An Empirical Modeling of Customer Satisfaction Towards Retail Supply Chain Stores in UAE: A Partial Least Square (PLS) Approach

*C. Annamalai, M. Rizwan

COLLEGE OF BUSINESS, UNIVERSITY OF MODERN SCIENCES, DUBAI, UNITED ARAB EMIRATES
*annaaerp@gmail.com

Abstract

Purpose – Recent time has witnessed that retail store has exerted utmost efforts to offer products and services to the customers in an intensely competitive environment. In this background, the purpose of this paper is to empirically investigate the influence of key factors influencing on customer satisfaction towards Retail Supply Chain Stores in United Arab Emirates (UAE).

Design/methodology/approach – A convenience method was used for a sample size of 104 from UAE. A questionnaire with mixed scale was administered online to measure effect of four variables-store layout, customer service, and value for money, and store location on customer satisfaction. The statistical software PLS was employed to measure the conceptual model.

Findings – All independent variables are positively related to the dependent variable, thus confirming the support to the conceptual model and hypothesis.

Managerial implications – Decision makers of the retail supply chain stores in UAE need to pay close attention to conceptually understand the dynamism of store layout, service convenience, wallet and bargain sense, preferences, and location; and then draw actionable strategies and tactics upon the said concepts and practically meet or exceed the pre-informed expectations to eventually render the satisfaction to the actual and potential customers.

Originality/value – Based on the previous research works, few studies have been carried out on the Retail Supply Chain Stores in UAE, which shows the research gap in the study. In this context, location, and value for money, were put to investigation. The results and findings are the new in addition to the body of knowledge, especially in the given retail format and geographic extent, particularly in United Arab Emirates (UAE). The study provides unique value in terms of content, results, and implications on customer satisfaction.

Keywords: Retail, Customer satisfaction, Store Layout, Value for Money, Location, Service, UAE

I. INTRODUCTION

Economic growth, rising young population, higher income level, and robust tourism has positioned UAE on the growth trajectory in the retail sector. This sector has posted 6.8 per cent of Cumulative Average Growth Rate (CAGR) in revenue during 2010-201 [1] and is poised to hit $52 billion in sales by 2020 with a CAGR of 8 per cent [2]. Retail supply chain stores-one of the types of modern supply chain retailers dominates the grocery sector. This retail format, being in the vicinity of the malls, attracts the customers. The dominant retail supply chain store in the sector include Lulu Group, Carrefour, Spinneys, Choitram, and Al Maya [3].

According to Singh [4] one of the key determinants of an organization's success is customer needs and wants. Furthermore, Yuen and Chan [5] assert that the retailers, given the fierce competition and growing retail sector, need to listen to 'the inner voice of customer' to deliver superior service and hence induce customer satisfaction. On the same propositions, many researchers [4][6][20][21][24] have recognized the importance of customer satisfaction for the success of an organization.

Levy and Weitz [7] define satisfaction as an assessment of how much a retailer meets the customer's expectation. Customer satisfaction is determined by the comparison of customer expectation and performance. In this backdrop, 'Disconfirmation Theory' explains the relationship between expectation and performance as greater or smaller after the usage of product or service. 'Negative Disconfirmation' happens if the

expectation of the product is greater than performance, 'Positive Disconfirmation' when performance is greater than expectation and 'Confirmation' occurs when expectation is equal to performance [8]. Several research studies show the positive interrelationship between the variables in this study, which are briefly mentioned as follow: Rahim and Baker [9] examined that repeat purchase in specific retail setting is positively related to customer satisfaction. Cronin and Taylor [10] argued that price and customer service both have influence on customer satisfaction. Martinéz-Ruiz, et al [11] explore that nearness of the retail store from home saves time and effort, and reduces transactions costs, thus resulting in customer satisfaction.

Thorough existent research from the various sources indicates that despite the vital need of achieving customer satisfaction, only scanty study is available on the success mantra of the retail store. This study, therefore, seeks to fill the research and knowledge gap by identifying the determining factors influencing the customer satisfaction towards the retail supply chain stores in UAE.

The reminder of the paper is organized as follows: Section 2 reviews the literature. Section 3 comprises of the research design and methodology. Section 4 analyse the data findings. Section 5 features on the managerial implications, while Section 6 concludes with the limitations and future research.

