



**Storescape and customer loyalty: Employee citizenship
behaviour towards customer as a catalyst**

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Storescape and customer loyalty: Employee citizenship behaviour towards customer as a catalyst

Abstract

Purpose – The purpose of the current paper is to examine the relationship between storescape (retail’s physical and social environment factors) and customer loyalty and how employee citizenship behaviour towards customer facilitates this relationship.

Design/methodology/approach – This study used a descriptive quantitative, non-experimental research method using a cross-sectional design with a self-administered questionnaire. 415 department store customers in Australia responded to the survey through an online panel provider.

Findings – Results confirmed the significance of all relationships between physical and social storescape factors, customer satisfaction and loyalty, except the direct effect of physical factors on customer loyalty. The findings also highlighted the interaction effect of employee citizenship behaviour towards customer in the relationship between storescape factors, satisfaction and customer loyalty, indicating that these effects are stronger at higher levels of employee citizenship behaviour towards customer than lower levels.

Practical implications – The study provides insights for department store retailers, practitioners and marketing managers into the role of employee citizenship towards customer in forming and shaping customer satisfaction and loyalty especially when there is a lack of storescape effect on customer satisfaction and loyalty.

Originality/value – This study extends the consecutive relationship of the Stimulus-Organism-Response model by adding employee citizenship behaviour towards customer as a moderator. The study employed resource exchange theory to investigate the direct effect of

storescape on customer loyalty beyond its indirect effect through organism suggested by the stimulus-organism-response model.

Keywords: Physical environment, Social environment, Employee citizenship behaviour, Customer satisfaction, Customer loyalty.

Paper type Research paper

Introduction

In recent years, profits of the retail industry in Australia as the second largest employing sector, have been flat or decreasing because of intense competition from online and international retailers integrated with continued low customer satisfaction and a weak retail environment (Knight, 2017, IBISWorld, 2019). The years 2018-19 recorded the weakest results since the early 1990's recession due to the declining annual rate of sales volume in retail. Industry revenue fell at an annual rate of 0.2% over the five years from 2014 to 2019 (IBISWorld, 2019). Further, the number of staff in Australia's retail sector decreased from 1,296,500 in February 2018 to 1,284,700 in February 2019; this shows a 0.9% fall (Parliament of Australia, 2019). According to Deloitte (2019), Australia's major department stores have sustained either poor profits, or losses, since the beginning of 2018. It also is predicted that Australia's department stores will face declining income in real terms over the five years from 2018 to 2023 (Knight, 2017).

In such a highly competitive retail market, it is increasingly important for retailers (e.g., department stores) to create a competitive advantage. Therefore, in order to enhance their competitiveness retailers have focused on their customers as a valuable source (Groth, 2005, Yi and Gong, 2008). Customers can be valuable if companies strive to maximize the loyalty of their customers (Chiu *et al.*, 2015, Yi *et al.*, 2011). Studies have acknowledged that improving customer loyalty can decrease marketing costs and increase companies' profits

(Oly Ndubisi, 2006, Jin *et al.*, 2013, Han and Ryu, 2009). For instance, according to Reichheld and Schefter (2000) retention of old customers is considerably cheaper than attraction of new customers. Moreover, Reichheld *et al.* (2000) demonstrated that a five percentage-point shift in customer loyalty consistently results in 25 to 100 per cent increase in profits. Consumers who are loyal are more likely to engage in positive word-of-mouth behaviours, repurchase or purchase other products from the same store than non-loyal customers (Jang *et al.*, 2015, Sui and Baloglu, 2003). In addition, they are less costly to serve because loyal customers know the product/service well and require less information (Han and Ryu, 2009, Reichheld and Sasser, 1990). Therefore, it would be helpful to gain a better understanding of the determinants of customer loyalty and the mechanisms through which the determinants affect it (El-Adly and Eid, 2016).

The present study aims to examine how physical and social environment factors of store - referred to in this paper as 'storescape'- and employee citizenship behaviour towards customers (ECB-C) influence customer loyalty. Many studies have examined store/service environmental factors as antecedents of loyalty based on the Stimulus-Organism-Response (SOR) model (Thakur, 2018, Jang *et al.*, 2015, Picón *et al.*, 2014, Line *et al.*, 2018, Terblanche, 2018). The SOR model proposes that physical and social environmental factors elicit responses through an organism (Mohan *et al.*, 2013, Jani and Han, 2015). In other words, the model postulates that the environmental factors (Stimuli) can have a noticeable effect on human behaviour (Response) while mediated by individual's processes (Organism) (Lee and Yun, 2015, Lin and Liang, 2011).

Although, many studies have investigated the indirect effect of in-store physical and social environment on behaviour through customer emotion based on the SOR model (Chang, 2016, Line *et al.*, 2018, Terblanche, 2018, Zhao *et al.*, 2020, Holmqvist and Lunardo, 2015, Jani and Han, 2015), no studies have examined the direct effect of storescape on customer loyalty (CL)

in department stores. Therefore to fill this gap, the present study aims to examine the direct effect of storescape on CL based on Resource exchange (RE) theory. This theory as a perspective of social exchange theory is widely used to explain human behaviour. RE theory focuses on resource exchange between one entity (e.g., the customer) and another (e.g., the company) (Roschk and Gelbrich, 2017), as well as the principle of reciprocity within a social interaction or relationship (Chan *et al.*, 2017, van Tonder *et al.*, 2018). Given that, the centre of RE theory is the transfer of resources between two parties, with a resource being something that another person values (Cropanzano and Mitchell, 2005). When individuals receive beneficial resources from other parties they will direct their reciprocation efforts towards them (Foa and Foa, 2012). Therefore, drawing on RE theory, when retail storescape provides direct and indirect service resources to the customers, they enjoy the benefits of receiving better service resources from the store, and then they try to pay off the benefits by staying loyal to it (Anaza and Zhao, 2013).

In addition to the important effect of environmental factors on CL, it is also vital to understand the role of employee behaviour in forming customer emotion and behaviour (Chan *et al.*, 2017, van Tonder *et al.*, 2018). Scholars have recently become interested in studying the role of employee behaviours toward customers due to their high relevance to the interactive sale and service environments (Chan *et al.*, 2017, Jain *et al.*, 2012, Park and Tran, 2018) which is referred to as ECB-C. ECB-C refers to employees' extra attempts in providing service to customers during the interaction with customers (Netemeyer *et al.*, 2005). Social exchange is an appropriate foundation to explain the relationship between ECB-C and loyalty (Chan *et al.*, 2017). When customers observe the citizenship behaviours of employees, the customers feel satisfied and valued and then act to reciprocate and protect the social exchange by displaying loyalty towards employees or where employees belong (Blau, 1964, Chan *et al.*,

2017, Deckop *et al.*, 2003). Therefore, ECB-C can affect other individuals' attitudes and behaviours (Jain *et al.*, 2012) by encouraging them to reciprocate the perceived extra efforts.

Despite the undeniable role of employee behaviour in shaping customers' attitudes and behaviours in retail and service environments (Chan *et al.*, 2017, van Tonder *et al.*, 2018), there is a deficit of research in investigating the antecedent role of ECB-C specifically when interacting with retail environmental factors on customer attitudes and loyalty.

The study extends the existing marketing and retailing literature in several ways. Firstly, this study extends the SOR model using RE theory as an overarching theory to examine the direct effect of physical and social storescape on CL beyond its indirect effect through organism mechanism suggested by the SOR model. Secondly, the study extends the traditional SOR model and its consecutive relationship, by employing ECB-C as a moderating factor. Finally, we enhance the existing retailing literature by introducing two important factors of the storescape and ECB-C that can interactively improve customer satisfaction (CS) and CL. Thus, this research has significant inferences to assist retails in leveraging their physical and social environment accompanied by ECB-C to sustain and improve CS and CL.

Theoretical Framework

The Stimulus-Organism-Response Model

The SOR model has enjoyed a wide attention by service and retail researchers (Chang, 2016, Lee and Shen, 2013, Vieira, 2013). In the SOR model, stimulus (S) refers to external factor which causes reactions and consists of various non-physical and physical elements in the environment. The organism (O) is an internal process and structure which mediates the relationship between external stimulus and individuals' response or behaviour. Finally, the response (R) refers to behavioural reactions of individuals (Kim and Damhorst, 2010, Sherman *et al.*, 1997). According to the SOR model, when organisms are influenced by external stimuli, its internal processes, such as cognitive and emotional states (Jang and

Namkung, 2009), are changed. Then, the altered organism drives individuals to either approach or avoid the environmental stimuli. Hence, the impact of environmental stimuli on behaviours is mediated by emotional responses. Therefore, the SOR model can articulate and explicate the link between storescape, CS and CL.

Employee citizenship behaviour towards customers (ECB-C)

There is unanimity among scholars that organisational citizenship behaviour (OCB) is typically an employee's extra-role behaviour which improves individual and organisational effectiveness (Bove *et al.*, 2009, Choi, 2007). According to Organ (1988) OCB is "individual behaviour that is discretionary, not directly or explicitly recognised by the formal reward system and that, all together, promotes the effective functioning of the organisation" (p. 4). Some previous studies examined the impact of OCB inside the organisations, for example, its effect on firm performance and co-workers (e.g., Podsakoff *et al.*, 2000, Williams and Anderson, 1991). However, other research has recently considered the importance of citizenship behaviour beyond organisations' wall towards other stake-holders, such as customers (Chan *et al.*, 2017, Payne and Webber, 2006). Employee citizenship behaviour towards customers is a specific type of OCB that reflects customer-directed extra-role behaviours; it mirrors employees' attempt beyond their formal tasks in serving customers (Netemeyer *et al.*, 2005, Chan *et al.*, 2017).

