



PLANNING MALAYSIA:
Journal of the Malaysian Institute of Planners
VOLUME 21 ISSUE 5 (2023), Page 373 – 386

THE IMPACT OF ONLINE SHOPPING ON SHOPPING CENTRES IN KLANG VALLEY, MALAYSIA

Yasmin Mohd Adnan¹, Chin Kee Liang², Muhammad Najib Razali³

*¹Department of Real Estate, Faculty of Built Environment,
UNIVERSITI MALAYA*

*²Henley Business School,
UNIVERSITY OF READING MALAYSIA*

*³Department of Real Estate, Faculty of Built Environment & Surveying,
UNIVERSITI TEKNOLOGI MALAYSIA*

Abstract

Real estate has been a spectator to technology disruption for the past few years as many activities that used to be mediated by physical spaces within buildings are presently being shifted to virtual space. Markedly, this is the case in shopping as brick-and-mortar retailers are being disrupted by e-commerce. This study's premise is that it is not clear whether the emergence of online shopping would transform the physical retail property sector in Malaysia. To gauge the impact of the disruption on the physical space, this study conducted a survey among the shoppers in Klang Valley, Malaysia to determine the preference of shoppers to shop virtually or in the physical spaces at shopping centres. From the findings, it is found that the virtual space is not identified as an immediate and direct threat to physical space by shoppers. The synergies between the virtual space and physical space have to be explored so that the existing physical spaces can be designed to ensure sustainability with shoppers' preferences.

Keywords: Online Shopping, Shopping Centres, Physical Space, Virtual Space

¹ Corresponding Author Email: yasmin_alambina@um.edu.my

INTRODUCTION

With the emergence of the digital economy, retail property could be affected in several ways, such as the reduction of rent per square foot and gross sales. Traditional shopping will become less appealing as Internet transactions become more common. According to the Department of Statistics Malaysia, there are around 25.08 million internet users in Malaysia comprising 79% of the total population as of 2019. In addition, Malaysia's overall e-commerce income performance in 2021 recorded RM1.1 trillion, an increase of 21.8% compared to 2020. The digital economy is expected to contribute 25.5% to the country's gross domestic product (GDP) by 2025, according to the 12th Malaysia Plan (12MP), a document released by the Economic Planning Unit (EPU), Malaysia (Economic Planning Unit, 2015).

Parallel to the emergence of virtual space that might have contributed to falling footfalls in physical retail space; the intrinsic inefficiencies of the property market are worsening the situation. Demand lags for new spaces have led to a massive oversupply of retail physical space in some markets across Malaysia, especially the Klang Valley. This study covers shopping centres (and excludes arcades and hypermarkets) located in the Klang Valley. Geographically the study area covers Wilayah Persekutuan Kuala Lumpur, Wilayah Persekutuan Putrajaya and some districts in Selangor. The occupancy rate has been showing a drop since 2018. It was reported by NAPIC (PMR, 2022) that the overall performance of the shopping complex continued to moderate, recording an occupancy rate of 75.4%, down from 76.3% in 2021.

The potential effects of e-commerce on the traditional retail property could eventually be profound as the rapid development of e-commerce may reduce the demand for physical space within the retail property market (Zhang et. Al, 2016). This study attempts to uncover the shoppers' preference towards online shopping and physical shopping and whether shopping centres could be threatened by the emergence of e-commerce in Malaysia. The study also has the objective to determine the shoppers' relative preference for one space versus the other in terms of drivers for that space and preferences in that space irrespective of the other space's characteristics. In addition, this study intends to measure the typical customer journeys for a consumer good purchase, a typical customer journeys for a consumer good purchase (physical goods) in which the journey is measured with four touchpoints corresponding to shoppers' arbitrage/preferences between physical and virtual spaces at the decision-making stages of their journey. Customer journeys are comprehensive as they cover the process from decision-making (prepurchase: touchpoint 1) to experience sharing (post-purchase: touchpoint 4) in accordance with the marketing literature.

