Research Article

Managerial Implications to Identify Supply Chain Performance Factors Influencing Stages of Customer's Purchase Decision of Household Refrigerator at Department Store in Bangkok

ประโยชน์ทางปฏิบัติของปัจจัยด้านศักยภาพของห่วงโซ่อุปทานที่มีอิทธิพลต่อขั้นตอนการตัดสินใจซื้อตู้เย็นในครัวเรือนของลูกค้าภายในห้างสรรพสินค้าเขตกรุงเทพมหานคร

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Abstract

The objectives of this study were to study the resource utilization, the information sharing, the inventory management, the order process with logistics support, and the electronic data interchange through customers' purchase decision process of household refrigerator at department store in Bangkok. The sample sizes of 222 respondents from the Taro Yamane formula table through applied systematic random sampling. Questionnaires are used as a data collection tools to accumulate customer feedback from demographic factors through customer purchase decision stages and find out supply chain performance factors influence customer purchase decision stages. The reliability tested by Cronbach's alpha coefficient with the value of 0.982. The descriptive

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statistics consisted of frequency, percentage, mean, and standard deviation and the inferential statistics were multiple regression analysis with 0.05 significance. The results found that decision recognition with resource utilization, information search with information sharing, evaluate alternative with inventory management, purchase behavior with order process and logistics support and post purchase behavior with electrical data interchange had a positive relationship. The supply chain performance factors had positively influence customer purchase decision. In addition, supply chain performance predictors quality, environment, location, price information, stock information, new product update information, balance inventory, order fill rate, accessories availability, speed of response, work in process rate, billing and tracking, booking, process work and database had unique contribution in customer purchase decision.

Keywords: *Supply Chain, Purchase Decision, Department Store, Customer Satisfaction, Refrigerator*

บทคัดย่อ

วัตถุประสงค์ของการศึกษานี้ เพื่อศึกษาการใช้ทรัพยากร การแบ่งปันข้อมูล การจัดการสินค้าคงคลัง กระบวนการสั่งซื้อและการสนับสนุนด้านโลจิสติกส์และการแลกเปลี่ยนข้อมูลทางอิเล็กทรอนิกส์ ผ่านกระบวนการตัดสินใจซื้อตู้เย็นในครัวเรือนของลูกค้าภายในห้างสรรพสินค้าเขตกรุงเทพมหานคร กลุ่มตัวอย่างจำนวน 222 คน จากการใช้สูตรการคำนวณของทาโร่ ยาเมเน่ โดยการสุ่มตัวอย่างอย่างเป็นระบบ แบบสอบถามเป็นเครื่องมือในการเก็บรวบรวมข้อมูล เพื่อรวบรวมข้อมูลส่วนบุคคลของลูกค้าและขั้นตอนการตัดสินใจซื้อของลูกค้า และปัจจัยด้านศักยภาพของห่วงโซ่อุปทานที่มีอิทธิพลต่อขั้นตอนการตัดสินใจซื้อของลูกค้า ค่าความเชื่อมั่นของครอนบาคของแบบสอบถามได้เท่ากับ 0.982 และวิเคราะห์สถิติเชิงพรรณนาด้วยค่าความถี่ ค่าร้อยละ ค่าเฉลี่ย และส่วนเบี่ยงมาตรฐาน และวิเคราะห์สถิติเชิงอนุมาน ด้วยการวิเคราะห์การถดถอยเชิงพหุที่ระดับนัยสำคัญทางสถิติ 0.05 ผลการศึกษาพบว่า การได้รับการยอมรับกับการใช้ทรัพยากร การค้นหาข้อมูลกับการแบ่งปันข้อมูล การประเมินผลทางเลือกกับการจัดการสินค้าคงคลัง กระบวนการสั่งซื้อและการสนับสนุน ด้านโลจิสติกส์กับพฤติกรรมก่อนซื้อและหลังซื้อทั้งหมดมีความสัมพันธ์เชิงบวก และปัจจัยด้านศักยภาพของห่วงโซ่อุปทานมีอิทธิพลต่อขั้นตอนการตัดสินใจซื้อของลูกค้า อีกทั้งศักยภาพของห่วงโซ่อุปทานสามารถบ่งชี้ในเรื่องคุณภาพ สิ่งแวดล้อม ที่ตั้ง ข้อมูลราคา ข้อมูลสต็อก ข้อมูลการอัพเดทผลิตภัณฑ์ใหม่ ยอดคงเหลือ อัตราการเติมคำสั่งซื้อ ความพร้อมใช้งานอุปกรณ์เสริม ความเร็วในการตอบสนอง อัตราการทำงานในกระบวนการ การเรียกเก็บเงินและการติดตาม การจอง งานกระบวนการและฐานข้อมูลมีส่วนร่วมเฉพาะในการตัดสินใจซื้อของลูกค้า

