors. This means that the input-output transactions table that has been considered in this study includes: (1) fifty two processing sectors; (2) six final demand sectors; and (3) five payment sectors. Since leakages are substitutes for domestic production, the input-output technique has been modified in this analysis reflects the import leakages as:

$$X_{52 \times 1} = A^d_{52 \times 52} * X_{52 \times 52} + F_{52 \times 1} - IM_{52 \times 1} \quad (4)$$

Where,

$X_{52 \times 1}$ = the vector of gross output produced by each of 52 sectors for the Malaysian economy,

$A^d_{52 \times 52}$ = the direct requirements (input coefficients) matrix for 52 sectors, which represents domestic production,

$X_{52 \times 52}$ = the diagonal matrix with each of 52 sectors gross output on the diagonal,

$F_{52 \times 1}$ = the vector of final demand sold by 52 sectors,

$IM_{52 \times 1}$ = the vector of imports made by 52 sectors.

The matrix of input coefficients, " $A^d_{52 \times 52}$ " represents only the direct effects of any change in tourist expenditure. To reflect the direct and indirect effects, the matrix of input coefficients must be subtracted from an identity matrix and then, the results are inverted as:

$$X_{52 \times 1} = (I_{52 \times 52} - A^d_{52 \times 52})^{-1} (F_{52 \times 1} - IM_{52 \times 1}) \quad (5)$$

Where,

$I_{52 \times 52}$ = a 52X52 identity matrix,

$X_{52 \times 1}$, $A^d_{52 \times 52}$, $F_{52 \times 1}$, and $IM_{52 \times 1}$ = as per equation (1),

$(I_{52 \times 52} - A^d_{52 \times 52})^{-1}$ = the direct and indirect requirements matrix for 52 sectors.

Tourist expenditure generates income for the economy. According to Keynes, if a certain amount of income due to an exogenous expenditure were injected into an economy, consumer spending would increase by less than the injection of income (Miernyk, 1965). In the same way, Archer (1982) also revealed that an increase in household income (wages and salaries) resulting from tourist spending would lead to a rise in household consumption. This increase in household consumption provides further impetus to the economic activity, such as income, employment and business turnover. This is known as induced effect of tourist spending.

Therefore, this study expanded the input-output technique through the inclusion of the household sector as one of the processing sectors. Because of the inequality between the sum of compensation of employee and the sum of private consumption in the Malaysian input-output transaction table, it is necessary to make a reconciliation of the household row and the column totals by adjusting some of the other entries in the payment and final demand sectors (Miernyk, 1965).

Once this adjustment has been made, the new matrix of technical coefficients yields a new Leontief inverse matrix as

$$X_{53X1} = (I_{53X53} - A^d_{53X53})^{-1}(F_{53X1} - IM_{53X1}) \quad (6)$$

Where,

X_{53X1} = the vector of gross output produced by each of 53 sectors including the household sector,

A^d_{53X53} = the new direct requirements matrix for 53 sectors including the household sector,

F_{53X1} = the vector of final demand sold by 53 sectors,

IM_{53X1} = the vector of imports made by 53 sectors.

$(I_{53X53} - A^d_{53X53})^{-1}$ = the direct + indirect + induced requirements matrix with being the household sector endogenous.

One of the most powerful mathematical analytical tool named MATLAB has been used to compute the new Leontief inverse matrix, $(I_{53X53} - A^d_{53X53})^{-1}$ which would measure the direct, indirect, and induced effects of any change in tourist expenditures in the Malaysian economy. Once the direct, indirect, and induced requirements matrix has been estimated, the output, income, employment, value-added, and import multipliers can be derived for each of six tourism sectors. The output multiplier shows how much one additional unit of tourist spending increases the level of output in the Malaysian economy. By denoting the direct, indirect, and induced requirements matrix of $(I - A^d)^{-1}$ as "M", the output multipliers for each of six tourism sectors can be calculated as:

Where,

$$O_{1X6} = i_{1X6} * M_{6X6} \quad (7)$$

O_{1X6} = the vector of output multipliers for six tourism sectors in the Malaysian economy,

i_{1X6} = the (final demand) vector of six tourism sectors,

M_{6X6} = the direct + indirect + induced requirements matrix for six tourism sectors.

The income multiplier for a particular tourism sector measures the change in household income for that sector resulting from one additional unit change in tourist spending. The income multiplier for each of six tourism sectors can be estimated as:

$$E_{1X6} = (H_{1X6} / X_{1X6}) * M_{6X6} \quad (8)$$

Where,

E_{1X6} = the vector of income multipliers for six tourism sectors in the Malaysian economy,

H_{1X6} = the vector of household income for six tourism sectors expressed in millions of Ringgit,

X_{1X6} = the vector of gross output for six tourism sectors expressed in millions of Malaysian Ringgit,

(H_{1X6} / X_{1X6}) = the vector of direct income effects for six tourism sectors,

M_{6X6} = as per equation (7).

The employment multiplier for a particular tourism sector measures the number of jobs generated for that sector as a result of one additional unit of tourist expenditures. The employment multiplier for each of six tourism sectors can be computed as:

$$L_{1X6} = (E_{1X6} / X_{1X6}) * M_{6X6} \quad (9)$$

Where,

L_{1X6} = the vector of employment multipliers for six tourism sectors in the Malaysian economy,

E_{1X6} = the vector of paid employees for six tourism sectors expressed in millions of Ringgit,

X_{1X6} = the vector of gross output for six tourism sectors expressed in millions of Malaysian Ringgit,

(E_{1X6} / X_{1X6}) = the vector of direct employment effects for six tourism sectors,

M_{6X6} = as per equation (7).

The value-added multiplier for a particular tourism sector measures the change in value-added for that sector resulting from one additional unit change in tourist spending. The value-added multiplier for each of six tourism sectors can be estimated as:

$$VA_{1X6} = (V_{1X6} / X_{1X6}) * M_{6X6} \quad (10)$$

Where,

VA_{1X6} = the vector of value-added multipliers for six tourism sectors in the Malaysian economy,

$V_{1 \times 6}$ = the vector of value-added for six tourism sectors expressed in man-years,

$X_{1 \times 6}$ = the vector of gross output for six tourism sectors expressed in millions of Malaysian Ringgit,

$(V_{1 \times 6} / X_{1 \times 6})$ = the vector of direct value-added effects for six tourism sectors,

$M_{6 \times 6}$ = as per equation (7).

The import multipliers for a particular tourism sector measures the change in import for that sector resulting from one additional unit change in tourist spending. The import multiplier for each of six tourism sectors can be estimated as:

$$S_{1 \times 6} = (IM_{1 \times 6} / X_{1 \times 6}) * M_{6 \times 6} \quad (11)$$

Where,

$S_{1 \times 6}$ = the vector of import multipliers for six tourism sectors in the Malaysian economy,

$IM_{1 \times 6}$ = the vector of import for six tourism sectors expressed in millions of Ringgit,

$X_{1 \times 6}$ = the vector of gross output for six tourism sectors expressed in millions of Malaysian Ringgit,

$(IM_{1 \times 6} / X_{1 \times 6})$ = the vector of direct import effects for six tourism sectors,

$M_{6 \times 6}$ = as per equation (7).

5. Description of Data Collection

Tourism industry is not classified as single industry according to SIC code of Malaysia. This industry is formed by aggregating different economic activities that serve it directly. In order to determine tourism multipliers through input-output techniques, the Year 2000 Malaysian national input-output transaction table (the latest table published by department of statistics in the year of 2005) has been utilized. Sectoral gross output and household income for 2000 were obtained from the 2000 Input-Output transaction table. The number of paid employees' for the year 2000 was derived from considering compensation of employees' row of the 2000 Input-Output transaction table. Apparently, Import and value added data have been taken from the 2000 Malaysian Input-Output transaction table. The 2000 Input-Output tables are a 94 X 94 sector Input-Output matrix of Malaysia. In this study, the 94 sectors in a transaction table are aggregated into 52 sectors and focus given to tourism-related sectors. Next, this transaction table is constructed into a technical coefficient matrix in order to conduct further analysis. Then, coefficient table is developed to derive multipliers. The aggregating process follows the guideline of Handbook of Input- Output Table Compilation and Analysis, UN, New York, 1999 (UN, 1999). Additional information and data was collected from Malaysian Tourism Promotion Board (MTPB).

6. Results and Discussion

This section represents contributions made by tourism sector. The multipliers are derived in terms of output, income, employment, value-added and import in the Malaysian economy. According to the research objectives, this study uses Input-Output technique to derive multipliers for the tourism industry.

6.1 Average Tourism Multipliers

(Table 1) shows the estimates of the average output multipliers on the Malaysian economy where both normal and ratio multipliers are evident.

The average tourism output multiplier illustrates that every Ringgit increase in the tourist expenditure would generate 1.42 Ringgit. The direct, indirect and induced effects that attributed to the total on average effect are 0.22, 1.14 and 0.07 respectively. The large figure or proportion of the indirect effect indicates the importance of the secondary effect. The relatively high Type I (6.26) and Type II (6.56) multipliers indicates relatively strong linkages with all sectors of the economy which is analogous to the secondary effect of tourism reflecting the significance of the secondary impact of tourism.

Accordingly, tourism average income multiplier shows the creation of local incomes in the form of salaries, wages, profits, rents, and interest at direct, indirect and induced levels, as a result of tourist expenditure. The average income multiplier of tourism that is represented in (Table 1) indicates that for every Ringgit of tourist spending generates 0.35 Ringgit of household income to the Malaysian residents. Out of 0.35 income multiplier of tourism on average, 0.27 Ringgit contributed by direct income effect, the indirect income effect is responsible for generating 0.07 Ringgit of income, and 0.01 Ringgit is contributed by induced income effect in the Malaysian economy. The secondary income effect of the tourism industry (0.07) is relatively not that much larger than the primary income effect (0.27) compared to output effect in which secondary output effect was about 6 times larger than primary output effect (0.22). Analysis of comparison between secondary and primary effect of income suggests that tourism industry is relatively high wage intensive in nature. This can be observed from relatively low Type I (1.24) and Type II (1.29) income multipliers.

