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# Editorial

Eldon Y. Li  
Wei-Hsi (Frank) Hung

## *Editorial Objective*

*JBM* is a double-blind refereed, authoritative reference addressing working or potential business and management theories/practices as well as the emerging issues of interest to academics and practitioners. The primary editorial objective of the *JBM* is to provide a forum for the dissemination of theory and research in all areas of business, management, and organizational decisions areas. We invite research articles, comprehensive reviews, and case studies that provide insights into the business phenomena occurring every day. Authors of *JBM* are always encouraged to offer recommendations to readers exemplifying the applicability of their research findings.

## *Research Topics*

In this issue, we have accepted four research papers for publication in *JBM*. The research topic of the first paper is "Role of In-store Atmospherics and Impulse Buying Tendency on Post-purchase Regret," authored by Chandan Parsad, Sanjeev Prashar, T. Sai Vijay, and Vinita Sahay. The second one is "Digital Storytelling as a Solution to Destigmatize Products: Case of Women Lingerie from India," reported by Varsha Jain, Amrita Bansal, and Tarishi Misha. The third one is "The evolving B2B e-commerce and supply chain management: A chronological mémoire," examined by Richard W. Monroe and Paul T. Barrett. Finally, a study on "Evaluating the alignment between organisational critical activities and websites in New Zealand Universities," is presented by Wei-Hsi (Frank) Hung and Kai-Ju Chuang.

We thank very much the authors for sharing their knowledge by contributing the papers and the reviewers for taking their precious time to offer improvement suggestions to the authors. Special thanks go to National Chengchi University in Taiwan for the administrative support and to Western Decision Sciences Institute for the financial support. Without all these scholars and partners the publication of *JBM* is not sustainable. Please note that the views expressed in these papers are those of the authors and not of the editors, editorial board, *JBM*, WDSI, National Chengchi University, or Chung Yuan Christian University. We hope these papers are interesting to read and useful to your future research. On behalf of the Editorial Board, I thank you very much for your continuous support.

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*Systems, Communications of the Association for Information Systems, Industrial Marketing Management, Journal of Global Information Management, Journal of Computer Information Systems, Computers in Human Behavior, Technology Analysis & Strategic Management, Telematics and Informatics, Internet Research, Pacific Asian Journal of Association for Information Systems, International Journal of Logistics Research and Applications, Journal of Information Management, Asia Pacific Management Review, Communications of the ICISA, International Journal of Web Portals, and Electronic Journal of Information Systems Evaluation.*

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# Role of In-Store Atmospheric and Impulse Buying Tendency on Post-Purchase Regret

Chandan Parsad  
Sanjeev Prashar  
T. Sai Vijay  
Vinita Sahay

## **Abstract**

*Purpose - For marketers and retailers, impulsive buyers constitute a dream segment. Stimulants at the point of shopping create sudden urge among these shoppers and they seek to immediately acquire the products. This desire for spontaneous acquisition and instant gratification can result in negative consequences, including post-purchase dissonance (regret). This paper is an attempt to comprehend and examine the direct and indirect impacts of store atmospherics, urge to buy impulsively and impulsive buying on post-purchase dissonance in the form of regret.*

*Method - The data for the study was collected using survey method and structural equation modeling was used to analyse the proposed model.*

*Findings - Result of the study reveals that shoppers' impulsive purchasing was positively linked to the feeling of regret. The study also noted the influence of positive and negative affect on urge to buy impulsively, which further is directed to impulse buying.*

*Limitations - This study has been conducted in India. By incorporating cross-cultural aspects, the study shall stand its worth for better generalizations.*

*Implications - The study findings suggest that retailers and mall developers to invest in improving in-store light and music that might encourage store visitors to devote extra time for browsing various products and these factors has a positive impact on reducing regret.*

*Originality - A large number of studies have been conducted for analyzing store environment factors effect on impulse buying, however little is known about how these factors influences regret arises from impulse buying. This study attempt to analyses the influence of store environment factors on regret hence addresses that gap in the impulse literature.*

**Keywords:** impulse buying, store environment, impulse buying tendency, regret.

**Reference** to this paper should be made as follows: Parsad, C., Prashar, S., Vijay, T.S., Sahay, V. (2019). Role of in-store atmospherics and impulse buying tendency on post-purchase regret. *Journal of Business and Management*, 25(1), March, 1-24. DOI: 10.6347/JBM.201903\_25(1).0001.

## Introduction

Impulse shopping involves buying as an outcome of spontaneous decision at the point of purchase, without any consideration for future outcome. Beatty and Ferrel (1998) described impulse buying as “a sudden and immediate purchase with no pre-shopping intentions either to buy the specific product category or to fulfill a specific buying task.” Crawford and Melewar (2003) stated that as shoppers’ life is becoming hectic, their frequency of visits to retail stores have increased. This has resulted in growth of sales through impulsive purchases. According to a research report, British consumers spent nearly 21.7 billion euro on impulse purchasing. More than half of the consumers made unplanned purchase every time they went for shopping (smartbusiness, 2016). It also reported that one-third of the US shoppers also reported impulsive buying.

This impulsive behavior displayed by shoppers in retail stores has lot of significance for marketers and retailers. In the last two decades, researchers like Beatty and Farrell (1998); Bell et al. (2011); Donovan et al. (1994); Inman et al. (2009); Prashar et al., (2015a & 2015b) and Rook and Fisher (1995); have examined the impact of point of contact on shoppers’ buying. This has led to change in companies focus from conventional marketing tools like advertisements to in-store promotional tools that would stir shoppers’ decisions. Hence, for retail stores it has become pertinent to use shoppers’ impulse buying behavior as a medium to increase their sales through the year.

However, the phenomenon of impulsive shopping has been observed to result in negative consequences too. Rook (1987) noted that financial distress because of excessive spending can lead to the feeling of guilt and/ or the fear of disapproval by immediate society. It was observed by Rook and Fisher (1995) that approximately four out of every five shoppers, who have purchased due to sudden urges, experienced negative emotions and feeling. According to these papers, rationality is over-powered by sudden emotional urges that results in purchasing of ‘not-so-needed’ goods.

Contrary to this, Hoch and Loewenstein (1991) posited that shoppers may also regret their decision of not buying a desired product.

There is a huge gap in the current consumer behavior literature on impulse buying and its consequences on post purchasing behaviour such as regret. Most of the existing studies have focused on conceptualizing impulse buying tendency, impulsive buying and the antecedent factors like store environment, price & promotion and products feature etc. influencing impulsive behavior (Beatty & Ferrel, 1998; Mohan et al., 2012; Rook & Fishaer, 1995). Few studies have attempted to explore the importance of regret on consumers' future buying/ revisiting the retail outlets. However, none of these studies have endeavored to examine the impact of store atmospherics store on regret in impulse buying context. The decipherence of cause-effect relationship between the variables leading to impulsive shopping and post-purchase regret shall equip marketers with strategic understanding of why consumers regret after impulse purchasing.

The present study endeavors to develop a theoretical model depicting associations of different predictors of store atmospherics like light, music, color, display and sales personnel and impulse buying tendency, with urge to buy impulsively, impulse purchasing and regret. The paper opens with discussion on theoretical framework followed by detailed review of literature on the constructs used in the study. The next section details the research methodology used and analysis of data obtained. The last section concludes with discussion, implication and limitations.

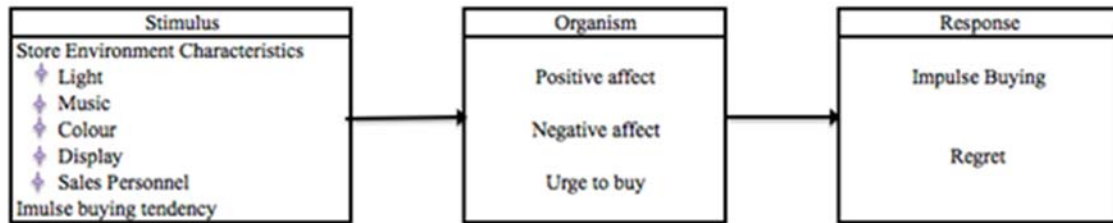
## **Theoretical Framework**

To conceptualize the present study, the authors have used Stimulus-Organism-Response (S-O-R) model as proposed by Mehrabian and Russell (1974) (see Figure 1). The framework comprises three components - stimulus, organism and response. Stimulus pertains to elements, which influence an individual's inner state and stimulating him/her in the process (Eroglu et al., 2001). The aspect of organism discusses the intermediary attitude or emotions that are formed as a result of the stimuli received by an individual (Bagozzi 1986). The resultant behaviour displayed by the subject is termed as response.

Bagozzi (1986) stated that when an individual's behaviour as a consumer is being studied through the S-O-R framework, the elements of stimuli would be external in nature. This could consist of marketing mix factors or various other factors from the surrounding environment. In the present study, the stimulus factors consist of the retail store atmospherics like light, music, colour, display, and sales employees. These factors invariably influence the behaviour of a shopper inside the retail store. Similarly, organism relates to the positive and negative affect of these variables and shoppers' urge to buy in the retail store. The final outcome or behavioural response is being measured through shoppers' impulse buying and their regret behaviour.

Extant literature has suggested that environmental variables such as light, music, colour, display, and sales employee contribute to the perception of positive/

negative affect associated with a shopping experience (Joo et al., 2006; Mohan et al., 2012). Consumers at different levels of positive/negative affect may react to the environment differently. In summary, according to the theoretical framework, consumer perceptions of characteristics of the retail environment would influence positive/negative affect and urge to buy impulsively, which in turn are expected to influence impulse buying or regret behavior.



**Figure 1.** Theoretical Framework

## Proposed Framework and Hypotheses

Clover (1950) has defined impulse buying as an “unplanned buying, any purchase made without advance planning before entering the store.” Later, Rook (1987) argued that impulse buying is more than unplanned buying and described impulse buying as “when a consumer experiences a sudden, after powerful & persistence urge to buy something immediately.” This impulsiveness is multifaceted that might lead to emotional conflict. Usually, impulse buying behaviour is prone to occur with diminished regards for its consequences. Refining the concept further, Beatty and Ferrell (1998) noted, “impulse buying to be a sudden and immediate purchase with no pre-shopping intentions either to buy the specific product category or to fulfill a specific buying task”.

### Store Environment, Positive Affect and Urge to Buy Impulsively

Past studies have linked impulse purchasing with impulse buying tendency (Beatty & Ferrell, 1998; Mohan et al., 2012) and pleasant store environment (Donovan et al., 1982; Mohan et al., 2012; Parsad et al., 2017a & 2017b). Yet, the indirect role of these factors on post-purchase regret is not clearly understood. For example, store environment variables like music, lighting etc. is one of the most important antecedents in triggering sudden urge to buy. The presence of pleasant music produces a positive effect in creating an urge to buy impulsively (Garlin & Owen, 2006). Similarly, well-designed and illuminated lighting system in a store makes a product more attractive that leads to excitement and induces positive affect. This also helps shoppers to focus on key sales point (Smith, 1989). The study by Yoo et al. (1998) demonstrated that both light and music together could stimulate positive affect. Extending this, Eroglu and Machleit (1993) predicted that music and light are

important variables in stimulating urge to buy impulsively. The research on retail environment has also suggested the integral role of color in retail interior. Past studies illustrated that color pattern inside the store creates a rainbow effect that leads pleasure and generates urge to buy among the shoppers (Beverland et al., 2006; Chebat et al., 2001; Handayani, 2018; Wu et al., 2013).

Display has been found to be an important variable of store environment. Prominent eye-catching display can significantly influence sales (Hultén & Vanyushyn, 2011). Good displays have direct impact on shoppers' impulsiveness and may also induce urge to buy (Aghazadeh, 2005; Hultén & Vanyushyn, 2011). Likewise, research on retail environment suggest the role of sales personnel in influencing consumer response (Bitner, 1990), which stirs urge to buy instinctively (Jones, 1999). A sales representative helps and guides shopper in identifying their needs, exploring more product range and thereby prompting urge to purchase. As per Park & Lennon (2006), this behaviour of sales employees contributes to creation of positive feeling and arousing desire to purchase.

Based on above arguments, this study proposes that store environment factors are perceived to create a positive affect leading to urge to buy impulsively and resulting more impulse purchasing. Considering store environment and positive affect, it is hypothesized:

*H1: A good store environment will intensify positive affect.*

*H2: Positive affect is associated with urge to buy impulsively.*

### **Store Environment, Negative Affect and Urge to Buy Impulsively**

In endeavoring to design an "appropriate" store atmosphere, it is pertinent for retailers and marketers to understand the right combination of store environmental factors. According to Bitner (1992), loud or improper music may create discomfort for shoppers. Such loud music irritates them and may induce negative affect (d' Astous, 2000). Similarly, too bright or dull light reduces the "visual acuity," the prime component for completing environmental task (Areni & Kim, 1994; Mohan et al., 2012). Past research illustrates that lighting inside the store impacted the shopping behavior of the consumer (Beverland et al., 2006; Chebat et al., 2001; Prasher et al., 2015b).

As noted by Oliver and Swan (1989), sales employees behavior inside the retail store would have an impact on shoppers' satisfaction. This satisfaction is with both the employees, as well as the retailers, and has an affective basis (Westbrook & Oliver, 1991). As the good behaviour of sales personnel increases the positive affect, improper behaviour might cause the negative affect (Jones, 1999). Such negative affect induces shoppers to withdraw from retail store, resulting in reduced intention to buy (Eroglu & Machleit, 1993). Hence, the probability to induce urge to buy more also decreases.

Accordingly, it can be postulated that improper store environment leads to negative affect that might impact an individual's urge to buy impulsively.

