

QUALITY

Malaysian Journal of Quality Vol.1

Does Quality Differentiation Strategies Enhance Competitive Advantage And Customer Satisfaction? A Strategic Management Perspective

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Edited by Assoc. Prof. Dr Roziyah Mohd Janor
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Maniam Kaliannan and Jasmine Ahmad

EDITORIAL

This inaugural issue of the Malaysian Journal of Quality focuses on the theme, "Quality Initiative: From Strategy to Implementation". We are pleased to report that we received a number of excellent papers for this inaugural issue. Hence, we are publishing the papers in two parts: Part I in December 2005 (English) and Part II in February 2006 (Malay). The journal envisions to be an official platform for documenting any quality initiatives that has proven workable and of value to any organisational community or society at large. The journal will provide opportunities for academicians and professionals from various fields to interact via published work with members inside and outside their own particular disciplines.

This issue contains seven papers, all from academics from various local universities, but their papers represent findings from study done both inside and outside of universities. The first paper looks at whether quality differentiation strategies gives impact on companies competitive advantage and its' customer satisfaction. The second author proposed an alternative way of building a learning organisation by providing a case study done in a local university. While the third paper provides a finding from a case study that promotes the idea that diverse cognitive ability amongst its executive results in better financial performance.

In focusing on the theme of quality initiatives in the university environment, the following four papers revolves around issues on how to improve teaching, learning and management system in universities. The fourth paper touches on the idea of higher education as a service and it defines the concept of an excellent lecturer from students' perspectives by comparing findings from a university in the United Kingdom to that in Malaysia. It reveals that the most important attributes of an excellent lecturer are competence, communication, reliability, responsiveness, and understanding. The fifth paper shares a modest way of monitoring and improving student performance in a Medical program that includes student feedback, examination performance and question analysis. The sixth paper critically looks at various methods of teaching law and its contending issue between teaching law to non-law students and teaching full fledged law students, where the author concludes that there is no superior method of teaching law but suggests that the effective teaching method rests more on the self of the lecturer rather than the method and his/her ability to create balance between fulfilling the need to pass exams and to develop legal skills. Finally the seventh paper documents a roadmap that consists of nine steps that a faculty has undertaken in implementing the ISO 9001:2000 guidelines in improving its management system.

We hope that this issue of the Malaysian Journal of Quality will be useful in efforts to better understand how quality initiatives can promote impeccable improvement in any organisational setting.

Roziyah Mohd Janor
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DOES QUALITY DIFFERENTIATION STRATEGIES ENHANCE COMPETITIVE ADVANTAGE AND CUSTOMER SATISFACTION? A STRATEGIC MANAGEMENT PERSPECTIVE

Arawati Agus
Za'faran Hassan

ABSTRACT. This study examines the impact of competitive quality differentiation strategies of Malaysian manufacturing companies and its impact on the enhancement of customer satisfaction. The findings demonstrate that consumer satisfaction can be influenced substantially by the product attribute structure, price and personnel differentiations. It also suggests that richer theories of competitive advantage may be constructed by formally integrating the "behavioral" view of consumer decision-making into concepts of marketing strategy.

INTRODUCTION

The dawn of the 21st century finds marketers in a dilemma. On one hand, customers are becoming very sophisticated and are demanding customized products and services to match individual preferences and tastes. These demand side pressures are forcing marketers to adopt many different strategies. On the other hand, competition is becoming intense, fueled by industry convergence, globalization and internetworking. These supply side measures are forcing marketers to hold the line on prices. Marketing responses and strategies reinforce existing practices to deliver short-term efficiencies, for example, via extending the life cycles of current products and to reposition the older products at a minimum cost (Kotler, 1994; Urban & Starr, 1991). However, they fail to address the underlying weakness in the overall process of satisfying customer needs and creating competitive advantage.