คำสำคัญ: *ห่วงโซ่อุปทาน การตัดสินใจซื้อ ห้างสรรพสินค้า ความพึงพอใจของลูกค้า ตู้เย็น*

Introduction

Thailand is one of ASEAN's largest production hub in the electrical appliances sector and globally recognized for its manufacturing competency (Board of Investment, 2014). According to Electrical and Electronics Institute (EEI) report, Domestic market size for electrical and electronic appliances 446,039 million Baht and household appliance contributed 18% (Electrical and Electronics Institute, 2016). According to Ratchata Suttapattanon, General Manager of Electrolux Thailand, "With the current economic environment, most people remain cautious about spending, but for middle- and high-income earners, their spending power remains intact."(Pitsinee, 2019). However, according to Ministry of industry Thailand, In the fourth quarter of 2018, domestic sales of refrigerators significantly decreased to approximately 325 thousand units compared to the same quarter in 2017 (Ministry of Industry, 2019). Compared to GDP growth still now market has positive trend from 2017 to 2018 (Statista, 2019). It is an alarming signal to its related business networks and conducts a deep study of the retail market segment.

According to The Mall Group, Thailand's appliance market is expected to be worth 250 billion baht (Pitsinee, 2019). Power Mall is most prestigious one stop electrical and electronic product retail point in Thailand and has wide and premium range of refrigerator collections under single roof. Besides, their convenient location, environment, service as well as different customer benefit program retain most of the domestic and international customers to visit this store. Due to the diversified and innovative business implementation, this department store has become a successful retail business point in recent years. "During the festive season, more than 250,000 people shop at Siam Paragon per day, compared to the usual 180,000-200,000 people per day (The Nation, 2017). However, Power Buy is one of similar competitors in this field. Besides retail chain-shop like Tesco Lotus, Home pro and Big C also have significant retail contribution for home appliance market in Thailand. According to a new report by Grand View Research, Inc., The household refrigerators, and freezers market was valued at U.S. dollar 72.43 billion in 2017 and the global household refrigerators and freezers market size is expected to reach U.S. dollar 125.68 billion by 2025 (Grand View Research, 2018). Key players include Haier, LG Electronics, Electrolux, Samsung, Whirlpool, Mitsubishi, Panasonic, and Robert Bosch.

A survey statistic showed that market contribution by sales channel online ore-commerce, big electronic retail channel and branded store are 1%, 39% and 83% respectively; also, around 52% customer's spending ability to own a refrigerator U.S. dollar 210 to U.S. dollar 400 (Di-Marketing,

2016). In addition, nowadays supply chain management is the key manipulator for retail business success. However, consumers are also entering into a new era of purchasing level by adopting new technology and methods. Those facts continuously add more function to the measure of satisfaction level on purchasing decision. Retailers are playing an important role by applying different techniques to improve sales revenue as well as establish sustainable business platforms. Retailer focused on customer positive intention toward every level of buying decision until a successful sales transaction happen. This research focused on two different segments of variables and explored the supply chain performance factors and how those factors influence customer purchasing decision in terms of refrigerator purchase. This study covered the supply chain implications area between retailer and customer in retail point.