*H3: Inappropriate store environment is associated with high level of negative affect.*

*H4: High level of negative affect is associated with reduced urge to buy impulsively.*

### **Impulse Buying Tendency (IBT) and Urge to Buy Impulsively**

Earlier studies describe impulse buying as an 'unintended' purchase or purchase 'not planned before entering store' (Stern, 1962). Products were segregated as impulsive and non-impulsive ones (Stern, 1962). However, recent studies have criticized this approach and linked this behaviour with individual characteristics rather than product features. According to psychologists, everyone has a different tendency to act impulsively. Consumer researchers have explained differing buyers' proclivity in their impulse shopping (e.g. Beatty & Ferrell, 1998; Rook & Fisher, 1995). In one of the earlier studies, Beatty and Ferrell (1998) explored the impact of IBT on shoppers' urge. Consistent with previous research, Jones et al. (2003) described the impulse-buying tendency as the "degree to which an individual is likely to make unintended, immediate, and unreflective purchase." Based on this, it is hypothesized:

*H5. Shoppers' IBT will have a positive impact on urge to buy impulsively*

### **Urge to Buy Impulsively and Impulse Buying**

It has been observed that when shoppers browse products in retail outlets, they continuously experience urge for buying more (Rook, 1987; Beatty & Ferrell, 1998; Mohan et al., 2012), and most of the time, shoppers are not able to resist their urge to purchase more (Baumeister, 2002). As per Dholakia (2000), those shoppers who experience spontaneous urges while shopping find it difficult to control these desires. Hence, a positive link is being postulated between urge to buy impulsively and impulsive buying.

*H6. Urge to buy impulsively will have a positive association with shoppers' impulsive buying*

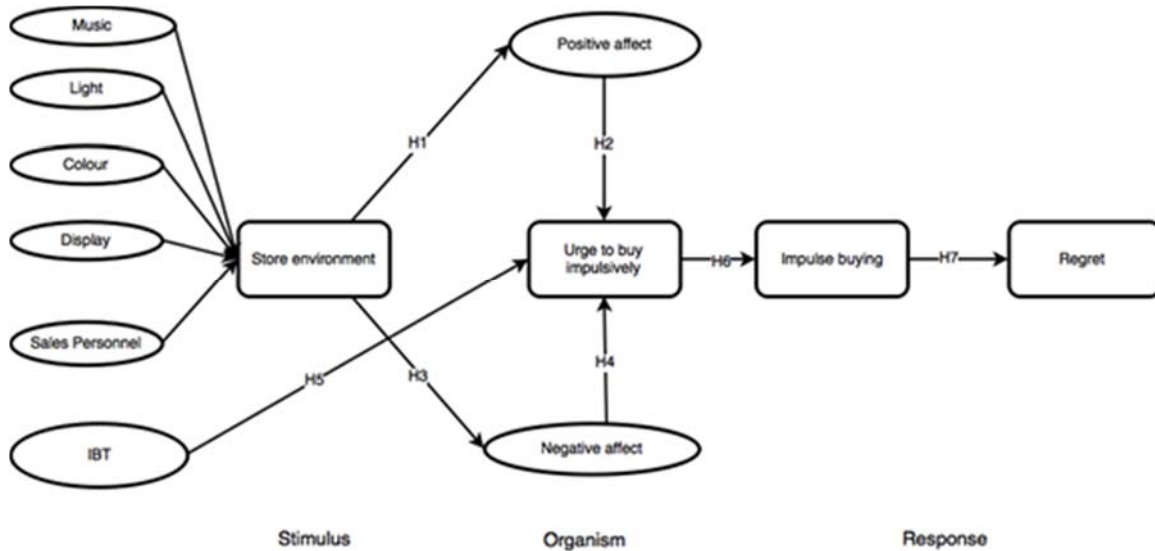
### **Impulse Buying and Regret**

Rook (1987) observed that consumers buy products impulsively because they "fall in love" with them and their "grabbing" looks. Emotionally attracted to the product, an impulsive customer seeks instant gratification (Hoch & Loewenstein, 1991). This desire for instant gratification leads to negative consequences, including regret after purchasing (Hausman, 2000; Wood, 2005). Impulse buying is always linked to financial pains (over expenditure), guilt feeling, and social disapproval (Rook, 1987). Rook & Fisher, (1995) claims that approximately eighty percent of the impulse purchasers remembered and associated negative experiences with impulse buying. Latest research also shows that intensity of guilt experienced by the shoppers

had a positive effect on planning to reduce impulse buying (Yi & Baumgartner, 2011). Verplanken and Sato (2011) noted that consumers want to reduce their impulsive shopping owing to guilt and regret filling. Accordingly, the hypothesis is:

*H7. Impulse buying is associated with regret of the shoppers.*

Figure 2 summarizes all the proposed hypotheses.



**Figure 2.** Conceptual Model

The proposed model comprised of two exogenous variables - store environment and impulsive buying tendency that act as stimuli and five endogenous variables, of which three variables - urge to buy, positive affect, negative affect behave as organism, while remaining two endogenous - impulse buying and regret are 'response' elements.

## Research Methodology

Cross-sectional in nature, this research study is an outcome of both exploratory and conclusive phases.

### Survey Instrument

The survey instrument comprised of statements that addressed retail store environmental features, positive and negative affect, IBT, urge to buy, impulse buying and regret. To examine buyers' perceptions about the role of store environmental features - music, light, display and sales person, Mohan et al. (2012) scale was adapted. To decipher the influence of color, scale from Chebat et al. (2001) was used. For measuring the positive and negative affects, scales developed by Watson et al. (1988) were used. To examine IBT, the scale developed by Rook and Fisher (1995) was



adopted. Beatty and Ferrell (1998) scale consisting of three items was used to measure consumers' urge to buy impulsively. The two scales developed by Hausman (2000) were applied for measuring the constructs of impulse buying and regret. A seven-point Likert's scale was used to record the responses, where '1' represented "Strongly disagree" and '7' signified "Strongly agree."

### Data Collection

For conducting the study, it was decided to approach shoppers carrying a shopping bag (sampling extent) using the mall-intercept method at various malls of Indian cities of Delhi, Mumbai, Hyderabad and Raipur. The surveyors collected data during the months of November and December 2016. To remove random bias, the process of data collection was carried out by altering the time and location of contacting the shoppers during the day. The sequence of questions in the survey was also varied. After eliminating incomplete/ erroneous responses, data from 203 respondents were taken for further analysis.

### Sample Profile

Two-third of the respondents were male. More than eighty percent of the survey participants were of the age between 21 and 30 years. Forty percent of them had a monthly family income in between INR 50,000 - 100,000 and approximately thirty five percent respondents had more than INR 100,000. (See Table 1)

**Table1:** Respondent Profile

		Frequency	Percent	Cumulative Percent
Age	Under 21	2	1	1
	21-30	165	81.3	82.3
	30-40	36	17.7	100
Gender	Male	140	69	69
	Female	63	31	100
Marital status	Unmarried	192	94.6	94.6
	Married	11	5.4	100
Educational Qualification	Graduation	48	23.6	23.6
	Post graduation	147	72.4	96.1
	Professional	8	3.9	100

Monthly family income	Less than 25,000	5	2.5	2.5
	25001-50,000	50	24.6	27.1
	50001-100,000	84	41.4	68.5
	More than 100,000	64	31.5	100
	Total	203	100	

### Data Analysis and Findings

Using AMOS 22.0, the collected data was analyzed opting a two-stage structural equation modeling approach as suggested by Anderson & Gerbing (1988). The measurement model was first analyzed applying confirmatory factor analysis, followed by testing the structural model using path analysis.

### Measurement Model

Being influenced by perception about the role of sales person, display, music, lighting and color, store environment was used as a second order construct. Goodness-of-fit statistics for the proposed model were checked to examine the fit of the model with the data. The ratio of chi square minimum to degree of freedom (CMIN/DF) was 2.8, which is lower than cut-off criterion of 3.00 (Hair et al., 2006), indicating a good fit between the postulated model and the data. Since the values for other indices like goodness-of-fit index (GFI = 0.936), comparative fit index (CFI = 0.966), incremental fit index (IFI = 0.966), Normed Fit Index (NFI = 0.950) and Tucker-Lewis index (TLI = 0.933), were also more than 0.9, the fitness of model with the data is confirmed (Hair et al., 2006). The value of root mean square error of approximation (RMSEA = 0.099), being less than 0.1, further confirmed the fitness (Hair et al., 2006). The confirmatory factor analysis result reflect that loading for all the items and average variance extracted (AVE) were greater than cut off value 0.50. (See Table 2) Composite reliability values were also more than 0.70 these values signifying reliability of the constructs (Netemeyer et al., 2003).

**Table 2:** Measurement Model (CFA)

	Items	Standardized Loading estimates	Average Variance Extracted (AVE)*	Composite Reliability (CR)**
Light	Well-lit store	0.72	0.62	0.76
	Pleasant lighting	0.85		
Music	The background music played	0.69	0.53	0.77
	Terrible music	0.77		
	Pleasant music	0.72		

	Helpful employees	0.9		
Sales person	Well-dressed and groomed employees	0.73		
	Store employees influence my buying decision	0.66	0.62	0.87
	Friendly employees	0.84		
Colour	Fashionable colors	0.88		
	Pleasing colour scheme	0.82	0.72	0.84
Display	Exclusive displays	0.65		
	Attractive product displays	0.84	0.56	0.72
Urge to buy	Sudden urges to buy	0.9		
	Tempted to buy many items	0.87		
	I experience no sudden urge to buy	0.64	0.66	0.85
IBT	Buy things spontaneously	0.78		
	Buy things according to how I feel at that moment	0.63		
	"I see it, I buy it"	0.72		
	I am a bit reckless about what I buy	0.7		
	"Just do it"	0.83	0.58	0.92
	I often buy things without thinking	0.78		
	I feel like buying things on the spur-of-the-moment	0.85		
	"Buy now, think about it later"	0.78		
Impulse buying	Buying more than I had planned to buy	0.9		
	I spend more money than I had originally planned	0.78	0.71	0.83
Positive affect	I felt enthusiastic while shopping today	0.84		
	I felt excited on this shopping	0.89	0.62	0.83
	I felt happy during this shopping	0.61		
Negative affect	I felt bored on this shopping today	0.7		
	I felt lethargic while shopping today	0.91	0.67	0.86
	I felt upset during this shopping	0.83		
*AVE: rule of thumb- should exceed 0.5; **CR: rule of thumb - exceed 0.7				

### Analysis of the Structural Model: Hypothesis Testing

Structural equation modeling was used to evaluate the research model. The two exogenous and five endogenous variables were tested to ascertain the strength of the proposed model and the stated hypotheses.

The overall fit indices for the proposed research model were as follows: ratio of chi square minimum to degree of freedom (CMIN/df = 2.43), comparative fit index (CFI = 0.96), goodness of fit index (GFI = 0.93), adjusted goodness of fit index (AGFI = 0.86), normed fit index (NFI = 0.94), incremental fit index (IFI = 0.96), Tucker-Lewis index (TLI = 0.94) and root mean square error of approximation (RMSEA = 0.08). All the indices indicated a very good fit of the proposed model with the data. This goodness of model provides a sound basis for testing the hypothesized paths. Table 3 reflects the results of the structural model.

**Table 3: Structural Model Results**

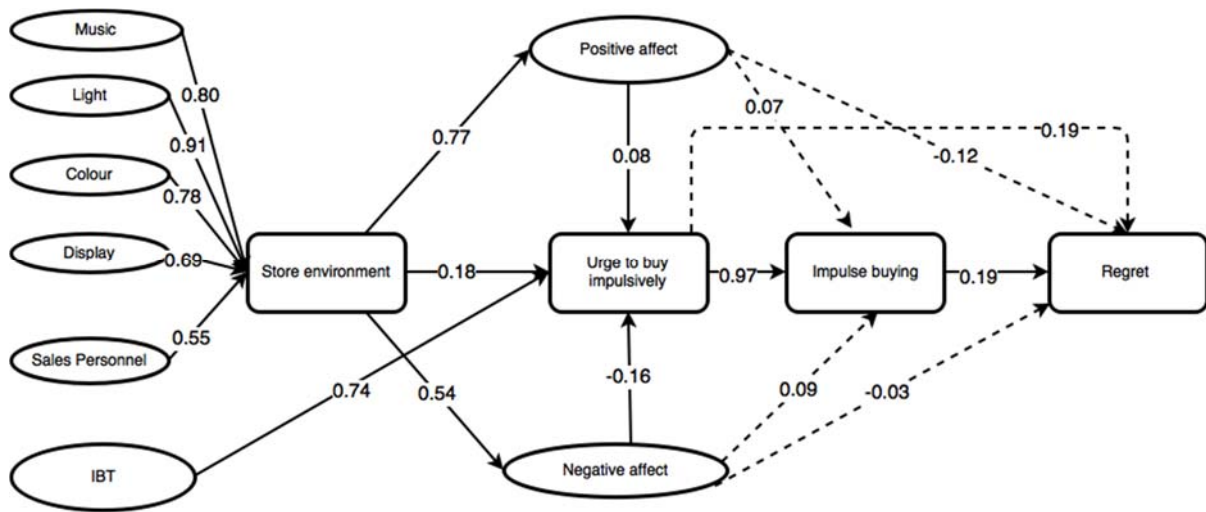
Hypothesis	Estimate $\beta$	t- value	p $\leq$	Result
H <sub>1</sub> : Store environment $\longrightarrow$ Positive affect	0.77	14.020	0.001	Accepted
H <sub>2</sub> : Positive affect $\longrightarrow$ Urge to buy impulsively	0.07	1.784	0.074*	Accepted
H <sub>3</sub> : Store environment $\longrightarrow$ Negative affect	0.42	6.139	0.001	Accepted
H <sub>4</sub> : Negative affect $\longrightarrow$ Urge to buy impulsively	-0.07	-1.625	0.001	Accepted
H <sub>5</sub> : IBT $\longrightarrow$ Urge to buy impulsively	0.73	12.602	0.001	Accepted
H <sub>6</sub> : Urge to buy impulsively $\longrightarrow$ Impulse buying	1.06	13.111	0.001	Accepted
H <sub>7</sub> : Impulse buying $\longrightarrow$ Regret	0.34	5.216	0.001	Accepted

Goodness of fit indices: CMIN/df=2.43; CFI=0.96; GFI=0.93; AGFI=0.86; NFI=0.94; IFI = 0.96; TLI = 0.94; RMSEA = 0.08  
 \* Accepted at 10% level.