Tourism average employment multiplier measures the average number of employment generated for a given unit of tourist expenditure. The on average tourism employment multiplier (Table 1) is found to be 0.174 per one million Ringgit of the tourism sector's output, meaning that a total of 174 full-time employments have been generated by tourism for every billion Ringgit of tourist expenditure. Of the total of 174 full-time employments, the direct employment effect attributes 125 employments, 40 employments are contributed by indirect employment effect and induced employment effect generates 9 employments. The smaller number of indirect and induced employment effects signify the less importance of secondary effect in generating employment when compared with direct employment effect. The relatively low Type I (1.32) and Type II (1.39) results representing the apparent outcome.

Likewise, average amount of local income that a specific tourism sector generates in the Malaysian economy in the form of salaries and wages, surpluses by business operation, and depreciation or consumption of fixed capital, resulting from one Ringgit increase in tourist expenditure can be explained by value-added multipliers of tourism. The on average value-added multiplier of tourism reflects that every Ringgit of tourist spending approximately contributes 0.56 Ringgit of income to the resident economy. Out of this 0.39 Ringgit is generated by direct value-added effect, indirect value-added effect generates 0.14 Ringgit to the local economy and 0.03 Ringgit is the amount of local income that has been generated by induced value-added effect.

The import multiplier of tourism in the Malaysian economy symbolizes the proportion of one Ringgit of exogenous tourism expenditure needed to import in order to produce one Ringgit worth of the output for a particular tourism sector. In other words, the amount of leakages from the economy per Ringgit of tourist expenditure is measured by the import multiplier. As presented in (Table 1), the on average tourism import multiplier implies that approximately 0.22 Ringgit is leaking out from the Malaysian economy for one Ringgit of expenditure of tourists.

6.2 Output Multiplier

The output multipliers of the Malaysian tourism industry of each of the six tourism sectors are represented in (Table 2) including normal and ratio multipliers. Among the tourism related sectors, the food and Beverage sector yields the largest output multiplier with multiplier of 1.82. Of the total output multiplier generated by tourism, the corresponding contribution of direct, indirect and induced effects are 0.43, 1.26 and 0.04 Ringgit respectively. The accommodation sector constitutes the second most important output generating sector with the multiplier of 1.44. Of this multiplier, 0.22 Ringgit created by direct effect, 1.16 Ringgit by indirect effect and 0.05 Ringgit by induced effect. Tour and transportation sector is the third most important sector generated the multiplier of 1.41. The other remaining tourism sectors, such as miscellaneous services (1.36), entertainment (1.28), and shopping sector (1.20) retained low output multipliers with less than a tourism industry average of 1.42. The shopping sector yields the largest Type I and Type II multipliers which are greater than the industry average of 6.26 and 6.56 respectively, reflecting the high degree of interdependence with all sectors in the economy. Among the obtained multipliers, it is noticeable that the sectors that generate high normal multipliers yield low ratio multipliers which are even lower than industry average. Such as, regardless of high normal multipliers, the sector of Food and Beverage yields low ratio multipliers of Type I (4.17) and Type II (4.27) that imply that this sector has relatively weak linkages with other sectors of the economy. The sector of Tour and Transport yields the second lowest ratio multiplier of Type I (5.56) and Type II (5.80) whereas accommodation sector generates the third lowest ratio multiplier of 6.27 and 6.51 for Type I and Type II respectively.

6.3 Income Multiplier

Income multiplier estimates the amount of local income that has been generated as a result one Ringgit injection of tourist expenditure in the form of salaries, wages, profits, rents, and interest at direct, indirect and induced levels. According to our findings i.e., (Table 3), the entertainment sector is found to be the most important income generating sector with highest income multiplier of 0.72. The second most important sector is the accommodation sector in terms of income generation which is holding the income multiplier of 0.66. The tourism income multipliers for these two sectors are greater than the industry average of tourism (0.35). Among the tourism related sectors, the food and beverage sector and tour and transport sector have been secured the third and fourth position respectively, generating 0.29 Ringgit and 0.19 Ringgit of household income per Ringgit of tourist expenditure, respectively. The miscellaneous sector remains last while the shopping sector retains fifth in terms of income generation. The income multiplier for miscellaneous service sector is 7 times smaller than that of entertainment sector. Though miscellaneous sector obtained lowest normal multiplier, this sector has the highest Type I (2.48) and Type II (3.59) income ratio multipliers. Contrary to the fact that while the entertainment sector is the most important income generating sector in terms of normal multiplier, this sector has the lowest Type I (1.09) and Type II (1.11) ratio multipliers.

It can be conclude that multipliers gathered from normal and ratio approaches tend to have opposite directions and patterns. Such as, it has been noticed that the entertainment sector has been found to be the second lowest Type I (1.09) and Type II (1.11) ratio multipliers while this sector was the second most important sector in terms of normal income multiplier. These paradoxical patterns were found in the study of Gwynedd by Archer et al. (1974) and in the study of Turkey by Liu et al. (1984).

6.4 Employment Multiplier

The number of employment generated for a given unit of tourist expenditure can be estimated by employment multiplier. The indirect employment effect represents the additional employment resulted from production effect and the induced employment effect describes the induced number of employment created resulting from household consumption. According to our findings in (Table 4), the highest employment multiplier of 0.21 has been retained by the tour and transportation sector. The second highest important sector in generating employment is the shopping sector with a multiplier of 0.20 followed by the accommodation sector with employment multiplier of 0.17. The entertainment sector, miscellaneous services sector and food and beverage sector ranked fourth, fifth and sixth in terms of employment multiplier.

The employment multiplier for tour and transport sector is higher than the industry average and about two times bigger than food and beverage sector. Thus indicating that the propensity to generate employment is high by this sector compared to other tourism sectors. This also explains that the tour and transport business is more labour-intensive than any other sector of the tourism industry. When ratio multipliers are taken into consideration, the food and beverage sector with lower normal multiplier has relatively strong linkages with the rest of the sectors of the economy. While tour and transportation sector retains the highest normal multiplier, it has relatively low ratio multipliers. It is also evident that the shopping sector with second highest normal multiplier has relatively weak linkages. Similar to the results found for the output and income multiplier, contrary results between normal and ratio multipliers are also apparent in employment multiplier analysis.

6.5 Value-Added Multiplier

The Ringgit amount of value that has been added in the form of salaries and wages, surpluses, and consumption of fixed capital on a particular product due to a one unit increase in tourism expenditure is estimated by calculating value added multipliers. The largest value-added multiplier of 0.78 is generated by the shopping sector, followed by entertainment sector with value-added multiplier of 0.74 (Table 5).

The tour and transportation sector and accommodation sector are appeared to be the third and fourth most important sector in regard to the generation of local income. Nevertheless, the miscellaneous services sector has emerged as the least important sector in the generation of local income. Relatively small increase in the value of indirect effect and induced effect compared to the direct effect reflects the less importance of the secondary effect. The contribution of shopping sector is significant in generating value-added lying above the industry average and more than three times bigger than miscellaneous service sector. Though the normal value-added multiplier of shopping sector (0.78) is the highest among the sector, the ratio multiplier is the lowest generating type I ratio multiplier of 1.21 and type II ratio multiplier of 1.29 respectively in compared to other sectors that suggest that this sector has relatively weak linkages with the other sectors of the economy in generating local income. Whereas value-added multiplier of miscellaneous services sector yields the lowest normal value added multiplier of 0.31 but yields the highest ratio multiplier of Type I (1.18) and Type II (1.29) (Table 5). This reverse nature of multipliers is analogous to the previously illustrated multipliers.

6.6 Import Multiplier

Import multiplier (Table 6) represents the amount of tourist expenditure leaking out of the economy to pay for the direct, indirect and induced imports of goods and services required to satisfy tourist consumption. The lower the import multiplier, the less tourism receipts will leak out from the economy. With a multiplier of 0.09, the entertainment sector generates the lowest import multiplier where as the tour and transportation sector produces the highest import multiplier of 0.33. The multiplier of 0.16 has been attributed by the shopping sector which maintains the second lowest import multiplier while the accommodation sector has the second highest import multiplier.

The results show that the tourism sectors with relatively larger value-added multiplier have relatively smaller import multipliers when comparing import multiplier with the value-added multiplier. For instance, the shopping sector has the propensity to generate a large value added multipliers and relatively small import multipliers, whereas the tour and transportation sector has the propensity to generate relatively small value-added with largest import multiplier.

7. Conclusion and Policy Implication

This paper quantified the multipliers of the tourism industry for the Malaysian economy using input-output technique. The faster growth of the sectoral contribution of Malaysian tourism industry and its contribution in generating output, income, employment, value-added, and import is significant. As the economic importance of tourism industry is growing among the policy makers and researchers, this study applied input-output technique to determine multipliers to gauge the significance of tourism in generating output, income, employment, value-added, and import. The obtained average tourism multipliers and sectoral (tourism-related) multipliers reveal several interpretations, first, Malaysian tourism industry not only playing an important role for generating output, income, employment, value-added, and import but also creates spill over effects on other tourism related sectors of the economy. This industry has strong

inter-sectoral linkages with other sectors of the economy. Secondly, results that have been estimated in this study can be considered as a guideline to the tourism industry policy makers to take necessary actions in developing and implementing policies and then to pay attention to promote those areas of tourism where direct, indirect, and induced effect is highest. Multiplier analysis, however, is the best element in policy making that must be taken into account before decisions are made.

According to the results, average tourism output multiplier found in this study represents the direct, indirect and induced effects that attributed to the total are 0.22, 1.14 and 0.07 respectively. The relatively high Type I (6.26) and Type II (6.56) output multipliers reveals that this industry has relatively strong linkages with all sectors of the economy. Furthermore, the average income multiplier of tourist expenditure generates 0.35 Ringgit of household income to the Malaysian residents, of which 0.27 Ringgit contributed by direct income effect, the indirect income effect is responsible for generating 0.07 Ringgit of income, and 0.01 Ringgit is contributed by induced income effect in the Malaysian economy. In addition to this, the on average tourism employment multiplier is found to be 0.174 per one million Ringgit of the tourism sector's output from which a total of 174 full-time employments have been generated by tourism for every billion Ringgit of tourist expenditure.