In conclusion, at retail point, to perform purchasing process a customer must go through step-by-step process from store visit, product selection, payment, documentation and receive delivery. Here are many opportunities for a retail point to interact with customer and satisfy them by applying correct supply chain tools and tactics. A study suggested that "the most effective remedy is home delivery. Trade-up and discount are very effective as well. The effectiveness of a raincheck is moderately strong. The least effective remedy is apology, which, in fact, can be counterproductive and increase the percentage of consumers leaving the store in response to a stock out" (Ester & Mauro, 2016). A satisfied customer is very important for business and only satisfied customers are considering to repeated purchase. Therefore, researchers want to study and investigate supply chain performance factors as well as their contributions to purchase decision. Thus, the aim of this research is to identify supply chain performance factors and how it is influenced to visit a sales point as well as contribute to purchase decision. There is few research studied before impact on buying behavior in terms of refrigerator purchase but not from supply chain focus. Therefore, researchers deeply focused on the relation between purchasing behavior with supply chain performance factors from every possible angle.

Research Objectives

The objectives of this study are as follows:

1. To study the resource utilization that influences the decision recognition phase of purchase decision process.

2. To study the information sharing those influences on information search phase of purchase decision process.

3. To study the inventory management that influences on evaluate alternative phase of purchase decision process.

4. To study the order process with logistics support that influences purchase behavior phase of purchase decision process.

5. To study the electronic data interchange that influences on post purchase behavior phase of purchase decision process.

Hypotheses

The null (Ho) hypotheses of this study are as follows:

1. The resource utilization has no significant influences on decision recognition phase of purchase decision process. ($H_0$1).

2. The information sharing has no significant influences on information search phase of purchase decision process. ($H_0$2).

3. The inventory management has no significant influence on evaluating alternative phase of purchase decision process. ($H_0$3).

4. The order process with logistics support has no significant influences on purchase behavior phase of purchase decision process. ($H_0$4).

5. The electronic data interchange has no significant influence on the post purchase behavior phase of the purchase decision process. ($H_0$5).

Literature Review and Previous Related Research

Concepts, theories, and related research about customer purchasing decision and supply chain management:

"Making a decision to buy any item is a rationale and conscious process in which the consumer evaluates each of the available alternatives to select the best among them" (Peighambari, 2016). According to Kotler & Armstrong, making a purchase decision, the consumer usually goes through five stages: recognition, information search, evaluate alternative, purchase and post-purchase behavior (Kotler & Armstrong, 2012). "Purchase decision also influenced by the surrounding environment. Customer perceived value consists of five components: price, product quality, service

quality, image and relationship between a customer and a vendor" (Sheth, Newman, & Gross, 1991). Consultants initially coined the term SCM (supply chain management) in the 1980s (Oliver & Webber, 1982). However, "it is believed to originate from the physical distribution and transport as well as total cost view of the logistics process" (Croom, Romano, & Giannakis, 2000). Number of theories and defination available form different aspect of SCM. Most common defination is network of organizations that are involved, through upstream and downstream linkages, in the different processes and activities that produce value in the form of products and services in the hands of the ultimate consumer (Hintze, 2015). "Marketing strategies differentiates gender buying behavior thus female are more emotional and easily be attracted by advertisements compared to male" (Inman, 1992). The older generation has more purchasing experience than the younger generation. Older people consider diversified options through the experience they have developed. While younger ones with less experience rely on brand and price (Richardson, Jain, & Dick, 1996). "Income is superior determinant of purchasing behavior" (Dorota, 2013). Most better paying white collar jobs require a college degree, while most blue-collar jobs require less schooling, and bring less income and prestige (Nguyen & Gizaw, 2014). "As supply chain management means getting the right products to the right place at the right time and cost to satisfy consumer needs, any positive changes to a retailer's supply chain agility will result in a positive impact on satisfying customer needs." (Tukker, 2008).