Storescape, customer satisfaction and loyalty

Providing pleasant shopping environments can be a specific opportunity to create a favourable customer experience and consequently new competitive advantage (Lin and Liang, 2011, Gottschalk, 2018). Baker (1986) classified service/retail environment factors into physical and social. Physical factor is defined as the visual component (e.g., Layout, architecture and welfare facilities) of an area that tends to develop customer awareness and the non-visual component of an area, such as music, temperature and lighting (Kumar and Kim, 2014, Jang

et al., 2018). Social factors consist of the availability, punctuality, knowledge, and friendliness of employees in the environment (Koo and Kim, 2013). Components of the environment have been shown to evoke customer emotional responses (Lin and Liang, 2011), making customers feel welcome, happy, comforted, and 'at home'. Customers' positive perceptions of the environment can cause feelings of involvement and attachment to providers (Line *et al.*, 2018). Therefore, the environment which includes a multitude of stimulus factors provides customers with a short way to access information about goods (Chang, 2016, El-Adly and Eid, 2016) as well as comfort and convenience. In this study, physical and social factors are considered as stimuli which are expected to influence pleasantness and customer emotions such as satisfaction, which in turn affect customer behaviour such as loyalty.

Many research studies provided evidence that environmental factors affect customer experiences (Nilsson and Ballantyne, 2014, Chang, 2016, Jang *et al.*, 2018), and subsequently customer emotional reactions (Kim and Moon, 2009, Wu *et al.*, 2013). Kotler (1973), in a study, demonstrated that, in some conditions, environmental factors can be more important in achieving favourable customer outcomes than the product itself (e.g., goods and services). In such situations, customers may evaluate their experiences and take their attitudes towards a service/store regardless of the quality of goods and services, only based on environmental factors. Therefore, environmental factors can shape and influence customer attitude and subsequently customer behaviour (Jani and Han, 2015). Beyond the indirect effect of environmental factors (i.e., physical and social) on customer behaviour based on the SOR model, they directly affect customer behaviour drawing on RE theory. According to RE theory, an individual is more likely to direct their reciprocation efforts towards the beneficial resources that they receive compared with that the non-beneficial resources (Yi *et al.*, 2013). Therefore, when individuals feel they get better service or resource of benefits from

individuals or companies, they may try to return the favour towards them (Yi *et al.*, 2013) by staying loyal to the company.

Conceptual model and hypotheses development

Drawing on the SOR model and RE theory, this study develops hypotheses related to the relationship among research variables. Figure 1 shows the proposed conceptual model of the current research. The model shows the direct and indirect effects of storescape factors on CL. Furthermore, it displays the moderating effect of ECB-C on the link between storescape factors and CL.

[Figure 1 near here]

In this study, RE theory employed as the theoretical foundation for explaining how CL can directly be predicted and affected by storescape factors. Drawing on RE theory, individuals usually direct their reciprocation efforts towards the beneficial resources that they receive than to the non-beneficial resources (Yi *et al.*, 2013, Cook *et al.*, 2013). Therefore, when individuals feel they get better service or resource of benefits from the other party (individuals or companies), they are more likely to direct their activities towards them (Yi *et al.*, 2013, Keh and Xie, 2009, Dholakia *et al.*, 2009, Anaza and Zhao, 2013). Physical factors provide customers with indirect service resources such as suitable design (i.e. decoration, lighting and colour), signs and self-service technology, which provide the amenity for convenience and comfort and useful information. Social factors allocate direct service resources such as answering customers' questions, giving suitable and required information and helping customers to find the things that they want to buy. Both physical and social factors shape customer perception of the value of received service resources. When customers perceive valuable resources provided by retail storescape, they will reciprocate the received benefits by staying loyal to the store. Therefore, it can be claimed that storescape could influence customer behaviour in a resource exchange. Accordingly, in line with RE theory, providing

the logic underlying the relationship between storescape factors and behaviour we put forward the following hypothesis:

H1a. Physical factors positively affect customer loyalty.

H1b. Social factors positively affect customer loyalty.

Creative use of the environment in a store operation would be essential in enhancing specific marketing objectives such as positive customer perception of the store, positive evaluation of experience, and positive attitudes (Han and Ryu, 2009). In such situations, customers may evaluate their experiences and take their attitudes towards a service/store regardless of the quality of goods and services, only based on environmental factors. Furthermore, several studies discussed the advantages of a stimulating environment, as it may lead to the positive cognitive/emotional attitudes and customer behavioural responses (Wu *et al.*, 2013, Holmqvist and Lunardo, 2015, Jang *et al.*, 2018). Therefore, retail environment which in this study is referred to as storescape, can shape and influence customer attitudes and accordingly behaviour (Lin and Worthley, 2012, Jani and Han, 2015). The store environment consists of factors (i.e., physical and social) which have negative or positive impacts on customer experience which in turn affect customer attitudes (i.e., organism) (Jayasankaraprasad and Kumar, 2012, Tomazelli *et al.*, 2017). For instance, customers who are happy with their overall experience, they are likely to feel a positive attitude towards the company and continue the relationship (Beatson *et al.*, 2006, Triantafillidou *et al.*, 2017, Anisimova, 2016). Moreover, previous studies revealed that the degree of customer loyalty and extra-role behaviours are positively affected by their positive experience and the degree of satisfaction from the company (Su *et al.*, 2016, Han and Hyun, 2017). Thus, it is hypothesised that:

H2a. Physical factors positively affect customer satisfaction.

H2b. Social factors positively affect customer satisfaction.

Customer satisfaction is the focal concept in the marketing research because meeting customer needs have the key role in creating customer loyalty (Hsin Chang and Wang, 2011). The retailing literature has been confirmed that CS positively influence CL (Frasquet and Miquel, 2017, Tontini *et al.*, 2017). Chen and Wang (2009) stated that a major reason for customers to continue a relationship with a company is in their positive evaluation of customers of the received products or services. The findings of many studies indicated the impact of CS on loyalty (Picón *et al.*, 2014, Thaichon and Quach, 2015, Vera-Martinez and Ornelas, 2019). For instance, the literature in consumer behaviour confirmed that when customers are satisfied, they are more likely to repeat buying goods and services and show loyalty in comparison with unsatisfied customers (Thaichon and Quach, 2015). Yoo and Park (2016) found that CL is significantly affected by CS. Further, Han and Ryu (2009) in their study showed CS significantly and positively influenced CL in a service context. To conclude, although using satisfaction is not the only strategy to improve CL, that is one of the main factors which can shape CL and an inseparable element in the customer loyalty process (Line *et al.*, 2015, Hung *et al.*, 2019). Thus, it can be hypothesised that:

H3. Customer satisfaction positively affects customer loyalty.

Customer satisfaction as a mediator

Relying on the literature, the study model proposes that CS can act as a mediator in the relationship between storescape and loyalty. The effect of environmental factors on emotional reactions are well documented in the behavioural science literature (Valdez and Mehrabian, 1994, Kaltcheva and Weitz, 2006). Behavioural scholars claim that individuals' affections or emotions shape how they react (Kim and Moon, 2009, Donovan *et al.*, 1994, Hussain and Phau, 2016). In fact, when customers show positive affective reactions towards the company (i.e., positive feelings and perceptions) they are more likely to show behavioural intentions that benefit the firm (Lin and Worthley, 2012). Several researchers argued that environmental

factors take a key part in generating emotional states leading to behavioural actions including repurchase, word of mouth, customer loyalty and the like (Wu *et al.*, 2013, Ballantine *et al.*, 2010, Hung *et al.*, 2019). For example, Ryu and Han (2010) and Chua *et al.* (2017) confirmed physical environment and interactional quality as crucial antecedents of customer satisfaction which shape customer loyalty. Their research showed the mediating effect of satisfaction in the relationship between quality factors and loyalty. In the restaurant context, Han and Hyun (2017) indicated that quality dimensions including food, service and physical environment affect customer behaviour through satisfaction. William (2008) also pointed out that quality of service/store social and physical environment, satisfaction and loyalty are a succession of interdependent factors that have causal relationships. In addition, based on the SOR model many studies clarified that customer satisfaction is a mediating factor between consumer perception of service, store environment quality and customer intentions (Lin and Mattila, 2010, Lin and Liang, 2011, Goi *et al.*, 2018). When stores directly or indirectly provide valuable resources and pleasure experience to customers through their physical (e.g. suitable design, lighting, pleasant and relaxing place) and social environment (e.g. friendly and hopefully behaviours), this could influence customer attitudes (e.g., satisfaction). Then, customers who are satisfied with the store, display loyalty to show more efforts towards the store as a reciprocal payment for benefits which were received from the store in the past (Anaza and Zhao, 2013, Hung *et al.*, 2019). Thus, based on the evidence discussed above and the SOR model, it can be hypothesised that:

H4a. Customer satisfaction mediates the relationship between physical factors and customer loyalty.

H4b. Customer satisfaction mediates the relationship between social factors and customer loyalty.