Strategy has been defined as "the match an organization makes between its internal resources and skills and the opportunities and risks created by its external environment" (Hofer and Schendel, 1978). The measure of competitive strategy is an important issue in strategic management. Porter (1985) first defined three generic competitive strategies - cost leadership, differentiation, and focus for businesses in 1980. Since then, the three strategies have been studied extensively and considerable support for their existence and effectiveness has emerged (Calingo, 1989; Dess & Davis, 1984; Hall, 1980; Kim & Lim, 1988; Miller, 1988). Attempts to measure Porter's competitive strategies seek to capture differences in the extent to which firms emphasize various competitive dimensions. Firms can seek to establish a cost-leadership position within their market segments for some products in a portfolio while seeking a differentiated position in other market segments. Discussions of generic competitive strategies have

suggested, however, that each strategy requires different organizational arrangements, control procedures, incentive systems, leadership styles, corporate cultures and people (Nayyar, 1993). The purpose of this paper is to examine quality differentiation competitive strategies of Malaysian manufacturing companies and its impact on the enhancement of customer satisfaction.

METHODOLOGY

The sampling frame of this study constitutes public listed manufacturing companies in Malaysia. The respondent companies were chosen based on stratified random sampling. Using a well-stratified process, the researchers hope that the element of diversities that may exist among industries would be captured (Arawati and Mokhtar, 1999). The sample size represents about 25% of the total sampling frame of 51 consumer product companies and 76 industrial product companies. The main objectives of this paper are:

1. To explore the relationship and examine correlations between quality differentiation strategies and customer satisfaction.
2. To determine the structural effect of product, personnel and price quality differentiations on the differentiation construct
3. To determine the structural effect of differentiation on customer satisfaction
4. To investigate the segmentation of manufacturing companies on the product quality differentiation criteria.

MEASUREMENTS/INDICATORS

In pursuing a competitive advantage based on differentiation strategies, firms attempt to create unique bundles of products and services that will be highly valued by customers. Any attribute, feature, or capability that customers value and that a particular firm is uniquely able to offer can provide a competitive advantage based on differentiation. If the firm is successful in creating some unique and desirable attribute in its goods or services, it builds brand loyalty in customers, decreases the number of alternative products the customers are willing to consider and reduces buyers' sensitivity to prices. These outcomes produce higher profit margins without the necessity of lowering costs. Thus, successful quality differentiation strategies require firms to (1) understand what customers value, (2) be uniquely able to provide that value, and (3) be able to extract a premium price for the value.

To determine the domain of differentiation strategies, the theoretical, empirical and practitioner literature were reviewed. By incorporating ideas from Powell (1995), Porter (1980, 1985, 1990) and differentiation measurements listed by Kotler (1994), three differentiation measurements were developed namely product, personnel, and price differentiations. Service differentiation is not discussed since it is not one

of the main factors of differentiation for manufacturing companies. This leads to the identification of the following factors, which underlie differentiation (DIFF) factors of manufacturing companies in Malaysia:

- Product Quality Differentiation (dproduct)
- Personnel Quality Differentiation (dperson)
- Price Differentiation/ Cost advantage (dprice)

All differentiation variables were operationalized on a ten-point ordinal scale with multiple items developed from literature referred earlier. The median value of all these items measuring a particular construct was taken as the value of the construct for a given respondent. A brief discussion of these three factors follows.

i) Product Quality Differentiation

Product differentiation is a classic marketing strategy and much has been written about product differentiation strategies (Aaker, 1991; Kotler, 1994; Porter, 1985). The prevailing view is that successful product differentiation requires distinguishing a product or brand from competitors on an attribute that is meaningful, relevant and valuable. But a brand can also achieve competitive advantage through differentiating not on an important, meaningful, or valuable attribute but through the addition of a distinguishing, unique, but irrelevant attribute (Carpenter et al., 1994).

Lei and Goldbar (1990) offer a robust argument for a future of product differentiation that is based on functional and performance customization rather than a differentiated “message” about a standard product (Pine, 1993). Product differentiation strategies that attempt to successfully meet market needs at increasingly micro levels do so for the purpose of expanding the size of the total target market.