Table 1 Related studies have conducted previously followed

Evolution stages	Key authors	Main ideas
Remedy on retail stock out situation.	Ester and Mauro (2016)	Managerial response to stock outs: the effect of remedies on consumer behavior.
Performance of retail supply chain.	Hsiao, Purchase, and Rahman (2002)	The impact of buyer-supplier relationship and purchasing process on the supply chain performance: a conceptual framework.
Brand, benefit and price.	Li, Wang, and Li (2011)	Demand attributes and market segmentation: an evaluation of refrigerator purchase behavior in rural china.

Table 1 Related studies have conducted previously followed (continue)

Evolution stages	Key authors	Main ideas
Cultural, social and personal factors.	Veerakumar (2017)	Consumer behavior and factors influencing purchase decision in durable goods.
Impact of energy saving refrigerator.	Belman-Flores et al. (2019)	Perspectives on consumer habits with domestic refrigerators and its consequences for energy consumption: case of study in Guanajuato, Mexico.
Operational performance.	Rashed, Azeem, and Halim (2010)	Effect of information and knowledge sharing on supply chain performance: A survey-based approach.
Supply chain awareness	Houlihan, (1987); Jones and Riley (1985); Novack and Simco, (1991); Oliver and Webber (1982)	Recognizes the chain of functions through which materials flow from suppliers to end users. Maintains that this chain of functions should be managed.
Linkage/logistics	Scott and Westbrook (1991); Turner (1993)	Deals with the actual linkages among the functional areas, such as suppliers, production, and distribution. The focus is on how the sequence of functional linkages can be exploited for competitive advantage.
Information	Towill, Naim, and Wikner (1992)	Emphasizes the bilateral information exchange between supply chain members.
Process integration	Cooper and Ellram (1990); Ellram and Cooper (1990)	Focuses on the integration of the key business processes, regardless of the configuration of functional areas, in order to satisfy ultimate customers.

Research Methodology

This study, researcher followed a quantitative approach by using surveys technique to collect data from a sample population through organized questionnaires fill-up and Interview methods from practical field, to understand attitude of customers toward department store in Bangkok as well as influence supply chain performance factors towards purchasing decision. (1) The researcher uses descriptive research design to collect the primary data, the respondents distribute the questionnaires by self-administered survey participation. (2) The sample population has been selected from random 500 customers who have visited from December 15th, 2019, to January 5th, 2020, after announced by a department store "The Electronic Carnival" on December 23rd, 2019. (3) The researcher used Yamane formula and calculated 222 as the sample size (Yamane, 1967). (4) Conducted two intervals for collect response as per Interval formula. (5) Followed Likert method every question scaled within five points with the statement "Strongly perceived" as five points and the statement "Strongly not perceived" with one point. (6) The research instrument for this questionnaire consists of 38 questions. There are four main parts of the research questionnaire as these follows:

Part 1: Demographic data, which included the specific question about gender, age, income, marital status, and occupation.

Part 2: Customer attitude toward the department store, which is specific question about reason, influence factors of sales point selection and recognition.

Part 3: Researcher deeply focused on this part to evaluate possible supply chain performance factors.

Part 4: Collect data to understand satisfaction level of purchasing decision stages.

(7) Coding as per statistical software input. (8) Tested validity by IOC analysis by reviewing from five experts of related field with the value of IOC between 1.67-1.00 and the value of reliability of 0.982 by Cronbach's alpha coefficient. (9) the descriptive statistic for analysis was frequency, percentage, mean, and standard deviation. The inferential statistics was the multiple linear regression analysis for hypothesis testing to check the relationship, and the analysis was to find out which supply chain factor's influencing customer purchasing decision.