The moderating role of ECB-C

OCB is considered as an important antecedent of customer attitudes and behaviours. Hence, several studies examined the effect of employee extra-role behaviours such as citizenship behaviours on customer attitudes and behaviours (Chan *et al.*, 2017, Jain *et al.*, 2012, Gupta *et al.*, 2017). For example, study results showed that employee citizenship behaviours enhanced customer emotions and loyalty (Jain *et al.*, 2012, Zhao *et al.*, 2018), and customer citizenship behaviours (Chan *et al.*, 2017). Similarly, benevolence behaviour of service employees which is defined under the umbrella of OCB, positively influenced customer citizenship behaviour (Bove *et al.*, 2009). ECB-C as a type of OCB can be an important factor in predicting and understanding customer behaviours. Theoretically, ECB-C can have a significant positive effect on customer attitude and accordingly their behaviour. When customers perceive that store/service employees go extra mile in serving them they may be more willing to reciprocate by staying loyal to the store/service or staff because they are more satisfied (Bove *et al.*, 2009). In addition, if physical and social storescape lack substantial resources to increase CS or CL, ECB-C can provide or compensate the required physical and social resources. For example, if there is no sign to guide customers to find the things that they need, frontline employees can help customers to find them or when there is no employee to greet customers, frontline employees who are available in-store and show ECB-C can compensate the lack of social storescape. Therefore, when customers perceive services from the retail environment and employees' extra effort to support them, they will be satisfied and motivated to reciprocate the received benefits by staying loyal to the store. Given that, the interaction between ECB-C and storescape factors may contribute to higher levels of CS and CL. Thus, the following hypotheses are proposed:

H5a: ECB-C moderates the effect of physical factors on customer loyalty.

H5b: ECB-C moderates the effect of social factors on customer loyalty.

H6a: ECB-C moderates the effect of physical factors on customer satisfaction.

H6b: ECB-C moderates the effect of social factors on customer satisfaction.

H7: ECB-C moderates the effect of customer satisfaction on customer loyalty.

Method

To verify these hypotheses, data were randomly collected from department stores across all states in Australia. Customers who had shopped at least once in a department store during the month prior to data collection, were invited to rate the survey through an online research panel provider. Although Kaden (2006) suggested that a robust sample size for most marketing research is about 300, according to a more stringent sample size determination suggested by Krejcie and Morgan (1970), for a population size over 1,000,000, a sample size of 384 is appropriate. In addition, due to the possibility of unusable responses in survey research, 10 percent was added to the sample size resulting in a total sample size of 422. 415 usable questionnaires were obtained and used for data analysis.

Sample included 204 (49.2%) male and 211 (50.8%) female respondents. Education level of 110 respondents (26.5%) were up to high school, 115 (27.7%) had TAFE Certificate/Diploma, 138 (33.2%) had a bachelor’s degree and 52 (12.5%) were master’s or PhD degree. In addition, the respondents include 111 respondents in the age range of 18 -34 (26.7%), 160 in the range of 35-54 (38.6%) and the rest of respondents were over 55 years of age (34.7%). Respondents also included 9 respondents in ACT, 130 in New South Wales, 4 in Northern Territory, 64 in Queensland, 37 in South Australia, 12 in Tasmania, 120 in Victoria and 39 in Western Australia.

The constructs were measured using seven-point, multiple-item scales anchored with ‘Strongly Disagree’ (1) to ‘Strongly Agree’ (7). Respondents rated five-item measures of physical factors adopted from Chang *et al.* (2011) and social factors adopted from Kumar and Kim (2014). Three-item measures of customer satisfaction (Ryu *et al.*, 2012), and customer loyalty (Bartikowski and Walsh, 2011), and employees citizenship behaviour towards

customers (Chan *et al.*, 2017), also were rated by respondents. To measure physical and social storescape, customer loyalty and satisfaction, reflective measures have been used. Both theoretical and empirical criteria are required to justify using reflective or formative measurement models (Coltman *et al.*, 2008). Following the literature on the SOR model which is broadly used as an overarching model to explain the effect of environmental stimuli (storescape) on customer attitude and behaviours, reflective measures are employed. As the SOR model posits that customers' judgements on the environmental factors can shape their attitudes and consecutively their behaviours, the measures need to assess customers' perceptions, attitudes and judgements. All of the measures are in Appendix A.

Measurement evaluation

An overall measurement model was conducted using Amos 23 to evaluate the internal consistency of the scales based on confirmatory factor analysis (CFA). The output of CFA indicated an acceptable model fit in line with the model evaluation criteria suggested by Schreiber *et al.* (2006). Values were all above 0.95 (RMSEA= 0.06, RMR= 0.08, CFI= 0.95, NFI= 0.93, RFI= 0.92, IFI= 0.96, GFI= 0.95 and TLI= 0.94) and χ^2/df was 2.79.

Results shown in Table 1 indicate that Cronbach's alpha (CA) coefficient of all constructs were higher than acceptable level (0.70) (Nunnally and Bernstein, 1994). Similarly, all composite reliability (CR) showed acceptable levels of reliability (i.e., 0.70), which ranged from 0.76 to 0.95 and average variance extract (AVE) were high with a minimum of 0.50 (ranging from 0.51 to 0.77). In line with Hair Jr *et al.* (2010) square root of AVEs of the constructs were greater than the correlation coefficient of the respective paired constructs, thus, discriminant validity of the constructs were supported.

[Table 1 near here]

Factor loadings reported for all latent constructs were higher than 0.50 (Hair Jr *et al.*, 2010) with a minimum of 0.58 suggesting adequate item reliability. Therefore, these results

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indicated satisfactory reliabilities and both aspects of construct validity (i.e. convergent and discriminant) of the measures.

Findings and analysis

Structural equation modelling (SEM) analysis using AMOS v.23 was used to test the direct and mediating effects among constructs. Findings indicated acceptable model fit (χ^2 519 = 942.31, χ^2/df = 1.82, $p < 0.001$, IFI = 0.90, TLI = 0.89, CFI = 0.90, RMSEA = 0.04). A bootstrapping technique with 5000 sample iterations and 95% bias-corrected confidence intervals (Jones *et al.*, 2008) were used to estimate the direct and mediation effects.

[Table 2 near here]

As it is shown in Table 2, the proposed direct effect of social factors on CL (H1b), physical and social factors on CS (H2a and H2b), and CS on customer loyalty (H3), are all statistically significant and supported except the effect of physical factors on CL which is not supported (H1a). The findings provide support for H4a (β = 0.42) and H4b (β = 0.37) at the 0.001 level.

A moderation model using the Process macro developed by Hayes (2013) was applied to test the moderation hypotheses. It was found that ECB-C had a significant moderating influence on the effect of physical factors on CL ($R^{2-change}$ = 0.01; F (411) = 3.85, $P<0.05$). Similarly, it was found that ECB-C had a significant moderating influence on the effect of physical factors on CS ($R^{2-change}$ = 0.01; F (411) = 9.88, $P<0.001$). The hypothesis testing results show that the interaction between physical factors and ECB-C on CL was statistically significant (β = 0.11, $P<0.000$), in support of H5a. Moreover, the interaction between physical factors and ECB-C on CS was statistically significant (β = 0.22, $P<0.000$), in support of H6a.

To estimate the interaction of ECB-C and physical factors at one standard deviation below the average (−1), moderate (average), and one standard deviation above the average (+1) levels of the moderator, a simple slope analysis was used (Hayes, 2013). Consistent with H5a and H6a, Table 3a&b show that the slope of the effect of physical factors on CS and CL is

stronger at higher levels of ECB-C than lower levels. In fact, although there was a significant interaction between ECB-C and physical factors on CS and CL, even at low levels of ECB-C, this interaction effect was stronger when ECB-C was at the higher levels (see Table 3a&b and Fig. 2).

[Table 3 near here]

[Figure 2 near here]

The results of hypothesis testing related to H5b and H6b, showed that ECB-C had a significant moderating effect in the relationship between social factors and CL ($R^2\text{-change} = 0.01$; $F(411) = 10.81$, $P < 0.001$). Similarly, it was found that ECB-C had a significant moderating effect in the relationship between social factors and CS ($R^2\text{-change} = 0.01$; $F(411) = 10.81$, $P < 0.001$). These results show that the interaction between social factors and ECB-C on CS and CL were statistically significant ($\beta = 0.13$, $P < 0.000$), ($\beta = 0.14$, $P < 0.000$), respectively. Also, it was found that ECB-C had a significant moderating effect in the relationship between CS and CL ($R^2\text{-change} = 0.01$; $F(411) = 14.7$, $P < 0.000$). According to the result of the simple slope analysis related to H5b and H6b, Table 4a&b show that the coefficients of the interaction effect of social factors on CS and CL were stronger at higher levels of ECB-C than lower levels (see Figure 3).

[Table 4 near here]

[Figure 3 near here]

Finally, findings related to H7 revealed that ECB-C moderated the relationship between CS and CL ($\beta = 0.07$, $P < 0.05$). Further, the results provided in Table 4c and Figure 4 show that the slope of the interaction effect of CS on CL was stronger at higher levels of ECB-C than lower levels.

[Figure 4 near here]

In addition to the analysis provided above, Table 5 presents the results of the hierarchical regression to show the variance explained by predictors in CL. Three models ran to compare the effects of mediating and moderation factors. Model 1 testing the effect of physical and social factors (the independent variables) on customer loyalty (the dependent variable) provides a significant R^2 of 0.617. It shows that 61.7% of the variance in CL is explained by physical and social factors. The first model was followed by a second regression of CL with physical and social factors as independent variables and CS as mediator variable. When CS was added in Model 2, the value for R Square increased from 0.617 to 0.735. The R^2 difference between Model 1 and 2 (0.118) was statistically significant. In Model 3 (i.e. the third regression), in addition to the independent variables (i.e. physical and social factors) and the mediation variable (i.e. customer satisfaction), ECB-C as moderation variable was entered. When ECB-C was added in Model 3, the value for R Square increased from 0.617 to 0.735. Therefore, Model 3 showed the highest R square indicating that physical and social factors, customer satisfaction and ECB-C can contribute 84.8 % of variance in CL. This can be interpreted that the addition of scores of CS and ECB-C contributes 23.1% additional variance in CL accounted for, or explained, above and beyond that which was accounted for by only physical and social storescape. Therefore, the inclusion of the interaction terms for physical and social storescape and ECB-C in the third model accounts for a statistically significantly increased amount of variance in CL, which supports that a moderating effect is present.