LITERATURE REVIEW

Impact of E-Commerce and Online Shopping

By 2023, the e-commerce market is predicted to fetch US\$5.7 billion with the number of users expected to amount to almost 22 million (Statista, 2022). With the advent of e-commerce within the retail sector, an earlier study by Razali et al. (2014) has highlighted that there will be no impact on the spaces of shopping centres. However, Lund (2020) and McGowan (2019) argued that with the increasing connectivity and online shopping among shoppers, the physical spaces at shopping centres will eventually be reduced. As in the case of Malaysia, the occupancy rate of shopping centres has been showing a drop in the occupancy rate since 2018. A study in China by Zhang et al (2016) has found that there is a minimal impact of e-commerce on the demand for commercial retail space. The relationship between online retailing and physical retailing has been seen as substitutes or complements (Dixon & Marston, 2002, Dixon & Marston, 2005).

E-commerce has been said to impact physical shopping space in several ways, including i) geocentric shopping advantages, based on distance and location, become less important as consumers go online; ii) retailers may decide to lead or follow customers online, causing a further migration of sales and a decrease in individual store performances; iii) retailers alter their virtual and physical sales channel mix, impacting on their leasing needs; and iv) rent and property values are affected, which in turn influences lender and investor expectations (Dixon & Marston, 2005). More recent studies on the impact of online shopping have shown the varying impact of online shopping on shopping centres. In Slovakia, a combination of omnichannel approaches was adopted in commercialising the merchandise (Hasan, 2019). The report by Savills (Savills Commercial report, 2018), has shown that the physical space is proving to be both a complementary and synonymous part of the brands' overall omnichannel strategy. Customers usually research online information about the products before buying, thus the need to adopt the omnichannel approach.

Shoppers' Motives and Attitudes Toward Physical and Online Shopping

It has been said that shoppers' motives and attitudes towards shopping often vary significantly depending on factors affecting shopping centres as their shopping behaviours can be for the achievement of utilitarian goals (Hastreiter and Marchetti, 2016). Another study on shopping behaviours at shopping centres in the Middle East has revealed three (3) main shopping motives: hedonic, efficiency, and accomplishment (Koksaiv, 2019). Hence, shoppers' attitudes towards shopping at centres differ and are somewhat unpredictable based on the centres' overall image, such as location, nature and quality of product assortment, prices, services, physical attributes, tenant mix and atmosphere (Elena and Howard, 2007; Hastreiter and Marchetti, 2016, Calvo-Porrall and Levy-Mangin, 2018). However, Cristina and Jean-Pierre (2018) have found that the convenience

of the shopping mall and the communication activities do not show a significant influence as pull factors.

In Malaysia, several factors have been identified related to shopping centres' characteristics that shaped shoppers' selection of their favourite shopping centres. These include aesthetics, convenience, merchandising and promotions, accessibility, architecture, atmosphere, customer service, point of difference and loyalty program, tenant mix, access convenience and ambience (Kamarulzaman and Lee, 2010; A Majid et al., 2015; Ying and Ng, 2010).

According to Lim et al (2010) and Gupta (2014), the Internet has enabled retailers to offer an unlimited range of products and services to all consumers from around the world at any point direct marketing channel for the global marketplace without any intermediary as well as simplify selling activities at a lower operating cost (Stofkova et.al, 2022). According to Wong (2019) and the earlier study by Thananuraksakul (2007), it has been highlighted that a virtual store has advantages over a brick-and-mortar store in its ability to offer consumers more choices of products/services, satisfy customers' specific needs, reduce search costs, and provide more convenient delivery & payment arrangements, time-saving, ease of use, nature of products, speed, cost-effectiveness, competitive price, and trust in online shopping. It has been highlighted that the number of online consumers is growing with its attention focused on new online marketing channels and social media platforms (Pollak et al., 2021).

Tools to model and analyse consumers' experiences in physical spaces through the customer journey map (CJM) are essential to understand the travelling order of customers before they end up buying a product. CJM enables the understanding and identification of the shoppers' expectations and desires in creating strategies that will improve their shoppers' experience at the final touchpoint as well as maps the sequence of events by a customer during an entire purchase process within a service organization (Giraldi & Bevilacqua, 2016, Rosenbaum and Ramirez, 2017, Stein and Ramaseshan, 2016). To achieve a certain shopping task, a series of touchpoints is formed within the journey of a consumer. During the purchase process, CJM lists all possible organisational touchpoints that a consumer may encounter which can be modelled with four (4) touchpoints corresponding to shoppers' arbitrage/preferences between physical and virtual spaces at the decision-making stages of their journey. The touchpoints are 1) Touchpoint 1: Making choices, 2) Touchpoint 2: Instore experience, 3) Touchpoint 3: Buying the products and 4) Touchpoint 4: Getting the products.