From the table, it is observed that that all the hypotheses were accepted. Accordingly, perception about store environment plays a significant role in creating either positive affect ( $\beta = 0.77$ ,  $p = 0.001$ ) or negative affect ( $\beta = 0.42$ ,  $p = 0.001$ ), supporting hypotheses H<sub>1</sub> and H<sub>3</sub> respectively. The acceptance of hypothesis H<sub>4</sub> ( $\beta = -0.07$ ,  $p = 0.001$ ) indicates the significant influence of negative affect on urge to buy impulsively. Positive affect is also found significantly associated with urge to buy ( $\beta = 0.07$ ,  $p = 0.074$ ) supporting hypothesis H<sub>2</sub>, albeit at the 10% level. The results also indicate that shoppers' impulse buying tendency has a positive impact on the urge to buy ( $\beta = 0.76$ ,  $p = 0.001$ ). As anticipated, the results suggest that urge to buy impulsively has a positive effect on impulse buying ( $\beta = 1.06$ ,  $p = 0.001$ ), and high level of impulse buying is associated with shoppers' regret ( $\beta = 0.34$ ,  $p = 0.001$ ), supporting H<sub>6</sub> and H<sub>7</sub> respectively.

## Testing for Mediating Role of Positive and Negative Affects and Urge to Buy Impulsively

To test the mediating role of positive affect, negative affect and urge to buy impulsively, it was decided to use method suggested by Iacobucci et al. (2007). The model first includes all direct paths from positive affect, negative affect to impulse buying and regret, later an indirect path via urge to buy impulsively and impulse buying to regret. With the values of CMIN/DF= 2.35; RMSEA =0.08; AGFI = 0.87; NFI = 0.95; IFI = 0.97; and TLI = 0.95, the model also indicated a good fit. The analysis revealed that the direct effect of store atmospherics on urge was not significant. However, the same it was observed that all the indirect path coefficients were significant (refer Figure 2), indicating the presence of some mediation effect (Iacobucci et al., 2007).



**Figure 3.** Structural Model (with Direct and Indirect Effects)  
(Solid lines represent direct path and dotted lines represent indirect path)

To further confirm the mediation effect, pair-wise inter-correlations matrix was used (Table 4). This further supports mediated model as against non-mediated or partially mediated models. The correlation figures for positive affect and negative affect with urge to buy impulsively (0.32 and 0.35 respectively) are greater than those with regret (0.05 and 0.16 respectively). The correlation of urge to buy impulsively with regret is 0.36, which is much below its correlation with impulse buying (0.67). Moreover, impulse buying and regret are also positively correlated (0.35). Hence, it confirms the role of the three constructs as mediator.

**Table 4.** Correlation Matrix

	IBT	Store Environment	Negative Affect	Positive Affect	Urge to Buy Impulsively	Impulse Buying	Regret
IBT	<b>0.762</b>						
Store Environment	0.54	<b>0.780</b>					

Negative Affect	0.62	0.42	<b>0.819</b>			
Positive Affect	0.42	0.77	0.33	<b>0.787</b>		
Urge to Buy Impulsively	0.72	0.45	0.35	0.32	<b>0.812</b>	
Impulse Buying	0.75	0.53	0.45	0.40	0.67	<b>0.843</b>
Regret	0.33	0.14	0.16	0.05	0.35	0.35

## **Discussions and Implications**

This study was aimed at examining the influence of store environment in triggering positive and negative affects, impact of these affects and impulse buying tendency on urge to buy impulsively. Further, it was endeavored to assess the role of this urge on impulse buying and regret, if any. This comprehensive study is pioneer in exploring the effect of store environment on regret in impulsive buying context. In this process, the study has also delineated the impact of positive affect and negative affect on post-purchase dissonance. Besides this, there is hardly any study that has attempted to explore the relationship between various factors related to impulse buying dimension of consumer behavior in the context of developing markets like India.

From the study, it is observed that store environment and IBT act as ‘stimuli’ in stirring the urge to buy impulsively. The factors constituting store environment create this urge directly as well as via positive affect and negative affect. These ‘organism’ variables cause ‘response’ that is manifested through shoppers’ impulsive buying, which may or may not result into regret. In the retail store context, it is worth noting that urge to buy impulsively and impulse buying mediate the relationship between store environment-generated affect and regret.

This study supported the validity of store environment construct and two of individual behaviour construct (IBT and urge to buy impulsively) as being significant predictors of impulse buying. The results of the study also validated the significant positive relationship between impulse buying and regret. The outcome of the paper supported the suggested framework and hypotheses.

The results of the present study noted that store environment factors induce impulse buying through positive affect and urge to buy impulsively. This is in line with outcomes of earlier studies like Mohan et al. (2012) and Bellini et al. (2017). Another striking finding relates to the negative relationship between negative affect and urge to buy impulsively. This suggests that a high negative affect lowers an individual’s urge to buy impulsively. However, prior studies like Beatty & Ferrel (1998), Mohan et al. (2012) and Bellini et al. (2017) failed to support this negative association. Hence, this study is pioneer in supporting the negative association and opens a new avenue for future research that can further strengthen this outcome.

In line with other existing studies like Dholakia (2000), Baumeister (2002) and Bellini et al. (2017), this study also observed that shoppers who are high on urge to buy impulsively would show more impulsive buying. The most valuable contribution of this paper pertains to the observation that shoppers indulging in impulsive buying also feel regretful during their post-purchase phase. This might be because of the feeling that they have diverted from their planned purchasing, which can lead to losses like financial or social loss (Rook & Hoch, 1985). These regretting shoppers may refrain from shopping trips. Thus, it may be inferred from the model that impulse buying leading to post-purchase regret, might lower the tendency of impulsive shopping in the near future.

These findings provide new insights that would help retailers and marketers to cater impulsive buyers. Since, store environment is noted to influence both positive affect and negative affect, which determine urge to buy impulsively that leads to impulsive shopping. For retailers, this is positive cue as the atmospheric factors including light, music, color, display and sales personnel are designed and driven by management. Requisite environment strategies must be developed after carefully studying demographic, psychographic and other relevant factors of the store visitors. On the other side, if a marketer resorts to undermining the importance of in-store factors, it would negatively influence the impulsive spending propensity of shoppers. Baker et al. (2002) has also warned of such consequences on shoppers' patronage.

Further, the study noted the relatively higher significance of light and music among the store environmental factors in influencing urge to buy impulsively. Indian retailers and mall developers are however, focusing on creating outlets with large spaces and ignoring the importance light and music. It becomes pertinent for managers to invest in improving in-store light and music that might encourage store visitors to devote extra time for browsing various products. This shall elicit impulsive responses from the shoppers.

They must formulate strategies that would assist shoppers in reducing the feeling of regret in order to make them a regular visitor. As shown in Figure 2, the indirect effect of positive affect is negatively linked to regret. This suggests that by increasing positive affect among shoppers, retailers can reduce the feeling of regret. The store atmospherics has the ability to lower the post-purchase regret. Retailers must induce new and innovative tools aimed at sustaining positive affect of shoppers over a longer time. Positive affect can also be enhanced by dynamically designing retail outlets that extends positive feeling to shoppers every time they visit the stores.

Regarding shoppers' negative affect, the study found its negative indirect association with regret. This shouldn't be taken as a variable for reducing post-purchase regret. Also, Huddleston et al. (2004) has observed a negative association between 'negative affect' and store patronage and loyalty. Therefore, mall managers must be careful and make that the strategies developed by them should not create negative affect.

Besides this, marketer must broaden all the shoppers' attraction strategies from just in-store promotional tools to other touch points available in the shopping cycle. This will create new reasons and motives for them to visit stores, search for new products (arrivals), compare with their present systems of consumption/ expenses and finally buy products. In this process, marketers will widen their connect with shoppers throughout their shopping cycle. In all, this will reduce the feeling of impulsive shopping even when shoppers are still buying the products, and thus the post-purchase regret might be lowered.

## **Conclusion**

This pioneer research contributes to the present body of knowledge on impulse buying and post-purchase regret. A prominent study by Beatty and Ferrell (1998) has proposed a model that predicts impulse buying, however, it didn't consider store level variables. Later studies like Peck and Childers (2006) and Zhou and Wong (2003) confirmed the role of store environment on impulse purchasing. Modifying Beatty and Ferrell model, Mohan et al. (2012) added store environment variables for predicting impulse buying. However, all these studies ignored impulsive shoppers' post-purchase dissonance. The present study fills this gap by adding 'regret' as response element.

This study illustrates the relationship between urge to buy impulsively, impulse shopping and regret that is consequent in the scenario. Accordingly, store environment causes either positive or negative affect on urge to buy impulsively, which ultimately leads to impulse buying. It also posits that urge to buy impulsively acts as a mediator between store environment and impulse buying. One of the most noteworthy finding is that the impulse buying leads to post-purchasing dissonance (regret). It is observed that positive affect can be used by marketers to decrease regret.

## **Limitations and Future Research**

Though the present research significantly contributed to the body of literature on impulse buying, some findings may be used as openings for potential research. As is the case with any social science research, the present study also has its own set of limitations. This study has been conducted in India. By incorporating cross-cultural aspects, the study shall stand its worth for better generalizations. Also, the researchers have used only store environment related factors and IBT as independent variables. Future research can also be used IBT as a moderator between urge to buy intention and impulsive purchase. Shoppers in the real scenario, are influenced by multitude of other factors like product involvement, product category, promotional offers, etc. It may also be worthwhile to consider the influence these variables on consumers' impulsive buying and regret. Data has been collected using respondents' self-reporting approach. Researchers in the future may use experimental designs to validate the current findings by designing store environment.



## References

- Aghazadeh, S.M. (2005). Layout strategies for retail operations: a case study. *Management Research News*, 28(10), 31-46.
- Anderson J.C., & Gerbing, D.W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological bulletin*, 103(3), 411-423.
- Areni, C.S. & Kim, D. (1994). The influence of in-store lighting on consumers' examination of merchandise in a wine store. *International Journal of Research in Marketing*, 11(2), 117-125.
- Bagozzi, R.P. (1986). *Principles of marketing management*. Chicago: Science Research Associates.
- Baumeister, R.F. (2002). Yielding to temptation: Self-control failure, impulsive purchasing, and consumer behavior. *Journal of consumer Research*, 28(4), 670-676.
- Beatty, S.E., & Ferrell, M.E. (1998). Impulse buying: Modeling its precursors. *Journal of Retailing*, 74(2), 169-191.
- Bellenger, D.N., Robertson, D.H., & Hirschman, E.C. (1978). Impulse buying varies by product. *Journal of Advertising Research*, 18(6), 15-18.
- Bellini, S., Cardinali, M.G., & Grandi, B. (2017). A structural equation model of impulse buying behaviour in grocery retailing. *Journal of Retailing and Consumer Services*, 36, 164-171.
- Beverland, M., Lim, E.A.C., Morrison, M., & Terziovski, M. (2006). In-store music and consumer-brand relationships: Relational transformation following experiences of (mis) fit. *Journal of Business Research*, 59(9), 982-989.
- Bitner, M. J. (1992). Servicescapes: The impact of physical surroundings on customers and employees. *Journal of Marketing* 56(2), 57-71.
- Chebat, J.C., Chebat, C.G., & Vaillant, D. (2001). Environmental background music and in-store selling. *Journal of Business Research*, 54(2), 115-123.
- CLOVER, V.T. (1950). Relative importance of impulse-buying in retail stores. *Journal of Marketing*, 15, 66-70.
- Crawford, G., & Melewar, T.C. (2003). The importance of impulse purchasing behaviour in the international airport environment. *Journal of Consumer Behaviour*, 3(1), 85-98

- Dawson, S., & Kim, M. (2010). Cues on apparel web sites that trigger impulse purchases. *Journal of Fashion Marketing and Management: An International Journal*, 14(2), 230-246.
- Dholakia, U.M. (2000). Temptation and resistance: an integrated model of consumption impulse formation and enactment. *Psychology & Marketing*, 17(11), 955-982.
- Donovan, R. J., & Rossiter J.R. (1982). Store atmosphere: An environmental psychology approach. *Journal of Retailing*, 58(1), 34-57.
- d'Astous, A. (2000). Irritating aspects of the shopping environment. *Journal of Business Research*, 49(1), 149-156.
- Eroglu, S.A., Machleit, K.A.& Davis, L.M. (2001). Atmospheric qualities of online retailing: A conceptual model and implications. *Journal of Business Research*, 54(1), 177-84.
- Eroglu, S.A., & Machleit, K.A., (1993). Atmospheric factors in the retail environment: sights, sounds and smells, in McAlister, L. and Rothschild, M.L. (Eds.), *Advances in Consumer Research*, Vol.20, Association for Consumer Research, Provo, UT, p.34.
- Gardner, M.P., & Rook, D.W. (1988). Effects of impulse purchases on consumers' affective states. *Advances in consumer research*, 15(1), 127-130.
- Garlin, F.V., & Owen, K. (2006). Setting the tone with the tune: a meta-analytic review of the effects of background music in retail settings. *Journal of Business Research*, 59(6), 755-764.
- Hair, J.F., Black, W.C., Babin, B. J., Anderson, R.E., & Tatham, R.L. (2006). *Multivariate data analysis*, (6). Upper Saddle River, NJ: Pearson Prentice Hall.
- Handayani, W., Anshori, M., Usman, I., & Mudjanarko, S. (2018), Why are you happy with impulse buying? Evidence from Indonesia. *Management Science Letters*, 8(5), 283-292.
- Hausman, A. (2000). A multi-method investigation of consumer motivations in impulse buying behavior. *Journal of consumer marketing*, 17(5), 403-426.
- Heilman, C.M., Nakamoto, K., & Rao, A.G., (2002). Pleasant surprises: consumer response to unexpected instore coupons. *Journal of Marketing Research*, 39(2), 242-252.
- Hoch, S. J., & Loewenstein G.F. (1991). Time-inconsistent Preferences and Consumer Self-Control. *The Journal of Consumer Research*, 17(4), 492-507
- Hultén, P., & Vanyushyn, V. (2011). Impulse purchases of groceries in France and Sweden. *Journal of Consumer Marketing*, 28(5), 376-384.

