SPATIAL INFORMATION SYSTEMS FOR SUSTAINING THE PROFITABILITY OF RETAILER BUSINESS DURING THE GLOBAL MELTDOWN ECONOMY

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ABSTRACT

Profitability is the central issues of world wide business firms, especially during the un-predictable situation under the global meltdown economy. Retailer is the most influenced by the crisis because it highly depends on the customers buying activity. In perspective of customers, the value that rewarded from purchasing activity is the most important consideration to continually transaction with the retailer. However, in perspective of retailers, they want to maximize the profit by utilizing their marketing efforts on selling the product to customers. As long as customer continues do the transaction, retailer believed that they can achieve their target. Critically, the contrast view of customer-retailer on the value will raise the issues on profitability and has identified as unsolved issues in the marketplace. Thus, this paper is highlighting the capability of Spatial Information Systems for sustaining the profitability of retailers. By utilizing this technology, it's helps retailers in sustaining the retailer's performance, via managing the customer value continuously and practically. Moreover, Spatial Information Systems provide tools and platform to analyzing the customer value in the marketplace, as the real geographical marketplace. Practical aspect of Spatial Information Systems applications are discussed with specific focus on retailer's business. Moreover, the used of spatial information systems is practically important to the manager to make them understand on what are the real chances on customer value in the geographical marketplace. At the end, suggestion was made on how to choose the suitable Spatial Information Systems to retailers with considerations on the current financial matters.

KEYWORDS: Spatial Information Systems, Profitability, Retailer Business, Global Meltdown Economy

INTRODUCTION

Profitability is the central issues of world wide business firms, especially during the un-predictable situation under the global meltdown economy. Retailer is the most influenced by the crisis because it highly depends on the customers buying activity. In perspective of customers, the value that rewarded from purchasing activity is the most important consideration to continually transaction with the retailer. However, in perspective of retailers, they want to maximize the profit by utilizing their marketing efforts on selling the product to customers. As long as customer continues do the transaction, retailer believed that they can achieve their target. Critically, the contrast view of customer-retailer on the value will raised the issues of profitability which has identified as unsolved issues in the marketplace. In fact, customer is an asset to the business as claimed by Gupta and Lehmann (2003) and for this reason retailers must now how to valuing their customers that contributes the business performance (Gupta, Lehmann, & Stuart, 2004). However, understanding customer is a basic step for ever retail store because after that marketing department should how to used customers information in targeting, retaining, satisfying, and maintaining their customers.

In today's competitive environment, it is critical to a retailer's survival to understand and monitor their business profitability, which is mainly containing various types of customer. On the one hand, managing relationship with customer is one of important initiatives to ensure the consistent profitability of firms. Fabel, Sonnenschein, Sester and Golestan (2008) noted that consumers have great power to revolutionizing their relationships to the business. The empowered consumer is no longer a vague concept, but a reality is that changing the face of commerce. Thus, the smartest companies try to figuring out on how to build relationship with customer to increase their revenues and in future to spurs growth. On the others hand, it is not easy to manages the customer profitability because retailer need to struggle with the key issues regarding their customers. Thus, these issues identified by Berman and Evans (2007) are includes how the retailers can best serve the customers while retaining a fair profits; how the retailers stand out in a highly competitive environment where consumers have so many choices; and how the retailers grow up their business while retaining a core of loyal customers.

The 2009 outlook for retailers is a challenging one as many find themselves confronted by liquidity issues, reduced consumer spending, and weak credit market conditions. The retail industry is clearly feeling the effects of the consumer cash and credit crunch. While some economists believe a reasonable forecast is that the economy will be on the road to recovery by the end of 2009, many retailers (even healthy ones) have already started to reduce inventory levels and close. Consumers will be intensely value-oriented in 2009, even more so than in the recent past (Janiak, 2009). In addition, Accenture (2007) points out that today's consumers are more demanding and also more diverse. These trends have created a consumer who is also more empowered compared to before. In addition, Berman and Evans (2007) believe that loyal customers are the backbone of a business and for that, four factors must to keep when manage customers are customer base, customer services, customer satisfaction and loyalty programs and defection rates. Specifically, retailers must regularly analyze their customer's base with finally to identify the retailer's core customers or its best customers.

OBJECTIVE OF THE PAPER

The objective of this paper is to discuss the issues of customer lifetime value with focused to profitability of retailers during the current meltdown economy. Secondly, the paper is highlighting the capability of Spatial Information Systems for sustaining the profitability of retailers.