Results

The summery demographic data showed that, respondents are almost equal male (49.5%) and female (50.5%); aging between 31-40years (28.45) and 41-50years (31.1%); having income THB 30,001-50,000 (40.5%) and single (41.1%), married (37.4%). From this result, it is clear to mention private company's employees (30.6%) are main customer with having purchasing power.

1. Research objective 1: To study the resource utilization that influences on decision recognition phase of purchase decision process.

Null hypothesis ($H_0$1): The resource utilization has no significant influences on decision recognition phase of purchase decision process.

Table 2 Regression analysis relation between resource utilization predictors with decision recognition phase of purchase decision process.

Model	Independent variable	B	Std. error	Beta	t	p-value
1	(constant)	0.667	0.161		4.141	0.000*
	V9.1	0.123	0.066	0.130	1.877	0.062
	V9.2	0.159	0.071	0.142	2.244	0.026*
	V9.3	0.205	0.072	0.222	2.832	0.005*
	V9.4	0.338	0.063	0.356	5.344	0.000*
	V9.5	0.045	0.060	0.049	0.746	0.457
F = 70.925, p-value ≤0.05*, R^2 = .542						

a. Dependent variable: V14.1

b. Predictors: (constant), V9.5, V9.2, V9.4, V9.1, V9.3

(Dependent: V14.1= Decision recognition. Independent: Resource utilization predictors Follows: V9.1=Collection, V9.2=Quality, V9.3=Environment, V9.4=Location and V9.5=service).

Table 2 found that the model of regression analysis is significant and there is a significant linear relationship between resource utilization factors with purchase decision recognition phase with F = 70.925, p-value ≤ 0.05, R^2 = .542. Null hypothesis ($H_0$1) rejected and alternative hypothesis (H_a1) accepted. Regression equation for decision recognition phase = (0.667 + 0.123V9.1 + 0.159V9.2 + 0.205V9.3 + 0.338V9.4 + 0.45V9.5) indicated that, factors V9.2=Quality, V9.3=Environment, V9.4=Location has unique contribution on decision recognition phase.

2. Research objective 2: To study the information sharing those influences on information search phase of purchase decision process.

Null hypothesis ($H_0$2): The information sharing has no significant influences information search phase of purchase decision process.

Table 3 Regression analysis relation between information sharing predictors with information search phase of purchase decision process.

Model	Independent variable	B	Std. error	Beta	t	p-value
1	(Constant)	0.661	0.182		3.635	0.000*
	V10.1	0.218	0.074	0.225	2.969	0.003*
	V10.2	0.194	0.080	0.203	2.404	0.017*
	V10.3	0.115	0.087	0.114	1.319	0.188
	V10.4	0.226	0.079	0.218	2.854	0.005*
	V10.5	0.082	0.072	0.084	1.146	0.253
F = 49.371, p-value ≤0.05*, R^2 = .371						

a. Dependent variable: V14.2

b. Predictors: (constant), V10.5, V10.2, V10.4, V10.1, V10.3

(Dependent: V14.2=Information search. Independent: Information sharing predictors follows: V10.1=Price information, V10.2=Stock information, V10.3=Service information, V10.4=New product update and V10.5=Timing information).

Table 3 found that the model of regression analysis is significant and there is a significant linear relationship between information sharing with information search phase of purchase decision with F = 49.371, p-value ≤0.05, R^2 = .371. Null hypothesis ($H_0$2) rejected and alternative hypothesis (H_a2) accepted. Regression equation for Information Search = (0.661 + 0.218 V10.1 + 0.194 V10.2 + 0.115 V10.3 + 0.226 V10.4 + 0.082 V10.5) indicated that, Factors V10.1=Price information, V10.2=Stock information and V10.4=New product update information has unique contribution in Information search phase.

3. Research objective 3: To study the inventory management that influences on evaluate alternative phase of purchase decision process.