- Iacobucci, D., Saldanha, N., & Deng, X. (2007). A meditation on mediation: evidence that structural equations models perform better than regressions. *Journal of Consumer Psychology, 17*(2), 140-154.
- Inman, J. J., Winer, R.S., & Ferraro, R. (2009). The interplay among category characteristics, customer characteristics, and customer activities on in-store decision making. *Journal of Marketing, 73* (5), 19-29.<http://dx.doi.org/10.1509/jmkg.73.5.19>.
- Jones, M.A., (1999). Entertaining shopping experiences: an exploratory investigation. *Journal of Retailing and Consumer Services, 6*(3), 129-139.
- Jones, M.A., Reynolds, K.E., Weun, S., & Beatty, S.E. (2003). The product-specific nature of impulse buying tendency. *Journal of business research, 56*(7), 505-511.
- Joo Park, E., Young Kim, E., & Cardona Forney, J. (2006). A structural model of fashion-oriented impulse buying behavior. *Journal of Fashion Marketing and Management: An International Journal, 10*(4), 433-446.
- Kacen, J. J., & Lee, J.A. (2002). The influence of culture on consumer impulsive buying behavior. *Journal of consumer psychology, 12*(2), 163-176.
- Lee, J.A., & Kacen, J. J. (2008). Cultural influences on consumer satisfaction with impulse and planned purchase. *Journal of Business Research, 61*(3), 265-272.
- Mehrabian, A., & Russell, J.A. (1974). *An approach to environmental psychology*. Cambridge: M.I.T. Press.
- Mohan, G., Sivakumaran, B., Sharma, P., 2012. Impact of store environment on impulse buying behavior. *European Journal of Marketing, 47*(10), 1711-1732
- Netemeyer, R.G., Bearden, W.O., & Sharma, S. (2003). *Scaling Procedures: Issues and Applications*. Sage.
- Peck, J., & Childers, T.L. (2006). If I touch it I have to have it: Individual and environmental influences on impulse purchasing. *Journal of business research, 59*(6), 765-769.
- Park, J., & Lennon, S. J. (2006). Psychological and environmental antecedents of impulse buying tendency in the multichannel shopping context. *Journal of Consumer Marketing, 23*(2), 56-66.
- Parsad, C., Prashar, S., and Tata, V.S. (2017a). Understanding nature of store ambiance and individual impulse buying tendency on impulsive purchasing behaviour: an emerging market perspective. *Decision, 44*(4), 297-311.
- Parsad, C., Prashar, S., & Sahay, V. (2017b). Impact of impulsive personality traits and store environment on impulse buying behavior. *Journal of Business & Management, 23*(1), 1-24

- Prashar, S., Parsad, C., and Vijay, T.S. (2015a). Application of neural networks technique in predicting impulse buying among shoppers in India. *Decision*, 42(4), 403-417.
- Prashar, S., Parsad, C., & Vijay, T.S. (2015b). Factors prompting impulse buying behaviour-study among shoppers in India. *International Journal of Indian Culture and Business Management*, 11(2), 219-244.
- Rook, D.W. (1987). The buying impulse. *Journal of Consumer Research*, 14(2), 189-199.
- Rook, D.W., & Fisher, R. J. (1995). Normative influences on impulsive buying behavior. *Journal of Consumer Research*, 22(3), 305-313.
- Rook, D.W., & Hoch, S. J. (1985). Consuming impulses. *Advances in Consumer Research*, 12, pp.23-27.
- Sherman, E., A.Mathur, & Smith, R.B. (1997). Store environment and consumer purchase behavior: Mediating role of consumer emotions. *Psychology & Marketing* 14(4), 361-378.
- Smith, W. (1989). Trends in retail lighting: an intelligent design approach. *International Journal of Retail and Distribution Management*, 17(5), 30-32.
- Stern, H. (1962). The significance of impulse buying today. *Journal of Marketing*, 59-62.
- Turley, L.W., & Milliman, R.E. (2000). Atmospheric effects on shopping behavior: A review of the experimental evidence. *Journal of Business Research*, 49(2), 193-211
- Verplanken, B., & Sato, A. (2011). The psychology of impulse buying: An integrative self-regulation approach. *Journal of Consumer Policy*, 34(2), 197-210.
- Watson, D., Clark, L., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of Personality and Social Psychology*, 54(6), 1063-1070.
- Wood, M. (2005). Discretionary unplanned buying in consumer society. *Journal of Consumer Behaviour*, 4(4), 268-281.
- Wu, J. J., Chen, Y.H., & Chien, S.H. (2013). Impulse purchases and trust: The mediating effect of stickiness and the mental budgeting account. *Cyberpsychology, Behavior, and Social Networking*, 16(10), 767-773.
- Yi, S., & Baumgartner, H. (2011). Coping with guilt and shame in the impulse buying context. *Journal of Economic Psychology*, 32(3), 458-467.

- Yoo, C., Park, J., & MacInnis, D. J. (1998). Effects of store characteristics and in-store emotional experiences on store attitude. *Journal of Business Research*, 42(3), 253-263.
- Zhou, L., & Wong, A. (2003). Consumer impulse buying and in-store stimuli in Chinese supermarkets. *Journal of International Consumer Marketing*, 16(2), 37-53.

## Appendix

Dear Sir/Madam,

This study is about impulse buying behavior among shoppers. Impulse buying is unplanned, and when one suddenly feels the urge to buy something immediately. This questionnaire will only be used for academic purpose and all the data will be confidential.

Thanks for your participation.

Section -1: Please tick the option that you find most suitable

1. Age Group?       Under 21     21 - 30     30 - 40     40 - 50     Above 50
2. Gender?             Male         Female
3. Marital Status:     Unmarried       Married       Other
4. Education level?    Schooling     Graduation     Post-Graduation  
    Professional Qualification
5. Family's monthly income level (INR)?     Less than 25,000  
    25,001 - 50,000       50,001 - 100,000       More than 100,000

Section -2: Please provide your best responses to the following statements on scale of 1 to 7, where 1 represents "**Strongly disagree**" and 7 represents "**Strongly agree.**"

Statements	1	2	3	4	5	6	7
I often buy things spontaneously							
I buy things according to how I feel at that moment							
"I see it, I buy it" describes me							
Sometimes, I am a bit reckless about what I buy							
"Just do it" describes the way I buy things							
I often buy things without thinking							
Sometimes, I feel like buying things on the spur-of-the-moment							
"Buy now, think about it later" describes me							
Pleasant music stirs the buying mood							
Pleasant lighting in the store influences my buying							
I walk out of the store that has terrible music							
The store employees influence my buying decision							
A well-lit store influences my buying decision							
Well-dressed and groomed employees will have influence on my buying decision							
Helpful employees in the store have influence on my buying decision							

The background music played in the store induces my purchase							
I tend to purchase more in the stores with friendly employees							
I prefer to shop at a store where it is easy to locate products/merchandise							
Attractive product displays stimulate me to buy							
The pleasing colour scheme in the stores excites me to buy							
The exclusive displays used in shops for certain products provoke me for buying spontaneously							
While shopping, I buy things that I had not intended to buy.							
The fashionable colours used in the store stimulate my purchase intent							
The pleasing décor of the store provokes me for unplanned purchases							
I am a person who makes unplanned purchases							
When I see something that really interests me, I buy it without considering the consequences							
It is fun to buy spontaneously							
I experience sudden urges to buy unplanned items							
I am tempted to buy many items that are not on my list							
I experience no sudden urge to buy unplanned items							
I end up buying more than I had planned to buy							
Mostly I spend more money than I had originally planned							

**Do you regret your impulse buying?**

- Yes, all the time and I try to cut it down
- Yes, all the time, but I can't stop it
- Sometimes and I don't like impulse buying.
- Sometimes but I still enjoy impulse buying.

Thank You!

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# Digital Storytelling as a Solution to Destigmatize Products: Case of Women Lingerie from India

Varsha Jain  
Amrita Bansal  
Tarishi Misha

## **Abstract**

*Purpose - The objective of the study is to develop a framework explaining digital storytelling as a solution to communicating about stigmatized products. In this study, women's lingerie was taken as the stigmatized product category.*

*Method - The study was conducted in three phases; the first phase included an in depth study of websites and online communication of lingerie brands, the second phase comprised of netnography where the women consumers were studied and the third phase included in depth interviews of women consumers along with projective techniques.*

*Findings - The major contribution of this research is the creation of a comprehensive framework based on stigmatization and storytelling. This study demonstrates the process of storytelling and how every part of the story can be managed with the stigma associated with the product. Additionally, the study also provides the features that each stage of the story should imbibe and manage different elements of the stigma.*

*Limitations - The study is qualitative in nature. Hence, for generalizability, another quantitative research can be conducted. Further, the present study was undertaken in the collectivistic culture in the Indian context. Thus, different research can be conducted to understand the varied culture and the values of the consumers.*

*Implications/recommendations - The study would help the brand communicate effectively to the consumers and destigmatize the products. Further, it will also help understand the way in which every feature of the story needs to be managed and issues be addressed effectively by the brand. The study has also proposed a theoretical framework by using the concepts of stigma and storytelling. Hence, the study has helped add to new knowledge in allied areas.*

*Originality/contribution - Storytelling is a partly historical form of learning which facilitates communication. This storytelling is used by brands and*

*organizations to connect with the consumers primarily by digital platforms. Thus, digital narratives and stories are developed which are relevant for the consumers. There is a dearth of literature on digital storytelling primarily in the context of stigmatized products such as lingerie for women. There are a few papers on digital storytelling and stigmatized products. But, there is no research that integrates these two areas and provides a comprehensive solution for this important dimension.*

**Keywords:** digital storytelling, stigmatized products, women lingerie, India, women consumer.

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## Introduction

Storytelling has been used in human history as a powerful tool of communication (Ochs *et al.*, 1992). This communication tool is used as the art of reaching out to the consumers through stories and narratives woven around the products. These narratives enable a brand to bring their products to life through well-constructed and appealing stories. They allow the consumers to connect with the brand emotionally and build a strong sense of brand identity (Woodside, 2010). Thus, a well-constructed story breaks through the clutter and engages the consumers on a personal level. In this way, stories are more impactful because the human brains are designed to remember them (Kaare, 2012). Therefore, marketers use different stories to engage with the consumers primarily through the digital platforms.

The reach of the digital platforms is increasing at an exponential rate. Around 51% of the world population has access to internet and Asian countries have the highest percentage of internet users which is 49% (“Asia Internet Usage Stats Facebook and 2018 Population Statistics”, 2018). Among the Asian countries, developing countries such as China and India have the highest number of regular internet users (“Asia Internet Usage Stats Facebook and 2018 Population Statistics”, 2018). This heavy usage of internet signifies high consumption of digital content. The content in these countries is preferred in terms of the stories. Thus, digital storytelling is useful for the marketers to engage with the consumers.

In these digital stories, marketers create narratives around the brand or the product. These narratives help the consumers in understanding the non-functional features of the brand (Woodside, Sood & Miller, 2008). Consumers are able to connect with the brands emotionally, which leads to a long and consistent relationship (Woodside, 2010). Hence, this form of storytelling is effective primarily for those products that are stigmatized. There are many products where the consumers and marketers are unable to communicate regarding the product because they are submerged with stigma. The stigma and social taboo can easily be seen with the products such as women lingerie. The women lingerie as a product category goes through high stigmatization because there is social taboo with the women body (Chrisler, 2011). In today's scenario as well, consumers are uncomfortable talking regarding women's body or their issues in public (DeSouza, Paludi & Paludi, 2010). This uncomfortable scenario is also observed in the case of women lingerie as well.

Consumers are not open and liberal due to which marketers are unable to communicate effectively about the products. However, with the advent of internet and high usage of digital platforms marketers can reach out to the consumers very easily. For instance, there are many national and international brands of women lingerie in India which are trying to connect with the consumers with the help of the digital platforms. These digital connections are helping the lingerie brands to grow at the exponential rate. By 2020, it is estimated that women lingerie market will value 280 billion Indian Rupee (Statista, 2018). This leap in the market is only possible because digital platforms are providing comfortable place to the consumers and marketers. Thus, to connect better, the brands are narrating digital stories to the consumers (Pera & Vigilia, 2016). Thus, the primary focus of the study is to explore the digital storytelling of the stigmatized products and how these stories help in destigmatizing products such as women lingerie. In order to explore the concepts of digital storytelling and stigmatized products, detailed literature review was carried out which is mentioned in the following section.

## **Literature Review**

As discussed in the introduction, the main objective of the study is to understand how digital storytelling can be a solution for destigmatizing products such as women lingerie. To understand the underpinning of the various concepts, the literature of digital storytelling, stigma and stigmatization of products and women lingerie product category was carried out meticulously. Further, different theoretical frameworks were also explored to legitimize the study.

### **Digital Storytelling and the Products**

Storytelling is used as a way of developing community that comprises of brand loyalists. This community has long term relationship among the members and the brand (Lugmayr *et al.*, 2016). These relationships build the story of a product which identifies with the brand proposition. Further, the prepositions form the base of the future content as well. Subsequently, digital storytelling is a particular form of

producing digital personal narratives for a specifically defined target audience for distribution over the digital platforms (Meadows, 2003). This concept originated from the western countries. Now this dimension is being accepted globally (Lundby, 2009). Digital storytelling is being used to drive community engagement over the digital platforms (Burgess and Klæbe, 2009). This engagement helps the consumer develop their identities which they can communicate with their social circles through digital storytelling (Lambert, 2012).