CUSTOMER LIFETIME VALUE AS UNSOLVED ISSUES

Valuing customers is a central issue of any commercial activity. The value of an individual customer is important for the detection of the most valuable ones, which deserve to be closely followed, and for the detection of the less valuable ones, to which the company should pay less attention. At the aggregated level, a marketing campaign targeting a group of customers can be budgeted more efficiently when the value of this group is known. Customers are an important asset, and as such, have to be precisely valuated (Glady, Baesens & Croux, 2009). Most of researchers such as Baum and Singh (2008); Berman and Evans (2008); Long, Trouve, and Blackmore (2005); and Accenture (2007) believe that customer is crucial part that contributes to retailer profitability for a short and long term business life cycles. In perspective of customer services, Baum and Singh in (2008) notes that understanding crucial customer touch of point and the most important expectations of customer are first step in establishing high-quality and effective customer services. Beside that, the quality of customer service and the overall customer experience are important factors consumers used in choosing company product over others. Similarly, Epstein, Friedl and Yuthas (2008) indicated that by measuring the profitability of segments and managing customer relationships based on customer value, both the customer and company win. Orienting an organization around measurement and management of customer profitability can take place immediately, or it can take many periods, implementing these strategies one step at a time, and adjusting and refining along the way.

In customer market view, consumer market and spending will projected to rise up in many countries including Asia region. Fabel *et. al.,* (2008) notes that no longer just passive partners in a world economy dominated by the United States, Europe and Japan. Beside that, countries like China, India and Brazil represent increasingly robust consumer markets. In addition, the emerging economies will account for more than half of global consumption by 2025, adjusted for differences in purchasing power. Thus, emerging markets for many products and services already rival those of industrialized countries. Figure 1 show that compound annual growth rate (CAGR) for the Big Six (B6) countries as well as Brazil, China, India, Mexico, Russia and South Korea, projecting to climbed up from USD 7,579 billions in 2005 to USD 24,799 billions by 2025, which is overall equally to 6.1%. For G6 countries, as well as France, Germany, Italy, Japan, United Kingdom and United States year, CAGR also predicting consistency grew about 2.3 %, where as shift from USD 13,106 billions in 2005 to USD 20,565 billions in 2025. However, for future prospect, Long *et. al.,* (2005) stated profitable performance tomorrow, then, depends on providing the right product mix at the right time to customers. Retailer must investigate what customers want before they even know they want it. That kind of customer knowledge is more insight and it is a fact-based foundation of successful customer-centric retailing.

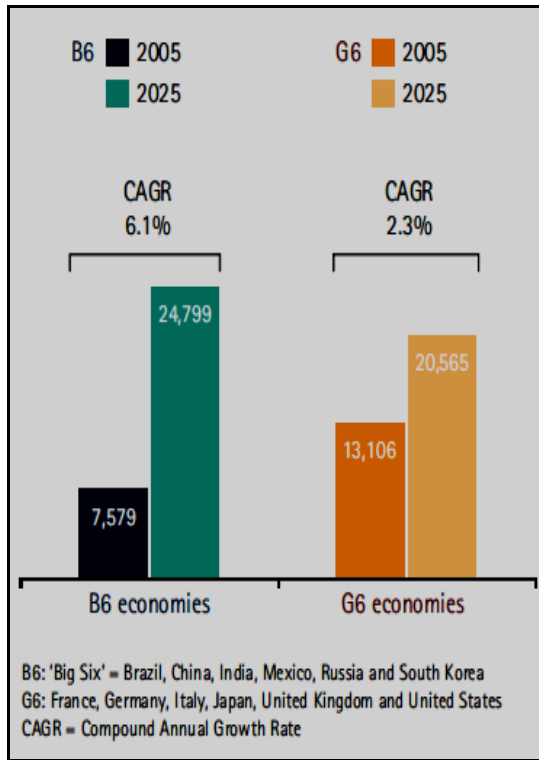**Figure 1: Consumer Spending in the G6 and B6. (Real US$ billions)**