The results show that the distribution of tourist expenditure is unequal in generating output, income, employment, value-added and import. The highest contribution of tourist expenditure is found for the generation of output since output multiplier is seven times higher than import multiplier. The lowest value of import multiplier is meaning that the amount of leakages that occurs as a result of tourist expenditure is not significant. In other words, tourism industry is less dependent on foreign goods and services in satisfying tourist consumption. It is also evident from the results that secondary effect of tourist expenditure is found to be higher in generating output and value added. The lower value of secondary effect on income and employment suggests that tourism industry is relatively labour-intensive in nature. Analysis of comparison between secondary and primary effect of income suggests that tourism industry is relatively high wage intensive in nature. This can be observed from relatively low Type I (1.24 and 1.32) and Type II (1.29 and 1.39) income and employment ratio multipliers consecutively. It can be observed from the results that the pattern and nature of normal and ratio multipliers are found different. When concern is given to tourism planning and development, these paradoxical results of normal and ratio multipliers distort policy makers in applying tools for appropriate policy initiatives. The support for the normal view on multipliers is pertinently to advocate that the entertainment or recreation businesses as the highest income generating sector to the residents. On the other side, the ratio approaches of multipliers are likely to suggest that miscellaneous sector is the most vital income generating sector. Since the relationships between these two approaches are remarkably opposite, Archer (1977a) noted that "They (ratio multipliers) give no indication per se of the volume of exogenous sale which are required to generate an initial unit of direct income. Without the provision of additional information relating to the creation of endogenous income to units of exogenously-derived expenditure they are valueless as a planning tool." In support to the Archer et al.'s argument, Liu et al. (1984) depict that "Normal multipliers are a better measure of overall benefit, since they provide a direct account of income generated per tourist dollar spent, while the conventional approach of using ratio multipliers gives only the extent to which secondary income generated relative to the direct income received."

The framework that has been developed in this study for the determination of multipliers and their distribution is valuable for empirical measurement that could give required guidelines to policy makers for policy making to acquire economic development through the integration of tourism development. The analysis can assist economies to enact right strategies for the development of tourism sector.

However, based on the analysis of this paper, it is obvious that tourism industry is contributing significantly to the Malaysian economy in terms of generating output, income, employment, and value-added. As Malaysia is aimed to be a developed nation by 2020, this industry has the potential to contribute significantly towards achieving the goal.

References

- Andrew, B. P. (1997). Tourism and the economic development of Cornwall. *Annals of Tourism Research*, 24(3), 721-735.
- Anonymous. (1997b). *Opening New Destinations. Asia Money*. Indonesia: Emerging Opportunities Supplement.
- Archer, B. H. (1995). The Impact of International Tourism on the Economy of Bermuda, 1994. *Journal of Travel Research*, 34(2), 27-30.
- Archer, B.H. (1982). The Value of Multipliers and their Policy Implications. *Tourism Management*, 3(4), 236-41.
- Archer, B. H. (1977a). *Tourism Multipliers: The State of the Art*. Bangor Occasional Papers in Economics (No.11), Bangor: University of Wales Press.
- Archer, B. H. (1985). Tourism in Mauritius: An Economic Impact Study with Marketing Implications. *Tourism Management*, 6(1), 50-54.

- Archer, B. H., Sheila, S., & Richard de Vane. (1974). *Tourism in Gwynedd and Economic Study*. Cardiff: Wales Tourist Board.
- Armstrong, W.E., Daniel, S. & Francis, A. A. (1974). A Structural Analysis of the Barbados Economy, 1968, with an Application to the Tourist Industry. *Social and Economic Studies*, 23(4), 493-520.
- Bryden, J. M. (1973). *Tourism and Development: A Case Study of the Commonwealth Caribbean*. Anglia: Overseas Development Group, University of East Anglia.
- Crespo, N. & Díaz, S. N. (1997). Cuban Tourism in 2007: Economic Impact. [Online] Available: <http://lanic.utexas.edu/la/cb/cuba/asce/cuba7/crespo.pdf> (August 22, 2005)
- Diamond, J. (1976). Tourism and Development Policy: A Quantitative Appraisal. *Bulletin of Economic Research*, 28(1), 36-50.
- Din, K. H. (1984). Tourist Regions and Development Problems in Malaysia. *Ilmu Alam* 12 & 13, 453-480
- Durbarry, R. (2002). The Economic Contribution of Tourism in Mauritius. *Annals of Tourism Research*, 29(3), 862-865.
- Fesenmaier, D.R., Jones, L., Um, S. and Ozuna Jr, T. (1989). Assessing the economic Impact of outdoor recreation travel to the Texas gulf coast. *Journal of Travel Research*, 28(1), 18-23.
- GOM. (1991). *Sixth Malaysia Plan 1991-1995*, Kuala Lumpur: Government of Malaysia.
- Harmston, K. F. (1969). The Importance of 1967 Tourism to Missouri. *Business and Government Review*, 10(3), 5-12.
- Heng, T. M., & Low, L. (1990). Economic Impact of Tourism in Singapore. *Annals of Tourism Research*, 17(2), 246-269.
- Hernández, M. R. (2004). Impact of Tourism Consumption on GDP. The Role of Imports. FEEM Working Paper No. 27.2004. [Online] Available: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=504505 (June 26, 2008)
- Khalifah, Z. and Tahir, S. (1997). Malaysia: Tourism in Perspective. In F. Go & C.L. Jenkins (Eds), *Tourism and Economic Development in Asia and Australasia* London: Cassell, pp. 177-196.
- Khan, H., Phang, S. & Toh, R.S. (1995). Singapore's Hospitality Industry: The Multiplier Effect. *Cornell Hotel and Restaurant Administration Quarterly*, 36(1), 64-74.
- Khan, H., Chou, F. S., & Wong, K. C. (1990). Tourism Multiplier Effects on Singapore. *Annals of Tourism Research*, 17(3), 408-409.
- King, P. (1994, July/August). Growth Sectors, *Corporate Location*, ss6-ss8.
- Kweka, J., Morrissey, O., & Blake, A. (2001). Is Tourism a Key Sector in Tanzania? Input-Output Analysis of Income, Output, Employment and Tax Revenue. Christel Dehaan, Tourism and Travel Research Institute discussion paper 2001/1. [Online] Available: <http://www.Nottingham.ac.uk/ttri> (June 26, 2008)
- Kweka, J., Morrissey, O., & Blake, A. (2003). The Economic Potential of Tourism in Tanzania. *Journal of International Development*, 15, 335-351.
- Liu, J. C. (1986). Relative Economic Contributions of Visitor Groups in Hawaii. *Journal of Travel Research*, 25(1), 2-9.
- Liu, J. C., & Turgut, V. (1983). The Economic Impact of Tourism in Metropolitan Victoria, BC. *Journal of Travel Research* 22(2), 8-15.
- Liu, J. C., Turgut V., & Timur, A. (1984). Tourist Income Multiplier for Turkey. *Tourism Management*, 5(4), 280-287.
- Loomis, J.B. & Walsh, R.G. (1997). *Recreation Economic Decisions: Comparing Benefits and Costs*, State College, PA: Venture Publishing Inc.
- Leontief, W. (1951). *The Structure of American Economy, 1919-1939*. New York: Oxford University Press.
- Sinclair, M. T. (1998). Tourism and economic development: A survey. *Journal of Development Studies*, 34 (5), 1 – 51.
- Teisl, M. F. & Reiling, S. D. (1990). *Tourism and Local Government Expenditures and Revenues*. The Maine Business Research Report Agricultural and Resource Economics Staff Paper. Maine: University of Maine.
- Miernyk, W.H. (1965). *The Elements of Input-Output Analysis*. NY: Random House, Inc.
- Miller, R. E. and Blair, P.D. (1985). *Input-Output Analysis, Foundations and Extensions*. NJ: Prentice-Hall Inc. Englewood Cliffs.
- Musa, G. (2000). Tourism in Malaysia. In C.M. Hall & S. Page (Eds), *Tourism in South and Southeast Asia: Issues and Cases*. Oxford: Butterworth Heinemann, Jabatan Perhutanan Negeri Perlis. pp. 144-156.

- Poon, W. C., & Low, K. L. T. (2005). Are Travellers Satisfied with Malaysian Hotels? *International Journal of Contemporary Hospitality Management*, 17(3), 217-227.
- Rashid, Z. A. & Bashir, M. S. (2004). Economic Impacts of Changing Tourist Profile in Malaysia: An Inter-Industrial Analysis. *ASEAN Journal on Hospitality and Tourism*, 3, 29-39.
- Ruiz, A. L. (1985). Tourism and the Economy of Puerto Rico: An Input-Output Approach. *Tourism Management*, 6(1), 61-65.
- Sadi, M., & Bartels, F. (1997). The Rise of Malaysia' Tourism Industry. *Cornell Hotel and Restaurant Administration Quarterly*, 38 (5), 88-95.
- Tohamy, S. & Adrian, S. (2000). The Economic Impact of Tourism in Egypt. The Egyptian Center for Economic Studies, Working Paper No. 40. [Online] Available: <http://bibemp2.us.es/turismo/turismonet1/economia%20del%20turismo/turismo%20zonal/africa/ECONOMIC%20IMPACT%20OF%20TOURISM%20IN%20EGYPT.PDF> (August 22, 2005)
- The Economic Planning Unit. (EPU). (2001). *Eighth Malaysia Plan 2001-2005*. Putrajaya,: Prime Ministers Department.
- The Economic Planning Unit (EPU). (2006). *Ninth Malaysia Plan 2006-2010*. Putrajaya,: Prime Ministers Department.
- UN. (1999). *Handbook of Input- Output Table Compilation and Analysis*. NY: UN.
- Vilaplana, J., Pai, D. Y. & Hushak, L. J. (1991). *Supply Side Benefits of Fisheries: Estimation of Economic Impacts Using IMPLAN*. In Paper Presented at the IMPLAN Workshop. Columbus, OH: The Ohio State University.
- Wagner, J.E. (1997). Estimating the economic impacts of tourist. *Annals of Tourism Research*, 24, 592-608.
- Wanhill, S. (1994). The Measurement of Tourist Income Multipliers. *Tourism Management*, 15(4), 281-283
- Wong, P.P. (1986). Tourism Development and Resorts on the East Coast of Peninsular Malaysia. *Singapore Journal of Tropical Geography*, 7(2), 152-162.