[Table 5 near here]

Discussion and implications

The importance of organisations’ environmental factors and employee citizenship behaviour in improving customer behaviour has been highlighted in management and marketing literature. However, no studies incorporated these two external factors in consumers’ decision-making processes especially in retail context. To fill this research gap, the study

model considered the direct and indirect effects of physical and social storescape on customer loyalty using the SOR model and RE theory. Furthermore, the study investigated the moderating role of employee citizenship behaviour towards customer as an extension to the SOR model in the relationship among store physical and social factors, CS and CL.

Consistent with Resource Exchange Theory, findings related to hypothesis 1(b) confirmed that social storescape directly affected CL. This result is in line with Harris and Ezeh (2008) and Jani and Han (2015) who found that behavioural intentions, including loyalty intention, were driven directly by store environment and servicescape factors. On the other hand, contrary to what was hypothesised (H1a), there was no direct effect of physical factors on CL. Although this result is not in line with the findings of Jang and Namkung (2009) and Jang *et al.* (2018), it is consistent with El-Adly and Eid (2016) and Harris and Ezeh (2008), who found that behavioural intentions, such as loyalty, were not driven directly by mall environment and servicescape factors. In line with the SOR model, results also demonstrated that both physical and social storescape positively affected CL through the mediating role of CS. The findings are consistent with previous studies that have investigated how customer behaviours are affected by environmental factors and to what extent customer attitudes mediate this relationship (Jayasankaraprasad and Kumar, 2012, Lin and Liang, 2011). Despite not confirming the direct effect of physical storescape on CL, the results indicated that both physical and social storescape indirectly affect loyalty whenever customers are satisfied with the store. Therefore, our findings provided additional support to the mediating role of CS in the relationship between physical and social storescape and loyalty.

The results of the analyses confirmed the moderating role of employee citizenship behaviour towards customer in the links between environmental factors, CS and CL. In addition, at higher levels of ECB-C, these interaction effects were stronger than lower levels. Given that, when customers observe that employees are helpful and perform beyond the call

of duty, they would be more satisfied with the store and employees. The satisfaction subsequently can create or enhance customer loyalty to the store. Drawing on the crucial role of ECB-C, our findings suggested that when frontline employees perform higher levels of ECB-C, the effect of storescape on customer satisfaction and loyalty will be reinforced. Interestingly, although the findings did not support the direct effect of physical factors on CL, the interaction between ECB-C and physical factors significantly affected CL. The results indicated that physical factors of department stores could not improve customer loyalty, unless when physical factors were paired with ECB-C. This may imply that customers could directly perceive resources which were provided by social storescape and therefore they tried to reciprocate the benefits by staying loyal to the store. In comparison, the results indicated that physical storescape was not able to provide enough reasons to customers to stay loyal but when interacted with ECB-C, CL improved. ECB-C reinforced the direct effect of retailers' physical and social factors on customer loyalty; thus, ECB-C can act as a catalyst in the relationship between storescape factors, CS and CL. Even if this effect is lacking (such as the effect of physical storescape on CL), high levels of ECB-C can improve the relationship. The finding related to storescape-CS-CL link is consistent with that of previous studies which employed the SOR model (El-Adly and Eid, 2016, Han and Ryu, 2009, Ryu and Han, 2010).

Theoretical implications

The findings of the study regarding the effect of storescape factors on CL and the moderating effect of ECB-C made several theoretical contributions that contribute to the marketing and retailing literature. First of all, the study extended the SOR model by adding a parallel/direct path to the model. Using RE theory for the first time, the study proposed the direct effect of physical and social storescape along with the mediated path suggested by the SOR model. As mentioned earlier, although the results did not support the direct effect of physical aspect, social storescape directly affected CL.

Another contribution of the current study is its empirical demonstration of how ECB-C moderates storescape-CS-CL links. Although previous studies confirmed the direct impact of ECB-C on customer behaviour, no studies have examined how ECB-C can act as a moderator in customer decision-making processes. Therefore, the study made an important contribution to the retailing and marketing literature, through clarifying the moderating role of employee CB-C in storescape-SA-CCB links.

Finally, the traditional SOR model is extended in this study by adding the effect of another external factor, that is ECB-C, as a moderator. While research on the SOR model has generally considered the mediating role of organisms as the only mechanism to explain the effect of stimulus on reactions, this research brought a new insight in retailing literature through investigating the moderating effect of ECB-C as an external factor in S-O, O-R and S-R relationships. When interacting with ECB-C, both social and physical storescape were related to CL. These findings are important because of suggesting different mechanisms that can explain the effect of stimulus, specified in this study as storescape, on reactions, specified in this study as CL beyond the mediating role of organism. Thus, this study provided a comprehensive explanation to the effect of store environmental factors in customer decision-making processes.

Practical implications

In addition to the mentioned theoretical implications, the present study provided practical implications that assist retail manager to improve customer experiences resulting in favourable customer reactions including loyalty. First, retail managers using environmental psychology and retailing research can try to provide customers with enhanced social and physical environment to create positive customer experience and elicit favourable reactions such as CL.

Second, CS has been the focus of many marketing studies for many years, however, the study finding showed that social storescape can affect CL beyond customer satisfaction. As

some studies indicated a gap between satisfaction and loyalty (Chuah *et al.*, 2017, Mittal, 2016), implying that not all satisfied customer would stay loyal, retail managers can focus on improving social storescape to increase CL. Enhancing social storescape along with ECB-C can be considered as a less costly strategy to improve CL.

At the end, the study findings suggested that ECB-C can enhance the effect of both physical and social storescape on CL. Therefore, employing strategies that motivate frontline employees to go extra mile in serving customers may enhance the effect of physical and social storescape.

Limitations and suggestion for future research

As with many studies, the current study contains limitations that can create new research opportunities. Firstly, the study introduced the moderating role of employee citizenship behaviour towards customer for the first time, which was limited to the relationships between storescape factors, CS and loyalty. We encourage other scholars to investigate the interaction effect of ECB-C on other important constructs in marketing such as customer behavioural intentions and extra-role behaviours. Secondly, the study employed an online survey design to test research hypotheses. Given that, respondents were invited to rate the questionnaires regarding their most recent shopping experience within the past month. Therefore, future studies could use a paper-based survey design in-store where customers are faced with environmental factors. Finally, the study was conducted in the department store environment. In other sale or service environments where customers are in a face-to-face contact with frontline employees, the environment itself can be considered as a component of service because selling products or services requires providing service. Thus, we suggest replicating this model in other retail and service contexts such small shops, convenient stores, restaurants, hospitals and tourism industry.

Conclusions

Although marketing and retailing scholars have emphasised on the importance of store environmental factors, referred to in this study as storescape and ECB-C in shaping CL separately, no study has paid attention to the simultaneous effect of these factors in shaping CL in retail context. Therefore, the study examined the relationship between physical and social storescape and CL both directly and through the mediating role of CS as well as the moderating role of ECB-C. The findings of the research provided theoretical contributions to the SOR model by adding the moderating effect of ECB-C and employing RE theory in examining the direct effect of storescape in consumer decision-making processes. The study also made practical implications to assist retail managers in improving their customers' satisfaction and loyalty using both storescape and ECB-C. The study also suggested future research directions.

References

- Anaza, and Zhao, J. (2013), "Encounter-based antecedents of e-customer citizenship behaviors", *Journal of Services Marketing*, Vol. 27 No. 2, pp. 130-140.
- Anisimova, T. (2016), "The effects of corporate brand symbolism on consumer satisfaction and loyalty: Evidence from Australia", *Asia Pacific Journal of Marketing and Logistics*, Vol. 28 No. 3, pp. 481-498.
- Baker, J. (1986), "The role of the environment in marketing services: The consumer perspective", *The Services Challenge: Integrating for Competitive Advantage*, Vol. 1 No. 1, pp. 79-84.
- Ballantine, P. W., Jack, R., and Parsons, A. G. (2010), "Atmospheric cues and their effect on the hedonic retail experience", *International Journal of Retail & Distribution Management*, Vol. 38 No. 8, pp. 641-653.
- Bartikowski, B., and Walsh, G. (2011), "Investigating mediators between corporate reputation and customer citizenship behaviors", *Journal of Business Research*, Vol. 64 No. 1, pp. 39-44.
- Beatson, A., Coote, L. V., and Rudd, J. M. (2006), "Determining consumer satisfaction and commitment through self-service technology and personal service usage", *Journal of Marketing Management*, Vol 22 Nos. 7/8, pp. 853-882.
- Blau, P. M. (1964), *Exchange and power in social life*, John Wiley & Sons, New York.