Product differentiation is an important firm-specific advantage that can ensure higher economic gain. Firms attempt to differentiate products in many ways, but an important component is creation of positive brand images. The competition for market dominance is heavy and companies entering these markets will be at a severe disadvantage if they do not practice differentiation strategies. While cost-based strategies are important, some modicum of brand differentiation is needed to create and sustain competitive advantage (Erramilli et al., 1997; Arawati and Za’faran, 1999c).

ii) Personnel Quality Differentiation

A skilled or knowledgeable worker is no doubt an important asset to any organization. Therefore, one of the keys to an organization’s success is the ability to tap into the productive energy of its workforce. We live in the knowledge era where the wealth of our companies is measured by both financial assets and liabilities, as well as by intellectual capital. All things being equal, the key differentiator in today’s market place will be the intellectual capital at the workplace (Marshall, 1998). A company’s

work force represents the intellectual capital - the brainpower and the creative energy, which can provide the company with personnel differentiation. Without them, a firm's productive engine will be idle. Without their full commitment, a company risks sub-optimizing its competitive potential.

Hofer and Schendel (1978) suggest a direct relationship between distinctive personnel competency and competitive advantage through the ability of the firm to use such competencies to create major competitive advantages. Competency is defined as the patterns of resource and skill deployment that will help the firm achieve its goal and objective (Hofer & Schendel, 1978). The source of competency is always internal to the firm, and competency is produced by the way a firm utilizes its personnel and resources, relative to competition (Read & De Phillip, 1990).

iii) Price Differentiation

The notion that low cost and differentiation are two extremes on a competitive strategy continuum, as conceptualized by Porter (1980) is being increasingly questioned (Hamel & Prahalad, 1990, 1993). As the new manufacturing technology continues to change the economic of manufacturing and of the product-process evolution cycle, it also forces a reconsideration of the strategic option available to firms. Firms nowadays have significantly enlarged product differentiation opportunities, and markedly lower cost penalty for differentiation. Product differentiation and low-cost strategies can be utilized simultaneously (Wright et al., 1991). Firms can now compete not only on the basis of product differentiation, but also price differentiation. Price adds to a product's distinctiveness, which makes discounting its distinguishing attribute difficult (Carpenter et al., 1994).

In terms of the value chain, firms have to come up with creative solutions whereby the value creating activity can be delivered at costs that are lower than the competitor's. The productivity approach forces firms to look at how to increase efficiencies from current activities. By focusing on outcomes that reside on the value frontier, firms can more easily identify new activities that can expand the productivity frontier. Focusing on outcomes allows firms to be creative and reconfigure their value chains. In so doing, they deliver more value to customers at the same or lower costs. The only way to develop a sustainable competitive advantage is to ensure that sufficient resources are available to achieve external outcomes that not only meet customers' current expectations about a firm's product, but also meet them better than competitors. Firms should try to reduce costs of activities if it does not impact any external outcome (Chatterjee, 1998). Low-price strategy would require an emphasis on maintaining a cost structure significantly lower than competitors. Limiting product offerings, reducing the complexity of products or limiting customer service might accomplish this. Whichever strategy is selected, a value chain analysis can help firms focus on its chosen strategic plan, and, thus achieve a competitive advantage (Donelan & Kaplan, 1998).

The main purpose of this study is to investigate the impact of differentiation strategies on the enhancement of customer satisfaction. Measurements of customer satisfaction on the following criteria were obtained:

- 1) Product quality (pquality)
- 2) Product feature (pfeature)
- 3) Product design (pdesign)
- 4) Product delivery (pdeliver)

Product quality stands for the ability of a product to perform its function. Quality attribute may vary among industries. Product features are characteristics that supplement the product's basic function. A company can create high-level models by adding more features (Kotler, 1994; Juran, 1992). The key issues associated with developing customer satisfaction based on achieving high quality are the features of the firm's product and services to meet customer requirements and the conformance to these features in the production process and support functions. The relative importance of product feature issues for a firm depends on its industry, the organization's state of technology and its selected business strategy. Meanwhile, product design is considered as the integrating force and in this study, it incorporates elements such as style and esthetics. The design issues for a firm in an industry producing a commodity item are not as crucial as they are for a firm building specialty items or custom-designed products. The final criteria, product delivery refers to how well the product is delivered to the customer. It includes speed, accuracy, and care while attending to the delivery process (Kotler, 1994).