Table 1. Average Tourism Multipliers; Output, Income, Employment, Value-added, and Import

Tourism Sector	Normal Multipliers				Ratio Multipliers		
	Direct	Indirect	Induced	Total	Type I	Type II	Rank
	1	2	3	(1+2+3)	(1+2)/1	(1+2+3)/1	
Tourism Average:							
Output	0.216205	1.136366	0.066347	1.418918	6.255965	6.5628362	
Income	0.273818	0.066867	0.013864	0.354549	1.244202	1.2948345	
Employment	0.12503	0.039705	0.009252	0.173987	1.317564	1.391562	
Value-added	0.385864	0.141296	0.03365	0.56081	1.366181	1.4533877	
Import	0.158205	0.052267	0.009792	0.220264	1.330375	1.3922695	

Source: Authors' calculation.

Table 2. Output multipliers

Tourism Sector	Normal Multipliers					Ratio Multipliers		
	Direct	Indirect	Induced	Total	Rank	Type I	Type II	Rank
	1	2	3	(1+2+3)		(1+2)/1	(1+2+3)/1	
Output:								
Accommodation	0.221319	1.167411	0.052769	1.441499	2	6.274789	6.5132185	4
Food & Beverage	0.427516	1.355483	0.040428	1.823427	1	4.170602	4.2651667	6
Tour & Transport	0.242699	1.106414	0.059392	1.408505	3	5.558791	5.8035056	5
Entertainment	0.154864	1.078079	0.049475	1.282418	5	7.961457	8.2809304	3
Shopping	0.104208	1.041693	0.054658	1.200559	6	10.99629	11.520795	1
Miscellaneous	0.146621	1.069117	0.141362	1.3571	4	8.291704	9.2558365	2

Source: Authors' Calculation

Note: Rank 1 and rank 2, in terms of normal and ratio multipliers, signify the relative significance of each of the six tourism sectors, where 1 is the most important and 6 is the least important correspondingly.

Table 3. Income multipliers

Tourism Sector	Normal Multipliers					Ratio Multipliers		
	Direct	Indirect	Induced	Total	Rank	Type I	Type II	Rank
	1	2	3	(1+2+3)		(1+2)/1	(1+2+3)/1	
Income:								
Accommodation	0.577679	0.069118	0.011026	0.657823	2	1.119648	1.1387345	5
Food & Beverage	0.153033	0.12425	0.008449	0.285732	3	1.811916	1.8671267	3
Tour & Transport	0.099546	0.075518	0.012411	0.187475	4	1.758624	1.8833002	2
Entertainment	0.646926	0.06144	0.010339	0.718705	1	1.094972	1.110954	6
Shopping	0.139137	0.031659	0.011422	0.182218	5	1.227538	1.3096301	4
Miscellaneous	0.026586	0.039217	0.029539	0.095342	6	2.4751	3.5861732	1

Source: Authors' Calculation

Note: Rank 1 and rank 2, in terms of normal and ratio multipliers, signify the relative significance of each of the six tourism sectors, where 1 is the most important and 6 is the least important correspondingly.

Table 4. Employment multiplier

Tourism Sector	Normal Multipliers					Ratio Multipliers		
	Direct	Indirect	Induced	Total	Rank	Type I	Type II	Rank
	1	2	3	(1+2+3)		(1+2)/1	(1+2+3)/1	
Employment:								
Accommodation	0.127657	0.039962	0.007357	0.174976	3	1.313042	1.370673	4
Food & Beverage	0.053314	0.059515	0.005637	0.118466	6	2.116311	2.222043	1
Tour & Transport	0.150479	0.05122	0.008281	0.20998	1	1.34038	1.3954107	3
Entertainment	0.129114	0.033826	0.006898	0.169838	4	1.261986	1.3154112	5
Shopping	0.171271	0.022408	0.007631	0.20131	2	1.130834	1.1753887	6
Miscellaneous	0.118344	0.031298	0.019711	0.169353	5	1.264466	1.4310231	2

Source: Authors' Calculation

Note: Rank 1 and rank 2, in terms of normal and ratio multipliers, signify the relative significance of each of the six tourism sectors, where 1 is the most important and 6 is the least important correspondingly.

Table 5. Value-added multipliers

Tourism Sector	Normal Multipliers					Ratio Multipliers		
	Direct	Indirect	Induced	Total	Rank	Type I	Type II	Rank
	1	2	3	(1+2+3)		(1+2)/1	(1+2+3)/1	
Value-added								
Accommodation	0.354958	0.14878	0.026763	0.530501	4	1.419148	1.4945458	4
Food & Beverage	0.222055	0.231509	0.020504	0.474068	5	2.042575	2.1349125	2
Tour & Transport	0.347905	0.15729	0.030122	0.535317	3	1.452106	1.5386873	3
Entertainment	0.591758	0.124493	0.025093	0.741344	2	1.210378	1.2527824	5
Shopping	0.668509	0.081217	0.027722	0.777448	1	1.12149	1.1629582	6
Miscellaneous	0.129999	0.104488	0.071695	0.306182	6	1.80376	2.3552643	1

Source: Authors' Calculation

Note: Rank 1 and rank 2, in terms of normal and ratio multipliers, signify the relative significance of each of the six tourism sectors, where 1 is the most important and 6 is the least important correspondingly.

Table 6. Import multipliers

Tourism Sector	Normal Multipliers					Ratio Multipliers		
	Direct	Indirect	Induced	Total	Rank	Type I	Type II	Rank
	1	2	3	(1+2+3)		(1+2)/1	(1+2+3)/1	
Import:								
Accommodation	0.192223	0.054504	0.007788	0.254515	2	1.283546	1.3240611	3
Food & Beverage	0.125245	0.103563	0.005967	0.234775	4	1.826883	1.8745259	1
Tour & Transport	0.252088	0.066525	0.008765	0.327378	1	1.263896	1.2986655	4
Entertainment	0.055624	0.032711	0.007301	0.095636	6	1.588073	1.7193298	2
Shopping	0.131783	0.021976	0.008067	0.161826	5	1.166759	1.2279733	6
Miscellaneous	0.192267	0.034321	0.020863	0.247451	3	1.178507	1.2870175	5

Source: Authors' Calculation

Note: Rank 1 and rank 2, in terms of normal and ratio multipliers, signify the relative significance of each of the six tourism sectors, where 1 is the most important and 6 is the least important correspondingly.

Million (RM)

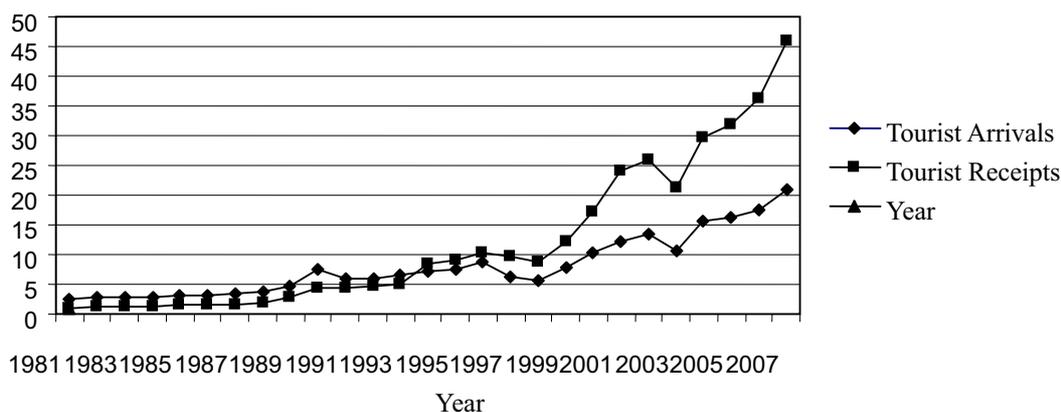


Figure 1. International Tourist Arrival and Receipts

Source: Annual Tourism Statistical Report several years, MTPB.



The Comparison of Opening up in Banking Industry between US and China

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Abstract

As a result of the full opening up in China's banking industry in 2006, foreign banks have gained more power in the market. On the one hand, it exerts a lot of pressure on domestic banks; on the other hand, it becomes a significant challenge for China's financial security. As a country opening up much earlier than China, United States may offer some ideas on how to avoid mistakes in the opening process. This article discusses what China can learn from US experience through the comparison in the openness of banking industry.

Keywords: WTO, Financial and trade liberalization, Comparison

1. Introduction

The opening up financial industry is not only one of the most important goals for service trading liberalization, but a significant promise our country made when joining the WTO. In the several round of the negotiations on the issue of China's joining, almost all the negotiating parties, especially developed countries, put forward a relatively high demand on the openness of financial industry. In order to join the WTO, China had to make a promise to open up financial industry in a planned and steady way, and the Schedule of Specific Commitment in the documents appended thereto of the Agreement on Financial services is a measure of the degree of openness

Because banking is the cornerstone of the financial industry, the degree of banking openness decides that of the financial industry in a large part. Therefore, the study of banking openness has been one of hot topics both in the academic field and practice field. Many researchers discuss the challenges and competition we face after join the WTO, so does the strategy to fight against the foreign banks. However, in order to find out the way to strengthen the domestic banks, attention should be paid not only on what we can do inside the country, but what others had done outside the country. We should learn the experience of other countries in order to spot out China's shortage in banking and improve it. United States is the major financial power in the world, and the comparison between US and China can give us some ideas on how to strengthen China's own financial power.