This study applies the concepts of customer journey and touchpoints in gathering the preferences of shoppers to the shopping platforms i.e., physical or online. Identifying the drivers of channel choice, e.g., in-store purchases or online purchases is complex and customer experience management in the context of

physical and virtual spaces is a relatively new field (Verhoef et al., 2015, Lemon and Verhoef, 2016).

METHODOLOGY

This study adopted a quantitative approach to determining the preference for online shopping and shopping at shopping centres in the Klang Valley. In addition, the research model measures typical customer journeys for a consumer good purchase, a typical customer journey for a consumer good purchase (physical goods) is modelled with four touchpoints as mentioned in the earlier section.

Due to the physical contact restriction that limits face-to-face interaction as a result of the COVID-19 pandemic, an online survey was designed. In addition to having the consent to conduct the survey from the University of Malaya Research Ethics Committee (UMREC), the Checklist for Reporting Results of Internet E-Surveys (CHERRIES) was used as a guide to improve the quality of online survey (Eysenbach, 2012). An initial advertisement through Facebook and Instagram was attempted to provide awareness and participation. After the survey appeared in these media 70,850 times, around 43,710 users were recorded to open and view the survey. Due to the poor participation, other online platforms including emails and WhatsApp were used to disseminate the survey forms (designed with SurveyMonkey) to shoppers domiciled in the Klang Valley. The use of enumerators also assisted in gathering responses from the various spectrum of shoppers who have consented to participate and fulfil the respondents' profile requirement of the targeted population in the Klang Valley. From the distributed online survey forms that were distributed, a total of 400 completed responses from the population of Klang Valley (as specified by Krejcie & Morgan (1970) for sampling size) were collected which eventually allowed for the data to be analysed accordingly.

DATA ANALYSIS

The collected data was analysed using descriptive analysis and non-parametric statistical tests using Statistical Package for Social Science (SPSS). The Descriptive analysis was used to analyse the respondents' profiles and preferences to do shopping either online or at shopping centres. In the later section, the respondents were asked about their preferences at each of the identified touchpoints.

For the subsequent section, the survey required respondents to rank the factors that influence households to shop online or physically. The reliability test was also conducted on the result to examine the reliability of the questionnaire. In addition, the frequency of each factor was ranked with respect to the level of influence based on opinions from the respondents. This factor also was analysed using the Spearman correlation coefficient to determine if any of the factors were

significantly related to each other. The Spearman correlation coefficient value ranges from -1 to 1. The higher the coefficient indicated the stronger the relationship between the variables.

RESULTS

Respondents Profile

According to Table 1, the majority of the respondents (68%) were female and 32% were male. Furthermore, most of the respondents originated from Kuala Lumpur followed by other locations in Klang Valley.

Table 1: Profile of Respondents

Respondents' Profile	Percent
Gender	
Male	32.0
Female	68.0
Shoppers Origin	
Kuala Lumpur	32.0
Petaling Jaya	9.8
Subang Jaya	8.8
Shah Alam	20.3
Other location in Klang Valley	29.3

Reliability Test

Cronbach alpha was used to measure the reliability of the items in the questionnaire. The Cronbach Alpha value of 0.693 indicates that the items have an acceptable level of consistency since the value of 0.65 and 0.95 is acceptable as specified by Chua (2006).

Shoppers Shopping Habits

Table 2 illustrates that the majority of shoppers shop in both shopping centres and online with a percentage of 93.5%. This shows that shoppers are well exposed to both shopping channels when purchasing a product.