II. LITERATURE REVIEW AND HYPOTHESIS

Factor 1: Store layout (SL)

The store layout has considerable influence on the retail consumer buying behavior [12]. Banerjee and Yadav [13] found that interior design and the appearance of a retail store is vital in the beginning of thirty seconds for the shoppers to decide whether to navigate the store or make buying decision. The store design helps the customer brows different sections effortlessly [14]. The store layout is of various types such as, the counter store layout, the forced-path layout, the grid layout, the racetrack layout, and the free-form layout; and meticulously designed to serve purpose of both- retailer and shoppers [15]. Given the competition, if customer is not satisfied with the layout of the retailer, he switches to another one [16]. On the basis of the above arguments, the following research hypothesis needs to be tested:

H1: There is a positive significant relationship between store layout and customer satisfaction.

Factor 2: Value for Money (VM)

Ciavolino and Dahlgaard [17] define value for money as the level of perceived quality compared to the price paid for goods or services. Product price and promotional offers in a competitive environment influence value for money. Besides, several research findings [9][20][21] reveal the varying influencing role of price and quality on 'perceived value, customer satisfaction'. Research indicates that retailers devise price, value and satisfaction as marketing tools [18]. On the basis of the above discussion, the following research hypothesis is proposed:

H2: There is a positive significant relationship between value for money and customer satisfaction.

Factor 3: Customer Service (CR)

According to Pettigrew [19], customer service is the aggregation of what a company delivers to fulfil customer expectation and resultant satisfaction. Also, this creates provision to 'the company's core products sold'. The previous research [20] sums up that the service quality determines the customer' perceived value. When the shoppers buy goods for less, saves time and energy compared to the quality of service, customers hold high perceived value for service. This implies service quality and perceived value are directly related to each other. Besides, perceived value is a predictor to customer satisfaction. As a corollary, the higher the perceived value, the higher the customer satisfaction [21]. On the basis of the above discussion, the following research hypothesis is suggested:

H3: There is a positive significant relationship between customer service and customer satisfaction.

Factor 4: Store location (LA)

Access to a retail store is essential for the success of retail business [22] and is regarded as a 'perceived convenience of retail location [23]. Reilly [24] developed 'law of retail gravitation', which attracts customers from far off places to a central location providing more product range and facilities. Retail location affects the frequency of customer's visit to the store. It was observed that easily accessible store is preferred over to the other store being farther [25]. Grewal [26] concludes that good location might induce the basic benefits, which can offset other costs. Further, the research reveals that store location has significantly positive effect on customer's waiting time and satisfaction [27]. Martinéz-Ruiz, et al [28] emphasizes that

International Journal of Research in Management, Science & Technology (E-ISSN: 2321-3264)
Vol. 5, No. 1, Pages 33-37, April 17
Available at www.ijrmst.org

customers often prefer the benefit of convenience, which is important for the retailers to keep customers satisfied. On the basis of the above discussion, the following research hypothesis needs to be tested:

H4: There is a positive significant relationship between store location and customer satisfaction.

Customer satisfaction is key determinant in the success for any organization, especially retail set up [29][31][32]. Given the fierce competition and growing retail sector, the organization needs to listen to 'the inner voice of customer' to deliver exceptional service and hence induce customer

| Variables	Survey Items	Factor Loading	Cronbach's Alpha
Store Layout (SL)	SL1 SL2 SL3	0.768 0.824 0.864	0.868
Store Location (LA)	LA1 LA2 LA3	0.922 0.826 0.822	0.822
Customer Service (CR)	CR1 CR2 CR3	0.912 0.852 0.846	0.878
Value for Money (VM)	VM1 VM2 VM3	0.808 0.924 0.878	0.819
Customer Satisfaction (CS)	CS1 CS2 CS3 CS4	0.820 0.812 0.788 0.928	0.922

satisfaction. Several research studies [4][5][7] show the positive interrelationship between the variables in this study such as store layout, customer service, value for money, and store location.

Table1: Results of Reliability and Validity

This study fills the research gap of customer satisfaction in retail supply chain stores due to lack of researches that have been carried out in United Arab Emirates (UAE). Further, anecdotal evidence shows that research on store location and customer

satisfaction in hyper market in UAE is novelty to this study. The following Figure 1 is the conceptual model based on the literature.