**Figure 2: Estimates for Top 15 Consumer Markets by 2025. (Real US$ billions)**

	2005	2025	CAGR
China	3,038	14,527	8.0%
United States	7,335	12,512	2.7%
India	1,924	4,264	4.1%
Russia	749	2,489	6.2%
Japan	1,780	2,291	1.3%
United Kingdom	1,058	1,707	2.4%
Germany	1,180	1,512	1.2%
Brazil	757	1,465	3.4%
France	917	1,374	2.0%
Italy	836	1,168	1.7%
Mexico	648	1,139	2.9%
Canada	539	1,045	3.4%
Spain	560	945	2.7%
South Korea	413	914	4.1%
Australia	229	592	2.8%
G6	13,106	20,565	2.3%
B6	7,579	24,799	6.1%
World	30,374	54,998	3.0%

Sources: Adapted from Fabel *et. al.,* (2008)

Abdul Manaf Bohari, Ruslan and Malliga (2009) mention that successful retailers such as IKEA, Giant, Carrefour, and many more develop an exceptionally keen and detailed knowledge about local and international markets specifically about customer need and niche. This kind of initiatives is important to permits them to tailor product assortment, product differentiation, product need and expectation, local niches, customer capability, and many more, with final objectives to increase customer satisfactions. In future, it becomes more valuable to every retailer before they operate in different country, culture and values. In global business perspective, Fabel *et. al.* (2008) suggests that, by 2010, China and India together will contain 123 million middle-class households. Mainly, it is more than the total number of households in the United States and most of them potential consumers of the retail industry's products and services. As shown on *Figure 2*, China achieves CAGR around 8.0%, following by other Asia Country as well as Russia India (4.1%), and South Korea (4.1%). Beside that, China estimates to reach US$14,527 billions by year 2025, than following by United States (US$ 12512 billions), India (US$ 4264 billions), Russia (US$ 2489 billions) and Japan (US$ 2291 billions). In addition, retailers should now how to fostering and prospecting new opportunities in multiple markets where the sources of competitive advantage are in constant flux must grapple with multiple risks.

Plainly, there is no single route to transform in higher performance for retailers and all successful retailer such as Giant, Tesco, Carrefour, and many more, however, will have maintained the integrity of their core customer by combining some of marketing fundamental elements especially customer value. Managing customers value are identifies as strategic factors for retailer success, moreover, will reflect a strategic planning on customer relationship management that is fully aligned with their business objectives and an operating model that is standardized, streamlined and globally implemented by their global layout (Abdul Manaf Bohari, *et al.,* 2009). According to Fabel *et. al.,* (2008), retailers should be setting high response to differentiate different face of customer then lead them to tackle the challenges of globalization successfully. To understand what actually happen to customer in the marketplace, Moriarty, Ben-Shabat, Gurski, Padmanabhan, Kuppuswamy, Prasad, and Groeber (2007) have develop window of opportunities framework to understand all matter about retail market and customers. The retailer can apply window of opportunities as a time frame to plan their market strategy including on how to analyze their customer value.

Figure 3: Window of Opportunities Analysis.
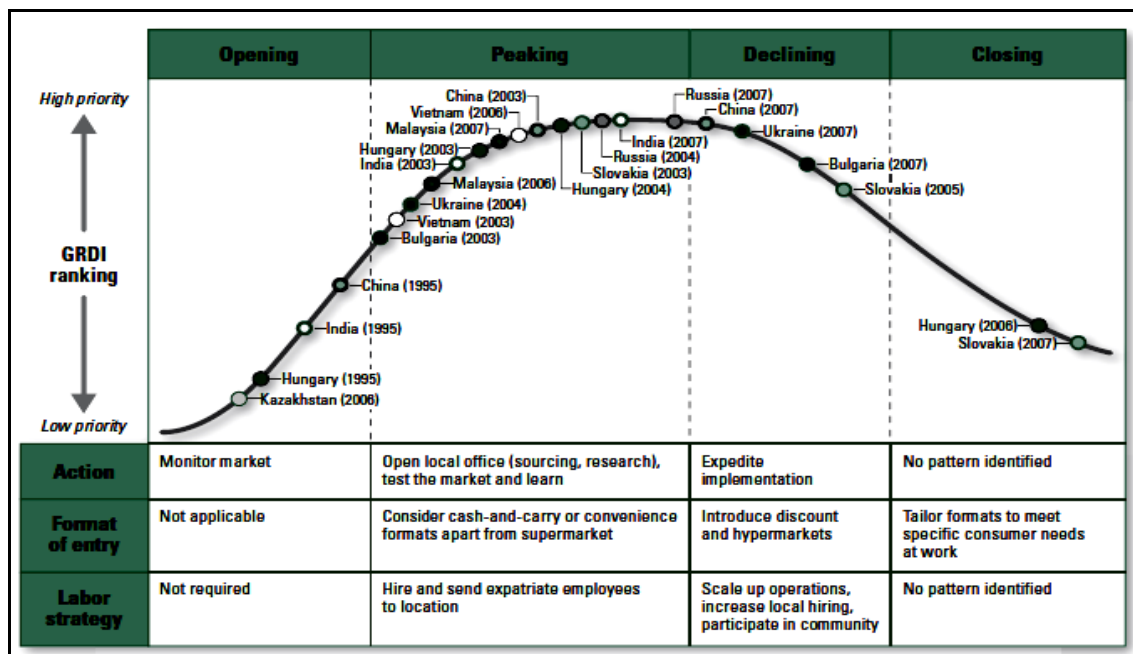
Specifically, based on window of opportunities analyses (*Figure 3*), customer is one of factors that contribute to business development. There are many countries identifies in times for stage of peaking, includes Malaysia (2006 & 2007), Vietnam (2003 & 2006), India (2003 & 2007), and Hungry (2003 & 2004) and for that, Moriarty, *et. al.,* (2007) indicates that information about business conditions as well as shows in *Figure 3* is important for retailer to build their customer entry strategy under differs circumstances. On the one hand, window of opportunities results guides retails to continue wide investment and maintaining the relationship with customer. On the other hand, there are