Table 2: Percentage of shopper's shopping habits

Shopping Habits	Percent(%)
I only shop in shopping centres	4.3
I only shop online	2.3
I shop in both shopping centres and online	93.5
Total	100.0

Factors Influencing the Decision of Shoppers to Shop in the Physical Shopping Centre

As shown in Table 3, the factors that mostly influence the decision of shoppers to shop in the physical shopping centre are product varieties and selection (25.2%), followed by accessible location (23.7%). The third ranking factor influencing the decision of shoppers to shop in the physical centre items from the physical attributes of the shopping centre (12.9%). The lowest percentage of factors that influence the decision of shoppers is the centre branding (2.8%).

Table 3: Factors Influencing the Decision of Shoppers to Shop in the Shopping Centres

Factors of Physical Shopping	Percent (%)	Rank
Accessible location	23.7	2
Product varieties and selection	25.2	1
Products with competition pricing	10.4	5
Quality customer services	4.7	6
Physical attributes	12.9	3
Shopping atmosphere	12.5	4
Shopping centre branding	2.8	8
Recreation activities	3.8	7
Safety in the centre	3.8	7
Total	100.0	

Factors Influencing the Shoppers' Choice of Shopping Online

Based on Table 4, the shoppers rank convenience – anywhere, anytime (27.8%) as the most important factor affecting their choice to shop online. This is followed by time saving and ease of use which represent 21.2% and 14.7% of the total percentage respectively. The shoppers in the study sample were mainly individual shoppers, which suggests very few shoppers buy the product online in bulk (1.0%).

Table 4: Factors Influencing the Shopper’s Choice of Shopping Online

Factors of On-line Shopping	Percent (%)	Rank
Convenience - anywhere, anytime	27.8	1
Time saving	21.2	2
Ease of use	14.7	3
Trust in online shopping	5.3	6
Quality of website (information and attractive)	6.9	5
Quick response to delivery	4.0	8
Safe transactions	4.4	7
Nature of products I buy - mainly cheap products	13.3	4
Nature of products I buy - mainly bulky products	1.0	10
Nature of products I buy - mainly household products	1.3	9
Total	100.0	

Customer Journey: Buying Physical Goods in a Shopping Centre

Table 5 shows the level of agreement of shoppers in mapping their journey when buying products through the virtual and physical space via the Four (4) touchpoints. For touchpoint 1, it was revealed that 67.8% of shoppers agree that they check retailers’ websites and go to check for product choices and offers when they shop virtually while 75.8% go to the store to check the product choices when they shop at physical spaces. At touchpoint 2, 68% of the shoppers research the relevant information from the retailers’ website for the product they want to buy online while 53.5% of the shoppers learn about the product from a sales representative in the store. At Touchpoint 3, 69% of the shoppers buy online while 76.1% buy instore. Finally, at Touchpoint 4, 80.6% of the shoppers get the product delivered online when they shop online while 56.3% of the shoppers collect the products in the store and bring it home.

Table 5: Level of agreement of shoppers in mapping their journey when buying products through the virtual and physical space

Mapping customer journey in virtual space and physical						
Touchpoint 1: Making choice	Virtual space		Physical space		Total	
	I check retailers' website for product choices and offers		I go to the store to check for product choices and offers			
	N	(%)	N	(%)	N	(%)
strongly disagree	15	3.8	11	2.8	26	3.25
disagree	23	5.8	21	5.3	44	5.5
neutral	91	22.8	65	16.3	156	19.5
agree	154	38.5	199	49.8	353	44.125
strongly agree	117	29.3	104	26.0	221	27.625
Total	400	100.0	400	100.0	800	100
Touchpoint 2: Instore experience	I research relevant information from the retailers' website about the products I want to buy.		I learn about products I want to buy from a sales rep in the store.		Total	
	N	(%)	N	(%)	N	(%)
strongly disagree	10	2.5	11	2.8	21	2.625
Disagree	28	7.0	61	15.3	89	11.125
Neutral	90	22.5	114	28.5	204	25.5
Agree	170	42.5	166	41.5	336	42
strongly agree	102	25.5	48	12.0	150	18.75
Total	400	100.0	400	100.0	800	100
Touchpoint 3: Buying the products	I buy online.		I buy in the store.		Total	
	N	(%)	N	(%)	N	(%)
strongly disagree	4	1.0	3	0.8	7	0.875
Disagree	11	2.8	7	1.8	18	2.25
Neutral	107	26.8	98	24.5	205	25.625
Agree	208	52.0	239	59.8	447	55.875
strongly agree	70	17.5	65	16.3	135	16.875
Total	400	100.0	400	100.0	800	100
Touchpoint 4: Getting the products	I get the products delivered.		I collect the products in the store and bring it back home with me		Total	
	N	(%)	N	(%)	N	(%)
strongly disagree	3	0.8	19	4.8	22	2.75
Disagree	11	2.8	66	16.5	77	9.625
Neutral	61	15.3	90	22.5	151	18.875
Agree	239	59.8	179	44.8	418	52.25
strongly agree	86	21.5	46	11.5	132	16.5
Total	400	100.0	400	100.0	800	100