Null hypothesis ($H_0$3): The inventory management has no significant influences on evaluating alternative phase of purchase decision process.

Table 4 Regression analysis relation between Inventory management predictors with evaluate alternative phase of purchase decision process.

Model	Independent variable	B	Std. error	Beta	t	p-value
1	(Constant)	0.554	0.174		3.180	0.002*
	V11.1	0.161	0.069	0.161	2.351	0.020*
	V11.2	0.221	0.070	0.218	3.153	0.002*
	V11.3	0.133	0.073	0.129	1.816	0.071
	V11.4	0.142	0.075	0.146	1.900	0.059
	V11.5	0.234	0.069	0.240	3.406	0.001*
F = 60.092, p-value ≤ 0.05*, R^2 = .305						

a. Dependent variable: V14.3

b. Predictors: (constant), V11.5, V11.2, V11.3, V11.1, V11.4

(Dependent: V14.3=Evaluate alternative. Independent: Inventory management predictors follows: V11.1=Balance inventory, V11.2=Order fill rate, V11.3=Traceability, V11.4=Real-time inventory and V11.5=Accessories availability.)

From table 4 found that, the model of regression analysis is significant and there is a significant linear Relation between inventory management with evaluate alternative phase with F = 60.092, p-value ≤0.05, R^2 = .305. Null hypothesis ($H_0$3) rejected and alternative hypothesis (H_a3) accepted. Regression equation for evaluate alternative = (0.544 + 0.161 V11.1 + 0.221 V11.2 + 0.133 V11.3 + 0.142 V11.4 + 0.234 V11.5) indicated that, Factors V11.1=Balance inventory, V11.2=Order fill rate, and V11.5=Accessories availability has unique contribution in evaluate alternative phase.

4. Research objective 4: To study the order process with logistics support that influences purchase behavior phase of purchase decision process.

Null hypothesis ($H_0$4): The order process with logistics support has no significant influences on purchase behavior phase of purchase decision process.

Table 5 Regression analysis, relation between order process with logistics support performance predictors with purchase behavior phase of purchase decision process.

Model	Independent variable	B	Std. error	Beta	t	p-value
1	(constant)	0.685	0.164		4.141	0.000*
	V12.1	0.093	0.064	0.098	1.466	0.144
	V12.2	0.364	0.067	0.383	5.409	0.000*
	V12.3	0.114	0.074	0.111	1.548	0.123
	V12.4	0.105	0.069	0.108	1.522	0.130
	V12.5	0.180	0.062	0.191	2.896	0.004*
F = 64.171, p-value ≤ 0.05*, R^2 = .301						

a. Dependent variable: V14.4

b. Predictors: (constant), V12.5, V12.2, V12.1, V12.4, V12.3

(Dependent: V14.4=Purchase behavior. Independent: Order process and logistics support predictors follows: V12.1=Capability, V12.2=Speed of response, V12.3=OTD, V12.4=Home delivery and V12.5=Work in process rate.)

Table 5 found that the model of regression analysis is significant and there is a significant linear relation between order process with logistics support in purchase behavior phase with F = 64.171, p-value ≤ 0.05, R^2 = .301. Null hypothesis ($H_0$4) rejected and alternative hypothesis (H_a4) accepted. Regression equation for purchase behavior phase = (0.685 + 0.093 V12.1 + 0.364 V12.2 + 0.114 V12.3 + 0.105 V12.4 + 0.180 V12.5) indicated that, Factors V12.2=Speed of response and V12.5=Work in process rate has unique contribution in purchase execution phase.

5. Research objective 5: To study the electronic data interchange that influences on post purchase behavior phase of purchase decision process.

Null hypothesis ($H_0$5): The electronic data interchange has no significant influences on post purchase behavior phase of purchase decision process.

Table 6 Regression analysis, relation between electronic data interchange predictors with post purchase behavior phase of purchase decision process.

