

Assessing the Relative Importance of Competitive Priorities that Influence Consumers' Choices in Mobile Phone Services

Md Nor Hayati Tahir¹, Mohd Fazli Mohd Sam¹, Mazidah Said¹ & Mohd Fauzi Kamarudin²

¹ Faculty of Technology Management and Technopreneurship, Universiti Teknikal Malaysia Melaka, Melaka, Malaysia

² Department of Human Development, Centre for Languages and Human Development, Universiti Teknikal Malaysia, Melaka, Malaysia

Correspondence: Md Nor Hayati Tahir, Faculty of Technology Management and Technopreneurship, Universiti Teknikal Malaysia Melaka, Hang Tuah Jaya 76100, Durian Tunggal, Melaka, Malaysia. Tel: 606-283-31170. E-mail: mdnortahir@utem.edu.my

Received: January 27, 2010

Accepted: October 22, 2015

Online Published: November 25, 2015

doi:10.5539/ijbm.v10n12p80

URL: <http://dx.doi.org/10.5539/ijbm.v10n12p80>

Abstract

Mobile telecommunication usage is a necessity to assure that someone is connected and accessible in a network. This study focuses on the elements that influence the customer's choice in mobile services, namely the cost/price, quality, time/delivery, flexibility, service and innovation. The objective of this study is to examine the significant importance of competitive priorities of elements that influence consumers' choices in mobile phone services and further to rank all the elements based on the level of importance from the consumers' points of view. The study focuses on mobile users in Melaka, Malaysia and data gathering is mechanized by a questionnaire. Data has been analyzed descriptively and further correlated and regressed. The analysis found that competitive priority elements as ranked according to priority are quality, cost, flexibility, time, service and innovation. This findings is useful for telecommunication providers towards improvement of service, as well as to achieve customers' satisfaction.

Keywords: mobile telecommunication, mobile provider, competitive priorities, mobile phone consumers' choice, mobile phone flexibility

1. Introduction

Intense competition in business is caused by many factors such as rapid change in technology, globalization, and the changing of consumer preferences. This has position telecommunication companies in a difficult situation in relation to providing high quality products or services towards achieving the customers' satisfaction. Krajewski, Ritzman, and Malhotra (2007) argued that telecommunication companies should develop customer-driven operations strategy beginning with corporate strategy which aligns the firm's overall goals with its core processes. As Krajewski et al. (2007) further stated that, in developing a customer-driven operations strategy, firms should coordinate their overall goals with their core processes whereby the competitive priorities are the critical dimensions that each process must possess in order to satisfy internal and external customers. Thus, competitive priorities that include cost, quality, time and flexibility are useful tools for translating the goals of a firm's strategy to the level of actual processes that are important to meet customers' satisfaction. These priorities were further expanded by researchers to include services and innovativeness (Askar & Mortagy, 2007).

The total subscription of cellular phones in Malaysia for the second quarter of 2008 was 25,086,000 with the growth rate of 3.4% (Malaysian Communications and Multimedia Commission, 2008). Competition can be seen as the main factor among the major mobile telecommunication service providers in Malaysia with each company looking to provide the most excellent services to the customers. This is where the competitive priorities should be aligned with the firm's overall goals. In this aspect, assessing the competitive priorities would highlight the competitive dimensions in terms of cost, quality, time, flexibility, service and innovativeness of telecommunication providers towards improvement and achieving customers' satisfaction (Krajewski et al., 2007).

This study explores consumer' choices on competitive priority elements that are cost or price, quality, time of

delivery, flexibility, service or innovation.