- Bove, L. L., Pervan, S. J., Beatty, S. E., and Shiu, E. (2009), "Service worker role in encouraging customer organizational citizenship behaviors", *Journal of Business Research*, Vol. 62 No. 7, pp. 698-705.
- Chan, K. W., Gong, T., Zhang, R., and Zhou, M. (2017), "Do employee citizenship behaviors lead to customer citizenship behaviors? The roles of dual identification and service climate", *Journal of Service Research*, Vol. 20 No. 3, pp. 259-274.
- Chang, H. J., Eckman, M., and Yan, R. N. (2011), "Application of the Stimulus-Organism-Response model to the retail environment: the role of hedonic motivation in impulse buying behavior", *The International Review of Retail, Distribution and Consumer Research*, Vol. 21 No. 3, pp. 233-249.
- Chang, K. C. (2016), "Effect of servicescape on customer behavioral intentions: Moderating roles of service climate and employee engagement", *International Journal of Hospitality Management*, Vol. 53, pp. 116-128.
- Chiu, W., Kwag, M. S., and Bae, J. S. (2015), "Customers as partial employees: The influences of satisfaction and commitment on customer citizenship behavior in fitness centers". *Journal of Physical Education and Sport*, Vol. 15 No. 4, pp. 627-633.
- Choi, J. N. (2007), "Change-oriented organizational citizenship behavior: effects of work environment characteristics and intervening psychological processes", *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, Vol. 28 No. 4, pp. 467-484.
- Chua, B. L., Lee, S., and Han, H. (2017), "Consequences of cruise line involvement: A comparison of first-time and repeat passengers", *International Journal of Contemporary Hospitality Management*, Vol. 29 No. 6, pp. 1658- 1683.
- Chuah, S. H. W., Marimuthu, M., Kandampully, J., and Bilgihan, A. (2017), "What drives Gen Y loyalty? Understanding the mediated moderating roles of switching costs and alternative attractiveness in the value-satisfaction-loyalty chain", *Journal of Retailing and Consumer Services*, Vol. 36, pp. 124-136.
- Coltman, T., Devinney, T. M., Midgley, D. F., and Venaik, S. (2008), "Formative versus reflective measurement models: Two applications of formative measurement", *Journal of Business Research*, Vol. 61 No. 12, pp. 1250-1262.
- Cook, K. S. and Rice, E. (2013), "*Social exchange theory*", Delamater, J., *Handbook of social psychology*, Springer, USA, pp. 61-88.
- Cropanzano, R., and Mitchell, M. S. (2005), "Social exchange theory: An interdisciplinary review". *Journal of Management*, Vol. 31 No. 6, pp. 874-900.
- Deckop, J. R., Cirka, C. C., and Andersson, L. M. (2003), "Doing unto others: The reciprocity of helping behavior in organizations", *Journal of Business Ethics*, Vol. 47 No. 2, pp. 101-113.
- Deloitte (2019), Retail Forecasts - August 2019, Accessed October. 2019, <https://www2.deloitte.com/au/en/pages/media-releases/articles/retail-forecasts.html>.

- Dholakia, U. M., Blazevic, V., Wiertz, C., and Algesheimer, R. (2009), "Communal service delivery: How customers benefit from participation in firm-hosted virtual P3 communities", *Journal of Service Research*, Vol. 12 No. 2, pp. 208-226.
- Donovan, R. J., Rossiter, J. R., Marcolyn, G., and Nesdale, A. (1994), "Store atmosphere and purchasing behavior", *Journal of Retailing*, Vol. 70 No. 3, pp. 283-294.
- El-Adly, M. I., and Eid, R. (2016), "An empirical study of the relationship between shopping environment, customer perceived value, satisfaction, and loyalty in the UAE malls context", *Journal of Retailing and Consumer Services*, Vol. 31, pp. 217-227.
- Foa, E. B., and Foa, U. G. (2012), *Resource theory of social exchange*, Handbook of social resource theory, Springer, New York, pp. 15-32.
- Frasquet, M., and Miquel, M.J. (2017), "Do channel integration efforts pay-off in terms of online and offline customer loyalty?", *International Journal of Retail & Distribution Management*, Vol. 45 Nos. 7/8, pp. 859-873.
- Goi, M. T., Kalidas, V., and Yunus, N. (2018), "Mediating roles of emotion and experience in the stimulus-organism-response framework in higher education institutions, *Journal of Marketing for Higher Education*, Vol. 28 No. 1, pp. 90-112.
- Gottschalk, I. (2018), "Consumer evaluation of ambient scent: The impact of pre-information, environment, and persuasion knowledge", *International Journal of Retail & Distribution Management*, Vol. 46 No. 6, pp. 530-544.
- Groth, M. (2005), "Customers as good soldiers: Examining citizenship behaviors in internet service deliveries", *Journal of Management*, Vol. 31 No. 1, pp. 7-27.
- Gupta, M., Shaheen, M., and Reddy, P. K. (2017), "Impact of psychological capital on organizational citizenship behavior: mediation by work engagement", *Journal of Management Development*, Vol. 36 No. 6. pp.973-983.
- Hair Jr, J., Black, W., Babin, B., and Anderson, R. (2010), *Multivariate Data Analysis; a global perspective*, Pearson Education Inc. New Jersey, USA.
- Han, H., and Ryu, K. (2009), "The roles of the physical environment, price perception, and customer satisfaction in determining customer loyalty in the restaurant industry", *Journal of Hospitality & Tourism Research*, Vol. 33 No. 4, pp. 487-510.
- Han, H., and Hyun, S. S. (2017), "Impact of hotel-restaurant image and quality of physical-environment, service, and food on satisfaction and intention", *International Journal of Hospitality Management*, Vol.63, pp. 82-92.
- Harris, L. C., and Ezech, C. (2008), "Servicescape and loyalty intentions: an empirical investigation", *European Journal of Marketing*, Vol. 42 Nos. 3/4, pp. 390-422.
- Hayes, A. F. (2013), *Mediation, moderation, and conditional process analysis. Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach* edn, Guilford, New York, pp. 1-20.
- Holmqvist, J., and Lunardo, R. (2015), "The impact of an exciting store environment on consumer pleasure and shopping intentions", *International Journal of Research in Marketing*, Vol. 32 No. 1, pp. 117-119.

- Hsin Chang, H., and Wang, H. W. (2011), "The moderating effect of customer perceived value on online shopping behaviour", *Online Information Review*, Vol. 35 No. 3, pp. 333-359.
- Hung, S. W., Cheng, M. J., and Chiu, P. C. (2019), "Do antecedents of trust and satisfaction promote consumer loyalty in physical and virtual stores? a multi-channel view", *Service Business*, Vol. 13 No.1, pp. 1-23.
- Hussain, R. (2016), "The mediating role of customer satisfaction: evidence from the airline industry", *Asia Pacific Journal of Marketing and Logistics*, Vol. 28 No. 2, pp. 234-255.
- IBISWorld. (2019), "Department Stores in Australia - Market Research Report". Accessed July. 2019, <https://www.ibisworld.com.au/industry-trends/market-research-reports/retail-trade/other-store-based-retailing/department-stores.html>
- Jain, A. K., Malhotra, N. K., and Guan, C. (2012), "Positive and negative affectivity as mediators of volunteerism and service-oriented citizenship behavior and customer loyalty", *Psychology & Marketing*, Vol. 29 No. 12, pp. 1004-1017.
- Jang, J. Y., Baek, E., and Choo, H. J. (2018), "Managing the visual environment of a fashion store: effects of visual complexity and order on sensation-seeking consumers", *International Journal of Retail & Distribution Management*, Vol. 46 No. 2, pp. 210-226.
- Jang, S. S., and Namkung, Y. (2009), "Perceived quality, emotions, and behavioral intentions: Application of an extended Mehrabian–Russell model to restaurants", *Journal of Business Research*, Vol. 62 No. 4, pp. 451-460.
- Jang, Y. J., Kim, W. G., and Lee, H. Y. (2015), "Coffee shop consumers' emotional attachment and loyalty to green stores: The moderating role of green consciousness", *International Journal of Hospitality Management*, Vol. 44, pp. 146-156.
- Jani, D., and Han, H. (2015), "Influence of environmental stimuli on hotel customer emotional loyalty response: Testing the moderating effect of the big five personality factors", *International Journal of Hospitality Management*, Vol. 44, pp. 48-57.
- Jayasankaraprasad, C., and Kumar, P .V. V. (2012), "Antecedents and consequences of customer satisfaction in food & grocery retailing: An empirical analysis", *Decision*, Vol. 39 No. 3, pp. 101-140.
- Jin, N., Line, N. D., and Goh, B. (2013), "Experiential value, relationship quality, and customer loyalty in full-service restaurants: The moderating role of gender", *Journal of Hospitality Marketing & Management*, Vol. 22 No. 7, pp. 679-700.
- Jones, T., Taylor, S. F., and Bansal, H. S. (2008), "Commitment to a friend, a service provider, or a service company-are they distinctions worth making?", *Journal of the Academy of Marketing Science*, Vol. 36 No. 4, pp. 473-487.
- Kaden, R. J. (2006), *Guerrilla marketing research: Marketing research techniques that can help any business make more money*, Kogan Page, USA, p. 252.