ANALYSIS AND DISCUSSION

i) Reliability Test

Table 1 contains the number of differentiation items measuring each scale, its mean, standard deviation and median. The reliability values for each scale based on Cronbach alpha are also shown. In this study, a reliability test was conducted to determine the item analysis and internal consistency of each measurement or scale of differentiation variables. Cronbach alpha coefficients were computed to test the reliability of the items within each scale. Typically, these coefficients usually fall within a range of 0.70 to 0.90 for narrow constructs such as those defined here, and 0.55 to 0.70 for moderately broad constructs (Van de Ven and Ferry, 1979, Nunnally, 1967).

Table 1. Descriptive Statistics of Critical Variables of Differentiation Measurements (DIFF)

Variable	No. of items	Mean	SD	Median	Reliability
Product Differentiation (dproduct)	6	6.48	1.75	6.50	0.8298
Personnel differentiation (dperson)	6	7.12	1.26	7.50	0.9227
Price differentiation (dprice)	6	6.10	2.01	6.00	0.9136

With respect to the differentiation indicators, the reliability analysis revealed that maximization of the alpha coefficient would require eliminating items in the scales. Product, personnel and price differentiations display satisfactory levels of reliability as indicated by alpha reliabilities ranging from 0.8298 to 0.9227 after the elimination and alpha maximization process (Table 1). The internal consistency analysis indicates that product, personnel and price differentiation scales contribute quite strongly to their respective main concepts and have high consistencies among items in the same group.

Table 2. Descriptive Statistics of Critical Variables of Customer Satisfaction Measurements (CS)

Variable	No. of Items	Mean	SD	Median	Reliability
Product Quality (pquality)	1	7.50	1.008	8.00	-
Product Features (pfeature)	5	6.80	1.529	7.00	0.8423
Product Design (pdesign)	3	7.45	1.094	7.50	0.8283
Personnel Delivery (pdeliver)	2	7.10	1.447	7.00	0.9031

Table 2 exhibits the reliability result and statistics of critical variables of customer satisfaction criteria. Cronbach alpha coefficients range from 0.8283 to 0.9031 after the elimination and maximization process. The alpha values as well as the mean, median and standard deviation suggest that customer satisfaction scales have substantially high reliability value.

ii) Correlation

The strategic purpose of a firm is to create value that meets its financial needs and the needs of its customers. Table 3 shows the correlation of differentiation variables and customer satisfaction indicators. Almost all differentiation indicators indicate positive and significant correlation with customer satisfaction indicators. This suggests that differentiation indicators are associated with customer satisfaction. Although product differentiation fails to exhibit significant correlation with product feature, it demonstrates significant correlation with product quality, product design

and product delivery. Meanwhile, personnel differentiation is not significantly correlated with product delivery. Finally, price differentiation shows significant correlation with all customer satisfaction variables.

Table 3: Spearman’s Correlation between differentiation variables and customer satisfaction indicators

Variable	Product Quality	Product Feature	Product Design	Product Delivery
1. Product Differentiation	0.423**	0.292	0.475**	0.402*
2. Personnel Differentiation	0.341*	0.486**	0.369*	0.262
3. Price Differentiation	0.398*	0.452*	0.569**	0.477**
1. *P<0.05, **P<0.01 2. All t-tests are one-tailed				