2. Literature Review

The study of the competitive priorities was introduced by Skinner (1969), who identified the strategic role of manufacturing and operations as the missing link in formulating corporate strategy. This link transformed the way companies view operations from simply being responsible for producing and shipping goods into a strategic function that provided capabilities and further enhance overall competitive advantage (Askar & Mortagy, 2007). To enhance overall competitive advantage, certain objectives needed to be developed by decision makers when formulating their strategies (Skinner, 1969). These objectives have been refined throughout literature, eventually being labeled as competitive priorities (Bolden, Waterson, Warr, Clegg, & Wall, 1997). Dangayach and Deshmukh (2001) and Spring (1997) identify these priorities as cost, produce and distribution of product at low cost; quality, manufacturing of products with high quality or performance standards; delivery, meeting of delivery schedules and flexibility, reaction to change in product, changes in product mix, modifications to design, fluctuations in materials, and changes in sequence.

These four elements of competitive priorities were further expanded by researchers to include service and innovativeness. According to Acur (2003) and Kim, Lee and Yun (2004), organizations must have a broader platform that includes superior service to boost customer satisfaction. The latest addition to the competitive priorities is innovation denoting the ability to develop new products and implement new technologies and processes that create new markets (Brown, Squire, & Blackmon, 2007). In short, by measuring competitive priorities, it gives managers a detailed assessment tool that highlights how their companies are operating, their strengths, and what areas need improvement (Askar & Mortagy, 2007).

3. Methodology

This study focuses on the quantitative method where the primary data gathered is from the feedback of respondents through the questionnaires. The respondents are categorized into two namely, the public and students. The survey questionnaires are distributed to areas in Melaka Tengah town which include the public, several colleges and university such as Kolej Komuniti Bukit Beruang, Kolej Yayasan Melaka, Universiti Teknikal Malaysia Melaka (UTeM) and Multimedia College.

The data is analyzed to test the hypotheses regarding the elements and the customer's choice for telecommunication providers. The hypotheses will confirm whether the element of cost, quality, time, flexibility, services, competition and competitive priority that has significant importance of consumer's choice in mobile phone.

The element of cost is associated with low price registration fee (also known as 'starter kit'), low charges to make a call/short messaging service (SMS) and the low price on value added facilities services. The element of quality includes low defect rate, wide coverage and service performance in terms of reliability of services offered. The element of time refers to the duration of getting service, response time on fault restoration and response time on complaints. The fourth element, flexibility consists of customization of services and the variety of services offered. The fifth element is service. Service refers to the after-sales services and customer service. Lastly, the element of innovation consists of introducing of new products or services, technology and creative service offered by the mobile phone providers.

The questionnaires are personally administered to respondents by the researcher in order to ensure high rate of return on feedback and also to assist the respondents if required. The probability, simple random sampling design is used whereby the subjects in the sampling frame have some known chance or probability of being selected as sample subjects. Based on the National Census 2000, Department of Statistics Malaysia, the population in Melaka is 635,791 with the population of the urban area at 67.2%. Malaysia is a country that has the second highest number of mobile phone users in Asia, 74.1 per 100 people (Razak, 2007). So, the population for this research is about 318,000. Referring to Sekaran (2007), the sample size is 384 respondents. A total of 400 questionnaires were distributed to the public and several colleges. From 400 questionnaires, 347 were received and analyzed. The return rate is about 87%. Students represent 45.8% while 54.2% are represented by the public with occupations such as government servants, management level, professionals, own businesses, non-executives and others. Regarding the marital status, 67.1% of the respondents are single, 31.7% are married and 1.2% of other status. The majority completed education at secondary level (33.4%), followed by college graduate (33.1%), university graduates (28.0%), master degree holders (3.5%), doctorate holders (0.3%) and others (1.7%). From the feedback, 100% of the respondents are mobile phone users. In the questionnaire, the respondent have to answer in the form of 5 scales Likert scale from 1 to 5 where, 1 is the lowest score and 5 is the highest score in each question.

4. Results and Discussion

From the results, the overall consumers' choice regarding the cost factor is significant and positively correlated to low registration fees or starter packs, low price charges and low price in value added as shown in Table 1. Positive correlation among the variables explains the factor of cost that influences the consumer's choice for mobile phone.