Extending further, digital storytelling is considered to be an institutionalized practice. However, in the past there are changes in the content of the digital stories (Lambert, 2012). This content helps the consumers to express their strong beliefs by illustrating the transformative digital stories and relevant narratives (Hull, 2003). These digital storytelling and narratives are premised on the lives of the consumers. Their relatable stories are connected with the strong community (Lambert 2009). The strong community is primarily seen in the emerging markets such as India. Thus, digital storytelling helps the consumers of this country in comprehending their lives and relatable stories. Consumers connect these stories while they search the products through the online platforms. Unfortunately, there are no papers that are being developed on these consumers and their orientation towards the digital storytelling. The digital storytelling also helps these consumers in expressing their views and thoughts about the stigmatized products very easily. This sharing of stories through the digital platform was visible very clearly in women lingerie category as the social stigma in this category is very high in the country. Thus, the subsequent section, we will explain the stigma and stigmatization of products.

### **Stigma and Stigmatization of Products**

Historically, stigma was known as a phenomenon that degrades, differentiates and discredits the life of individuals and groups (Goffman, 1963). This concept of stigma was developed from the fields of psychology and sociology. In these fields, scholars have focused on the concept of stigma, stigmatization of groups and individuals (Jones, 1984). This research was further established to understand the attitudes towards stigmatized groups and individuals and its impact on these groups (LeBel, 2008). These studies have found that stigmatized individuals are considered to be the inferior group in the society (Petty, Fleming & White, 1999).

This orientation and meaning of stigma is closely associated with the products as well. We could identify only two papers related to product stigmatization. These papers were related to consumers who find it difficult to buy stigmatized products. The other paper focused on the marketers who find the stigmatization as a challenging scenario for selling the products. In the last decade the research on stigmatization has extended to consumer products (Bailey and Waroonska, 2014). These products are considered stigmatized where significant consumer segments associate negative emotions to the users primarily for the purchase of the product. Additionally, the stigma is considered more profound when the purchase or use of the product takes place in the public domain (Bailey and Waroonska, 2014). Further, the consumers who

buy or use the stigmatized products need to go through coping mechanism because the stigma is associated to the comprehensive process of consumption. More specifically, the stigmatization of the products results in the challenges for the marketers to sell and communicate about the product seamlessly. These difficulties are primarily faced by marketers who sell women lingerie. Especially, in countries such as India where the mindset of the consumer is conventional, it is difficult to communicate about lingerie. However, due to increase in the usage of digital platforms consumers are easily able to connect with the marketers. These marketers are also able to sell the products easily via digital platforms. This is because consumers do not have to connect with the marketers in person and discuss about the product in the physical public space. Hence, the following section will explain the scenario regarding women consumers and stigma related to women's lingerie.

### **Indian Consumer's Perspective for Lingerie**

We could only identify one paper that aimed at lingerie brand experience and in terms of Indian consumer (Singh, 2014). However, this paper has not discussed about managing the stigma related to lingerie primarily in the case of Indian women. Therefore, this section is mainly developed from the company reports and articles which focuses on Indian women consumer. The Indian consumer has a conservative mindset regarding lingerie. These consumers consider lingerie discussion in the public set up as a taboo. Due to this taboo, it is difficult for the brands to provide detailed information with comprehensive content about lingerie in the advertisement. This is because the consumers have less knowledge about these products. Further, lack of knowledge and conservative environment has led to minimal understanding about the lingerie product category even among the women consumers in the country. These women consumers are unaware of different kinds of lingerie, especially in the context of their body types. These women have a habit to hide the product and treat them as 'undergarment' which should not be discussed by anyone in their social circles.

This conservative scenario changed after the online platforms marketed the lingerie products. These online platforms helped the women to make easier choices as they made the selection of a stigmatized product without having a discussion with any person. However, the online platforms also provided the discussion forums for these women which were accepted by their social circles and peers. This acceptance was seen as the online platforms provided privacy to these individuals. This privacy was supplemented by the lingerie portals as they provided unlimited shelf space, styles and sizes for these consumers.

All these changes due to internet and digital media made it easier for the marketers to adopt ways to destigmatize the products. One of the ways that the paper proposes is digital storytelling. Therefore, to give this paper strong theoretical foundation, two set of theories were used which are explained in the subsequent section. These theories help in understanding the stigma and storytelling in the integrated format as the objective of the present investigation is about understanding

the role of digital storytelling in destigmatizing the women consumers for the lingerie products.

## **Theoretical Framework**

As discussed in previous sections of this research, providing a solution to stigmatized products with the help of digital storytelling is important for women consumers. To achieve this objective two frameworks were used: stigma and stigmatization (Link & Phelan, 2001) and storytelling (Kalid & Mahmood, 2016). The theoretical framework used to explain the stigma, describes the steps involved in the process of stigma. Different steps in this process are labeling, stereotyping, separation, status loss and discrimination (Link & Phelan, 2001). Labeling can be described as naming any entity with undesired characteristics. Further, the naming leads to stereotypical formation of the particular entity. The stereotypes over simplify the process of judgment. This generalization by easy judgments separates the stigmatized individual or group from the main stream. The separation makes the stigmatized entity feel different and inferior from others. The feeling of being inferior, changes the behavior of both the stigmatized and non-stigmatized entity. The stigmatized group feels low in self-esteem and non-stigmatized group feels superior to the others. In this way the stigmatized entity face loss in their status and feels discriminated. This differentiation between these groups leads to stigma. Hence, the study proposes stories to be a way of destigmatizing the entities.

In order to do so, the research used the phenomenon of how a story is developed. The building blocks of the story are divided into three phases: start, middle and end. In the 'start' phase of the story, describes the characters and problems faced by them. Further, in the 'middle' phase, the characters try to find out different solutions to the issues that are faced by the person. And at the 'end' of the story, the characters solve the problem and leave the audience with a learning. In this way, every story is developed and narrated.

These stories are used to explain various concepts. Consumers connect with the characters of these stories and try to learn from the solution. Taking this phenomenon forward, brands have indulged in storytelling. This helps the brand connect with their consumers effectively. Hence, storytelling is an effective solution to destigmatize the products in this research. This solution was researched in the present investigation because there are no papers that discusses about this important area and provides solution for the major issue that primarily is related with the women consumers.

Storytelling and stigmatization literature is diverse and has been studied independently under different contexts. Stigma related to people and groups has been studies in depth in the disciplines of sociology (Goffman, 1963, Jones, 1984, Petty, Fleming & White, 1999). Further, the concept of stigma has been explored in the context of market products by marketing scholars (Bailey and Waroonska, 2014; Boland and Perelli, 2015). Subsequently, storytelling has been researched extensively with in the preview of brands (Kalid & Mehmood; 2016; Herskovitz & Crystal, 2010).

However, to understand the phenomenon of storytelling as a preventive measure for stigmatization of products have not been studied in the earlier literature. Thus, this paper aims to address this identified gap and study how storytelling is a solution to destigmatize the product category.

## **Research Methodology**

A qualitative approach was used as the objective of study was exploratory in nature (Malhotra and Dash, 2010). This exploration helped us gain understanding about the role of storytelling as an effective method for destigmatizing products such as women lingerie. The research was conducted in three phases; first phase involved an inductive content analysis comprising of the study of websites and online communication of premium lingerie brands for comprehensive understanding of this domain. This phase was undertaken because there was minimal literature on content of marketing communication regarding premium lingerie. In the second phase, netnography was carried out where the online consumers' (women) responses were studied with the focus of comprehending the role of storytelling to destigmatize the product. Finally, in the third phase insights gathered from the first and second studies were used for in-depth interviews. These interviews were embedded with the projective techniques. These techniques were used to understand the sub conscious mind of the consumer.

### **Phase One: Content Analysis of Websites**

The content of leading lingerie websites was studied with the phenomenon of digital storytelling. This digital storytelling is specific to women and portrays direct stories about their products and stigma that influences their mindset. This approach of online storytelling was observed in premium lingerie brands such as Zivame, Clovia and Pretty Secrets. Further, this approach of these brands was studied by using inductive content analysis. This analysis provided us an understanding about the various categories and themes that the brands have used for the storytelling. The units of analysis were visual, text, themes, characters, colors, style of presentation, topics related to storytelling, narratives, dialogues and story boards (Malhotra and Dash, 2010).

### **Phase Two: Netnography**

After understanding the content of different premium websites, netnography was carried out to understand how consumer responded to the online storytelling content that was undertaken by the premium lingerie brands (Kozinets, 2002). Active netnography was carried out for a month, from three different premium lingerie websites. These websites were selected on the basis of their online traffic and activeness on other social media platforms such as Facebook, Twitter, YouTube and so on. All the activities that the three brands carried out on these online platforms were documented for a month. We used this approach as we posted many questions



on these websites based on the objective of the study. This gave us unique consumer insights regarding the storytelling process used by the brands.

### **Phase three: In- Depth Interviews with Projective Techniques**

In-depth interviews are a direct and unstructured way to retrieve information and allow the researcher to gain deeper insights (Malhotra and Dash, 2010). Further there is a possibility of social pressure that may lead a respondent to conform to the group (Wilson, 1996). This method allowed us to explore the connections between stories told by the brands and stigma related to the product category. Interviews helped us gain in-depth insights from these respondents who might have not provided their perspective in a group (Qu and Dumay, 2011). This is because lingerie is considered to be a private and intimate product. We made respondents comfortable to talk about lingerie in the subsequent discussion.

A total of 30 in-depth interviews were conducted in the cities of New Delhi and Mumbai. These interviews were conducted with various women from different age groups and professional backgrounds. These differences were considered for the study because the cities are diverse and have heterogeneous groups. The in-depth interviews were supplemented by the projective techniques. These techniques helped us in making the respondent comfortable to discuss about the lingerie and their shopping experience. They also facilitated in understanding the storytelling that was used by the brands and its role in making them feel comfortable about the product. Further, when respondents were unable to express their views through direct questions, this technique helped us retrieve their responses. Projective techniques are considered a nonintrusive approach to encourage open disclosure with less hesitancy, verbally less demanding and suitable to overcome emotional, language and cultural barriers (Boddy 2004; Dykens *et al.* 2007; Hutcheon 2010; Porr *et al.* 2011) which is very important for the product such as lingerie. Projective techniques are ideal for exploring new research areas or issues of a sensitive or complex nature (Levin-Rozalis 2006; Ramsey *et al.* 2004) such as lingerie and social stigma associated with the product.

In this research, we used the completion category which required respondents to complete sentences by giving one-word answers to sentences pertaining to the stigma related to the product lingerie along with storytelling carried out by the premium lingerie brands.

### **Sampling**

The in-depth interviews along with projective technique were conducted in the metropolitan cities of New Delhi and Mumbai. These cities were chosen because Mumbai and New Delhi account for more than 80% of premium apparel consumption in India. This signifies that this consumption is also relevant to the lingerie products. This is further substantiated by the higher earning capacity of the individual residing in these two cities (McKinsey, 2012). This high earning of the individual is also seen in the buying patterns of premium products in these cities. This high earning capacity

and buying patterns were specifically observed among the young women primarily for lingerie. These women have high awareness about the premium lingerie brands and would like to purchase them.

This awareness was derived by extensive use of social media platforms (Liu, Burns and Hou,2013). The extensive use of social media was observed among various types of women who had different occupations, including students, working professionals and homemakers. Therefore, we included these individuals in this study to derive in-depth insights about the product. Their demographic details are illustrated in Table 1.

**Table 1:** Demographic Details of Respondents

<b>Age Group</b>	<b>No.of Respondents</b>	<b>Occupation</b>	<b>No. of Respondents</b>
18- 25	12	Student	15
26-30	10	Working Professionals	10
31-35	8	Homemaker	5

All respondents belonged to Social Economic Class (SEC) A. The Indian Marketing Research society defines SECs on the basis of education and possession of goods. The population of SEC A1, A2 was selected as these individuals are key buyers of premium brands (BARC, 2015). They buy these products as they would like to spend and indulge themselves in these purchases. In this study, we selected those respondents who were in SEC A and who have purchased premium lingerie online in the last one year. These criteria helped us study the key objectives of the research, which was essentially about the role of storytelling to destigmatize premium lingerie product categories.

### **Protocol**

The protocol was developed based on the codes that emerged from the analysis of the online content, websites, netnography and literature review. The discussion was divided into three categories. These categories essentially focused on storytelling and its role in destigmatizing the product category of lingerie. Additionally, in different categories, there were also associated attributes that were studied along with this key dimension. The first category comprised of general discussions about premium lingerie, brands and perception regarding lingerie. The questions were associated with the stigma that surrounds the product category, how much women feel comfortable talking and discussing about the same. These questions were also related to the key influencers that affect the respondents while purchasing the products.

The second category emphasized on the communication from the brand side to tackle with the product stigma. This category was related to the promotions, campaigns, advertisements of lingerie brands, celebrity endorsements, visuals, text, narratives, dialogues that were presented online to the customers. The third category focused on the type of stories told by the brands. In this category, we studied how storytelling affected the feeling of the consumers regarding the product. The key attributes were online communication by brands, role of feedback, reviews and word of mouth (WOM) in the context of product storytelling. Finally, the consumer expectation about storytelling and stigma related to premium lingerie was also discussed.

## **Analysis**

The data collected through netnography and in-depth interviews were documented after receiving due permission from the respondents. Audio recordings of the interviews were used to develop verbatim transcripts. Finally, the notes and transcripts were analyzed to achieve the objective of the study. The triangulation analysis facilitated cross verification of the data. Triangulation facilitates the study as it strengthens the research design and provides clear prospective about the respondent (Denzin 1978; Patton 1990; De Vos 1998). Additionally, multiple methods were used to collect the data from the same sample so that comprehensive understanding of the respondents could be achieved (Whitty, Thiele and Scuffham 2012). The data derived from one method was supplemented and verified by the data retrieved from the second method (Banister, Burman, Parker, Taylor & Tindall 1994). In this study the three methods that were triangulated: content analysis of the websites, netnography and in-depth interviews. Here, the base of the study was in-depth interviews and it was supplemented by the other two methods.