- Kaltcheva, V., and Weitz, B. A. (2006), "The moderating influence of motivational orientation on the relationship between shopping environment arousal and behavior", *Journal of Marketing*, Vol. 70 No. 1, pp. 107-118.
- Keh, H. T., and Xie, Y. (2009), "Corporate reputation and customer behavioral intentions: The roles of trust, identification and commitment", *Industrial Marketing Management*, Vol. 38 No. 7, pp. 732-742.
- Kim, J., and Damhorst, M. L. (2010), "Effects of level of internet retailer's service quality on perceived apparel quality, perceived service quality, perceived value, satisfaction, and behavioral intentions toward an internet retailer", *Clothing and Textiles Research Journal*, Vol. 28 No. 1, pp. 56-73.
- Kim, W. G., and Moon, Y. J. (2009), "Customers' cognitive, emotional, and actionable response to the servicescape: A test of the moderating effect of the restaurant type", *International Journal of Hospitality Management*, Vol. 28 No. 1, pp. 144-156.
- Knight, E. (2017), "Department stores face uncertain future as sales seen shrinking over coming years". The Sydney Morning Herald. Accessed October. 2018. <https://www.smh.com.au/business/companies/department-stores-face-uncertain-future-as-sales-seen-shrinking-over-coming-years-20170301-gunxmh.html>
- Koo, W., and Kim, Y. K. (2013), "Impacts of store environmental cues on store love and loyalty: single-brand apparel retailers", *Journal of International Consumer Marketing*, Vol. 25 No. 2, pp. 94-106.
- Kotler, P. (1973), "Atmospherics as a marketing tool", *Journal of Retailing*, Vol. 49 No. 4, pp. 48-64.
- Krejcie, R. V., and Morgan, D. W. (1970), "Determining sample size for research activities", *Educational and Psychological Measurement*, Vol. 30 No. 3, pp. 607-610.
- Kumar, A., and Kim, Y. K. (2014), "The store-as-a-brand strategy: The effect of store environment on customer responses", *Journal of Retailing and Consumer Services*, Vol. 21 No. 5, pp. 685-695.
- Lee, H. J., and Yun, Z. S. (2015), "Consumers' perceptions of organic food attributes and cognitive and affective attitudes as determinants of their purchase intentions toward organic food", *Food Quality and Preference*, Vol. 39, pp. 259-267.
- Lee, T. H., and Shen, Y. L. (2013), "The influence of leisure involvement and place attachment on destination loyalty: Evidence from recreationists walking their dogs in urban parks", *Journal of Environmental Psychology*, Vol. 33, pp. 76-85.
- Lin, I. Y., and Worthley, R. (2012), "Servicescape moderation on personality traits, emotions, satisfaction, and behaviors", *International Journal of Hospitality Management*, Vol. 31 No. 1, pp. 31-42.
- Lin, J. S. C., and Liang, H. Y. (2011), "The influence of service environments on customer emotion and service outcomes", *Managing Service Quality: An International Journal*, Vol. 21 No. 4, pp. 350-372.

- Lin, I. Y., and Mattila, A. S. (2010), "Restaurant servicescape, service encounter, and perceived congruency on customers' emotions and satisfaction", *Journal of Hospitality Marketing & Management*, Vol. 19 No. 8, pp. 819-841.
- Line, N. D., Hanks, L. and Kim, W. G. (2015), "An expanded servicescape framework as the driver of place attachment and word of mouth", *Journal of Hospitality & Tourism Research*, Vol. 42 No. 3, pp. 476- 499.
- Line, N. D., Hanks, L., and Kim, W. G. (2018), "An expanded servicescape framework as the driver of place attachment and word of mouth", *Journal of Hospitality & Tourism Research*, Vol. 42 No. 3, pp. 476-499.
- Mittal, B. (2016), "Retrospective: why do customers switch? The dynamics of satisfaction versus loyalty", *Journal of Services Marketing*, Vol. 30 No. 6, pp. 569-575.
- Mohan, G., Sivakumaran, B., and Sharma, P. (2013), "Impact of store environment on impulse buying behavior", *European Journal of Marketing*, Vol. 47 No. 10, pp. 1711-1732.
- Netemeyer, R. G., Maxham III, J. G., and Pullig, C. (2005), "Conflicts in the work-family interface: Links to job stress, customer service employee performance, and customer purchase intent", *Journal of Marketing*, Vol. 69 No. 2, pp. 130-143.
- Nilsson, E., and Ballantyne, D. (2014), "Reexamining the place of servicescape in marketing: a service-dominant logic perspective", *Journal of Services Marketing*, Vol. 28 No. 5, pp. 374-379.
- Nunnally, J. C., and Bernstein, I. (1994), *Psychometric Theory (McGraw-Hill Series in Psychology)* (Vol. 3), McGraw-Hill, New York.
- Oly Ndubisi, N. (2006). "Effect of gender on customer loyalty: a relationship marketing approach", *Marketing Intelligence & Panning*, Vol. 24 No. 1, pp. 48-61.
- Organ, D. W. (1988), "A restatement of the satisfaction-performance hypothesis", *Journal of Management*, Vol. 14 No. 4, pp. 547-557.
- Park, J., Stoel, L., and Lennon, S. J. (2008), "Cognitive, affective and conative responses to visual simulation: The effects of rotation in online product presentation", *Journal of Consumer Behaviour*, Vol. 7 No. 1, pp. 72-87.
- Parliament of Australia. (2019), Snapshot of employment by industry. Accessed April. 2019. https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/FlagPost/2019/April/Employment-by-industry-2019.
- Payne, S. C., and Webber, S. S. (2006), "Effects of service provider attitudes and employment status on citizenship behaviors and customers' attitudes and loyalty behavior", *Journal of Applied Psychology*, Vol. 91 No. 2, pp. 365-378.
- Picón, A., Castro, I., and Roldán, J. L. (2014), "The relationship between satisfaction and loyalty: A mediator analysis", *Journal of Business Research*, Vol. 67 No. 5, pp. 746-751.

- Podsakoff, P. M., MacKenzie, S. B., Paine, J. B., and Bachrach, D. G. (2000), "Organizational citizenship behaviors: A critical review of the theoretical and empirical literature and suggestions for future research", *Journal of Management*, Vol. 26 No. 3, pp. 513-563.
- Reichheld, F. F., Markey, R. G. Jr., and Hopton, C. (2000), "The loyalty effect – the relationship between loyalty and profits", *European Business Journal*, Vol. 12 No. 3, pp. 134-9.
- Reichheld, F. F., and Schefter, P. (2000), "E-loyalty: Your secret weapon on the web", *Harvard Business Review*, Vol. 78 No. 4, pp. 105–113.
- Reichheld, F. F., and Sasser, W. E. (1990), "Zero defections: Quality comes to services", *Harvard Business Review*, Vol. 68 No. 5, pp. 2-9.
- Roschk, H., & Gelbrich, K. (2017), "Compensation Revisited: A Social Resource Theory Perspective on Offering a Monetary Resource After a Service Failure". *Journal of Service Research*, Vol. 20 No. 4, pp. 393-408.
- Ryu, K., Lee, H. R., and Gon Kim, W. (2012), "The influence of the quality of the physical environment, food, and service on restaurant image, customer perceived value, customer satisfaction, and behavioral intentions", *International Journal of Contemporary Hospitality Management*, Vol. 24 No. 2, pp. 200-223.
- Ryu, K., and Han, H. (2010), "Influence of the quality of food, service, and physical environment on customer satisfaction and behavioral intention in quick-casual restaurants: Moderating role of perceived price", *Journal of Hospitality & Tourism Research*, Vol. 34 No. 3, pp. 310-329.
- Schreiber, J. B., Nora, A., Stage, F. K., Barlow, E. A., and King, J. (2006), "Reporting structural equation modeling and confirmatory factor analysis results: A review", *The Journal of Educational Research*, Vol. 99 No. 6, pp. 323-338.
- Sherman, E., Mathur, A., and Smith, R. B. (1997), "Store environment and consumer purchase behavior: mediating role of consumer emotions", *Psychology and Marketing*, Vol. 14 No. 4, pp. 361-378.
- Su, L., Swanson, S. R., and Chen, X. (2016), "The impact of perceived service fairness and quality on the behavioral intentions of chinese hotel guests: the mediating role of consumption emotions", *Journal of Travel & Tourism Marketing*, Vol. 33 No. 1, pp. 88-102.
- Sui, J. J., and Baloglu, S. (2003), "The role of emotional commitment in relationship marketing: An empirical investigation of a loyalty model for casinos", *Journal of Hospitality & Tourism Research*, Vol. 27 No. 4, pp. 470-489.
- Terblanche, N. S. (2018), "Revisiting the supermarket in-store customer shopping experience", *Journal of Retailing and Consumer Services*, Vol. 40, pp. 48-59.
- Thaichon, P., and Quach, T. N. (2015), "The relationship between service quality, satisfaction, trust, value, commitment and loyalty of Internet service providers'

- customers”, *Journal of Global Scholars of Marketing Science*, Vol. 25 No. 4, pp. 295-313.
- Thakur, R. (2018), “The role of self-efficacy and customer satisfaction in driving loyalty to the mobile shopping application”, *International Journal of Retail & Distribution Management*, Vol. 46 No. 3, pp. 283-303.
- Tomazelli, J., Broilo, P. L., Espartel, L. B. and Basso, K. (2017), “The effects of store environment elements on customer-to-customer interactions involving older shoppers”, *Journal of Services Marketing*, Vol. 31 No. 4/5, pp. 339-350.
- Tontini, G., Söilen, K., and Zanchett, R. (2017), “Nonlinear antecedents of customer satisfaction and loyalty in third-party logistics services (3PL)”, *Asia Pacific Journal of Marketing and Logistics*, Vol. 29 No. 5, pp. 1116-1135.
- Triantafillidou, A., Siomkos, G., and Papafileppaki, E. (2017), “The effects of retail store characteristics on in-store leisure shopping experience”, *International Journal of Retail & Distribution Management*, Vol. 45 No. 10, pp. 1034-1060.
- Valdez, P., and Mehrabian, A. (1994), “Effects of color on emotions”, *Journal of Experimental Psychology: General*, Vol. 123 No. 4, pp. 394-409.
- Van Tonder, E., Saunders, S. G., Lisita, I. T., and Debeer, L. T. (2018), “The importance of customer citizenship behaviour in the modern retail environment: Introducing and testing a social exchange model”, *Journal of Retailing and Consumer Services*, Vol. 45, pp. 92-102.
- Vera-Martinez, J., and Ornelas, S. (2019), “Comparison-based perceived attribute performance as a better antecedent of satisfaction, value and loyalty”, *Asia Pacific Journal of Marketing and Logistics*, Vol. 31 No. 5, pp. 1252-1268.
- Vieira, V. A. (2013), “Stimuli–organism–response framework: A meta-analytic review in the store environment”, *Journal of Business Research*, Vol. 66 No. 9, pp. 1420-1426.
- William, B. (2008), “Service loyalty. The effects of service quality and the mediating role of customer satisfaction”, *European Journal of Marketing*, Vol. 34 Nos. 11/12, pp. 1338-1352.
- Williams, L. J., and Anderson, S. E. (1991), “Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors”, *Journal of Management*, Vol. 17 No. 3, pp. 601-617.
- Wu, J., Won Ju, H., Kim, J., Damminga, C., Kim, H. Y., and KP Johnson, K. (2013), “Fashion product display: An experiment with Mockshop investigating colour, visual texture, and style coordination”, *International Journal of Retail & Distribution Management*, Vol. 41 No.10, pp. 765-789.
- Yi, Y., Gong, T., and Lee, H. (2013), “The impact of other customers on customer citizenship behavior”, *Psychology & Marketing*, Vol. 30 No. 4, pp. 341-356.