iii) LISREL Analysis

Advances in statistical applications have allowed researchers to observe the interplay between theory and data for a better understanding of the real world (Fornell & Bookstein, 1982). LISREL modeling was chosen in the analysis of structural relationships of differentiation and customer satisfaction because such covariance based structural modeling allows one to systematically check model identification, to estimate parameters simultaneously and provides overall measures of goodness of fit (Bollen, 1989; Joreskog, 1989; Mueller, 1996). The two main constructs namely differentiation (DIFF) and customer satisfaction (CS) were treated as latent constructs, schematically represented in the path structure shown in Figure 1. The proposed structural framework is fundamental to the modeling because it allows the researcher to outline the hypothesized set of relationships among variables. It can also be directly translated into equations needed for the analysis. A maximum likelihood (ML) estimation procedure was used in the LISREL iteration process because it produces robust chi-square values as a goodness of fit measure. A chi-square test can be conducted to test the null hypothesis, H_0 , that the observed covariance matrix is generated by the hypothesized model, against the alternative hypothesis H_1 , that the covariance matrix is an unrestricted covariance matrix. Therefore, failure to reject the null hypothesis is desired. Rejecting this hypothesis indicates that the model does not adequately reproduce the observed covariance matrix (Bollen, 1989; Joreskog, 1989; Mueller, 1996). Given our earlier explanation, we would expect to accept the null hypothesis. The alternative hypothesis would postulate the following:

H_1 : The hypothesized model does not have a good fit.

In addition, this study will test our main notion that quality differentiation strategies would enhance customer satisfaction. The second hypothesis can be stated as follows:

H_2 : Differentiation (DIFF) has a positive structural effect on customer satisfaction (CS)

In simple words, the hypothesis we are suggesting is:

H_0 : The hypothesized model has a good fit.

Figure 1 exhibits the result retrieved from the LISREL analysis. The resulting Chi-square value illustrated by the hypothesized model is 14.30 with 13 degrees of freedom and a p-value of 0.353. **This finding supports the null hypothesis that the model has a good fit (H_0) and the alternative hypothesis that the data do not fit the model cannot be accepted (H_1).** The p-value is considerably greater than 0.05, so we have sufficient evidence that the data fit the model (Bollen, 1989; Joreskog, 1989; Mueller, 1996; Arawati and Za'faran, 1999b). In addition, the Bentler CFI Index (comparative fit model) = 0.973, MFI (Absolute fit index) = 0.978, Bollen Non-normed Index (IFI) = 0.977 and Tucker & Lewis Index (TLI) = 0.956 (Table 4) further support the notion that the model has a good fit (H_0). Since the probability value and structural modeling indices are well above the recommended level, the model is considered to be a reasonable representation of the data (Hair et al., 1995).

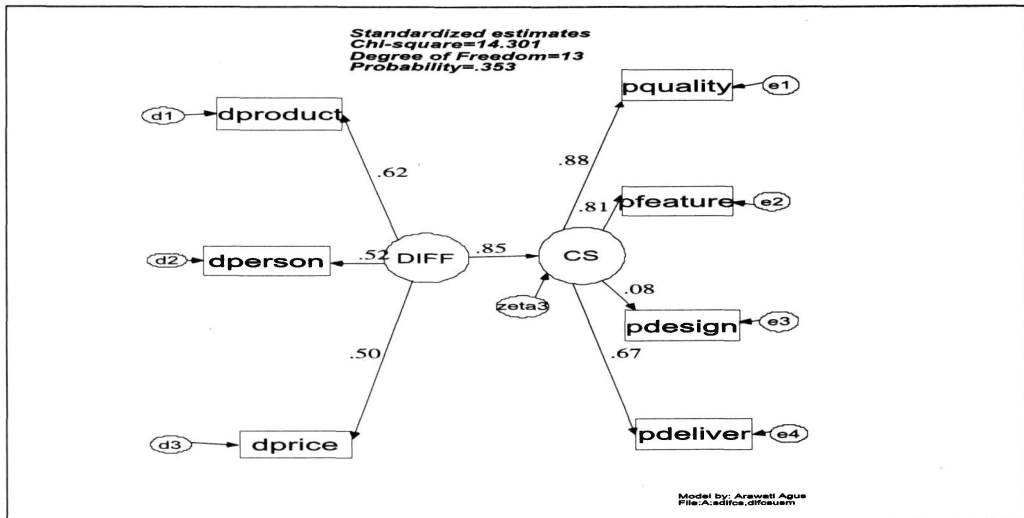
From the LISREL linkage, we can see that the linear structural effect of differentiation (DIFF) on customer satisfaction (CS) is 0.85 (Figure 1). It means that the structural effect of differentiation on customer satisfaction is very high. The non-zero t-value (2.135) and small standard error (0.537) indicate that the two parameters have a positive and significant relationship. Parameters or structural paths whose t-values are larger than two in magnitude are normally judged to be significantly different from zero (Joreskog, 1989; Sharma, 1996). **Hence, there is enough evidence to reject the null hypothesis in favor of the notion that differentiation has a positive structural effect on customer satisfaction (H_2).** Therefore, we can possibly say that the fundamental requirement of successful manufacturing companies is the ability to provide differentiation strategies, which are oriented towards customer satisfaction.