FIGURE 1. CONCEPTUAL MODEL
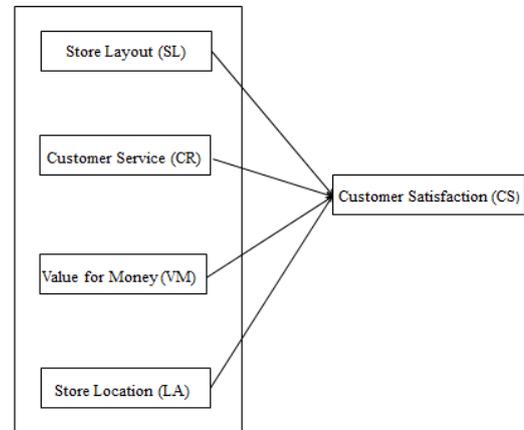
III. RESEARCH METHODOLOGY

Sample was collected from the people working in the retail supply chain business. An online questionnaire was sent to 180 individuals out of whom 104 respondents reverted. Their response was collected and analyzed using the SPSS and Partial Least Square (PLS) approach.

SURVEY INSTRUMENTS

A questionnaire containing 16 instrument items was developed. The questionnaire consisted of 5 sections with one for the demographic factors and others for the independent variables.

IV. DATA RELAIBILITY AND VALIDITY

In order to check the reliability of data, Cronbach's Alpha was applied [33]. Cronbach's Alpha is a measure used to check the internal consistency. This represents how closely related a set of items are as a group. A value of above 80% represents that data is reliable and can be used for further analysis.

The above output shows that customer satisfaction has the highest internal consistency, while value for money is the lowest. Others factors fall between these two points. Besides, factor load of customer service and value for money based on the mean value of factor loading for the instruments is 0.870, being on higher side, and the same indicating that their internal consistency is high hence reliability of the data for the constructs is also high. Whereas, the mean value of the factor load for store layout is 0.818 indicating the lower side, which is comparatively less consistent and hence less reliable. In between are location and customer

International Journal of Research in Management, Science & Technology (E-ISSN: 2321-3264)
Vol. 5, No. 1, Pages 33-37, April 17
Available at www.ijrmst.org

satisfaction at 0.858 and 0.837respectively, which are still high in terms of consistency and reliability.

Table 2: Path Analysis

Hypothesis	Path Direction	Path Coefficient	P	Verification
H1	SL -> CS	0.622	***	Supported
H2	LA -> CS	0.324	**	Supported
H3	CS -> CS	0.308	**	Supported
H4	VM -> CS	0.512	***	Supported

** Significant at p<0.05; *** Significant at p<0.01

V.   RESULTS AND DISCUSSION

Reliability and validity of the sample data ensures good fit of the assumed conceptual model. PLS software has been used to test the data [33]. From the Table 1, it has been revealed that through each variable's instrument items, the reliability coefficient values are above 0.4 which shows that there is a reasonable fit.

Furthermore, the validity of the data has been tested by factor loading. From the Table 2, it has been revealed that all the instrument items show the value above 0.6 indicating that reasonable validity has been achieved. This is further supported by the path analysis results which indicate that there is strong relationship among the factors considered for the conceptual model. Store layout seems to be an important driver and on the higher side for customer satisfaction, with a path coefficient of 0.622 followed by 0.512, and 0.324 corresponding to value for money, and customer service.

VI.   MANAGERIAL IMPLICATIONs

To achieve and endure customer satisfaction is vital to all firms in a fiercely competitive environment [31] [32]. Yuen and Chan [30] emphasis that the retailers should listen to 'inner voice of the customer to deliver superior services resulting in customer satisfaction. Managers of retail supply chain stores in UAE need to pay close attention to conceptually and practically understand the dynamism of store layout, customer service, value for money, preferences, and location and their effect on customers satisfaction; then chalk out actionable strategies and tactics upon the said concepts and meet or exceed the pre-informed expectations to eventually render the satisfaction to the actual and potential customers. All the influencing factors are positively related to customer satisfaction. However, managers need to

be more evaluative and particular about location, working on the premise of gravitational pull.

VII.   LIMITATIONS AND FUTURE RESEARCH

There are some limitations that should be taken into account when interpreting conclusion:

First, the extent of research was in a retail environment and confined to UAE, hence finding should be interpreted within these boundaries and conceptual model developed. Second, as the sample size was small, findings do not flatly merit generalization in a wider market. Third, the four independent variables employed in this study may not be inclusive and comprehensive enough to delineate the latent dimension of the model, methods, and hence findings. Another shortcoming of this study can be the design, that is, cross-sectional, whereby data gathered were in one time frame. On future direction front, the investigation in the study raises some pertinent questions, such as how longitudinal study might affect the outcome of this study, how and why customer satisfaction can be vital for a retail firm. Besides, research gap can provide more constructs of the study. Finally, from statistical standpoint, moderating variable such as quality or car park in an additional modeling can be further investigated.