instance when consumer are ready to adopt modern retail independently of a market's current states. But, overall, key for success for exploring the new opportunities on customers market is by targeting and segmenting the customer, accordingly to certain customer models. Projecting the strategic location to operate is also important for capturing the best consumers. Thus, for helps the retailers in analyzing the location of customers, Spatial Information System (SIS) can be employed for enhancing the retails decision making such as site location analysis (Andronikov, 2008) and improve decision making by using spatial analysis based (Zwillinger, 2008). According to Abdul Manaf Bohari *et. al.,* (2009) by utilizing this technology, it's helps retailers in sustaining the retailer's performance, via managing the customer value continuously and practically. Moreover, SIS provide tools and platform to analyzing the customer value in the marketplace, as the real geographical marketplace. Practical aspect of SIS applications are discussed with specific focus on retailer's business. Moreover, the used of spatial information systems is practically important to the manager to make them understand on what are the real chances on customer value in the geographical marketplace.

In the real marketplace, retailers actually just have limited option on how to maximize the customer value because of highly in market competition. Retailer must generate innovative ways to strengthening long relationship to their key customers and finally gaining high performance through customer base value. Principally, the idea of the customer as king has become engrained in the retailer way of thinking and influencing the retailer performance and profitability. That why, Berman and Events (2007) argue that to prosper, a retailer must properly apply the concept of 'value' and 'relationship' for ensuring the customer strongly believe the firm offers a good value for the money and both customers and channel members want to do business with that retailer. According to Abdul Manaf Bohari (2009), continuously, the issues of customer management have grown rapidly in recent years, with highly consideration on how the firms manage customers as key assets. Regarding customer value management, there are some key challenges that firms and researchers face in understanding, managing, and implementing successful customer management strategies. In fact, Kumar, Lemon, and Parasuraman (2006) noted there eight key challenges for managing customer, such as (1) Managing customers across multiple channels, (2) Achieving customer centricity, (3) Managing brand equity versus managing customer equity, (4) Developing and operationalizing appropriate customer lifetime value (CLV) models, (5) Understanding the link between CLV and shareholder value, (6) Developing forward-looking customer metrics, (7) Successfully implementing customer relationship management (CRM) strategies and (8) Implementing CRM in global environments. Overall, managing customer is one of factors for success in managing retail profitability, as indicated in Janiak (2009), Fabel *et. al.,* (2008), Moriarty *et. al.,* (2007), Baum and Singh (2008); Berman and Evans (2008); and Long *et. al.* (2005). Moreover, it is also important to predict the customer's value for prospecting the retails profitability by utilizing technology application and tools, as well as SIM tools and applications.