Table 4 Results of the Overall Model Fit (H_0)

Statistics	Values
Chi square	14.301
Degree of Freedom	13
Probability Level	0.353
Bentler (1988) CFI (comparative fit model)	0.973
MFI (Absolute fit index)	0.978
Bollen (1989) Non-normed Index (IFI)	0.977
Tucker & Lewis (1973) TLI	0.956

The structural loadings of differentiation variables (Figure 1 and Table 5) indicate that product differentiation (structural loading = 0.62, standard. error = 0.517, t-value = 2.140) exhibits the highest contribution towards the differentiation construct. This is followed by personnel (structural loading = 0.524, standard. error = 0.342, t-value = 2.001) and price differentiation (structural loading = 0.504, standard. error = 0.806, t-value = 2.001). These three indicators have low standard errors and significant t-values. Although not formally hypothesized, **we can state that product, personnel and price differentiation have positive and significant structural loadings on the main differentiation construct.** Therefore, based on the model proposed, we can suggest that a manufacturing company can differentiate itself from other competitors by emphasizing on product, personnel, and /or price differentiations.

Figure 1. Differentiation and Customer Satisfaction Linkage: A LISREL analysis.



As for the customer satisfaction criteria, product quality (structural loading = 0.88, standard error = 0.215, t-value = 4.638) acts as the most important contributor towards the enhancement of customer satisfaction (Table 5). Product feature (structural loading = 0.81, standard error = 0.216, t-value = 4.637) also appears to be one of the significant determinants towards improving satisfaction among customers in public listed manufacturing companies and it is followed by product delivery (structural loading = 0.67, standard error = 0.299, t-value = 3.651). These indicators (product quality, feature and delivery) also have low standard errors and significant t-values. However, product design fails to indicate substantial contribution towards customer satisfaction with an insignificant t-value (0.425) and low structural loading (0.084). The non-responsiveness and low contributing impact of product design on customer satisfaction may be due to one obvious reason. In the commodity market, where the design has been set and the standards are universally (industry wide) accepted, the customer selects on the basis of other criteria such as delivery and/or cost as opposed to design quality (Legare, 1996). **Thus, we can conclude that product quality, product features and product delivery have positive impact on customer satisfaction.** Therefore, we can possibly suggest that product quality product features and delivery are among the most important determinants of customer satisfaction.