2. Discussion

2.1 *The comparison of opening up banking industry between US and China*

In the section, the comparison about opening up of banking industry will focus on three aspects: goals, mode and results. From the analysis of the similarity and difference, we hope to find out China's shortages and the way to adjust it.

2.1.1 The comparison of the goals

Achieving the financial service liberalization and increase the welfare of whole world is the common goal. Nowadays, the distribution of financial resources is uneven in the world. On the one hand, developing countries is extremely lack of capital and eager to find the capital resources to support their economy development; on the other hand, the developed countries own a lot of capital surplus and need to invest effectively and make a profit. The financial service liberalization, especially the capital flow and investment liberalization can reduce or even remove the barriers of the flow of financial resources, strengthen the connection of the financial markets in different countries and increase the welfare as a result.

The difference of the financial power decides the different goals of financial openness. US financial market had been highly developed before signing the agreement of opening. Therefore, the openness of banking has little influence in the market. However, joining the multilateral trade in financial industry gives US a chance to enter other countries' markets with much fewer barriers. As for China, on the one hand banking has transformed from planned economy to market

economy after 20 years reform. There are some powerful banks in China in terms of strength and effectiveness, which means China has the capability to response the attack caused by opening up. On the other hand, due to the local government's intervention, the regulation of the banking is not appropriate enough and the relationship inside is very complicated. It needs outside competition to improve its effectiveness and quality.

2.1.2 The comparison of the modes

The figure 1 and figure 2 shows the differences of limitations on market access and national treatment.

	Banking in China	Banking in US
Geographic Limitation	For foreign currency business, there will be no geographic restriction. For local currency business, foreign services Suppliers may provide business in 20 major cities. Within five years after accession, all geographic restrictions will be removed.	There are few federal geographic limitations. But the rules of entry in the states are various, in term of initial entry of expansion by a foreign person, the citizenship of boards of directors, the establishment of a direct branch or agency by a foreign bank.
Clients Limitation	For foreign currency business, foreign financial institutions will be permitted to provide services in China without restriction as to clients. For local currency business, foreign financial institutions will be permitted to provide services to Chinese enterprises. Within five years after accession, foreign financial institutions will be permitted to provide services to all Chinese clients.	In order to accept or maintain domestic retail deposits of less than \$100,000, a foreign bank must establish an insured banking subsidiary. This prohibition does not apply to a foreign bank branch that was engaged in insured deposit-taking activities on December 19,1991
License available	Criteria for authorization to deal in China's financial services industry are solely prudential. Within five years after accession, any existing non-prudential measures restricting ownership, operation, and juridical form of foreign financial institutions, including on internal branching and licenses, shall be eliminated.	No branch or state agency license available in some states. All directors of a national bank must be citizens unless a national bank is an affiliate or subsidiary of a foreign bank, in which case only a majority of the board need be citizens.

Figure 1. Limitation on Market Access

Resources: UNITED STATES OF AMERICA Schedule of Specific Commitments

China's Schedule of Specific Commitments

	Banking in China	Banking in US
Cross-border Supply	None	None
Consumption Abroad	None	None
Commercial Presence	Except for geographic restrictions and client limitations on local currency business (listed in the market access column), foreign financial institution may do business, without restrictions or need for case-by-case approval, with foreign invested enterprises, non-Chinese natural persons, Chinese natural persons and Chinese enterprises. Otherwise, none.	Foreign banks are required to register under the Investment Advisers Act of 1940 to engage in securities advisory and investment management services in the United States, while domestic banks are exempt from registration. Foreign banks cannot be members of the Federal Reserve System, and thus may not vote for directors of a Federal Reserve Bank. Foreign-owned bank subsidiaries are not subject to this measure. Branch, agency and representative offices of foreign banks are required to be charged for the cost of Federal Reserve examinations.
Presence of Natural Persons	Unbound except as indicated in horizontal commitments.	None

Figure 2. Limitation on National Treatment

Resources: UNITED STATES OF AMERICA Schedule of Specific Commitments

China's Schedule of Specific Commitments

From the figures above, we can see that limitations in US are fewer from the appearance, but more in fact. There are few federal limitations, and US give foreign banks almost fully national treatment. However, there are many intangible trade barriers. First, the limitations on market access are different among states, so does the national treatment, which can be the huge barriers for foreign banks that plan to strength their power in terms of size and capital. Second, the financial regulation system in US is very complicated, foreign banks have to deal with multiple regulations, and accept harsh openness control and business control if they want to broad their business. In addition, United States has published action in 1997 to regulate foreign banks before signing Financial Service Agreement.

China, in the contrast, has more limitations in appearance, but fewer in fact. In order to ensure the stability and development of financial system, the opening up of banking has followed in proper sequence. Geographically speaking, the opening regions are from developed area to less developed area. In terms of business affairs, the openness is from foreign currency business to local currency business. It also carried out other methods to control the speed of openness, such as administrative approval system, qualification research, licensing quantity limitations, operation regulations, etc. However, foreign banks have been given sub-national treatment in practice in the aspects of income tax, business coverage, loan income and pre-tax bad debt cancel. For instance, the tax rate of foreign exchange earning is just 15 percent for foreign banks, compared to 33 percent for domestic banks, let alone other tax preferences.

2.1.3 The comparison of the results

There have been 62 countries establishing foreign banks in United States before December 31st, 2002, including 246 branches of foreign banks, 54 bank sub-agencies, 78 foreign bank holding companies, 4 Edge companies which the foreign banks holding is above 25 percent, and 165 agencies. The assets of foreign banks in US are \$134 billion, accounting for 18.3 percent of the total assets in the commercial banking system. The branches and agencies just operate wholesale business and do not work in retail business. The loan business of foreign banks accounts for 1/5 of the total. However, these statistics have no significant change in the period from 2002 to 2007. It seems that signing the Financial Service Agreement has no influence in US banking. It is the result of the developed macro economy. In 1990s, the financial industry in US has highly developed, and the opening up of banking is in the condition of stable economy. As a most developed country, there is almost no pressure after its opening up. As a result of the capital inflow, it has satisfied the demand for financial services and added US banks' competitive strength. The stable economy makes the opening up of banking possible, and the opening up of banking improves the banking system and increases its internationalization in reverse.

According to the research, there are 20 solely foreign-owned banks with 95 branches in China before the October, 2007, and the share-holding bank is 3 with 5 branches and 1 subsidiary. 72 foreign banks from 22 countries have established 130 branches. The total assets are \$153.9 billion, accounting for 2.24 percent. In terms of market share, the foreign banks have no advantages, but they attracted significant amount of clients with high incomes relying on their financial products and high-quality service, which exert huge pressure on domestic banks. However, the achievement of openness is obvious. The major state-owned banks have introduced advanced mode of company governance and reform the banking system step by step. They have established the basic infrastructure of modern companies so far, especially in the non-performing loan problem. In recent years, both the non-performing loan and ratio of that have decreased significantly. After the all-round opening up in 2006, the major domestic commercial banks have to change the mode of relying on deposit and loan business only facing the fierce competition. They pay more attention on the possibility of full-service banks, and tried their best to reduce the risk and bad debt. The figure 3 is the recent years performance of the major commercial banks in China in the aspect of non-performing loan.

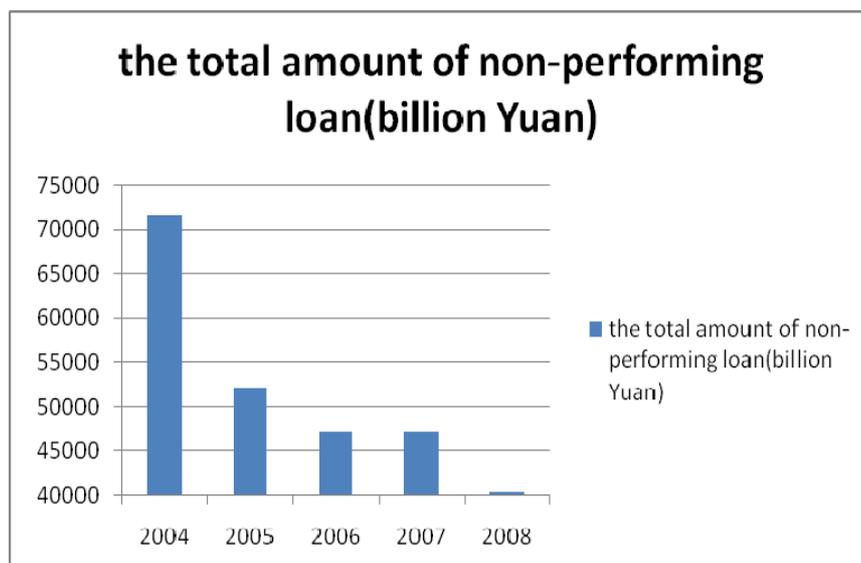


Figure 3.

2.2 What we can learned from the comparison

From the comparison of goals, modes and results, we can see that there are many differences between the openness of US and China. In order to make it clearer, we should look inside these differences and find out the experiences.

2.2.1 The stable economy is the premise of opening up

The development of banking is on the premise of the stable economy. The reform and opening up of the banking only responds to the requirement of the economy. In reverse, only if the economy develops steadily the reform and opening up of banking can be effective and the monetary disturbance will not take place. The International Economic Research Center in Washington, US has analyzed about 200 cases of monetary disturbance in the world, and pointed out that there are 6 economy warning index on whether the country is in monetary disturbance; that is real exchange rate, trade environment, capital, stock price index, real economy development, the increase of currency issue and the real trade level. These 6 indexes have different indications of monetary disturbance, but only if all indexes are stable, financial industry can develop steadily. At the same time, we should know that the opening up is just a method to accelerate the reform of the banking system. In terms of power and stability, the economy and the degree of banking development is much higher than that of China. As a result, the total assets accounting of foreign bank is much higher than that of China.

As for China, the degree of opening up of banking industry has to adjust with the current condition of economy. The development of China's economy is very fast in recent years. However, the health development should not only embody on GDP, but on the stability. Therefore, the opening up of banking industry should follow in a cautious way. That means the licensing system should be completed gradually and the license quantities' increase should fit the demand of the economy. Finishing the whole thing just in on step is not acceptable.