- 1
2
3 Yi, Y., and Gong, T. (2008), "The effects of customer justice perception and affect on
4 customer citizenship behavior and customer dysfunctional behavior". *Industrial*
5 *Marketing Management*, Vol. 37 No. 7, pp. 767-783.
6
7
8 Yi, Y., Natarajan, R., and Gong, T. (2011), "Customer participation and citizenship
9 behavioral influences on employee performance, satisfaction, commitment, and
10 turnover intention", *Journal of Business Research*, Vol. 64 No. 1, pp. 87-95.
11
12 Yoo, J., and Park, M. (2016), "The effects of e-mass customization on consumer perceived
13 value, satisfaction, and loyalty toward luxury brands", *Journal of Business Research*,
14 Vol. 69 No.12, pp. 5775-5784.
15
16 Zhao, Y., Wang, A., and Sun, Y. (2020), "Technological environment, virtual experience, and
17 MOOC continuance: A stimulus–organism–response perspective", *Computers &*
18 *Education*, Vol. 144, p. 103721.
19
20
21 Zhao, Y., Yan, L., and Keh, H. T. (2018), "The effects of employee behaviours on customer
22 participation in the service encounter: The mediating role of customer emotions",
23 *European Journal of Marketing*, Vol. 52 Nos.5/6, pp. 1203-1222.
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Appendix A: Measurement model

Construct Items/ Scale Items

1. Storescape

Physical factors

- This store is a pleasant place for shopping.
- This store is a relaxing place for shopping.
- This store is clean.
- This store has an attractive interior design.
- The lighting in this store is pleasant.

Social factors

- There were enough employees in the store to service customers.
- The employees are friendly.
- The employees are well-dressed and appear neat.
- The employees are knowledgeable.
- The employees are helpful.

2. Customer satisfaction

- I am very satisfied with my overall experience at this store.
- Overall this store puts me in a good mood.
- I really enjoy shopping in this store.

3. Customer loyalty

- I am a loyal customer of this store.
- I have a very good relationship with this store.
- I will certainly remain a customer of this store.

4. Employee citizenship behaviour towards customer

- Employees of this store often go above and beyond the call of duty when serving me.
- Employees of this store help me with problems beyond what is expected or required.
- If necessary, employees of this store go beyond their job requirements to assist me.

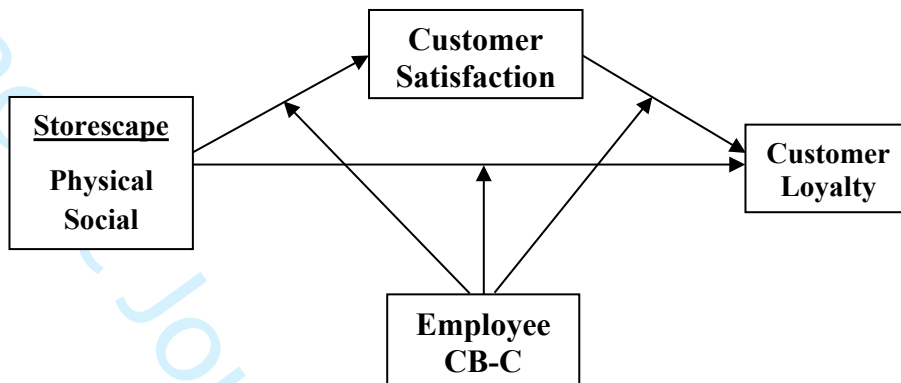
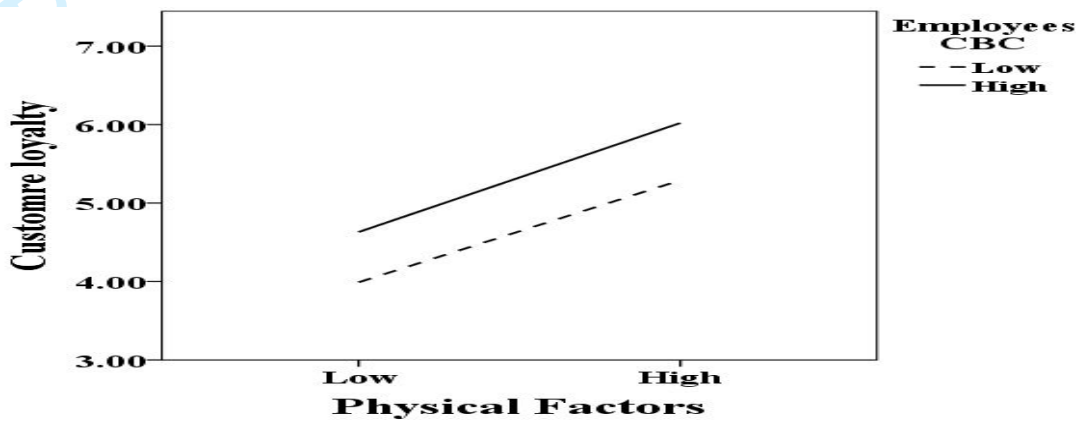


Figure 1. The research conceptual model.

Moderation effect of employee CB-C on physical factors-loyalty link.



Moderation effect of employee CB-C on physical factors-satisfaction link.

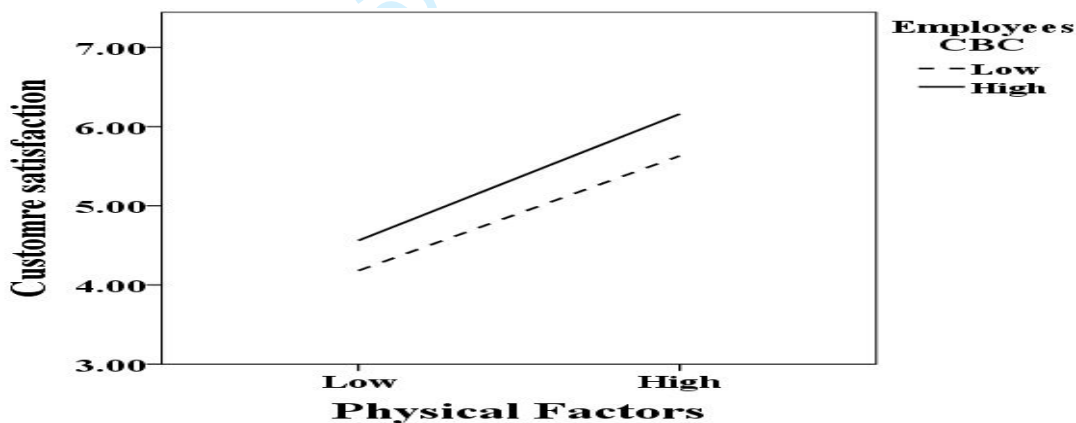
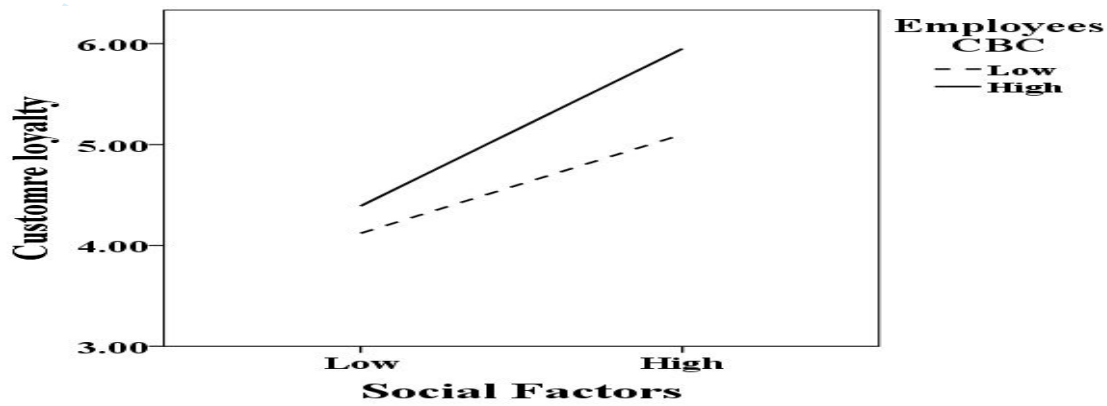


Figure 2. Moderation effects of employee CB-C on physical factors-satisfaction-loyalty link.

Moderation effect of employee CB-C on social factors-loyalty link.