Table 5 Measurement Results

(i) Constructs and Indicators	Standardized Loadings	SE	t- value
a. Differentiation (DIFF)			
X ₁ (Product differentiation)	0.619	0.517	2.140*
X ₂ (Personnel differentiation)	0.524	0.342	2.001*
X ₃ (Price differentiation)	0.504	0.806	2.001*
b. Customer Satisfaction (CS)			
Y ₁ (Product quality)	0.877	0.215	4.638*
Y ₂ (Product feature)	0.811	0.216	4.637*
Y ₃ (Product design)	0.084	1.408	0.425
Y ₄ (Product delivery)	0.668	0.299	3.651*
ii) Exogenous/endogenous Path			
a. DIFF-CS (H₂)	0.854	0.537	2.135*

The high attribute of product quality towards customer satisfaction is not surprising. By producing high product quality, manufacturing companies can increase their market share and can earn more because the premium quality enables them to charge a premium price as well as benefit from more repeated purchasing, customer loyalty and positive word of mouth (Kotler, 1994).

iv) Cluster Analysis

Since product differentiation demonstrates the highest loading towards differentiation construct, this study will carry out further analysis on product differentiation segmentation among manufacturing companies by performing a cluster analysis. A cluster analysis based on hierarchical, Euclidean, single-linkage clustering over the product differentiation factor is employed (SPSS, 1990).

The result of each cluster center coordinate and types of industries in each cluster is shown in Table 6. The cluster analysis statistically segmented these manufacturing companies into three clusters namely "High product differentiation achievers", "Average product differentiation achievers" and "Low product differentiation achievers". The first cluster, "High product differentiation achievers", consists of oil/gas, automotive, tobacco and brewery/beverages industries and has a cluster center coordinate of 8.30. The researchers strongly believe that companies in the first cluster consist of those that have carried out high investment in R&D to produce differentiated product in the market as compared to other clusters. This cluster mainly comprises of high technology companies with well-known differentiated products. With six types of manufacturing companies, the second cluster ("Average product differentiation achievers") is the largest. Food, textile, electric/electronic, chemical, cement and telecommunication industries constitute this second cluster with a product differentiation center coordinate of 6.39. The second cluster mainly consists of companies with medium capital intensive and moderately differentiated products. The third cluster, "Low product differentiation achievers", characterizes two types of industries, steel and wood. This final cluster has a cluster center coordinate of 4.75 and comprises of companies that produce generic products which are not easily differentiated.

Table 6. Cluster Center Coordinates of the Product Differentiation Factor and Types of Industries.

Cluster	Product Differentiation Center Coordinate	Types of Industries
1. 'High product differentiation achievers'	8.30	Oil/gas, automotive, tobacco, and brewery/beverages
2. 'Average product differentiation achievers'	6.39	Food, textile, electronic, cement, chemical and telecommunication
3. 'Low product differentiation achievers'	4.75	Wood and steel

Table 7. Analysis of variance on product differentiation factor

Differentiation Factor	Cluster		Error		F-value	sig.
	Mean Square	df	Mean Square	df		
Product Differentiation	9.248	2	.337	9	27.465	0.000**

Analysis of variance (ANOVA) is used to further explore difference in means between product differentiation clusters. The significant F-value (see Table 7) allows us to reject the null hypothesis that **the three groups' means are equal. Hence, the three clusters are significantly different. We can possibly conclude that "High product differentiation achievers" and "Average product differentiation achievers" have achieved better product differentiation than "Low product differentiation achievers"**.

CONCLUSION

This study demonstrates that consumer satisfaction can be influenced substantially by the product attribute structure, price and personnel differentiations. It also suggests that richer theories of competitive advantage may be constructed by formally integrating the "behavioral" view of consumer decision-making into concepts of marketing strategy. A useful starting point could be to examine the impact of several differentiation strategies and its implications on competition and customer satisfaction. If judgments about strategies and consumer satisfaction are context dependent, competition can take on an entirely different character. Rather than being a race to meet customer needs at the lowest price, competition may become a battle over the structure of consumer preferences. Firms may attempt to elevate the importance of one product's attribute over another or add distinctive but irrelevant attributes to shift competition. Therefore, a fundamental component of being "customer driven" may involve devoting resources not just to satisfy customers better than competition but also to create value for customers by shaping the context of customer satisfaction.