Correlation Analysis Using Spearman Correlation Test

This test is conducted to test the correlation of the customer journey in virtual and physical space at the four touchpoints.

Table 6: Spearman Correlation Test for Touchpoint 1- Making a Choice

	I check retailers' website for product choices and offers	I go to the store to check for product choices and offers
Spearman's rho	I check retailers' website for product choices and offers	Correlation Coefficient
		1.000
		.206**
		0.000
		400
		400
	I go to the store to check for product choices and offers	Correlation Coefficient
		.206**
		0.000
		400
		400

** . Correlation is significant at the 0.01 level (2-tailed).

A Spearman's r data analysis revealed that there is a very weak correlation, ($r = .206$, $p < .05$) between the two variables and the correlation is positive. The positive correlation shows that there is a relationship between the customers' journey in doing shopping virtually and physically when making a choice.

Table 7: Spearman Correlation Test for Touchpoint 2- Instore Experience

			I research relevant information from the retailers' website about the products I buy	I learn about products I want to buy from a sales rep in the store
Spearman's rho	I research relevant information from the retailers' website about the products I buy	Correlation Coefficient	1.000	.153**
		Sig. (2-tailed)		0.002
		N	400	400
	I learn about products I want to buy from a sales rep in the store	Correlation Coefficient	.153**	1.000
		Sig. (2-tailed)	0.002	
		N	400	400

** . Correlation is significant at the 0.01 level (2-tailed).

A Spearman's r data analysis revealed that there is a very weak correlation, ($r = .153$, $p < .05$) between the two variables and the correlation is positive. The positive correlation shows that there is a relationship between the customers' journey in doing shopping virtually and physically for the instore experience.

Table 8: Spearman Correlation Test for Touchpoint 3 – Buying the Products

			I buy online	I buy in the store
Spearman's rho	I buy online	Correlation Coefficient	1.000	.409**
		Sig. (2-tailed)		0.000
		N	400	400
	I buy in the store	Correlation Coefficient	.409**	1.000
		Sig. (2-tailed)	0.000	
		N	400	400

** . Correlation is significant at the 0.01 level (2-tailed).

A Spearman's r data analysis revealed that there is a weak correlation, ($r = .409$, $p < .05$) between the two variables and the correlation is positive. The positive correlation shows that there is a relationship between the customers' journey in doing shopping virtually and physically when buying the products

Table 9: Spearman Correlation Test for Touchpoint 4 – Getting the Products

			I get the products delivered	I collect the products in store and bring them back home with me
Spearman's rho	I get the products delivered	Correlation Coefficient	1.000	-0.013
		Sig. (2-tailed)		0.798
		N	400	400
	I collect the products in store and bring it back home with me	Correlation Coefficient	-0.013	1.000
		Sig. (2-tailed)	0.798	
		N	400	400

** . Correlation is significant at the 0.01 level (2-tailed).

A Spearman’s r data analysis revealed that there is no correlation, $r = (-0.013)$ between the two variables. The correlation is also not significant with each other, $p < .05$ (which is $p = 0.798$). The negative correlation shows no relationship between the customers’ journey in shopping virtually and physically when getting the products.

DISCUSSION

The survey results show that most shoppers (93% of the respondents) in the Klang Valley do their shopping at both channels i.e. at shopping centres and online. The findings revealed that the top factor is product varieties & selection followed by accessible location and physical attributes. Thus, in light of the factors mentioned in earlier studies factors identified by shoppers in Klang Valley are similar to the ones identified in past literature.