More importantly the data was analyzed by thematic content analysis. This analysis allows the researcher to analyze large amounts of textual information and by systematically identifying properties, such as the maximum used keywords by locating the important structures of its communication content (Krippendorff, 2004). The thematic analysis helped us in categorizing the customer response based on the role of storytelling to destigmatize lingerie product category from all the three methods (Krippendorff, 2004).

This analysis was undertaken after integrating the transcripts and the field notes (Hirschman,1992; Rubin and Rubin, 1995). We developed different categories and themes based on the common and exclusive elements (Rubin and Rubin, 1995; Patton, 2002; Spiggle, 1994; Thompson, Locander and Pollio, 1990). The analysis of the data was done with the help of three sequential and broad phases: initial design, in course extension and full frame development (Pettigrew, 1997). Initial design is the way of coordinating the inductive and deductive logic (Singh, 2015). Further, in course extension involves selecting, integrating and operationalizing the respondent's observation (Creswell, 2010). With the help of this integration, a full framework is developed. Data was transcribed and analyzed via Butler- Kisber's (2010) two stage

thematic inquiry analytical process. The two stages of this process were open and axial coding. Subsequent to data analysis, themes and categories were derived. Hence, the following section will explain the results of the study.

**Table 2:** Data analysis: Codes, Categories and Themes emerging from the analysis

<b>Si. No.</b>	<b>Categories</b>	<b>Sub Categories</b>	<b>Themes</b>	<b>Codes</b>
1	Labeling and Stereotyping	First Phase of Story: Begin	-Societal Conservatism  -Stereotypical Thinking-High  -Dependency on Reference Group	-social pressure, negative emotions  -shame, weird, anxiety  -togetherness, discussion
2	Separation	Second Phase of Story: Middle	-Display of Confidence and Boldness with Beauty  -Self Driven Solution	-integrity, openness, positive attitude  -problem solving attitude, different thinking
3	Status Loss and Discrimination	Third Phase of Story: End	-Experiential and Non Transactional  -Introspection Leading to Happiness	-incidents, happy, achievement  -inspiration, bold, out of the box thinking

## **Result**

After the data analysis, we developed the framework (refer Figure 1) that was based on the insights and perspective of the maximum respondents. We identified that the key dimension that differentiates lingerie from the other apparels was social stigma. This is because the brands and consumers did not discuss openly about this product category. This apprehension regarding restricted the exchange of information from these stakeholders. Therefore, to develop the engagement between these stakeholders, premium lingerie brands used the storytelling approach. This storytelling was further embedded with the consumers' emotions. These emotions were projected very easily by the different characters in the various stories developed by the brands. This storytelling enabled the brand to discuss about the associated stigma in a very subtle approach. These stories were made subtle as the brands wanted to make women more comfortable about the content so that they can discuss it further. This comfort level was enhanced further by using fairytale stories. Interestingly, the content did not discuss anything about the product or the brands as the focus was to manage the stigma and make women consumer comfortable. More specifically, these stories had three categories: begin, middle and end. The begin category of the story discussed about the hardships and the problems faced by the protagonist and develop the foundation of the content. Further, the lingerie brands associated these problems with the needs of the consumers. These stories that were developed from the consumer needs lead to the labeling and stereotyping part of the stigmatization (Link & Phelan, 2001). The second category of the story is the 'middle' segment where the protagonist tries to find out different resources that could lead to the solution. These resources facilitate the consumers in taking decisions and solving the problems. These processes are encapsulated thoroughly by the brands as they provide different type of lingerie products with specific information for the divergent needs of the consumer. Link and Phelan (2001) suggested that labeling led to the separation of the stigmatized entity from the society. The last category of the story is the end. This 'end' category of the story provides nostalgic feeling to the consumers.

These associations have inspired the consumer to become liberal while discussing about de- stigmatization. In addition, this process does not make them feel discriminated. The 'end part' of the story restores the status of the consume (Link and Phelan, 2001). For example, the protagonist gets converted into spokesperson and inspires others with her story. These consumers' stories inspire other prospective consumers. More specifically, it is very important to understand the context before making the stories as they are directly associated with all the stages of stigma regarding a product. Further, the in-depth attributes of the framework will be explained by the various themes illustrated in the subsequent section.

### **Phases of Storytelling**

Every story is divided into three phases: begin, middle and end. A majority of the respondents stated that these phases were also used by the premium lingerie brands to develop their stories. In the following section, the paper has analyzed

different themes that emerged from these phases of the stories that was developed and used by the brands.

## **Begin**

'Begin' is the first phase of the story. In this part of the story, the needs and the problems faced by the protagonist is introduced. Many respondents mentioned that this feature of the stories is used by the premium lingerie brands in their storytelling. A majority of the respondents said that stigma associated with the products can be removed by fairy tale stories. This also helps as women can control their emotions related to their stigma. Further, the situation of women needs to be illustrated upfront in the 'begin' phase of the stories. There were sub themes that emerged from this stage of storytelling. These sub themes are explained clearly in the sub sections.

### *Societal Conservatism*

Our study found that the stigma associated to this apparel does not allow the individual to discuss about this category openly in the public. This is because these apparel are made for the private parts of the body. This privacy deflects discussions about the lingerie. We also found that consumers do discuss in seclusion because of the societal norms. To manage this stigma, premium lingerie brands have narrated fairy tales of Cinderella, Red Riding Hood and so on. In the begin phase of these stories, they have portrayed the societal norms and conditions. We identified through netnography that the lingerie brands have clearly used Cinderella as they have narrated, "Cinderella was bound by the rules of her step mother and the fear of rejection." This Cinderella story has close association with the women consumers as these stories narrate the effect of the rules and restrictions imposed by the society. Additionally, the narrow thinking of the society has led to close mindedness of the women. This close mindedness is specifically observed by the lingerie brands. These insights were substantiated by one of the respondents from Mumbai said, "I don't feel comfortable when my friends start discussing about lingerie and all." To summarize, societal norms and close thinking makes it difficult for the consumers to discuss about the lingerie which label it as undesired.

### *Stereotypical Thinking*

This study identified that stereotypes related to women's body parts and women's characteristics increase the issues for the premium lingerie. These stereotypes restrict the brands and the consumers from openly discussing about the products. Many respondents said that these stereotypes restrain them from discussing about their body parts in the open forums. After understanding these consumers' perspective through interviews, we identified through netnography that brands are providing better environment to the women consumers where they can openly discuss about their private body parts in public. This was illustrated by one of the lingerie brands where it was clearly stated in the video, "It is just a body part, like any other part of the body. So stop making fuss about it. It is just breast." Further, we found in our study that there are other stereotypes in the society which portray

women as a dependent individual. They are always understood as individuals who always try to seek help from their male counter parts for every issue. This situation was substantiated by one of the respondents who mentioned "Most of us have grown up listening to bedtime stories about princesses who got their perfect ending only when they met Prince Charming." Therefore, it showed that these types of stereotypes do not allow women and premium lingerie brands to open the discussion.

### *High Dependency on Reference Group*

Several respondents have revealed that reference groups have a high influence on their purchases, specifically premium lingerie brands. This reference group includes friends and family. This finding was substantiated by a respondent who said, "My mother would buy me sports bras when I was a teenager." Further, we identified through our study that reference groups have various degrees of influence on the customers. This influence was also seen in the associative reference group. This group is specifically related with the individuals who can easily influence the purchase. We found that most respondents mention this associative reference group as their friends. This was because they could openly discuss about lingerie with them. This finding is clearly demonstrated by one of the respondents who said, "Discussing with friends at college increased my knowledge about lingerie brands and influenced what I bought which had till then been limited to what my mother bought for me" Further, we also found that the consumers became more conscious about lingerie after getting married. As one 28-year-old Female from Delhi puts it, "After I got married I became more conscious of what lingerie I wore, and made it a point to purchase good expensive ones." To summarize, consumers have a high influence of the reference group on their lingerie purchase and they are always dependent on these individuals while they make the purchase.

Therefore, the above stated themes make it clear that the 'begin' part of the story addresses the labeling and stereotyping related to stigma about the product. During the start of the story, the brands address the issue by stating the problems caused due to stigma. Further, the involvement of the peer groups in the discussion helps in making the product category more desirable. Thus, the inclusion of more people helps in shattering the negative label and stereotype about the product.

### **Middle**

'Middle' is the second phase of the story. In this part of the story, the solution of the problem is explained. We found that this feature is also reflected in the storytelling carried out by the premium lingerie brands through netnography and content analysis of the websites. We also found through these methods that brands are trying to unsterotype the portrayal of women which leads to non-separation of their segment from the main stream. These portrayals also help break the stereotypes of the women consumers. We found that these stereotypes were broken by presenting women as a confident, bold and independent individual. We also observed that brands are trying to offer the solutions to the consumers through these lingerie

products. Additionally, the sub themes of this category are explained in the subsequent sections.

### *Display of Confidence and Boldness with Beauty*

We found in the study that premium lingerie brands portrayed the protagonist in their stories as strong and confident women. This insight was substantiated by the netnography that states, "She's firm, assertive and completely confident in her own skin." These brand approaches were also supported by the consumers when the interviews were undertaken. This happens because they also stated that the premium lingerie brands are those products that are created and developed for self-consumption. Many respondents also mentioned that this type of product provides them self-accomplishment and confidence. This was demonstrated by a respondent who said, "I feel bold, confident and powerful." Thus, we can state that women feel better about the premium lingerie when the social stigma is removed and they could think about this product for individual consumption.

### *Self Driven Solution*

We determine that women consumers are always dependent on others to find solutions for their problems. This thinking creates stigma among the women consumers. We found through netnography and content analysis of the brand websites that the premium lingerie brands would like to eradicate this stigma. They have tried to remove this stigma by portraying a woman protagonist who is a self-driven individual. This individual finds solutions to her problems by herself. We found that brands have changed the original story of Rapunzel (fairy tale), where the character waited for someone to come and rescue her. However, the new story created by the premium lingerie brands, has taken the opposite perspective. This perspective was created by the brands while portraying the character who finds solution for herself while she was in a castle which was like a prison. These changed perspectives were illustrated by the brand on their website as it was stated in the story, "This little damsel refused to stay in distress and she spent her time figuring out how to rappel out of the window. Why wait for someone else to come and tug at your hair when you can sashay down in style and set yourself free?" Further, in other stories, the brands have tried to change the perception about the relationship that exist between a man and woman. We found through netnography and content analysis that the brands do not want to portray as a wife or a girlfriend. They have portrayed women as an independent and an ambitious individual. In addition, the brand also illustrated that women can decide their own track and pursue the journey based on her requirements. These findings were substantiated by the brand as they mentioned, "Tiana chose the #Unroutine path instead. She realized the marketing potential of a talking frog and set up an innovative café that would have customers flocking in for the treats and the toad! Now that's what MBA colleges should be teaching!"

To summarize, brands are trying to change the stereotyped portrayal of women and the stigma that exist in the society about these individuals. They are doing it by creating and developing new stories about the women who are strong, independent



and self-confident. Lastly, they also find solutions for their issues. Thus, the finding solutions themselves make them as independent individuals. This independence gives them a strong hold in the society.

## **End**

'End' is the third and the last phase of the story. In this part of the story, the protagonist reflects upon his/her journey. In this research, the same feature was found in the storytelling technique of the premium lingerie brands. During the analysis of websites and netnography, we also found that this technique helps in celebrating the emotions of the women consumer. Further, it was noticed that women go through different emotions to destigmatize this type of women's clothing. This type of celebration is done with the help of experiential events, inspirations from others and self-satisfying journeys. Additionally, in the following section, we have explained the sub themes of the last phase of storytelling.

### *Experiential and Non Transactional*

After analyzing the data, we found out that, lingerie brands have experiential relationship with their women consumers. These brands understand that lingerie for women is just not any other product for them. There are many emotions and experiences associated with lingerie as a product. As one of the women respondent said, "I still remember that how nervous was I when for the first time I went for lingerie shopping,".

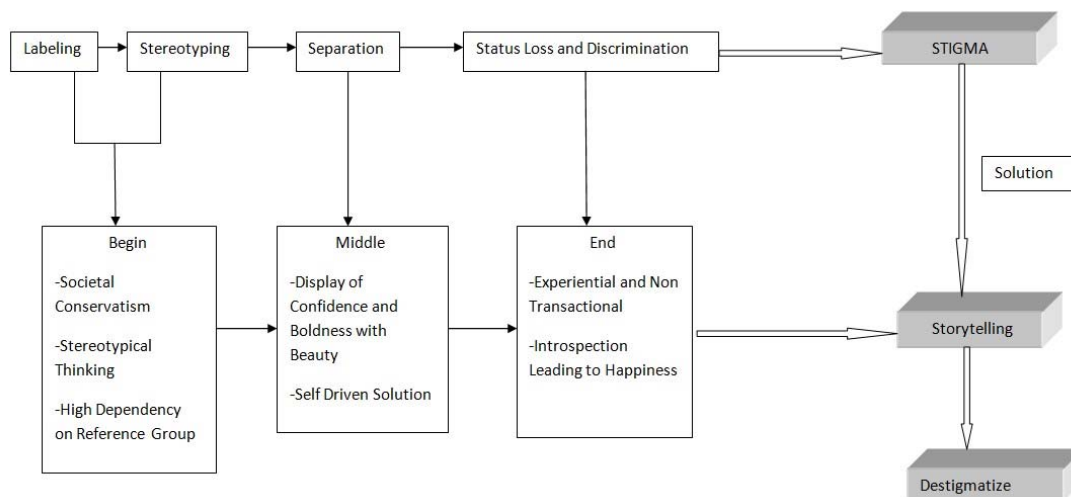
This shows how women have gone through different emotions at different point of their lives while purchasing lingerie for themselves. Due to these experiences, shopping for lingerie is never a transactional activity for the women. Hence, the marketers in their stories included the emotional journey of the women that they go through while facing the hard ships in their lives. In most of the stories told by the brands, the ending was always about the emotional achievements of the women. Further, the stories were never grounded to the materialistic achievements of the protagonist. They were more focused on the emotional journeys of the characters. Additionally, the stories talked about the decisions that the protagonist took and the choices that they make, differentiates them from others. As a woman respondent said after reading one of the stories, "I really like that the stories are such a roller coaster rides for us. How different the life becomes if we take decisions that are not taken by everyone. We learn how to dare and do things differently." These types of experiences make it easier for the consumer to connect with the stories and the products. These connections make them more comfortable to talk about their feelings and products freely. Thus, to summarize the theme, it is evident that the lingerie product category is an experiential product for the women consumers. Further, the stories help them talk about these experiences openly with others, which help in destigmatizing the product.