All organizations considered being in the mainstream of current management trends and practices have explored benefits to be gained from creating differentiation strategies. The LISREL findings indicate that product differentiation plays an important role in the effort of manufacturing companies in Malaysia to be positively different from their competitors. In addition, personnel differentiation and price differentiation also emerge as important competitive strategies. Firms that are usually very con-

cerned about competition may choose how to best address the competitive forces they face. Perhaps, in the case of Malaysian manufacturing companies, in addressing these competitive forces, firms tend to emphasize on product and price differentiation. This also gives evidence that some firms may choose to focus on achieving a favorable competitive position by emphasizing structural positioning in their industries or process execution as a source of competitive advantage.

A firm's ability to extract value from the market place will depend on how it creatively defines, develops and delivers outcomes - internal and external. Managers should try to consider alternative processes that can deliver the same outcomes and select the processes that play into a firm's core competencies. They should also consider several outcomes that can add similar value and choose the one that best match the resources of the firm. This mindset will open up creative thinking by concentrating on processes or product features. And it will also help managers see opportunities for competitive advantage by facilitating re-engineering and R&D in order to exploit new market opportunities.

The strong and positive structural loadings of the differentiation factors indicate that the means to create differentiation is to focus on product quality differentiation followed by price and personnel quality differentiation. The results support the findings of McCorry and Gertsberger, (1992); Drucker (1995); Besanko et al., (1996). This implies that differentiation is essentially the ability of the firm to outperform its industry, that is, to earn a higher rate of profit than the industry norm by producing differentiated products that are valued by customers. Hence, for a firm to achieve a competitive advantage, it must create a competitive edge against its competitors.

Product differentiation is no doubt the major determinant in gaining or maintaining differentiation of manufacturing companies in Malaysia. The essence of sustainable competitive advantage revolves around an organization's ability to continually differentiate itself in the marketplace. That is the difference that a customer perceives the benefits of a particular offering from those of its rivals. Product differentiation is the ability to provide unique and superior value to the buyer, which may enhance customer satisfaction and lead to superior profitability. Through differentiation, a manufacturing company makes its products stand out to the customer (see Mathur, 1992; Porter, 1990). An effective product differentiation can curtail potential threat from substitute products and new entrants must overcome the resulting brand loyalty arising from successful product differentiation. Malaysian firms need strategies and should start becoming more focused in terms of unique core competencies such as product development, demand management or order fulfillment. Otherwise, they simply cannot sustain the growth in per capita income or profit. Sheer scale is of little value. Companies should have enough focus so that there is real value-added across business and an enduring competitive advantage that can withstand and weather competition.

The cluster analysis indicates the importance of competitive scope or the breadth of the firm's target in positioning its products within its industry. Competitive scope for differentiation competitive strategy is important because industries are segmented and serving different segments which requires different capabilities and different competitive differentiation strategies. Included in the business scope decisions are those involving: (i) the range of market segments targeted; (ii) the number and type of product/service offered in the market segment selected; and (iii) the geographical parameter of the product-market strategy. Competitive strategy is traditionally measured at the business level. Yet businesses often consist of product portfolios in which a different competitive strategy is used for each product. Furthermore, within each industry, different firms may construct different product portfolios. Those industries in the first and second clusters can focus on product and personnel differentiations, while companies in the third cluster can concentrate on price and personnel differentiation strategies. However, manufacturing companies in the same industry can choose a different competitive focus depending on their core competencies and resources.

In managing business in an increasing competitive environment, manufacturing companies need to plan their strategies to stay ahead of competition. This can be partly achieved by providing differentiated product, price and personnel. This study makes inferences for the public listed manufacturing companies in Malaysia. However, other manufacturing companies or other types of industries can benefit from the findings of this study. Since product differentiation appears to be the prominent determinant of differentiation construct, Malaysian manufacturing companies can create a niche by making their product positively different from their competitors through product differentiation strategy. This may require firms to invest in R&D or product development so that its products can be differentiated in the market. This would lead to brand loyalty, customer satisfaction and ultimately improve financial performance (Arawati and Za'faran, 1999a). In conclusion, we hope that the findings of this study would open new avenues for future research in different types of industries.

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