Model	Independent variable	B	Std. error	Beta	t	p-value
1	(constant)	0.928	0.163		5.683	0.000*
	V13.1	0.211	0.065	0.229	3.240	0.001*
	V13.2	0.199	0.067	0.213	2.978	0.003*
	V13.3	0.056	0.068	0.060	0.820	0.413
	V13.4	0.106	0.066	0.117	1.611	0.109
	V13.5	0.232	0.063	0.262	3.709	0.000*
F = 57.473, p-value ≤0.05*, R^2 = .296						

a. Dependent variable: V14.5

b. Predictors: (constant), V13.5, V13.2, V13.1, V13.4, V13.3

(Dependent: V14.5=Post Purchase behavior. Independent: Electronic data interchange predictors follows: V13.1=Billing and tracking, V13.2=Transection, V13.3=Booking, V13.4=Process work and V13.5=Database.

Table 6 found that the model of regression analysis is significant and there is a significant linear relation between electronic data interchange with post purchase behavior with F = 57.473, p-value ≤0.05, R^2 = .296. Null hypothesis ($H_0$5) rejected and alternative hypothesis (H_a5) accepted. Regression equation for post purchase behavior = (0.928 + 0.211 V13.1 + 0.199 V13.2 + 0.056 V13.3 + 0.106 V13.4 + 0.232 V13.5) indicated that, factors V13.1=Billing and tracking, V13.3=Booking, V13.4=Process work and V13.5=Database has unique contribution in post purchase behavior.

Conclusion and Discussion

The conclusion and discussion will be described by results of the hypotheses of study. They are as follows:

1. The resource utilization has no significant influences on decision recognition phase of purchase decision process. It was found that the resource utilization in aspects of Quality, Environment and Location had significant influences on decision recognition phase of purchase decision process. The results will reflect the global markets, which offer a variety of products of

different quality and cost altogether with the best environment and good location for customers' purchase decision process. According to the study of Burgess (1998) and Hoek (1999) mentioned about customers look for more choices, better service, higher quality, faster delivery, good location and friendly environment before the decision will be made on their purchase. The quality, environment and location might be the first step of buyer decision process of the decision recognition. This refers to a need or problem that customers recognize from internal stimuli or external stimuli. Internal stimuli mean customers need heightened to a level that it becomes a drive. External stimuli mean customers see a certain advertisement or talk to a friend about buying a certain product. This triggers them to think about purchasing a certain item or service (Kotler & Armstrong, 2012).

2. The information sharing has no significant influences on information search phase of purchase decision process. It was found that the information sharing in aspects of Price information, Stock information, and new product update had significant influences information search phase of purchase decision process. The results will reflect of relationship with customers and has turned into a strategic issue for today's companies. Cannon and Perreault (1999) suggested that more open sharing of information is indicated by the willingness of both parties to share important information. However, lack of trust can be translated to unwillingness to share information such as price information, stock information, and new product update during having purchase decision process on product or service would be affected information search phase of purchase decision process (Fawcett & Gregory, 2001). Moreover, Mavondo and Rodrigo (2001) brought up the issue of difficulties in cross-cultural communication and information sharing as they can be a significant obstacle to business. Information sharing in channel relationships can enhance levels of channel member coordination, satisfaction, commitment levels, and performance (Mohr, Fisher, & Nevin, 1996). Information sharing is also crucial to maintain a long-term buyer- relationship and achieve high performance (Morgan & Hunt 1994).