### *Introspection Leading to Happiness*

The study found out that, the stories told by the marketers help the women to think and introspect regarding the choices they make in their lives. These stories which mostly have women protagonist help them to introspect and see what kinds of changes are needed in their lives to achieve their goals.

To show these achievements, the marketers changed the ending of the famous story 'Princess and the Frog'. In the story, instead of kissing the frog and changing it to the prince who eventually helped her overcome her problems, the princess kept the frog with her as a pet. She further opens her own boutique store and lives her life independently. In this story she faces a lot of emotional troubles as she had to go through different problems at each stage of the business. However, she overcomes it with her intelligence and zeal. These types of stories with their twisted and unconventional ending make the reader think about their own actions. The women consumer gets inspired and sheds inhibitions. They think more about their lives and its achievements, rather than what others will think. As one of the consumer said, "I bought a blood red bra and I wore it under white colored clothes as well. I do not think twice that what will others say as one can see my bra. But I feel more confident and feel like a queen." Such kind of confidence helps the women take their own decisions and inspire others to do the same. In this way, they shed away their inhibitions and feel free. At the end, to summarize one can say that these stories about strong women who take risks in their lives help them to achieve their goals. Thus, helping the consumer realize to not to think about social taboos and buy and what they need to.

## Discussion and Implication



**Figure 1:** Storytelling a solution for stigmatized products

The major contribution of this research is the creation of a comprehensive framework based on stigmatization and storytelling. As illustrated in Figure 1, this

study demonstrates the process of storytelling and how every part of the story can manage the element of the stigma associated with the product.

As mentioned in the earlier sections of the present research, there are limited studies in the marketing literature which focuses on the stigmatized products (Bailey and Waroonska, 2014; Boland and Perelli, 2015). The literature of stigmatized products majorly focuses on the effects of the stigmas on the consumers. Further, these studies also focus on the problems that marketers face due to the social taboos related to their products or service (Boland and Perelli, 2015).

However, the current study encapsulates these areas and provides a solution for the stigmatized products to destigmatize consumers. The solution is storytelling around the products so that the consumers can relate themselves to the solutions provided by the marketers. Additionally, the study also provides the features that each stage of the story should imbibe and be managed with different elements of the stigma. The study suggests that to integrate the labeling and stereotyping, the 'begin' section of the story should discuss about the conservative nature of the society, the stereotypical thinking of the members of the society and the dependency of the consumers on their reference groups. These elements of the story help understand the scenario in which the consumer and the product survives. Further, the 'separation' stage of stigma can be answered by the 'middle' element of the story. This stage of the story should tell the ways in which one can break out from the stigmatized mindset by displaying confidence and boldness and provide self-driven solutions. Finally, the 'end' part of the story inspires the audience to take certain fruitful action in their lives so that they do not feel discriminated. In this way, a good story can be a solution to the stigma that surrounds certain products.

Further, the previous studies on stigma state the reasons that consumers feel while purchasing the stigmatized products is a "shame". Subsequently, it was also found out in the earlier studies that this shame is majorly felt when the transaction happens in public (Bailey and Waroonska, 2014). However, the current study gives a solution to these issues mentioned by the past literature. The study majorly discusses about digital stories where the transactions are not in public. Thus, this environment provides the consumers and marketers a private and safe place to openly discuss about the products. The consumers feel independent and they are able to connect with other like-minded people as well. Additionally, digital platforms provide an opportunity to the marketing managers to communicate with the consumers and narrate relevant stories around their products. Managers will also be able to understand the important elements that they can use while narrating the stories. Subsequently, the practitioners can focus on different stages of the story and how each stage can solve different issues related to stigma. On the other hand, academicians can better understand elements of stories and stigmatized products.

## Scope of Future Research

The current study is based on a qualitative exploration of concepts. However, it can be supplemented with quantitative research where the variables of the proposed framework can measure the relationships among the variables. In continuance, future studies can be done on male consumers and see how stories and stigmas work in their contexts. Further, the study can be undertaken with other stigmatized products such as condoms, sanitary napkins and so on. As the study discusses storytelling as one of the solution to stigmatized products, future research can work on other solutions. These studies would help the brand communicate effectively with the consumers and destigmatize the products. Extensions of this line of investigation can also include the offline scenario of the stigmatized products. Further, research can be undertaken to understand how marketers can use storytelling in the offline setting. Other ways of extending this line of thought is by making the study more socially oriented. The present investigation is aimed at individualistic behavior patterns. Further studies can be carried out where group behavior can be comprehended. The present study was carried out in a specific cultural context. Thus, the effect of stigma can be investigated with different cultural contexts. In conclusion, the present study has explored the concepts of stigma and storytelling rigorously and proposes that future studies can strengthen this research area very effectively.

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## References

- Asia Internet Usage Stats Facebook and 2018 Population Statistics. (2018). Retrieved from <https://www.internetworldstats.com/stats3.htm> (accessed 1 March, 2019).
- Bailey, A. A., & Waronska, A. K. (2014). Stigmatized Products: Fostering Discourse on Those "Products I Would Never be Caught Dead Buying!". *Marketing, Technology and Customer Commitment in the New Economy*, 219-225. doi:10.1007/978-3-319-11779-9\_79 .
- BARC India. (2015). BARC India's NCCS is the new SEC. Retrieved from <https://www.barcindia.co.in/resources/pdf/NCCS%20is%20the%20New%20SEC-Sept%2015.pdf>. (accessed 1 March, 2019).

- Belk, R.W. Ger, G. and Askegaard, S. (1997). Consumer Desire in Three Cultures: Results from Projective Research. *Advances in Consumer Research*, 24, pp.24-28.
- Boddy, C.R. (2004). From brand image research to teaching assessment: using a projective technique borrowed from market research to aid an understanding of teaching effectiveness. *Quality Assurance in Education*, 12 (2), 94-105.
- Banister, P., Burman, E., Parker, I., Taylor, M. and Tindall, C. (1994). *Quality methods in Psychology*. Buckingham: Open University Press.
- Broadcast Audience Research Council India. (2015). BARC India's NCCS is the new SEC. Retrieved from <https://www.barcindia.co.in/resources/pdf/NCCS%20is%20the%20New%20SEC-Sept%2015.pdf> (accessed 1 March, 2019).
- Butler-Kisber, L. (2010). *Qualitative Inquiry*. London: Sage.
- Burgess, J., Klæbe, H., Hartley, J., & McWilliam, K. (2009). Digital Storytelling as Participatory Public History in Australia. In *Story Circle: Digital Storytelling around the World* (pp. 155-156). Wiley-Blackwell.
- Chrisler, J. (2011). Leaks, Lumps, and Lines. *Psychology of Women Quarterly*, 35(2), 202-214. doi: 10.1177/0361684310397698
- Creswell, J. (2010). Mapping the developing landscape of mixed methods research. In A. Tashakkori & C. Teddlie (Eds.), *Sage Handbook of Mixed Methods in Social & Behavioral Research* (pp. 45-58). California: Sage
- Darwan, A., Boland, R., Perelli, S., Edm, N., & King, K. (2015). The impact of product stigma on consumer behavior: The effects of self concept and attitudes. Western Reserve University.
- Denzin, N.K. (1978) *The Research Act: A Theoretical Introduction to Sociological Methods*. New York: McGraw-Hill.
- De Vos, A.S. (1998). *Research at Grass Root*. Pretoria: Van Schaik
- DeSouza, E., Paludi, C., & Paludi, M. (2010). *Praeger Handbook on Understanding and Preventing Workplace Discrimination* (pp. 105-132). Santa Barbara, Calif.: Praeger.
- Dykens, E. Schwenk, K. Maxwell, M. and Myatt, B. (2007). The Sentence Completion and Three Wishes tasks: Windows into the inner lives of people with intellectual disabilities. *Journal of Intellectual Disability Research*, 51 (8), 588-597
- Goffman, E. (1963). *Stigma*. Alexandria, VA: Alexander Street Press.
- Herskovitz, S., & Crystal, M. (2010). The essential brand persona: storytelling and branding. *Journal of Business Strategy*, 31(3), 21-28. doi: 10.1108/02756661011036673

- Hirschman, E. (1992). The Consciousness of Addiction: Toward a General Theory of Compulsive Consumption. *Journal of Consumer Research*, 19(2), 155. doi: 10.1086/209294
- Hull, G. (2003). At last: Youth culture and digital media: New literacies for new times. *Research In The Teaching of English*, 38(2). doi: <https://www.jstor.org/stable/40171638> (accessed 1 March, 2019).
- Hutcheon, D. (2010). A Case Study Using TAT Projective Interpretation with a Korean Client to Influence Disclosure in Therapy. *American Psychotherapy*, (1), 14- 21
- Jones, E. (1984). Social stigma. New York: W.H. Freeman.
- Kaare, B. (2012). The Self and the Institution. *Nordicom Review*, 33(2), 17-26. doi: 10.2478/nor-2013-0011
- Kalid, K. S., & Mahmood, A. K. (2016). The development of a storytelling process framework to support knowledge management process. *Journal of Theoretical and Applied Information Technology*, 90(1), 12-22. doi:10.1109/icriis.2011.6125697
- Krippendorff, Klaus. (2004). *Content Analysis: An Introduction to Its Methodology* (2nd ed, pp. 413). Thousand Oaks, CA: Sage
- Kozinets, R. (2002). The Field behind the Screen: Using Netnography for Marketing Research in Online Communities. *Journal of Marketing Research*, 39(1), 61-72. doi: 10.1509/jmkr.39.1.61.18935
- Lambert, J. (2009). Where it all started. In J. Hartley & K. McWilliam (Eds), *Story Circle: Digital Storytelling around the World* (1st ed.).
- Lambert, J. (2012). *Digital storytelling (7th ed.)*. New York: Routledge.
- Levin-Rozalis, M. (2006). Using projective techniques in the evaluation of groups for children of rehabilitating drug addicts. *Issues in Mental Health Nursing*, 27 (5), 519- 535.
- LeBel, T. (2008). Perceptions of and Responses to Stigma. *Sociology Compass*, 2(2), 409-432. doi: 10.1111/j.1751-9020.2007.00081.x
- Link, B. G. and Phelan, J. C. (2001). Conceptualizing stigma. *Annual Review of Sociology*, 27 (1):363-385.
- Liu, X., Burns, A., & Hou, Y. (2013). Comparing online and in-store shopping behavior towards luxury goods. *International Journal of Retail & Distribution Management*, 41(11/12), 885-900. doi: 10.1108/ijrdm-01-2013-0018
- Lugmayr, A., Sutinen, E., Suhonen, J., Sedano, C., Hlavacs, H., & Montero, C. (2016). Serious storytelling - a first definition and review. *Multimedia Tools and Applications*, 76(14),15707-15733. doi: 10.1007/s11042-016-3865-5

- Lundby, K. (2009). The Matrices of Digital Storytelling. In J. Hartley & K. McWilliam (Eds.), *Story Circle: Digital Storytelling around the World*. Blackwell Publishing.
- Malhotra, N.K. and Dash, S. (2010), *Marketing Research* (pp.137-151). New Delhi: Pearson.
- Meadows, D. (2003). Digital Storytelling: Research-Based Practice in New Media. *Visual Communication*, 2(2), 189-193. doi: 10.1177/1470357203002002004
- McKinsey and Company. (2012). Urban World: Cities and the Rise of the Consuming Class. Retrieved from [https://www.mckinsey.com/~media/McKinsey/Featured%20Insights/Urbanization/Urban%20world%20Cities%20and%20the%20rise%20of%20the%20consuming%20class/MGI\\_Urban\\_world\\_Rise\\_of\\_the\\_consuming\\_class\\_Full\\_report.ashx](https://www.mckinsey.com/~media/McKinsey/Featured%20Insights/Urbanization/Urban%20world%20Cities%20and%20the%20rise%20of%20the%20consuming%20class/MGI_Urban_world_Rise_of_the_consuming_class_Full_report.ashx) (accessed 1 March, 2019).
- Ochs, E., Taylor, C., Rudolph, D., & Smith, R. (1992). Storytelling as a theory-building activity. *Discourse Processes*, 15(1), 37-72. doi: 10.1080/01638539209544801
- Patton, M. (1990). *Qualitative Research & Evaluation Methods (2nd Ed.)*. Newbury Park: Sage.
- Patton, M. (2002). Two Decades of Developments in Qualitative Inquiry. *Qualitative Social Work: Research and Practice*, 1(3), 261-283. doi: 10.1177/1473325002001003636
- Pettigrew, T. (1997). Generalized intergroup contact effects on prejudice. *Personality and Social Psychology Bulletin*, 23(2), 173-185. doi: 10.1177/0146167297232006
- Pera, R., & Viglia, G. (2016). Exploring how video digital storytelling builds relationship experiences. *Psychology & Marketing*, 33(12), 1142-1150. doi: 10.1002/mar.20951
- Petty, R., Fleming, M., & White, P. (1999). Stigmatized sources and persuasion: Prejudice as a determinant of argument scrutiny. *Journal of Personality and Social Psychology*, 76(1), 19-34. doi: 10.1037/0022-3514.76.1.19
- Porr, C., Mayan, M., Graffigna, G., Wall, S., & Vieira, E. R. (2011). The evocative power of projective techniques for the elicitation of meaning. *International Journal of Qualitative Methods*, 10(1), 30-41.
- Qu, S., & Dumay, J. (2011). The qualitative research interview. *Qualitative Research in Accounting & Management*, 8(3), 238-264. doi: 10.1108/11766091111162070
- Ramsey, E. Ibbotson, P. Bell, J. and Brendan, G. (2004). A projective perspective of international "e" -services. *Qualitative Market Research*, 7 (1), 34-47
- Rubin, H., & Rubin, I. (2012). *Qualitative Interviewing*. Thousand Oaks: SAGE.