Meanwhile, the top three factors influencing Klang Valley shoppers’ preference for shopping online are convenience, time saving and ease of use. This finding correlates to earlier findings by Wong (2019) insofar as virtual space has an advantage over physical space owing to its ability to offer customers convenient delivery and payment arrangements, speed, accessibility, and cost-effectiveness. With respect to their customer journeys when purchasing physical goods in a shopping centre, shoppers in the Klang Valley have varying responses to channel choices encountered during their journey in both physical and virtual spaces.

At the decision-making choice stage, i.e. at Touchpoint 1, the majority of shoppers agree that they check the retailer’s website for product choices and offers while going to the physical store to check for product choices and offers. At Touchpoint 2, i.e. the instore experience, a majority of shoppers agree that they search for information on the retailers’ website. Interestingly, only half of the shoppers learn about the product from a sales representative in the physical store.

At Touchpoint 3, i.e. buying the product, a majority of shoppers indicate that they buy online as well as in the physical store. At Touchpoint 4, i.e. getting the product, a majority of shoppers get their product delivered when they shop online. On the other hand, approximately half of the shoppers collect the product in physical stores. What can be observed from these findings are shoppers' preferences at the various touchpoints. Nonetheless, shoppers tend to shop in the shopping centre that they like when making purchases in physical spaces. This enhances the role of factors discussed in earlier studies of the factors as key drivers of shoppers to shopping centres.

CONCLUSION

The relationship of certain key variables, particularly those related to customer purchases either in a centre or online as a result of social media (online) and offline (shopping centre) marketing, suggests a symbiotic relationship between physical retailing (brick-and-mortar centres) and e-commerce (virtual space). To enable shopping centres to compete with online retailers, shopping centre developers/policymakers could consider a range of measures impacting the convenience of shopping centres

While it is easy to get carried away in forecasting the demise of physical space for the exclusive benefits of e-shopping, the reality on the ground is different as exemplified by the findings of this study. What e-commerce does to space is not making it irrelevant, but rather it makes it relevant in an existential rather than functional way, i.e., shoppers come to shopping centres to enjoy, meet, experience, touch, taste and feel what they might have noticed through online marketing. This positioning of retail real estate space into people's lives is an opportunity that many real estate actors are already working hard to capitalize on.

REFERENCES

- Babin B.J., Darden, W.R., & Griffin, M. (1994). Work and/or fun: measuring hedonic and utilitarian shopping value. *Journal of Consumer Research*, 20(4),644-657.
- Beatty, S.E., Mayer M.L., & Coleman J.E. (1996). Consumer-sales associate retail relationships. *Journal of Retailing*, 72(4), 223-247.
- Bloch, P.H., Ridgway, N.M., & Dawson, S.A. (1994). The consumer centres as shopping habitat. *Journal of Retailing*, 72(1), 23-42
- Changchit, C. (2006). Consumer perceptions of online shopping. *Issues in Information Systems*, 7(2), 177-181.
- Calvo-Porràl, C. and Lévy-Mangín, J.-P. (2018), Pull factors of the shopping centres: an empirical study, *International Journal of Retail & Distribution Management*, Vol. 46 No. 2, pp. 110-124.
- Chang, P., Mendonça, D., & Im, I. (2004). Inside the customer: modeling cognition during online shopping. AMCIS 2004 Proceedings, 429.