2.2.2 Effective regulation is the base of opening up

As we mentioned above, the regulation of foreign banks is very complicated in United States, not only from Federal level but the state level. In addition, the regulation institutions are different in different business affairs. In terms of Fed

level OCC, FED, FDIC, OTS and NCUA are included. There are two major regulation indexes in US. One is the requirement of equivalency for assets and deposits. According to the US law, foreign banks must deposit certain quantity of cash or other valued securities in appointed banks (usually domestic banks). Other one is the requirement of assets remains. In order to protect the benefits of public and debt owner, Fed requires all the foreign banks remaining enough assets to pay their debts in US. In recent years, in order to adapt the changes of financial environment, the regulation institutions have reduced the limitations of banking in the aspects of capital, business affairs, geographic operations, rate level, etc. However, they strengthen the regulations of banking as a whole, realizing the changes from regular regulations to risky regulations and emphasizing the role of the market.

The major regulation institutions in China are China Banking Regulatory Commission and the People's Bank of China. Compared to planed economy, the mode of regulation has been changed. For instance, the control on the loan quantity has been given up and there are fewer government's interventions in the capital markets. However, government still over regulates banks' regular operations and the market does not work effectively. To realize the internalization, the government's overregulation should be removed and the market forces strengthened.

2.2.3 The optimized law system ensures the safety of opening up

When analyzing the law system in the US, especially in banking law, we can see that the law relating to foreign banks is much more than that in China. The International Bank Act (IBA) published in 1978 is the major law relating to foreign banks in the US, and RNIBBA published in 1994 is a complement to IBA, which provides the mode to establish branches across the states. There are just 18 states in the US agreeing foreign banks to establish new companies as their branches. GLB published in November, 1999 summarized and completed the financial laws published in the recent 10 year's period.

Since joining the WTO, China's government has published the banking related law, including the Cancellation Rules of Financial Institutions, the Rules on Foreign Financial Institutions, etc. These laws are not only a complement to China's law system, but a standard of behavior for foreign banks entering China's market. However, the result is not as good as government's prediction. In some regions, for instance, foreign banks gain sub-national treatment. To a great relief, the PBC and State Council have been engaged in solving the problems. It is clear that the law cannot be optimized in short period, but the openness of the policy is an effective way to realize the goal.

3. Conclusion

Through the comparison of opening up in banking industry between the US and China, we can see that there are similarities and differences in the goals of opening up, so does the modes, but the results turn out to be good. Despite the existing deficiencies, the efficiency of domestic banks in China has increased significantly. In order to remove these deficiencies, the law system should be optimized and the regulation of banking should be reinforced in appropriate way. Above all, the stable economy is the cornerstone of the health of banking system.

References

- CBRC. (2007). The Total Assets of Foreign Banks Are Reaching USD 153.9 Billion. [Online] Available: <http://mnc.people.com.cn/GB/6680519.html> (January 10, 2009)
- CBRC. (2009). The Non-performing Loan of Major Commercial Banks in China. [Online] Available: <http://www.cbrc.gov.cn/chinese/home/jsp/docView.jsp?docID=20070516A4DD51DB0062F0CBFF883AB8A21E4800>
- Han, song. (2006). The Infrastructure of Foreign Bank Regulation in the US. [Online] Available: <http://business.sohu.com/20061215/n247071968.shtm> (January 11, 2009)
- He, Maochun. (2007). *International Service Trade: liberalization and rule*. World Economy Press.
- Ministry of Commerce. (2004). *American Trade Policy — the Trade Policy Review of the United States (2002 — 2003)*. China's Commerce Press.
- Ministry of Finance and Ministry of Trade. (2001). The Policy Suggestion on the Sub-national Treatment of Foreign Bank in China Published by People Bank of China. [Online] Available: http://www.34law.com/lawfg/law/6/1187/print_250946253425.shtml (January 11, 2009)
- Wang, Daohan and Long, Yongtu. (2002). *Joining the WTO and the Opening Up of Service Market*. Economy and Trade Press.
- WTO. (February 1998). *UNITED STATES OF AMERICA Schedule of Specific Commitment*. GATS/SC/90/Suppl.3. 6
- WTO. (October 2001). *China's Schedule of Specific Commitments*. WT/ACC/CHN/49/Add.21.



Supervisor vs. Subordinate Perception on Leader-Member Exchange Quality: A Malaysian Perspective

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Abstract

There is considerable research evidence (e.g., Campbell, White, & Johnson, 2003; Schriesheim, Neider, & Scandura, 1998; Xin, 2004) to suggest that supervisors and subordinates do not agree about the quality of their relationships. Since these past studies were mainly found in the western countries, this study was undertaken to investigate the dimensionality of a specific leader-member exchange (LMX) measure across two different samples in the Malaysian context. Accordingly, we employed a principal components analysis on LMX data obtained from two different sources: 229 employees and their 109 immediate supervisors representing various organizations in Northern Malaysia. As expected, we found that employees' perceptions of the quality of exchanges differ from those of their supervisors. The implications of these findings for future research on LMX are discussed.

Keywords: Leader-member exchange, Supervisory perception, Subordinate perception

Studies of leader-member exchange (LMX) have spanned nearly three decades (Graen & Uhl Bien, 1995). Most of these past studies were conducted in the United States. Also, the earlier studies have tended to measure perceptions of LMX solely from the subordinate's perspective. Nonetheless, a number of authors have emphasized the importance of measuring the quality of dyadic relationships from both supervisor and subordinate perspectives (e.g., Bhal & Ansari, 2000; Graen & Cashman, 1975; Graen & Scandura, 1987; Scandura, Graen, & Novak, 1986; Schriesheim et al., 1998; Varma & Stroh, 2001). Given the above, this study aims to investigate the dimensionality of a specific LMX measure in the Malaysian setting using both supervisor ratings and subordinate ratings of LMX.

Past research has demonstrated that LMX is correlated to a number of important outcomes for employees. Consistent with exchange theory, high LMX members who receive more support may in fact be empowered to perform at a higher level or exhibit positive work attitudes (Gagnon & Michael, 2004; Hui, Law, & Cheri, 1999; Randall, Cropanzano, Bormann, & Birjulin, 1999; Scriesheim, Castro, Cogliser, 1999; Wayne, Shore, & Liden, 1997) and organizational commitment (Duchon, Green, & Taber, 1986; Gagnon & Michael, 2004; Martin, Thomas, Charles, Epitropaki, & McNamara, 2005; Schyns, Paul, Mohr, & Blank, 2005). Ultimately, they may be rewarded via favorable work outcomes that include salary increases (Scandura & Schriesheim, 1994; Wakabayashi & Graen, 1984; Wakabayashi, Graen, Graen, & Graen, 1988), career satisfaction (Liden, Wayne, & Sparrowe, 2000; Martin et al., 2005; Masterson, Lewis, Goldman, & Taylor, 2000; Pillai, Scandura, & Williams, 1999; Sagas & Cunningham, 2004; Scandura et al., 1986; Schriesheim et al., 1998), and promotions (Kee, Ansari, & Aafaqi, 2004; Liden & Maslyn, 1998; Scandura & Schriesheim, 1994; Wakabayashi et al., 1988).

In light of the positive outcomes of dyadic exchanges, we stress the importance of knowing whether supervisors and subordinates perceive the quality of the exchanges similarly or differently. The findings will be of particular relevance to supervisors and subordinates alike. We also argue that organizations would benefit from an increased understanding

of how LMX relationships are viewed by employees and their supervisors. Thus, this understanding can be appropriately utilized in efforts to encourage the development of quality LMX relationships that will result in favorable outcomes for both individuals and the organization.

1. Leader-Member Exchange Model: Conceptualization Issues

Over the years, the leadership model has undergone significant changes, evolving from a vertical dyad linkage (VDL) model (Dansereau, Graen, & Haga, 1975) to the social exchange model (Graen, Liden, & Hoel, 1982; Graen, Novak, & Sommerkamp, 1982). Whereas VDL is seen as a concept comprising the characteristics of leaders, members, and the relationship between leaders and members (Dansereau, Yammarino, & Markham, 1995), the social exchange perspective is concerned with the different types of relationship or exchange that leaders cultivate with individual subordinates (Bhal & Ansari, 2000; Dansereau et al., 1975; Graen & Scandura, 1987; Liden & Graen, 1980).

The present study adopts the latter perspective and accordingly defines LMX as the quality of the exchange relationship between an employee and his or her immediate superior (Dienesch & Liden, 1986). The LMX theory attests that leaders develop different quality of work relationships with different subordinates (Graen & Scandura, 1987; Scandura & Graen, 1984; Scandura & Scriesheim, 1994). Low quality LMX members experience simple “order giving and following” relationships (Gagnon & Michael, 2004) akin to those of a contract where relationships are governed solely by the conditions for employment. On the other hand, high LMX members enjoy relationships that are characterized as being a partnership between a supervisor and subordinate and involve liking, loyalty, professional respect, and contributory behaviors (Dienesch & Liden, 1986; Liden & Maslyn, 1998).

The social exchange model of leadership has seen LMX developed from a single dimensional construct to a multidimensional construct. Dienesch and Liden (1986) were perhaps among the first to advocate the multidimensionality of LMX, while rejecting the single dimensional construct. Specifically, they proposed three dimensions of LMX that consist of perceived contribution, loyalty, and affect. However, Bhal and Ansari's (1996) empirical study in the Indian setting only supported perceived contribution and affect as relevant measures of the quality of the interaction. More recently, Liden and Maslyn (1998) proposed a four-dimensional construct of LMX known as LMX-Multidimensional measure (LMX-MDM) by including professional respect as the fourth dimension. Specifically, the four dimensions in LMX-MDM are *affect* (mutual affection leader-member dyads have for each other based on interpersonal attractions rather than work or professional values; Dienesch & Liden, 1986), *professional respect* (perception of leader-member dyads with regard to each other's knowledge, competence and skills (Liden & Maslyn, 1998), *contribution* (the perceived amount, direction, and quality of work-oriented activity that each member puts forth towards attaining an agreed mutual goal; Dienesch & Liden, 1986), and *loyalty* (the extent to which both leader and member publicly support each other's actions and character; Dienesch & Liden, 1986).