VIII.   CONCLUSION

UAE, especially has emerged as one of top ten retail destinations in the world today. Retail sector has been one of the key contributing sectors to the GDP of the UAE economy, and UAE is home to a large number of retail supply chain stores-some existing swanky, while many mushrooming ones, thus operating in a highly competitive and dynamic environment. Amidst this, while many retailers have grown and sustained hugely, some have faced hard time to even survive. In this backdrop, this study investigated the effect of store layout, customer service, value for money, and store location on customer satisfaction. Anecdotal evidence indicates that all these factors are positively related to customer satisfaction, and the same is proven by the findings through empirical investigation and analysis. The dyadic of the retail location and customer satisfaction was the novelty to the study. The valuable managerial implication includes that managers of hyper market in UAE needs to make cutting-edge strategy on layout, services, promotional schemes, and location to finally meet or exceed customer satisfaction.

REFERENCES

[1] Wam (2016), "UAE's retail market grows to $35 billion in 2015", available at:

http://www.emirates247.com/business/economy-finance/UAE-s-retail-market-grows-to-35-billion-in-2015-2016-04-06-1.626394

[2] Staff (2016), "UAE's retail market set to surpass $52bn sales by 2020", available at: http://www.arabianbusiness.com/UAE-s-retail-market-set-surpass-52bn-sales-by-2020-627593.html

[3] Report (2016), "Grocery Retail Trends in the United Arab Emirates", available at: http://www.agr.gc.ca/eng/industry-markets-and-trade/statistics-and-market-information/agriculture-and-food-market-information-by-region/middle-east-and-africa/market-intelligence/grocery-retail-trends-in-the-united-arab-emirates/?id=1459445540542

[4] Singh, H. (2006), "The Importance of Customer Satisfaction in relation to customer loyalty and retention", *UCTI.WP-06-06,* May 2006, Kuala Lumpur, Malaysia.

[5] Yuen, F.T. and Chan, S.S.L. (2010), "The effect of retail service quality and product quality on Customer Loyalty", *Journal of data base marketing and customer strategy management,* Vol. 17, pp. 222-240.

[6] Reichheld, F. (2003), "The One Number You Need to Grow", *Harvard Business Review*

[7] Grewal, D. and Levy M. (2009), "Customer Experience Management in Retailing: An Organizing Framework", *Journal of Retailing,* Vol. 85 No. 1, pp. 1-14.

[8] Levy, M. and Weitz, B. A. (2007), "Retailing Management. New York: McGraw Hill.

[9] Rahim, A. and Bakar, A. (2014), "Customer store loyalty in the context of customer perceived value in Saudi Arabia", *Interdisciplinary Journal of Contemporary Research In Business,* Vol. 5 No. 12, pp. 444-448.

[10] Cronin, J. and Taylor, S. (1992), "Measuring Service Quality: A Re-examination and Extension, *Journal of Marketing,* 56, pp. 55-68.

[11] Reilly, W.J. (1931), "*The law of Retail gravitation.* New York: W.J Reilly Inc as cited in Martinez-Ruiz, M, Jiménez- Zarco, AI, Yusta, A.I 2010, "Customer Satisfaction's Key Factors in Spanish grocery stores: evidence from retail supply chain stores and supermarkets", *Journal of Retailing and Consumer Services*, Vol. 17, pp. 278-285. responses in a High end Supermarket", *Int. Rev. of retail distribution and consumer research,* Vol. 17, No.5, pp. 469 – 482.

[12] Masudin, I. and Faudi, M. (2014), "Store layout for virtual retailing: A literature review", *Journal of Information Technology Impact*, Vol. 13 No. 2, pp. 141-148.

[13] Banarjee, S. and Yadav, P. (2012), "Analysis of visual merchandising: effect on consumer buying behaviour", *International Journal of Retailing & Rural Business Perspectives*, Vol. 1 No. 2, pp. 209-217.

[14] Soars, B. (2003), "What every retailer should know about the way into the shopper's head, International", *Journal of Retail & Distribution Management*, Vol. 31 No. 12, pp. 628–637.

[15] Ebster, C. and Garaus, M. (2015), "Store Design and Visual Merchandising: Creating Store Space That Encourages Buying", 2nd ed. New York: Business Expert Press

[16] Juhari, N.H; Ali, H.M; and Khair, H. (2012), "The Shopping Mall Servicescape Affects Customer Satisfaction", *3rd International conference on business and economic research proceeding*, Indonesia

[17] Ciavolino, E. and Dahlgaard, J.J. (2007), "Customer satisfaction modeling and analysis: A case study", *Journal of Total Quality Management*, Vol. 18 No.5, pp. 545-554.