Table 1. Correlation for cost

Correlations		Low register fee	Low price charge	Low price value added	Overall consumer's choice
Low register fee	Pearson correlation	1	0.371	0.301	0.328
	Sig. (1-tailed)		0.000	0.000	0.000
	N	347	347	347	347
Low price charge	Pearson correlation	0.371	1.000	0.404	0.269
	Sig. (1-tailed)	0.000		0.000	0.000
	N	347	347	347	347
Low price value added	Pearson correlation	0.301	0.404	1.000	0.317
	Sig. (1-tailed)	0.000	0.000		0.000
	N	347	347	347	347
Overall consumer's choice	Pearson correlation	0.328	0.269	0.317	1.000
	Sig. (1-tailed)	0.000	0.000	0.000	
	N	347	347	347	347

For the overall consumers' choice, low registration fee exhibits the highest Pearson correlation value. This suggests that lower the registration fee will promote better position of cost factor in the ranking of consumers' choice for mobile phone. This suggests that the consumers' choice increases when the registration fees or the price of the starter packs are low. Low prices in registration fees or starter packs also positively correlate to low cost charges. Thus, the hypothesis about the relationship of cost and consumer's choice substantiated that cost has a significant importance on a consumer's choice in mobile phone services.

The overall consumers' choice regarding the quality factor is significant and positively correlated to service performance, wide coverage and low defect rate. The consumers' choice increases when the service performance is high. Service performance positively correlates to wide coverage and low defect rate. Thus, hypothesis 2 is substantiated as quality has a significant importance on a consumer's choice in mobile phone services. The quality factor is significant and positively correlated to response on complaints, time for initial service and time taken on fault restoration. The consumers' choice increases when the response on complaints is fast. The response on complaints is also positively correlated to fault restoration and time for service. Thus, hypothesis 3 is substantiated as time has a significant importance on a consumer's choice in mobile phone services.

The overall consumers' choice regarding the flexibility factor is significant and positively correlated to service customization and service variety offered to the consumer. The consumers' choice increases when the aspect of service customization is enhanced. Service customization is also positively correlated to service variety. Thus, hypothesis 4 is substantiated as flexibility has a significant importance on consumer's choice in mobile phone services. The service factor is significant and positively correlated to after sales service and customer service. The consumers' choice increases when after sales service and customer service is enhanced.

After sales service elements also positively correlates to the customer service. Thus, hypothesis 5 is substantiated as service has a significant importance on a consumer's choice in mobile phone services. Innovation is significant and positively correlated to creative services and introduction to new products or technology. The consumers' choice increases when creative services are offered to them. Creative services also positively correlate to the introduction of new products or technology. Thus, hypothesis 6 is substantiated as innovation has a significant importance on a consumer's choice in mobile phone services.

From the regression analysis, 48.2% of the variance ($R^2 = 0.482$) in consumers' choice is been significantly explained by the six independent variables as shown in Table 2. For the overall evaluation, flexibility gives the highest beta coefficient (0.311), which means 31.1% increase in the flexibility element which consists of customization and variety of services, will contribute to the increase in consumers' choice towards the provider by one unit. Thus, hypothesis 7 is substantiated as competitive priorities have a significant importance on a consumer's choice in mobile phone services.

Table 2. Multiple regressions output for overall consumers' choice

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.695 ^a	.482	.473	.35613

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	1.260	.205		6.148	.000
	Overall cost evaluation	.110	.036	.135	3.049	.002
	Overall quality evaluation	.128	.047	.139	2.719	.007
1	Overall time evaluation	.049	.039	.064	1.254	.211
	Overall flexibility evaluation	.246	.045	.311	5.529	.000
	Overall service evaluation	.102	.041	.135	2.487	.013
	Overall innovation evaluation	.102	.030	.156	3.423	.001