Even though Liden and Maslyn's (1998) construct has “undergone reasonable psychometric testing and has shown promising evidence of satisfactory reliability and validity” (Schriesheim et al., 1999, p. 95), the question about its applicability in different settings or situations remains. For instance, Bhal and Ansari (2000) have queried the applicability of LMX-MDM for new and developing dyadic pairs. We speculate that the dimensionality of LMX could vary across samples (supervisor and subordinate) and cultural settings. This study was hence aimed at seeking some empirical evidence to the aforementioned.

2. Method

2.1 Participants and Procedure

Employees and their supervisors provided information on LMX via a survey questionnaire. Complete data were obtained for 229 paired subordinates and supervisors from 63 private organizations in the manufacturing and service industries in Northern Malaysia. Specifically, a total of 229 subordinates and 109 supervisors participated in this study.

Of the 229 subordinates, 111 (48.5%) were female. They were between the ages of 17 and 64 years ($M = 35.03$, $SD = 9.49$). In terms of ethnicity, the 103 (45.0%) Chinese respondents constituted the majority, whereas 90 (39.3%) were Malay, 34 (14.8%) were Indian, and 2 (.9%) were of other ethnic groups. As for educational attainment, only 6 (2.6%) of the subordinate sample had tertiary education while the rest (204 or 89.1%) predominantly obtained at least a high school qualification. A total of 109 subordinates (47.6%) came from manufacturing facilities, whereas the remaining 120 (52.4%) were from various service entities. Their average organizational tenure, job tenure, and dyadic tenure were 8.75 years ($SD = 6.36$), 2.03 years ($SD = 1.22$) and 5 years ($SD = 4.26$), respectively. The majority of them (216 or 94.3%) were concentrated at low organizational level. The remaining 13 (5.7%) occupied the middle level.

With a span of control between 2 and 268 employees, 57 (52.3%) of the supervisors were men and 52 (47.7%) were women. In general, compared to the subordinates, the superiors were slightly older with ages ranging from 24 years to 71 years ($M = 40.72$, $SD = 9.16$). With regard to ethnicity, 49 (45.0%) of the supervisors identified themselves as Chinese, 33 (30.3%) as Malay, 24 (22.0%) as Indian, and 3 (2.7%) as of foreign origin (1 Thai and 2 Bangladeshis).

The majority of the supervisors (102 or 93.6%) obtained a diploma or at least a high school qualification. Five (4.6%) held bachelor's or master's degrees and 2 (1.8%) had some other professional qualifications.

2.2 Measures

Liden and Maslyn's (1998) 12-item construct was employed to gauge the quality of LMX. The scale was accordingly modified to reflect supervisory perceptions of LMX. The four dimensions--affect, professional respect, contribution, and loyalty--are measured on a 7-point scale. A sample affect item is: "He/she is the kind of person one would like to have as a friend."

3. Results

Intercorrelations between the study variables were computed. As shown in Table 1, Factor I of supervisor-rated LMX was weakly correlated with both factors of subordinate-rated LMX. However, Factor II of supervisor-rated LMX was insignificantly correlated with Factor I of subordinate-rated LMX, and only weakly correlated with Factor II of subordinate-rated LMX. Tables 2 and 3 display standard deviations that were near to or greater than 1.0, indicating that the study variables were discriminatory. The internal consistency reliabilities of all scales were between .70 and .94. These are clearly acceptable as they exceed the recommended value of .60 (Nunnally & Bernstein, 1994; Sekaran, 2000).

A principal components analysis with a varimax rotation was performed to examine the dimensionality of the LMX measure. Specifically, this analysis was conducted separately for supervisor-rated LMX and subordinate-rated LMX. For subordinate rating of LMX quality, two factors emerged with affect and professional respect items loaded cleanly on one factor. Factor loadings were between .66 and .83. On the other hand, contribution and loyalty items formed the second factor with loadings ranging from .56 to .71 (see Table 2). The two factors cumulatively explained 53.54% of the total variance.

As is evident, the data revealed only two dimensions of LMX. Factor I seems to denote feelings of respect and affect that a member holds for a leader. Factor II, on the other hand, implies that a member is likely to reciprocate through work contributions when a leader is loyal to him or her. In other words, the degree of contribution by a member is likely to be influenced by the degree of loyalty that a leader exhibits for the member in question. This finding could perhaps be attributed to the fact that Malaysian society is a hierarchical and relationship-oriented society (Abdullah, 1992, 1996; Ansari, Ahmad, & Aafaqi, 2004), whereby work and non-work factors are characteristically separated. Affect and professional respect seemed to be representative of non-work factors, whereas contribution and loyalty clustered as work-related factors.

As for supervisory perceptions on LMX, the 12 items were similarly subjected to a varimax rotated principal components analysis. The result was a total variance explained of 66.97 per cent. Again, all 12 items loaded cleanly and substantially (with factor loadings between .65 and .85) on two discrete factors. However, this time around, only loyalty items formed the second factor. The remaining items loaded on Factor I. A plausible reason for this finding could be similar to that noted previously in the factor analysis results for subordinate rating of LMX. Table 3 summarizes the factor analysis results for supervisor rating of LMX.

4. Discussion

The current study presented several findings from which important conclusions can be drawn. First, our study lent support to recent studies (e.g., Campbell et al., 2003; Schriesheim et al., 1998; Xin, 2004) that reported that supervisors and subordinates do not agree on their perceptions of their exchange relationships. For instance, Xin (2004) found that Asian American managers' perceptions of LMX quality are not in harmony with those of their supervisors.

According to Sagas and Cunningham (2004), developing and maintaining high quality relationships between a supervisor and subordinate is vital to dyad members and especially the subordinate. The main reason is that the quality of LMX relationships is correlated to a number of important outcomes (Masterson et al., 2000; Pillai et al., 1999; Sagas & Cunningham, 2004; Schriesheim et al., 1998). Hence, to eventually enjoy the benefits of their exchange relationships, employees must first be in tune with not only their own perception of LMX but also that of their supervisor.

This finding also has important implication for organizations that are serious about helping their employees experience favorable work outcomes. With a better knowledge of the nature of the quality exchanges gleaned from both the supervisor and subordinate perspectives, organizations can subsequently take the necessary steps to enhance the quality of relationships between superiors and subordinates. Another important implication for future research on LMX is that the quality of exchange relationships could be more reliably measured using not one but two ratings provided by the supervisor and subordinate.

This study has also reaffirmed past researchers' (e.g., Dienesch & Liden 1986; Kee et al., 2004; Liden & Maslyn, 1998) contention on the multidimensionality and distinctiveness of the LMX construct. However, unlike some past findings in the west (e.g., Liden & Maslyn, 1998; Settoon, Bennett, & Liden, 1996), our LMX data did not reveal the four

dimensions of LMX. Instead, we found a two-factor solution that similarly emerged for the two different sets of data obtained from the supervisor and subordinate samples. As noted earlier, this could be attributed to the fact that Malaysian society is both hierarchical and relationship-oriented (Abdullah, 1992, 1996; Ansari et al., 2004).

There are some limitations in terms of the design of the present study. First, respondents' perceptions on LMX, though useful, may not be an accurate reflection of reality and may have also inflated the correlation. Second, the supervisor and subordinate samples have been drawn from only manufacturing and service industries in Northern Malaysia. Further, the respondents were predominantly concentrated at low hierarchical level. As such, generalization of the present findings to other settings is, to some degree, limited.

We recommend that research in the future employs diverse sample as well as bigger sample size. There is good reason for doing so: (a) the dimensionality of LMX could be further clarified from the supervisor as well as subordinate standpoint; and (b) the generalizability of findings to other settings can be enhanced.

In conclusion, this study has indicated that the dimensionality of the LMX construct differs across samples and culture. We hope that the findings of this study has, to some extent, added to career research stream by substantiating the importance of measuring LMX from more than one perspectives so that more comprehensive investigation into the antecedents and outcomes of LMX can be carried out.

References

- Abdullah, A. (1992). Influence of ethnic values at the Malaysian workforce. In A. Abdullah (Ed.), *Understanding the Malaysian workforce: Guidelines for managers* (pp. 1-17). Kuala Lumpur: Malaysian Institute of Management.
- Abdullah, A. (1996). *Going glocal: Cultural dimensions in Malaysian management*. Kuala Lumpur: Malaysian Institute of Management. (to add)
- Ansari, M. A., Ahmad, Z. A., & Aafaqi, R. (2004). Organizational leadership in the Malaysian context. In D. Tjosvold & K. Leung (Eds.), *Leading in high growth Asia: Managing relationship for teamwork and change* (pp 109-138). Singapore: World Scientific Publishing.
- Bhal, K. T., & Ansari, M. A. (1996). Measuring quality of interaction between leaders and members. *Journal of Applied Social Psychology*, 26, 945-972.
- (2000). *Managing dyadic interactions in organizational leadership*. Thousand Oaks, CA: Sage.
- Campbell, K. S., White, C. D., & Johnson, D. E. (2003). Leader-member relations as function of rapport management. *The Journal of Business Communication*, 40, 170.
- Dansereau F., Graen, G., G., & Haga, W. J. (1975). A vertical dyad linkage approach to leadership within formal organizations: A longitudinal investigation of the role making process. *Organizational Behavior & Human Performance*, 13, 46-78.
- Dansereau, F., Yammarino, F. J., & Markham, S. E. (1995). Leadership: The multiple-level approaches. *Leadership Quarterly*, 6, 251-263.
- Dienesch, R. M. S., & Liden, R. C. (1986). Leader-member exchange model of leadership: A critique and further development. *Academy of Management Review*, 11, 618-634.
- Duchon, D., Green, S. G., & Taber, T. D. (1986). Vertical dyad linkage: A longitudinal assessment of antecedents, measures, and consequences. *Journal of Applied Psychology*, 71, 56-60.
- Gagnon, M.A., & Michael, J. H. (2004). Outcomes of perceived supervisor support for wood production employees. *Forest Products Journal*, 54, 172-177.
- Graen, G. B., & Cashman, J. (1975). A role-making model of leadership in formal organizations: A development approach. In J. G. Hunt & L. L. Larson (Eds.), *Leadership frontiers* (pp. 32-58). Kent, OH: Kent State University Press.
- Graen, G. B., & Liden, R. C., Hoel, W. (1982). Role of leadership in the employee withdrawal process. *Journal of Applied Psychology*, 67, 868-872.
- Graen, G. B., & Novak, M., & Sommerkamp, O. (1982). The effects of leader-member exchange and job design on productivity and satisfaction: Testing a dual attachment model. *Organizational Behavior and Human Performance*, 30, 109-131.
- Graen, G. B., & Scandura, T. A. (1987). Toward a psychology of dyadic organizing. In L.L. Cummings & B. M. Staw (Eds.), *Research in organizational behavior* (Volume 9, pp. 175-208). Greenwich, CT: JAI Press.
- Graen, G. B., & Uhl-Bien, M. (1995). Relationship-based approach to leadership development of leader-member exchange theory of leadership over 25 years applying a multi-level multi-domain perspective. *Leadership Quarterly*, 6, 219-247.