3. The inventory management has no significant influences on evaluate alternative phase of purchase decision process. It was found that the inventory management in aspects of Balance inventory, Order fill rate, and Accessories availability had significant influences on evaluate alternative phase of purchase decision process The results will reflect the important of the efficiency of inventory management, which involves consideration of disturbances and changes. If supply chain is affected by a disruption or exposed to fluctuations, its competitiveness is compromised and

business income is reduced (Guojun & Caihong, 2008). Regarding inventory management, the incidence of changes in company decisions are tradeoff between restricting of risk by having a greater inventory level and limiting a cost of inventory (Michalski, 2008). Lee and Billington (1993) mentioned the reason for keeping low inventory because today's fluctuating market conditions will need and taste of the customers' changing continuously. This has increased the risk of obsolescence which can be avoided by adopting zero inventory concept. When applying evaluation of alternative phase of purchase decision process for inventory management, Kotler and Armstrong (2012) stated that some consumers make their decision by having someone else help them, such as a friend or spouse. They also might buy on impulse and just rely on intuition rather than using careful calculations and logical thinking.

4. The order process with logistics support has no significant influences on purchase behavior phase of purchase decision process. It was found that the order process with logistics support in aspects of Speed of response, and Work in process rate had significant influences on purchase behavior phase of purchase decision process. The results will reflect a logistics perspective, the order-to-delivery (OTD) process is one of the most important processes to manage. It can be defined as consisting of four sub-processes: customer's ordering, supplier's delivery, logistics service provider's (LSP's) transportation, and customer's goods receipt sub-process. Most existing performance dimensions are on-time delivery (Forslund & Jonsson, 2009) as well as delivery flexibility, speed of response and work in process (Keebler & Plank, 2009). Kotler and Armstrong, (2012) mentioned once the evaluation process has completed, the customer is now ready to choose between the alternatives and make a purchase decision. When making this decision, two factors can come between the purchase, attitudes of others and unexpected situational factors. These two factors are something the buyer needs to take into consideration when deciding to purchase something.

5. The electronic data interchange has no significant influences on post purchase behavior phase of purchase decision process. It was found that the electronic data interchange in aspects of Billing and tracking, Transection, and Database had significant influences on post purchase behavior phase of purchase decision process. The results will reflect opportunities to leverage big data in the marketing, sales, and after-sales service activities. The opportunities can be the segmentation of customers and applying analytics to improve the effectiveness of sales forces (Chiu, Hsu, Lai, & Chang, 2012). In retail business, consumer behavior and preferences can be understood by analyzing

the big data which includes customers' movement in the store or online webs site, transactions, and product searches (Macdonald & Sharp, 2000). Kotler and Armstrong (2012) stated that after purchasing the product or service, customers are then in the final stage of the customer decision process. This stage can be described as post purchase behavior. This final stage in the process is more concerning to the marketers to make sure their product is up to the customer's standards. If the product falls short of the expectations of the customers, then the customers are disappointed with their purchase.

Recommendations

Effective supply chain management is a hidden platform to influence customer purchase decisions. Those performance factors may not directly interact with customer purchase decision, but it will provide a good support to customer positive intention toward retailers. Therefore, the following recommendations for general retail business as follows:

1. Retailers should more focus on quality product collection in their inbound supply chain network with suppliers and focus on the retail environment to make it more convenient and customer friendly.

2. Location is a very important fact for retail point identification. Before retail business, investment must give priority to convenient potential location and price information is key influence factory on sales, price information should be updated and reliable.

3. Product stock availability information increases purchase decision confidence, it also helps. Customer to choose alternate products within the store and decrease store or retail point switching. Visualized product stock information has more effectiveness.

4. Retail management should keep advance updating to customer about new product upcoming though various media and channel. It has a significant positive impact when customers search for information about the product as well as retail point and balance inventory of product with related accessories is important in retails business. Stock out always creates a negative impact on customers and increase product or store switching.

5. Order fill rate, speed of response and work in process are operational activities. Agility is its boosting factor. Retailers should set up a standard cycle time for every operation activity. Do not keep customer long time wait. Implement just in time or Lean philosophy to improve this segment and billing tracking, booking and process work are official recording process. It is necessary for

retailers as well as customers. Here need to reduce non-value adding activities. Implications of digitalize process will be more effective to improve and faster overall process; it will also enhance customer loyalty and confidence.

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