SPATIAL INFORMATION SYSTEMS AS A PLATFORM
Gilbert (2007) argues that customer value changes over time, and the value is increasing over time. In general, customer values were expected to initially increase as the firm

grows and later decline when the firm reaches a critical mass or maturity. With regard to future prospect of firm, Glady *, et. al.,* (2009) mention that the value of a customer based on future activity is a key metric for any business activity. There are two types of customer value, where is identified as tangible and intangible value of customers, both needed to manage properly to gain. To deal with these new global retailers challenges, retailers should explore the advantages of SIS because of reasons, as well as SIS utilize by business community (Pick, 2008) and emerging of enterprise SIS (Clancy, 2008). Further more, SIS technology ultimately delivers value to the business (Harries, 2008) where as ultimately to achieve strategic position and competitive advantages on it. Thus, retails get valuable information about country market level which typically progress through four stages, identified as opening, peaking, declining and closing. However, to get more precise about customer in these four stages, SIS view as high priority technology because SIS supply an indispensable analysis tool (Miller, 2007) for analyse customers in every stage, and ability to integrate, view, and analyze data from geography view (ESRI, 2007) specifically different location of customers in countries as well as shows in window opportunities (*Figure 3*).

Retail industry is a world wide business and involved many customer, business and location in different country and value. Clearly analyses of customer value can be produced by using SIS technology and because of that, SIS are considers as useful technology to helps retailer to penetrate the market and customer. Chen (2007) stress that the use of geo visualization system in the retail industry at micro-level, market, regional, and national scales. At the micro level, the measurement of the profitable operation of a leased retail space and indicates how the geo-visualization system could be used to support decisions relating to lease renewals, anchor tenant subsidies, mall access planning, and optimizing tenant mix. At the market level, SIS used to view how an ethnic composition of businesses along the Greater Toronto Area's retail strips decreased over the 1993 - 2003 period. At the regional level, SIS used to view how the geo-visualization application could facilitate the spatial analysis of retail sales by category across the entire regional portfolio of stores. At the national level, mapping retailer sales can be used for dominant metropolitan markets such as Toronto, Montreal, Vancouver, Calgary, Edmonton and Ottawa. In addition, SIS enables retailers to employ buffer and logistic functions, derive new information from existing data, analyze, classify grids and map locations of attributes.

Not surprisingly, successful retailers apply customer based strategy globally for gearing many more customers for contributes to firm profitability. To ensure retailers get more details on real customer situation, SIS should considered as important strategic tools for any reason, such as, SIS is an ideal tool for identifying and expanding markets, and increasing profits (Zhao, 2000); SIS provides answer for question about demand (customers) and supply (retail outlets and shopping centers) (Beaumont,1991); and SIS purposely used for target store sales predictions, sales territory modeling, product placement, and customer analytics (Thum, 2008). By using SIS technology, retailers enable and performing such kind of customer based strategy, as well as market differentiation, customer value identification, and streamlining and integrating their global customers to achieve high profitable market. In addition, ESRI (2002) estimates

that approximately 50 percent of today's retail stores do not capture customer information as part of the business transaction. Without this find of information, it is difficult to quantify the demographics of your customers or market areas. So, SIS application is powerful and useful which provides one means of identifying characteristics of a mathematically generated market area. Other analyses can be performed to add to the value of these areas including drive time and ring analyses. ESRI (2007) stated that successful businesses use SIS tools purposely to integrate, view, and analyze data from geography view. These applications can be used across an entire organization, in the field, and on the Internet. Thus, retail business processes, including market analysis, site selection, merchandising, distribution, delivery, and facilities management, actually involve geographic relationships. SIS enables retailers to understand and visualize these geographic relationships toward the end for improve productivity, effectiveness, and efficiency in these processes. At the same time, predictive investigators such as market and customer analytics are also enhanced by SIS capabilities. In addition, many different forms of real-world and modeled data can be used with it to understand the demographic, competitive, and psychographic interaction of consumers, suppliers, and the geographic space in which the data is distributed. However, the beauty and power of SIS is that it allows companies to consider many possibilities, understand potential, review the impact of different investments, store and produce configurations, and analyze changing trends in the retail landscape. So far, no other software technology has such a far-reaching potential.

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Spatial based technologies have been growing rapidly in every single of segment of business. In today's marketplace, many of the world's leading commercial organizations, as well as Pest Control Company, Levi Strauss & Co., HSBC bank, Suzuki Motor Corporation, Kentucky Fried Chicken, Domino's Pizza, and many more are relying on SIS technology to enhance strategic competitiveness and improve efficiency in how they operate in the real environment of business and establishing the strategic business planning for the future performance. According to Pick (2008) SIS spatially enabling the business to create unique advantage to competing in market environment, acquiring new

customers, retain customers, grow the business performance, make better decisions, develop new products and services, and optimize workflow of business processes.