Moderation effect of employee CB-C on social factors-satisfaction link.

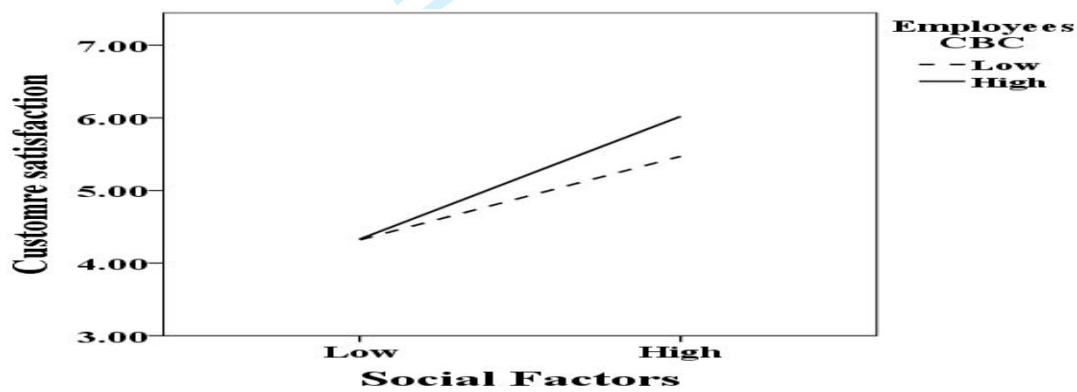


Figure 3. Moderation effects of employee CB-C on social factors-satisfaction-loyalty link.

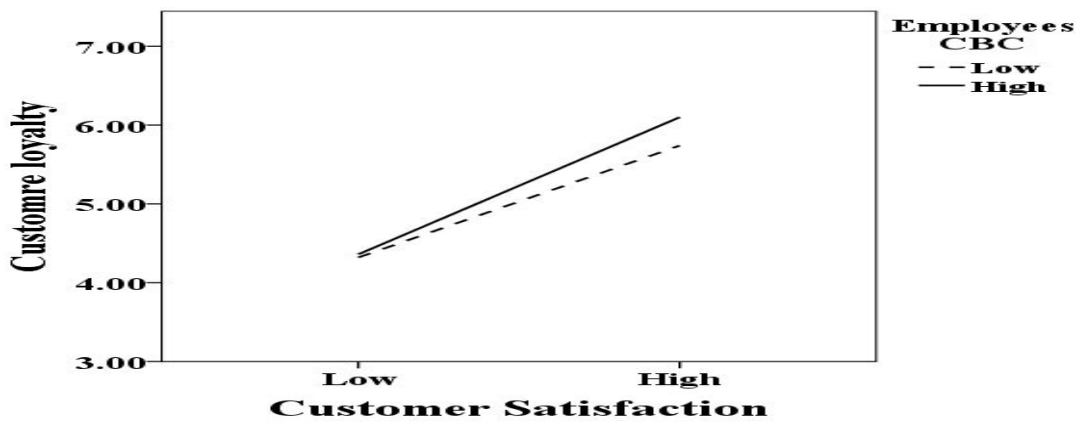


Figure 4. Moderation effect of employee CB-C on satisfaction-loyalty link.

Table 1. Reliability and discriminant validity of the constructs.

Constructs	CA	AVE	CR	1	2	3	4	5
1. Physical factors	0.92	0.74	0.93	0.86				
2. Social factors	0.87	0.66	0.95	0.51**	0.82			
3. CS	0.87	0.69	0.87	0.69**	0.49**	0.83		
4. CL	0.75	0.51	0.76	0.53**	0.44**	0.61**	0.74	
5. ECB-C	0.91	0.77	0.91	0.51**	0.64**	0.60**	0.52**	0.88

Note: Diagonal values in bold represent square root of AVEs, CS = Customer satisfaction, CL= Customer loyalty, ECB-C= Employee citizenship behaviour towards customer, **, P< 0.01.

Table 2. Results for direct relationships and mediation effects.

(a) Direct relationships					
Hyp.	Relationships	β	t-Value	Conclusion	
H1a	Physical factors \rightarrow CL	0.16	1.21 ^{n.s.}	Not Supported	
H1b	Social factors \rightarrow CL	0.31	5.77***	Supported	
H2a	Physical factors \rightarrow CS	0.45	6.27***	Supported	
H2b	Social factors \rightarrow CS	0.34	4.27**	Supported	
H3	CS \rightarrow CL	0.42	6.48***	Supported	
(b) Standardized indirect effects: bias-corrected					
Hypothesized mediated relationship		β	Bootstrap 95% CIs		Conclusion
			Lower	Upper	
H4a: Physical factors \rightarrow CS \rightarrow CL		0.42***	0.34	0.60	Supported
H4b: Social factors \rightarrow CS \rightarrow CL		0.37***	0.31	0.55	Supported

Note: CS = Customer satisfaction; CL= Customer loyalty, CIs= Confidence intervals.

β = coefficient effect, n.s. = non-significant, **p<0.01. ***p<0.001.

Table 3. Results related to hypotheses 5a and 6a.

(a). Interaction effect of ECB-C and physical factors on CL.				
	M ± 1 SD	β	Bootstrap 95% CIs	
			LL	UL
CL	Low: -1(3.95)	0.27	0.17	0.37
	Moderate: W (5.13)	0.46	0.39	0.47
	High: +1(6.36)	0.56	0.28	0.61
(b). Interaction effect of ECB-C and physical factors on CS.				
	M ± 1 SD	β	Bootstrap 95% CIs	
			LL	UL
CS	Low: -1(3.95)	0.33	0.15	0.39
	Moderate: W (5.13)	0.44	0.32	0.52
	High: +1(6.36)	0.54	0.43	0.70

Note: LL= Lower level, UL= Upper level, CIs= Confidence intervals, β= Coefficient effect.
ECB-C = employee citizenship behaviour towards customers CS = Customer satisfaction,
CL= Customer loyalty.

Table 4. Results related to hypotheses 5b, 6b and 7.

(a) Interaction effect of ECB-C and social factors on CL.				
	M ± 1 SD	β	Bootstrap 95% CIs	
			LL	UL
CL	Low: -1(3.95)	0.18	0.15	0.25
	Moderate: W (5.13)	0.30	0.18	0.43
	High: +1(6.36)	0.47	0.31	0.64
(b) Interaction effect of ECB-C and social factors on CS.				
	M ± 1 SD	β	Bootstrap 95% CIs	
			LL	UL
CS	Low: -1(3.95)	0.13	0.02	0.24
	Moderate: W (5.13)	0.31	0.19	0.42
	High: +1(6.36)	0.48	0.33	0.64
(c) Interaction effect of ECB-C and CS on CL.				
	M ± 1 SD	β	Bootstrap 95% CI	
			LL	UL
CS	Low: -1(3.95)	0.41	0.31	0.52
	Moderate: W (5.13)	0.50	0.40	0.59
	High: +1(6.36)	0.57	0.46	0.71

Note: LL= Lower level, UL= Upper level, CIs= Confidence intervals, β= Coefficient effect,
ECB-C = employee citizenship behaviour towards customers CS = Customer satisfaction,
CL= Customer loyalty.

Table 5. Model summary of the hierarchical regression for customer loyalty

Model	β	T-Value	P-Value	R ²	ΔR^2
Model 1				0.617	0.617
1. Physical factors	0.671	11.854	0.000		
2. Social factors	0.276	5.434	0.000		
Model 2				0.735	0.118
1. Physical factors	0.176	2.957	0.003		
2. Social factors	0.193	3.202	0.001		
3. Customer Satisfaction	0.678	13.546			
Model 3				0.848	0.113
1. Physical factors	0.214	3.649	0.000		
2. Social factors	0.118	2.741	0.000		
3. Customer Satisfaction	0.632	12.695	0.000		
4. ECB-C	0.261	4.686	0.000		

Note: ECB-C = employee citizenship behaviour towards customers, $\Delta R^2 = R^2$ changes

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Dear Prof. Ian Phau

Thank you for considering my paper. I also would like to thank the reviewers' insightful comments that improved the paper. The answers to the comments are summarized in the table below.

Kind regards,

Dr. Mohammadbagher Gorji
Assistant professor in HRM and
PhD candidate in Marketing at the Tasmanian School of Business and Economics, University of Tasmania, Australia.

Reviewer 2 comments	Answer
<p>In my opinion, the author(s) need to add or mentioned some additional articles other than some previous studies by Chang (2016), Line et al., (2018) and Terblanche (2018) which had been mentioned by the author(s)] in order to further strengthen and justify the argument made by the author(s) that it is true that "No studies have examined the direct effect of storescape on customer loyalty (CL) in department stores"</p> <p>It is mainly because in my opinion, when the author(s) stated that "No Studies had been conducted prior to this study", it really means that the topic that the author(s) currently discussing about is truly the first article which try to assess this topic</p> <p>Therefore, In my opinion, 3 previous articles still aren't enough to justify author(s)' argument that this paper is really the first one which discuss the topic that the author(s) would like to discuss</p>	<p>Added more references including (Chang, 2016, Line et al., 2018, Terblanche, 2018, Zhao et al., 2020, Holmqvist and Lunardo, 2015, Jani and Han, 2015), On page 3</p>
<p>in my opinion, since the author(s) had stated and mentioned the implementation/adoption of the Resource Exchange Theory into the model that was proposed in this study, I suggest the author(s) to give some explanations regarding the basic concept of the RE Theory in order to prevent some confusions which might occur toward the readers who have no prior knowledge regarding what RE Theory is all about</p>	<p>Done on page 4</p>