a. Dependent Variable: Overall consumers' choice

In order to determine the relative importance of the competitive priority elements or to rank all the elements, descriptive statistics was administered. The elements of cost include the price of registration fee or price of starter packs. Additionally, call charges includes the charges of making calls or short messaging services (SMS), as well as the price of value added services such as call divert, call waiting, followed me and other facilities. The finding shows that the respondents choose low price in call charging with a mean score of 4.76 as the first priority for them in making the choice of mobile phone providers followed by low price in value added services with a mean score of 4.47 and lastly, the factor of registration fees or starter packs with a mean score of 4.41 as shown in Table 3. The overall mean for cost evaluation is 4.55 with a minimum of 1.67 and a maximum of 5.00.

Table 3. Descriptive statistics on cost

	N	Min	Max	Mean
Registration fee or price of starter kit	347	1	5	4.41
Call/short messaging service charges	347	1	5	4.76
Value added charges	347	1	5	4.47
Overall cost evaluation	347	1.67	5	4.55

Among the cost factors that influence the consumers' choice, the charges on call and short messaging services contribute the highest mean value. From this result, telecommunication providers may consider lowering the tariff on calls and short messaging charges in order to attract the customers.

The element of quality is associated with the low defect rate, wide service coverage and service performance. In this context of study, low defect rate can be defined as low in error occurring during the services provided, for example the network is busy and disconnects. Wide coverage means that the coverage available for the service is within a large area and covers many places and service performance refers to the overall services provided to the potential users and existing such as the performance of directory services from the operators. The mean for wide coverage is 4.81 followed by service performance, 4.79 and low defect rate, 4.45 as shown in Table 4. The overall quality evaluation is a mean of 4.69 with a minimum of 1.67 and maximum of 5.00.

Another factor of the competitive elements that influence the consumers' choice in mobile phone services is associated with the time to get service. This refers to the duration of time whereby customers receives service for the first time after the registration or activation of the starter pack, the duration of fault restoration, the providers response time to solve complaints and the way the telecommunication staff handle the customer's complaint.

Table 4. Descriptive statistics on quality

	N	Min	Max	Mean
Defect rate	347	1	5	4.45
Service coverage	347	2	5	4.81
Service performance	347	1	5	4.79
Overall quality evaluation	347	1.67	5	4.69

The result shows that the three elements of time that are considered in this study are important to the customers since the mean is not much different. Service providers' response to complaints and fault restoration are two most important factors to the consumers as compared to the duration of time whereby customers receives service for the first time after the registration or activation of the starter pack. The overall quality evaluation has the mean score of 4.53 with a minimum of 1.00 and a maximum of 5.00 as shown Table 5.

Table 5. Descriptive statistics on time

	N	Min	Max	Mean
Duration to get first time service	347	1	5	4.45
Fault restoration time	347	1	5	4.56
Response on complaint	347	1	5	4.59
Overall time evaluation	347	1	5	4.53

The mean value of the time factor that influences the consumers' choice does not shows any marginal result. This reflects the importance of customer services and the competitiveness of customer services presence in the telecommunication sector.

Table 6. Descriptive statistics on flexibility

	N	Min	Max	Mean
Services customization	347	2	5	4.58
Services variety	347	1	5	4.49
Overall flexibility evaluation	347	2.5	5	4.54

In the aspect of flexibility, the associated elements are service customization and service variety. Service customization refers to the services given by the providers that suit the requirement of a particular group of users, for example, family packages and business packages. Service variety means that many types of facilities are offered to the users such as online bill payment and online complaint. The result of the study shows that service customization and service variety offered to the users are both important and influenced the consumers' choice in mobile phone service. Both elements have almost the same mean score of 4.50 as shown in Table 6. The overall flexibility evaluation mean score is 4.54 with a minimum of 2.50 and maximum of 5.00.

Form the mean analysis, the mean value of all three flexibility factors have almost equal values. This result reflects that services that are unique and cater to the needs of individuals as well as a particular group contributes to consumers decision making choices.