In relation with the globalization era, Abdul Manaf Bohari (2008) noted the huge demands for new customer entrance, customer segmentation, market value, demographics or populations, business resources, technology and innovation, degrees of efficiency and complexity in competition actually already intense. Thus, it's could be an urgent reality for any business or firms on every location of customers. Due to all of these needs and requirements, transformation of any kind of organization with objectively to capitalize and utilize new opportunities of unexpected market has become more complicated and ever challenging than before. Thus, to maximize the potential of new market and customers demand, SIS can play as platform for transforming the traditional paradigm to modern approaches of conducting any kind activity and planning related to business such as marketing and site analysis, customer management, retail profitability analysis, competition and market force, and many more. In addition, close similar, Miller (2007) indicates the value of SIS technology for the business and marketing industry has never been greater than it is today. Small and large businesses alike are finding SIS to be an indispensable analysis tool in site selection, market area analysis, sales territory management, customer profiling, sales and service-call routing, and merchandising strategy development.

In reality, the trends for business uses of spatial technologies are change and move towards high platform such as web based services, mobile spatial devices, advanced visualization, multi-tasking, but simpler functionality of user interfaces. In practical view, more sophisticated and complex technology applied and used in marketing and retailing areas and really advance rather than before. On the one hand, Longley, Goodchild and Rhind (2005) estimated the total revenues for spatial technologies and associated products and services has been reach at over $15-20 billion. Conceptually, Pick (2008) stated that SIS as information technologies have become more pervasive, interactive, mobile, internet-based, and diffused throughout the enterprise, likewise spatial technologies have done so. Moreover, Clancy (2008) stated enterprise SIS now become important application in business sectors. This is because of enterprise SIS is integrated, multi-departmental system of components used collect, organize, analyze, visualize, and disseminate geographic information. Indeed, the goal of an enterprise SIS is to implement interoperable technologies, standard and methods so that SIS data and services can support core business needs more efficiently and more effectively.

To date, SIS is used and applied in the real world business operation including Baystate Health, Chico's, Kaiser Permanente, Lamar Advertising Company, Rand McNally, Southern Company, Sears Roebuck, and Sperry Van Ness (Pick, 2008). The usability of SIS in business firms are vital important because every single of business asset is geographically dispersed and needs to be managed using SIS tools. According to ESRI (2002), SIS technology is a tool for making maps, analyzing data, and reporting results. Since 1969, SIS has been helping people solve real-world geographic and business problems. Until today, more than 100,000 organizations around the world use SIS technology through ESRI Company to manage location, information and any types of

knowledge related to spatial. For examples, by visualizing specific information, businesses and government agencies can better organize and visualize their data for improved communications and enhanced decision making.

SUGGESTION

Specifically, SIS plays important roles in marketing, including in retailing and customer management. According to Zhao (2000), the application of SIS in business has grown rapidly and major retailers, automobile dealerships, video rental companies, media organizations, and fast food corporations are just some of the many businesses around the world that have discovered the value of SIS. Research has shown that since more than 80 per cent of all information in an organization can be geographically referenced and that why the business strategists are finding SIS to be an ideal tool for identifying and expanding markets, and increasing profits. In addition, combining SIS and other techniques will create appropriate and diverse approaches to problem solving. For examples, by linking statistical methods with SIS this are be able to enhance SIM capabilities with the power of statistical analysis, and effectively use data from different sources for market analysis. SIS allow users to visualized spatial data in different form, including visualized the spatial distribution of data on maps prior to further statistical analysis. By doing this, the potential of SIS application in market analysis have been seen as a tool for reaching a desired solution especially for Executive Business, Marketer and Retailers, includes Hypermarket.

To realize the use of SIM in business marketplace, Figure 1 and Figure 2 are refereed. The case is the Seberang Perai Tengah Area of Penang with specific reference to SME firm. Assume that there are four main SME firms in Seberang Perai Pengah, as indicated as Firm1, Firm2, Firm3 and Firm4 with conducting business on Internet and Computers Equipment. Figure 1 shows that location of SMEs and every single customer of them in their real location, as well as refers to 'Mukim'. Here, CV can derive from any formula of CV and then represent by pink dot. By the way, we can see that CV is visualizing in every areas of Seberang Perai Tengah, also called Mukim that would exist in different value. In single view, the map clearly show that every single CV has contributes to the finale performance of SME firm and from here, the SMEs should strategies their marketing promotion to tackles important segment of customers. The most important customer to them is who has high value of CV.