- Hui, C., Law, K., & Cheri, Z. X. (1999). A structural equation model of the effects of negative affectivity, leader-member exchange, and perceived job mobility on in-role and extra-role performance: A Chinese case. *Organizational Behavior and Human Decision Processes*, 77, 3-21.
- Kee, D. M. H., Ansari, M. A., & Aafaqi, R. (2004). Fairness of human resource management practices: Leader-member exchange, and organizational commitment. *Asian Academy of Management Journal*, 9, 99-120.
- Liden, R. C., & Graen, G. (1980). Generalizability of the vertical dyad linkage model of leadership. *Academy of Management Journal*, 23, 451-465.
- Liden, R. C., & Maslyn, J. M. (1998). Multidimensionality of leader-member exchange: An empirical assessment through scale development. *Journal of Management*, 24, 43-73.
- Liden, R. C., Wayne, S. J., & Sparrowe, R. T. (2000). An examination of the mediating role of psychological empowerment on the relations between the job, interpersonal relationships, and work outcomes. *Journal of Applied Psychology*, 85, 407-416.
- Martin, R., Thomas, G., Charles, K., Epitropaki, O., & McNamara, R. (2005). The role of leader-member exchanges in mediating the relationship between locus of control and work reactions. *Journal of Occupational and Organizational Psychology*, 78, 141-147.
- Masterson, S. S., Lewis, K., Goldman, B. M., & Taylor, M. S. (2000). Integrating justice and social exchange: The differing effects of fair procedures and treatment on work relationships. *Academy of Management Journal*, 43, 738-748.
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.
- Sekaran, U. (2000). *Research methods for business: A skill-building approach* (3rd ed.). New York: John Wiley & Sons.
- Pillai, R., Scandura, T. A., & Williams, E. A. (1999). Leadership and organizational justice: Similarities and differences across cultures. *Journal of International Business Studies*, 30, 763-779.
- Randall, M. L., Cropanzano, R., Bormann, C. A., & Birjulin, A. (1999). Organizational politics and organizational support as predictors of work attitudes, job performance, and organizational citizenship behavior. *Journal of Organizational Behavior*, 20, 159-174.
- Sagas, M., & Cunningham, G. B. (2004). Treatment discrimination in college coaching: Its prevalence and impact on the career success of assistant basketball coaches. *International Sports Journal*, 8, 76-88.
- Scandura, T. A., Graen, G. B., & Novak, M. A. (1986). When managers decide not to decide autocratically: An investigation of leader-member exchange and decision influence. *Journal of Applied Psychology*, 71, 579-584.
- Scandura, T. A., & Schriesheim, C. A. (1994). Leader-member exchange and supervisor career mentoring as complementary concepts in leadership research. *Academy of Management Journal*, 37, 1588-1602.
- Schriesheim, C. A., Castro, S. L., & Cogliser, C. C. (1999). Leader-member exchange (LMX) research: A comprehensive review of theory, measurement, and data-analytic practices. *Leadership Quarterly*, 10, 63-113.
- Schriesheim, C. A., Neider, L. L., & Scandura, T. (1998). Delegation and leader-member exchange: Main effects, moderators, and measurement issues. *Academy of Management Journal*, 41, 298-318.
- Schyns, B., Paul, T., Mohr, G., & Blank, H. (2005). Comparing antecedents and consequences of LMX in German working context to findings in the US. *European Journal of Work and Organizational Psychology*, 14, 1-22.
- Settoon, R. P., Bennett, N., & Liden, R. C. (1996). Social exchange in organizations: Perceived organizational support, leader-member exchange, and employee reciprocity. *Journal of Applied Psychology*, 81, 219-227.
- Varma, A., & Stroh, L. K. (2001). The impact of same-sex LMX dyads on performance evaluations. *Human Resource Management*, 40, 309-320.
- Wakabayashi, M., & Graen, G. (1984). The Japanese career progress study: A seven-year follow up. *Journal of Applied Psychology*, 69, 603-614.
- Wakabayashi, M., Graen, G., Graen, M., & Graen, M. (1988). Japanese management progress: Mobility into middle management. *Journal of Applied Psychology*, 73, 217-227.
- Wayne, S. J., Liden, R. C., Kraimer, M. I., & Graf, I. K. (1999). The role of human capital, motivation and supervisor sponsorship in predicting career success. *Journal of Organizational Behavior*, 20, 577-595. (to remove)
- 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.
- Xin, K. R. (2004). Asian American managers: An impression gap?: An investigation of impression management and supervisor-subordinate relationships. *The Journal of Applied Behavioral Science*, 40, 160-181.

Table 1. Zero-order Correlations

Supervisor-rated LMX	Subordinate-rated LMX	
	LMX-M (Factor I)	LMX-M (Factor II)
LMX-L (Factor I)	.25**	.22**
LMX-L (Factor II)	.08	.19**

Note: $N = 229$; $*p < .05$; $**p < .01$; LMX-L = Supervisor-rated LMX; LMX-M = Subordinate-rated LMX.

Table 2. Subordinate Rating of Leader-Member Exchange: Rotated factors, Item loadings, Reliabilities, Means, and Standard Deviations

Factors		I	II
<u>Factor I</u>			
PR3: I respect his/her knowledge of and competence on the job.		<u>.83</u>	.22
A3: I like him/her very much as a person.		<u>.80</u>	.23
PR2: I admire his/her professional skills.		<u>.72</u>	.26
PR1: I am impressed with his/her knowledge of his/her job.		<u>.72</u>	.23
A2: He/She is a lot of fun to work with.		<u>.70</u>	.20
A1: He/She is the kind of person one would like to have as a friend.		<u>.66</u>	.17
<u>Factor II</u>			
C2: I do work for him/her that goes beyond what is specified in the job descriptions.	.07	<u>.71</u>	
C1: I am willing to apply extra efforts beyond those normally required in order to meet his/her work goals.	.18	<u>.70</u>	
L2: He/She would go to my defense if I were "attacked" by others.	.36	<u>.63</u>	
L3: He/She would defend me to others in the organization if I make an honest mistake.	.33	<u>.62</u>	
L1: He/She defends my work and actions to a superior even without complete knowledge of the issue.	.12	<u>.57</u>	
C3: I do not mind working the hardest for him/her.	.39	<u>.56</u>	
Eigenvalue	5.14	1.28	
Variance (%) (Total: 53.54%)	42.86	10.68	
Kaiser-Meyer-Olkin MSA	.87		
Bartlett's test of sphericity	1072.96**		
Reliability (Cronbach's alpha)	.86	.76	
<i>M</i>	4.99	3.98	
<i>SD</i>	1.35	1.32	

Note: $N = 229$; Items are grouped for presentation purpose; Underlined loadings indicate the inclusion of those items in the factor; PR = Professional respect; A = Affect; C = Contribution; L = Loyalty.

Table 3. Supervisory Rating of Leader-Member Exchange: Rotated factors, Item loadings, Reliabilities, Means, and Standard Deviations

<u>Factors</u>		
Items	I	II
<u>Factor I</u>		
PR1: I am impressed with his/her knowledge of his/her job.	<u>.85</u>	.22
C1: He/She is willing to apply extra efforts beyond those normally required in order to meet my work goals.	<u>.84</u>	.22
PR2: I admire his/her professional skills.	<u>.83</u>	.29
C2: He/She does work for me that goes beyond what is specified in the job descriptions.	<u>.80</u>	.14
A2: He/She is a lot of fun to work with.	<u>.78</u>	.18
PR3: I respect his/her knowledge of and competence on the job.	<u>.77</u>	.33
C3: He/She does not mind working the hardest for me.	<u>.77</u>	.29
A1: He/She is the kind of person one would like to have as a friend.	<u>.70</u>	.04
A3: I like him/her very much as a person.	<u>.70</u>	.37
<u>Factor II</u>		
L2: I would go to his/her defense if he/she were "attacked" by others.	.28	<u>.85</u>
L3: I would defend him/her to others in the organization if he/she makes an honest mistake.	.24	<u>.81</u>
L1: I defend his/her work and actions to a superior even without complete knowledge of the issue.	.09	<u>.65</u>
Eigenvalue	6.71	1.33
Variance (%) (Total: 66.97%)	55.91	11.06
Kaiser-Meyer-Olkin MSA	.91	
Bartlett's test of sphericity	1896.85**	
Reliability (Cronbach's alpha)	.94	.70
<i>M</i>	5.07	4.86
<i>SD</i>	1.14	1.12

Note: $N = 229$; Items are grouped for presentation purpose; Underlined loadings indicate the inclusion of those items in the factor; PR = Professional respect; A = Affect; C = Contribution; L = Loyalty.

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