Service is another important element that will influence the consumers' choice. The service elements are associated with after sales service and customer service. After sales service involves the services offered by the providers after the user uses the services such as service guidance and technical advice. Customer service usually provides support both to the potential and existing customers, such as product or service information, complaint handling, billing information and other necessary information. The customer service with a mean score of 4.56 is most important to the consumer as compared to after sales service as shown in Table 7. The overall service

evaluation is a mean score of 4.48 with a minimum of 1.50 and a maximum at 5.00.

Customer service support gives the highest mean value for the service factor for mobile phone users. This indicates that telecommunication providers must consider the availability of support services to increase the consumers' choice to decide the telecommunication services.

Table 7. Descriptive statistics on service

	N	Min	Max	Mean
After sales services	347	1	5	4.39
Customer service support	347	1	5	4.56
Overall services evaluation	347	1.5	5	4.48

Innovation is an enhanced element in the competitive priorities that contributes to the consumers' choice. Innovation element is associated with new products and creative services. New products offered usually involves new services or new technology such as 3G. The creative services can be viewed as services that can add value both to the provider and also to the potential and existing consumers. The result shows that both the new products or services and creative services are important to the consumer with a mean score of almost the same, at 4.40 as shown in Table 8. The overall innovation evaluation has a mean score of 4.39 with a minimum of 2.00 and a maximum of 5.00. Innovation activities in introducing new products and services will contribute to consumers to decide the type of telecommunication provider to use. New products and technology that have highest mean value reflects that consumers demand for better product with better technology.

Table 8. Descriptive statistics on innovation

	N	Min	Max	Mean
New product and technology	347	1.00	5.00	4.40
Creative services	347	2.00	5.00	4.38
Overall innovation evaluation	347	2.00	5.00	4.39

The result of the descriptive statistics on overall consumers' choice of all the competitive priority elements, cost, quality, time, flexibility, service and innovation are shown in Table 9. The highest mean score is 4.69 for the overall quality evaluation. This means that the low defect rate, wide coverage area and reliability of service performance are important factors that influence the consumer's choice.

From the mean analysis, quality gives the highest mean value from the overall consumers' choice factors with the score of 4.69. This finding shows that consumers believe quality of services is an important factors in prioritizing the telecommunication provider to use. The second important factor with a mean score of 4.55 is the pricing which relates to the price of registration fees or the price of starter packs, call charges and value added facility pricing. The third factor is flexibility with a mean score of 4.54. This refers to customization and variety of services offered. The fourth factor is time with a mean score of 4.53. Time signifies duration of time in getting service for the first time, response time on fault restoration and response time on complaints. The fifth factor is services which denotes after sales service and customer service. This factor has a mean score of 4.48.

Table 9. Descriptive statistics on overall consumers' choice

	N	Min	Max	Mean
Cost	347	1.67	5.00	4.55
Quality	347	1.67	5.00	4.69
Time	347	1.00	5.00	4.53
Flexibility	347	2.50	5.00	4.54
Services	347	1.50	5.00	4.48
Innovation	347	2.00	5.00	4.39
Overall consumers' choice	347	2.50	5.00	4.61

Lastly, innovation with a mean score of 4.39 includes the introduction to new products or services and creative

services offered by providers. The minimum mean score of 2.50 indicates that there are some who do not agree that the competitive priority elements have a significant importance to the overall consumers' choice and the maximum of 5.00 indicates that some strongly agree that competitive priority elements have a significant importance to the overall consumers' choice in mobile phone services.

Table 10. Ranking of competitive priority elements

Element	Mean
Quality	4.69
Cost	4.55
Flexibility	4.54
Time	4.53
Service	4.48
Innovation	4.39

As an overall analysis of the results, Table 10 presents the relative importance of competitive priorities that influence the consumers' choice in mobile phone services. From the mean value, users of mobile phone ranked quality as the first priority for decision making in choosing the mobile phone services, followed by cost, flexibility, time, services and innovation.