However, in another perspective, if there are operates another SME firms in the area of Seberang Perai Tengah, can we analyze this new situation? What actually suppose to be happened? How can SIS visualize this new situation? What actually happen to the CV of every single customer compared to before? What is the current of effect of establishment of alternative firms to Firm1, Firm2, Firm3 and Firm4 which are operate at very close place in the same area? In Figure 2, we found that the operations of another SME firms, as indicated as FirmA, FirmB, FirmC, FirmD, FirmE, FirmF, FirmG, FirmH, FirmJ and FirmK will reduce the value of CV. The chances of CV value are represents by red dot at the right side which is decreased as opposite to the increase number of firm.

Figure 1: Location of SME Firms and CV of Individual Customer by Mukim.
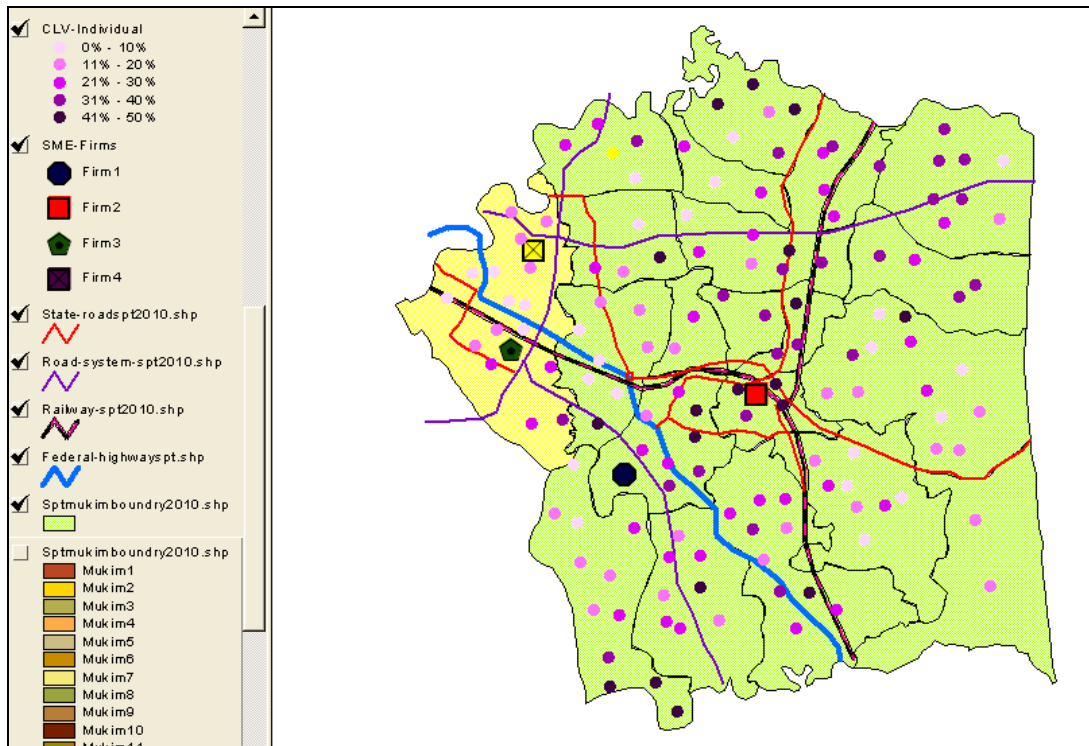
Sources: Abdul Manaf Bohari *et. al.,* (2010)