- Chua, Y. P. (2006). *Methods and Statistics Research: Book 1 Research Methods*. Kuala Lumpur: McGraw Hill
- Cristina Calvo-Porrall and Jean-Pierre Lévy-Mangin (2018), Pull factors of the shopping centres: an empirical study, *International Journal of Retail & Distribution Management*, 46(2), 110-124
- Dixon, T. and Marston, A. (2005), "Taking the shopping centre online: new models in e-commerce", *Property Management*, Vol. 23 No. 2, 97-109.
- Dixon T. and Marston A. (2002) The Impact of E-commerce on Retail Real Estate in the UK, *Journal of Real Estate Portfolio Management*, 8:2, 153-174.
- Economic Planning Unit. (2015). Eleventh Malaysia Plan 2016-2020: Anchoring growth on people. Driving ICT in the Knowledge Economy, Strategy Paper 15. Putrajaya, Malaysia.
- Elena, S.M., & Howard, E. (2007). Shopping for pleasure? Shopping experiences of Hungarian consumers. *International Journal of Retail & Distribution Management*, 35(6), 474-487
- Eysenbach G. (2012). Correction: Improving the Quality of Web Surveys: the Checklist for Reporting Results of Internet E-Surveys (CHERRIES). *Journal of Medical Internet Research*, 14(1), e8. <https://doi.org/10.2196/jmir.2042>.
- Giraldi, L., Mengoni, M., & Bevilacqua, M. (2016). *How to Enhance Customer Experience in Retail: Investigations Through a Case Study*. 381–390. <https://doi.org/10.3233/978-1-61499-703-0-381>
- Gupta, N. (2014). Customer perception towards online shopping/retailing. jrps. in/uploads/july 2013/customer_perfection_by_nidhi_gupta. pdf.
- Hasan, J (2019), E-commerce and its impact on retail stores in Slovakia, *Studia commercialia Bratislavensia*, 12 (41). 16-23
- Kamarulzaman, Y., & Lee, F. C. L. (2010). Attracting shoppers to shopping centres: The Malaysian Perspective. *Interdisciplinary Journal of Contemporary Research in Business*, 2(3), 185-198
- Kirkup, M.H. and Rafiq, M. (1999), "Marketing shopping centres: challenges in the UK context", *Journal of Marketing Practice: Applied Marketing Science*, Vol. 5 No. 5, pp. 119-133. <https://doi.org/10.1108/EUM0000000004570>
- Krejcie R V & Morgan D W (1970), Determining Sample Size for Research Activities, *Educational and Psychological Measurement*, 30, 607-610
- Lund, C. (2020). The Effects of E-commerce on Retail Property Values: A study about how the growth of e-commerce affects property values in the retail real estate sector (Dissertation). Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:kth:diva-277028>
- McGowan, Jacob, "How Has the Growth of E-commerce Sales Affected Retail Real Estate?" (2019). CMC Senior Theses. 2189. https://scholarship.claremont.edu/cmc_theses/2189
- NAPIC, Property Market Report, 2022
- Razali N., Rahman A., Adnan M.Y., Yassin M. (2014) The impact of information and communicating technology on retail property in Malaysia, *Property Management*, 32:3, pp. 193-212.

Yasmin Mohd Adnan, Chin Kee Liang, & Muhammad Najib Razali
The Impact of Online Shopping on Shopping Centres in Klang Valley, Malaysia

- Rohayu Ab Majid, Nor Zalika Adnan, Rosli Said, Olusegun Olaopin Olanrele (2015), Drivers Influencing Customers' Visit to Shopping Centres in Malaysia, *International Surveying Research Journal (ISrJ)*, 5(3), pp.43-10
- Rosenbaum, M. S., Otolara, M. L., & Ramirez, G. C. (2017). *How to create a realistic customer journey map*. 60, 143–150.
<https://doi.org/10.1016/j.bushor.2016.09.010>
- Savills Commercial Research, Retail 2018, Retail Revolutions Exploring the impact of E-commerce on Local Physical Retailing. Retrieved from: <https://savills.co.uk/insight-and-opinion>
- Statista : <https://www.statista.com/outlook/243/122/ecommerce/malaysia>).
- Stein, A., & Ramaseshan, B. (2016). Towards the identification of customer experience touch point elements. *Journal of Retailing and Consumer Services*, 30, 8–19.
<https://doi.org/10.1016/j.jretconser.2015.12.001>
- Thananuraksakul, S. (2007). Factors influencing online shopping behavior intention: A study of Thai consumers. *AU Journal of Management*, 5(1), 41-46.
- Verhoef, Peter & Kannan, P. K. & Inman, J.. (2015). From Multi-Channel Retailing to Omni-Channel Retailing. *Journal of Retailing*. 91. 10.1016/j.jretai.2015.02.005.
- Wong, Xian Yang (2019), Impact of Technology on the Singapore Retail Market, Cushman & Wakefield, Retrieved from: <https://www.cushmanwakefield.com/en/singapore/insights/blog/impact-of-technology-on-the-singapore-retail-market>

Received: 7th June 2023. Accepted: 5th September 2023