[18] Li, Y. and Liu L. (2012), "Assessing the impact of retail location on store performance: A comparison of Wal-Mart and Kmart stores in Cincinnati", *Applied Geography*, Vol. 32 No. 2, pp. 591- 600.

[19] Pettigrew, S. (2008), "Chapter 17: Older Consumers' Customer Service Preferences. In F. Kohlbacher and C. Herstatt (Eds.), *The Silver Market Phenomenon* (p. 257). Springer. [Online] available:

http://www.springerlink.com/content/u134g348j42778w3/fulltext.pdf (June, 2011)

[20] Howat, G. and Assaker, G. (2013), "The hierarchical effects of perceived quality on perceived value, satisfaction, and loyalty: empirical results from public, outdoor aquatic centers in Australia", *Sport Management Review*, Vol. 16 No. 3, pp. 268-284

[21] Caruana, A., Money, A. H., and Berthon, P.R. (2000), "Service quality and satisfaction-the moderating role of value", *European Journal of Marketing*, Vol. 34 No. 11/12, pp. 1338-153.

[22] Grewal, D. and Levy M. (2009), "Customer Experience Management in Retailing: An Organizing Framework". *Journal of Retailing,* Vol. 85 No. 1, pp. 1-14.

[23] Swoboda, B., Berg, B., Schramm-Klein, H., and Foscht, T. (2013), "The importance of retail brand equity and store accessibility for store loyalty in local competition", *Journal of Retailing and Consumer Services*, Vol. 20 No. 3 pp. 251-262.

[24] Reilly, W.J. (1931), "*The law of Retail gravitation.* New York: W.J Reilly Inc as cited in Martinez-Ruiz, M, Jiménez- Zarco, AI, Yusta, A.I 2010, "Customer Satisfaction's Key Factors in Spanish grocery stores: evidence from retail supply chain stores and supermarkets", *Journal of Retailing and Consumer Services*, Vol. 17, pp. 278-285. responses in a High end Supermarket", *Int. Rev. of retail distribution and consumer research,* Vol. 17, No.5, pp. 469 – 482.

[25] Rhee, H. and D. R. Bell, (2002), "The Inter-store Mobility of Retail store Shoppers*", Journal of Retailing*, Vol. 78 pp. 225-237.

[26] Grewal, D. and Levy M. (2009), "Customer Experience Management in Retailing: An Organizing Framework", *Journal of Retailing,* Vol. 85 No. 1, pp. 1-14.

[27] Davis, M. M. and T. E. Vollmann, (1990), "A Framework for Relating Waiting Time and Customer Satisfaction in a Service Operation", *Journal of Services Marketing,* Vol. 4, pp. 61-69.

[28] Martinez-Ruiz, M, Jiménez- Zarco, AI, Yusta, A.I 2010, "Customer Satisfaction's Key Factors in Spanish grocery stores: evidence from retail supply chain stores and supermarkets", *Journal of Retailing and Consumer Services*, Vol. 17, pp. 278-285

[29] Singh, H. (2006), "The Importance of Customer Satisfaction in relation to customer loyalty and retention", *UCTI.WP-06-06,* May 2006, Kuala Lumpur, Malaysia.

[30] Yuen, F.T. and Chan, S.S.L. (2010), "The effect of retail service quality and product quality on Customer Loyalty", *Journal of data base marketing and customer strategy management,* Vol. 17, pp. 222-240.

[31] Chockalingam, A; Alam, M; Upadhye, N; and Nassar S. (2016), "An Empirical Study of Key Critical Success Factors (CSFs) of Consumer Buying Behavior for Grocery Products in United Arab Emirates (UAE*)", Gulf – Pacific Journal of Business Administration* , Vol. 1 No. 1, pp.20-31

[32] Rizwan, M., Annamalai, C., A., Nassar, S. and Upadhye, N. (2016), "Consumer buying intention towards health insurance: Empirical evidence from the United Arab Emirates (UAE)", Gulf-Pacific Journal of Business Administration, Vol. 1, No. 2, pp. 109 – 125.

[33] Peterson, R. A., & Kim, Y. (2013). On the Relationship between Coefficient Alpha and Composite Reliability. Journal of Applied Psychology,98(1), pp. 194-8.