Figure 2: Location of SME Firms, Other Alternative Firms and CV of a Customer by Mukim.
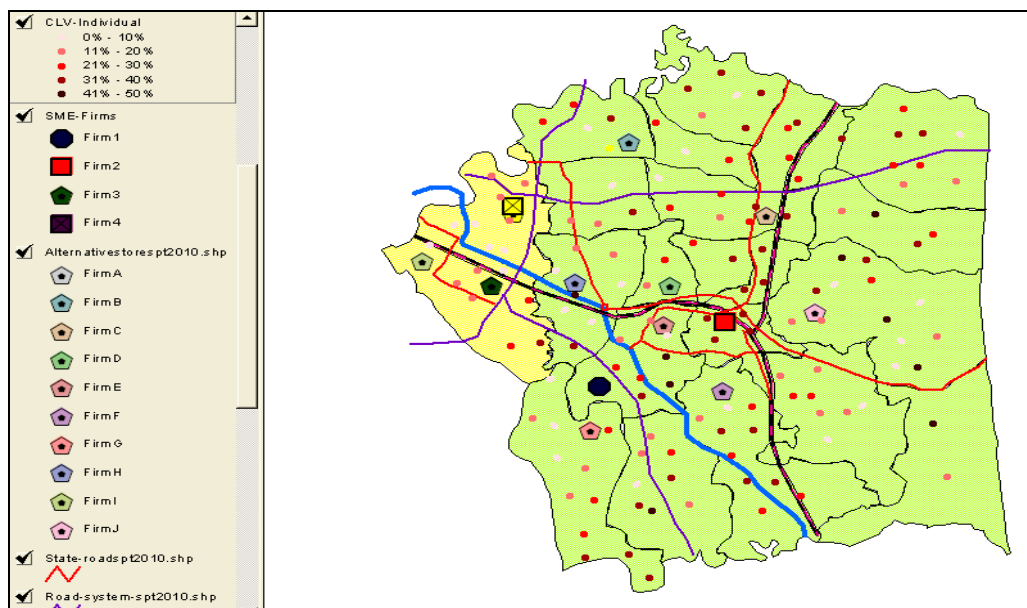
Sources: Abdul Manaf Bohari *et. al.,* (2010)

As appear in Figure 1 and Figure 2, in reality, the trends for business uses of spatial technologies are change and move towards high platform such as web based services, mobile spatial devices, advanced visualization, and multi-tasking. In practical view, more sophisticated and complex technology applied and used in SME studies are really advance rather than before. On the mind, Miller (2007) indicates the value of SIS for the business has never been greater than it is today. Small and large businesses includes SMEs alike are finding SIS to be an indispensable analysis tool in site selection, market area analysis, sales territory management, customer profiling, sales and service-call routing, and merchandising strategy development.

FUTURE PROSPECT AND CONCLUSION
From executive or senior management point of view, Laudon and Laudon (2008) argue that IT is important tools for gaining business competitive advantages because IT offers valuable tools to solve the business problems and SIS is one of the important applications for it. The important to analyses the geographical perspectives and spatial data are transforming SIS as become relevance IT tools for achieving the aimed business profitability and friendly links to organization internal databases and systems as well. While, SBL GIS (2008) listing the applications of SIS services in retail sector, including (a) evaluate current market position and identify under and over invaded submarkets; (b) estimates the number of locations a market can support; understand the effects of competitive market moves; (c) identify the optimal expansion opportunities in a market; (d) evaluate existing stores to spot over and under performers; (e) measure the impact of new store (openings, relocations, remodels, closures, and competitive acquisitions); (f) identification of a series of existing locations that resemble the proposed location; (g) compilation of maps and reports that highlight the crucial information about a potential site in a consistent and comparable manner; (h) score potential locations (based on the quality and composition of the expected trade area); (i) assess the size and shape of a proposed store's trade area (based on urban city and competitive intensity); (j) store networks and prioritize capital investments (based on predictive), multi-factor trade areas; (k) optimize store networks; (l) localize marketing and merchandising; and (m) prioritize markets (either to enter, expand or exit).

To date, SIS provides the small and medium sized firms with analysis tools the business core and secondary activities; which is functionally for analyzing the customer value. SIS supply analytical, visualization and in-dept function for meeting the requirement related to business customer analysis. Bastedo (2008) stated that SIS are enhancing business value in a complex organization, which are includes understanding values related to place, customer, organization (revenue), shareholders, and brand. Further more, Andronikov (2008) mention that SIS functionally in enhancing the business decision making process in many area of business, such as site analysis, market analysis, analysis of demand, supply chain management, risk management, and network routine modeling. In addition, Zwillinger (2008) stress that one of the primary benefits of SIS is that it allow businesses to improve decision making by using spatial analysis. That why, in term of customer management, SIS highlighting the proximity between the location and key potential customers and provide some insight into the potential daytime customer demand.

In future, increasingly, more sophisticated and advance SIS technology will introduce to the business area with aimed to create highly impact on business operation and performance, including marketing value. In essence, SIS provide three essential capabilities which are identified as visualize and modeling the real phenomena, in-depth analysis of spatial aspects, and manage and utilize the information for better decision making execution. This ability actually vital important to solve common business problems, such as market analysis, retail site selection, territory design, logistics, business continuity, risk analysis, and many more.

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