5. Conclusion

This study indicates that consumers' choice of telecommunication providers to mobile phone services is influenced by the elements of competitive priorities. All the six competitive priority elements can be ranked as quality, cost, flexibility, time, service and innovation. This rank reflects the importance of operational processes especially to the business-oriented organization such as the mobile phone providers. Competitive priority elements are useful to the providers or producers to perform both efficient and effective activities to address the needs and wants from the consumers' point of view. Consumers expect better service quality from the mobile phone providers. Other factors such as cost or price, flexibility, service and innovation also have significant impacts that influence the consumers' choice of mobile phone providers in Malaysia. From the multiple regression, the highest contribution factor that influence consumers' choice is the flexibility. This factor contributes 31.1%, which mean increase in 1 unit of flexibility elements which consist of customization and variety of services will contribute to the increase by 31.1% in consumers' choice towards the provider.

Since consumers' choice vary according to the quality, cost, flexibility, time, service and innovation, the mobile phone providers also compete with each other to attract the consumers. Currently, the competition among the mobile phone providers in Malaysia is more intense as a result of new policy such as Mobile Number Portability (MNP) and other regulations that have direct or indirect effects to this industry. So, it is suggested that mobile phone providers use the competitive priorities elements in all their processes or activities in order to provide excellent services to their existing and potential consumers. The element of quality associated with the defect rate, service performance and coverage area and many others that explained previously. Mobile phone providers have to zoom in and focus to every element to produce better services to the customers. In terms of cost, the elements that take into consideration are registration fee or price of starter pack, call charges and price of value added facilities. Mobile phone providers should add more elements within their operational processes and activities and improve on flexibility because 31.1% increasing of flexibility in the service will contribute to 1 unit increasing in consumers' choice towards the particular provider. The elements of flexibility that can be addressed are service customization that suit to the consumer's requirements, as well as other variety of services. Mobile phone providers should be aware of the changing of consumers' preferences in mobile phone services through the external environment analysis. Adaptation and changes have to be made swiftly and accordingly, to suite with the new trend and style. It is clear that the result of this study proves useful to mobile telecommunication players in order to maintain competitiveness in the telecommunication industry. Strategically, the result of this study highlights the focus area to be enhanced in order to attract customers.

The outcome of this research shows a comprehensively integrated framework in order to understand the dynamic relationships among competitive priority elements that include cost, quality, time, flexibility, service and innovation related with consumers' choice in mobile phone service. In this aspect, further research is needed to examine these factors in Malaysia with additional samples before generalization can be made.

Acknowledgements

The authors would like to thank the management of Universiti Teknikal Malaysia Melaka, Malaysia for the support towards the completion of this research.

References

- Acur, N., Gertsen, F., Sun, H., & Frick, J. (2003). The Formulation of Manufacturing Strategy and its Influence on the Relationship between Competitive Objectives, Improvement goals, and Action Plans. *International Journal of Operations & Production Management*, 23(10), 1114-1141. <http://dx.doi.org/10.1108/01443570310496599>
- Askar, M., & Mortagy, A., K. (2007). Assessing the Relative Importance of Competitive Priorities in Egyptian Companies. *S.A.M. Advanced Management Journal*, 72(3), 35.
- Bolden, R., Waterson, P., Warr, P., Clegg, C., & Wall, T. (1997). A New Taxonomy of Modern Manufacturing Practices. *International Journal of Operations & Production Management*, 17(11), 1112-1130. <http://dx.doi.org/10.1108/01443579710177879>
- Brown, S., Squire, B., & Blackmon, K. (2007). The Contribution of Manufacturing Strategy Involvement and Alignment to World Class Manufacturing Performance. *International Journal of Operations & Production Management*, 27(3), 282-302. <http://dx.doi.org/10.1108/01443570710725554>
- Christiansen, T., Berry, W. L., Brunn, P., & Ward, P. (2003). A Mapping of Competitive Priorities, Manufacturing Practices, and Operational Performance in Groups of Danish Manufacturing Companies. *International Journal of Operations & Productions Management*, 23(10), 1163-1183. <http://dx.doi.org/10.1108/01443570310496616>
- Dangayach, G. S., & Deshmukh, S. G. (2001). Manufacturing Strategy Literature Review and Some Issued. *International Journal of Operations & Production Management*, 21(7), 884-932. <http://dx.doi.org/10.1108/01443570110393414>
- Kim, Y., Lee, S., & Yun, D. (2004). Integrating Current Competitive Service Quality Level Analyses for Service-Quality Improvement Programs. *Managing Service Quality*, 14(4), 288-296. <http://dx.doi.org/10.1108/09604520410546824>
- Krajewski, L., Ritzman, L., & Malhotra, M. (2007). *Operations management*. New Jersey: Pearson Prentice Hall.
- Malaysian Communications and Multimedia Commission. (2008). *Cellular Phone in Malaysia*. Retrieved from http://www.skmm.gov.my/facts_figures/stats/viewstatistic.asp?cc=46381784&srId=9247989
- Prajogo, D. I., Laosirihongthong, T., Sohal, A., & Boon-Itt, S. (2007). Manufacturing Strategies and Innovation Performance in Newly Industrialized Countries. *Industrial Management and Data Systems*, 107(1), 52-68. <http://dx.doi.org/10.1108/02635570710719052>
- Pratali, P. (2003). Strategic Management of Technological Innovations in the Small to Medium Enterprise. *European Journal of Innovation Management*, 6(1), 18-31. <http://dx.doi.org/10.1108/14601060310456300>
- Razak, M. S. (2007). *Pantau Teknologi Komunikasi*. Retrieved from http://mohamadsofee.blogspot.com/2007_08_01_archive.html
- Ren, J., Yusuf, Y. Y., & Burns, N. D. (2003). The Effects of Agile Attributes on Competitive Priorities: A Neural Network Approach. *Integrated Manufacturing Systems*, 14(6), 489-497. <http://dx.doi.org/10.1108/09576060310491351>
- Schmenner, R. W. (1982). Multiplant Manufacturing Strategies among the Fortune 500. *Journal of Operations Management*, 2(2), 77-86. [http://dx.doi.org/10.1016/0272-6963\(82\)90024-9](http://dx.doi.org/10.1016/0272-6963(82)90024-9)
- Schroder, R. G., Scudder, G. D., & Elm, D. R. (1989). Innovation in Manufacturing. *Journal of Operations Management*, 8(1), 1-15. [http://dx.doi.org/10.1016/S0272-6963\(89\)80002-6](http://dx.doi.org/10.1016/S0272-6963(89)80002-6)
- Sekaran, U. (2007). *Research methodology business approach*. New Jersey: Prentice Hall.
- Skinner, W. (1969). Manufacturing-The missing link in corporate strategy. *Harvard Business Review*, 136-145.
- Spring, M., & Boaden, R. (1997). One More Time, How do you Win Orders: A Critical Reappraisal of the Hill's Manufacturing Strategy Framework. *International Journal of Operations & Production Management*, 17(9), 757-779. <http://dx.doi.org/10.1108/01443579710175547>

Vokurka, R. J., & Flores, B. E. (2002). Plant Charter Classifications and the Operating Homogeneity of U.S. Manufacturing Plants. *Industrial Management & Data Systems*, 102(8), 406-416. <http://dx.doi.org/10.1108/02635570210445844>

Wheelwright, S. C. (1984). Manufacturing Strategy: Defining the Missing Link. *Strategic Management Journal*, 5(1), 77-91. <http://dx.doi.org/10.1002/smj.4250050106>

Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/3.0/>).