- Singh, N. (2014). Lingerie brand experience study in the Pune market. *International Journal of Business and Administration Research Review*, 1(5), 70-84.
- Singh, K. (2015). Creating Your Own Qualitative Research Approach: Selecting, Integrating and Operationalizing Philosophy, Methodology and Methods. *Vision: The Journal of Business Perspective*, 19(2), 132-146. doi: 10.1177/0972262915575657
- Spiggle, S. (1994). Analysis and Interpretation of Qualitative Data in Consumer Research. *Journal of Consumer Research*, 21(3), 491. doi: 10.1086/209413
- Thompson, C., Locander, W., & Pollio, H. (1990). The Lived Meaning of Free Choice: An Existential-Phenomenological Description of Everyday Consumer Experiences of Contemporary Married Women. *Journal of Consumer Research*, 17(3), 346. doi:10.1086/208562
- Value of the women's innerwear market across India in 2010, a. (2018). India - women's intimate wear market size 2020 | Statista. Retrieved from <https://www.statista.com/statistics/747938/women-intimate-wear-market-size-india/> (accessed 1 March, 2019).
- Wilson, R., & Creswell, J. (1996). Research Design: Qualitative and Quantitative Approaches. *Journal of Marketing Research*, 33(2), 252. doi: 10.2307/3152153
- Woodside, A. (2010). Brand-consumer storytelling theory and research: Introduction to a Psychology & Marketing special issue. *Psychology and Marketing*, 27(6), 531-540. doi:10.1002/mar.20342
- Woodside, A., Sood, S., & Miller, K. (2008). When consumers and brands talk: Storytelling theory and research in psychology and marketing. *Psychology and Marketing*, 25(2), 97-145. doi: 10.1002/mar.20203
- World Internet Users Statistics and 2018 World Population Stats. (2018). Retrieved from <https://www.internetworldstats.com/stats.htm> (accessed 1 March 2019)
- Whitty, J., Rundle-Thiele, S., & Scuffham, P. (2012). Insights from Triangulation of Two Purchase Choice Elicitation Methods to Predict Social Decision Making in Healthcare. *Applied Health Economics and Health Policy*, 10(2), 113-126. doi:10.2165/11597100-000000000-00000



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# The Evolving B2B E-Commerce and Supply Chain Management: A Chronological Mémoire

Richard W. Monroe  
Paul T. Barrett

## *Abstract*

*Purpose – B2B e-commerce in the U.S. has grown substantially in the last two decades. This study aims to describe that growth and explore factors that contribute to the magnitude and timing of growth.*

*Method – Sixteen years of historical data is analysed to quantify the growth rate in B2B e-commerce in the U.S. A literature review guides the discussion of factors contributing to the growth.*

*Findings – For the period from 2000 to 2015, B2B e-commerce in the U.S. grew by an average rate of more than 10 percent year-over-year. The growth gained momentum in the period from 2003 through 2005 after a slow start in the prior years.*

*Limitations – The study analyses aggregated data for the entire U.S. manufacturing sector which limits the ability to explore those manufacturing industry sectors that may be leaders or laggards.*

*Implications – The study suggests that major contributing factors are systems integration and the stage within a maturity model for the company working towards integration. Managers should set reasonable goals and timelines based on project complexity and the organisation's maturity level for systems integration.*

*Originality – Both theory and practice are informed by examining the growth of B2B e-commerce for a sixteen-year period. Consequently, this study provides an historical view for the evolution of B2B e-commerce and the maturation of related information systems and supply chain management processes in the U.S. manufacturing sector.*

**Keywords:** e-commerce, technology systems, systems integration, maturity model, supply chain integration

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## Introduction

Over the last two decades, businesses have witnessed significant digitalisation of information sharing with customers and suppliers. In addition to information sharing, electronic marketplaces and a host of electronic transactions have become commonplace, albeit not without its challenges (Albrecht, Dean & Hanson, 2005). Business-to-business (B2B) e-commerce is the prime example where digital technology has had a profound effect on business processes. E-commerce, by a very basic definition, is “conducting business transactions with suppliers and customers electronically” (Guinipero & Sawchuk, 2000). Another fundamental description defines e-commerce as “the use of the Internet to facilitate, execute, and process business transactions” (DeLone & McLean, 2004).

Businesses have implemented these new digital technologies for a variety of reasons. Motivations include replacing outdated legacy systems, avoiding the largely exaggerated Y2K catastrophe and genuinely seeking to improve both internal and external business processes. Saving money through cost reductions is implicit in these motivations. As Zhu *et al.* (2017) point out, early adopters of B2B e-commerce have established aggressive investment policies for updating technology platforms as a routine. With that strategy came an advantage the researchers referred to as switching costs, costs that provide returns on investment related to higher quality technology performance (Zhu *et al.*, 2017). However, while late adopters of B2B have typically experienced somewhat lower initial information technology (IT) costs than early adopters, late adopters tend to switch technology only when the IT costs fall significantly (Zhu *et al.*, 2017). In general, in exchange for the substantial investments to acquire these technologies, a long list of benefits is promised by system developers and expected by system users. The issue became the timing of those benefits which continues to be a major concern today.

In the early 2000s, organizations had made some progress on their internal integration through information technology (IT) initiatives, especially enterprise systems (ES) (Davenport, 2000). Those that had achieved some measure of success with internal integration were turning their focus externally to the supply chain (Davenport & Brooks, 2004). From the early successes, it

became evident that the supply chain, with the heavy emphasis on business transactions and reliance on information, offered considerable opportunities for lower inventory investments and reduced working capital (Davenport & Brooks, 2004). Using IT to enhance supply chain performance also leads to higher functioning, stronger relationships with suppliers and customers (Davenport & Brooks, 2004). Hazen and Byrd (2012) caution that adopting “off-the-shelf” logistics information technology (LIT) is not sufficient for gaining competitive advantage. They suggest that LIT investments must be combined with other relevant and complementary resources to gain company-wide synergies that lead to superior supply chain performance (Hazen & Byrd, 2012).

There was limited progress with B2B e-commerce integration into supply chain processes in the 2000 to 2001 timeframe. As evidence, Remko van Hoek (2001) called for supply chain leaders “to make the supply chain dimension of e-business a reality,” because it was “largely neglected and managed poorly” and “virtually non-existing” (van Hoek, 2001). By 2002, however, progress was mounting, as Handfield and Nichols (2002) suggested that technology change was happening at a much faster rate. Specifically, e-procurement had begun to impact supply chain integration but the authors believed that the progress at that point was merely “scratching the surface” (Handfield & Nichols, 2002).

This study undertakes an historical and longitudinal look at the growth in business-to-business (B2B) e-commerce. This includes an investigation of whether B2B e-commerce has grown at the same rate as overall business activity has grown, and what these growth rate comparisons might inform us about the future growth trend of B2B. An additional analysis focuses on the integration of the different systems that strategically and operationally link the many interrelated business processes in the supply chain. An enhanced understanding of these interconnected systems can yield an enterprise view of what may lie ahead for B2B and supply chain management.

## **E-Commerce Statistics**

An annual report published by the U.S. Department of Commerce, Economics and Statistics Administration, and the U.S. Census Bureau is known as “E-Stats” (U.S. Census Bureau, 2017). The statistics contained in “E-Stats” are actually taken from five different surveys which focus on the various sectors of the economy. For the Manufacturing sector, two different surveys are utilized: the Economic Census – Manufacturing and the Annual Survey of Manufactures (ASM) (U.S. Census Bureau, 2017). The ASM is a survey which collects a wide range of data from more than 50,000 manufacturing plants in the United States (U.S. Census Bureau, 2017).

## **E-Commerce Growth**

E-commerce accounted for 46 percent of the Total Value of Shipments by manufacturers and wholesale merchandisers in 2010 (U.S. Census Bureau, 2012). By 2015, the e-commerce share was more than 63 percent of the Total Value of Shipments for manufacturers (U.S. Census Bureau, 2017). This compares with an 18 percent share of the Total Value of Shipments in 2001 (U.S. Census Bureau, 2010; 2012). The growth of e-commerce as a larger share of the Total Value of Shipments is evident and meaningful when comparing 2015 data to 2001 data (U.S. Census Bureau, 2017).

As a reference, a comparison of business-to-consumer (B2C) e-commerce for retail with B2B e-commerce is provided. The most recent statistics for B2C and B2B are shown in Table 1:

**Table 1:** B2C and B2B Comparison for U.S.

	<b>2015 for B2C (retail)</b>	<b>2015 for B2B (manufacturing)</b>
Year/Year Growth Rate	Approx. 13%	Approx. 10%
Percent of Total	Approx. 7%	Approx. 63%
Total Dollar Amount	\$ 340,164,000,000	\$3,495,326,000,000

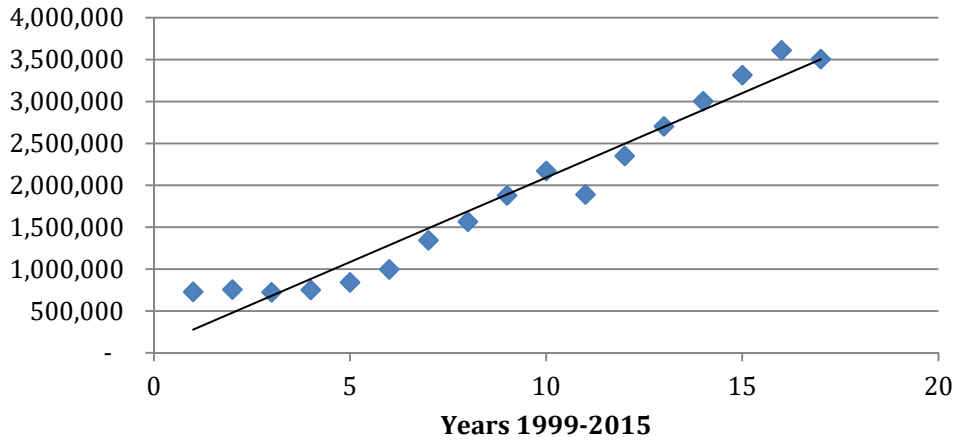
**Source:** U.S. Census Bureau (2017), [www.census.gov/estats](http://www.census.gov/estats)

From Table 1, there is a relatively small difference in the Growth Rate for B2C and B2B. A big difference can be seen in the Percent of Total with B2B outpacing B2C by a wide margin with 63% versus roughly 7%. This means that manufacturing has converted a greater volume of transactions to e-commerce compared to the volume of e-commerce for retail. The Total Dollar Amount also highlights a huge disparity with B2B accounting for almost \$3.5 trillion while B2C accounts for \$340 billion – a tenfold difference. The results of this comparison for Percent of Total and Total Dollar Amount clearly show the significance of B2B and the reason for investigating e-commerce in the manufacturing sector further.

A graph showing the overall trend of B2B e-commerce for the Manufacturing sector can be seen in Figure 1. The early years start from approximately three-quarters of a trillion dollars and gradually move to a sustained period of double-digit growth bringing the total for B2B to approximately \$3.5 trillion in recent years.

## Total Shipments for Manufacturing B2B E-Commerce for 1999-2015

in millions of dollars



**Figure 1.** Total Value of Manufacturing E-commerce (E-Shipments) for U.S.

Total Manufacturing Shipments and Total E-Commerce statistics were further evaluated for sixteen years from 2000 through 2015. The data for 1999 was used to calculate the percent change from 1999 to 2000. Year-over-year growth percentages were calculated for both the Total Shipments and the Total E-Commerce and can be seen in Table 2. The mean growth rate for Total Manufacturing Shipments was 2.308% while the mean growth rate for Total Manufacturing E-Commerce (or E-Shipments) was 10.901% for the sixteen-year period (see Table 2).

**Table 2.** E-Commerce Growth and Total Manufacturing Growth for 2000-2015 (year over year percent)

	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15
Total Mfg Shipments	4.4	-5.7	-1.3	2.4	7.3	10.1	5.8	6.4	2.4	-19	11.0	11.7	4.7	1.3	1.3	-5.8
Total E-Shipments	3.6	-4.2	3.8	12.1	18.2	34.9	16.6	19.9	15.5	-13	24.3	15.0	11.1	10.4	8.9	-2.9

A logical conclusion might be that B2B e-commerce has grown primarily as a result of the overall growth of the U.S. economy in the last two decades. On the other hand, the alternative would be that there are factors other than overall economic growth that are contributing to the growth of B2B e-

commerce. To answer that question and statistically assess whether there is a significant difference in the mean growth rates, the following Hypotheses were evaluated:

$$H_0 : \mu_1 = \mu_2$$

$$H_1 : \mu_1 \neq \mu_2$$

The null hypothesis suggests that Total Manufacturing Shipments and Total E-Commerce Manufacturing Shipments (or E-Shipments) have grown at the same average rate for the sixteen-year period or in other words, the two means are equal. The alternative hypothesis makes the opposite statement, that the mean growth rates are not the same. Table 3 contains the results for the t-test:

**Table 3.** Difference in the Means t-test Results

	<b>Total Manufacturing Shipments</b>	<b>Total Manufacturing E-Commerce</b>
Mean	0.02308	0.10901
Variance	0.005957	0.013685
Observations	16	16
Pearson Correlation	0.879321442	
Hypothesized Mean Difference	0	
df	15	
t Stat	-5.60308	
P(T≤t) two-tail	0.0000503643	
t Critical two-tail	2.1314495	

Comparing the t-statistic with the critical t, the null hypothesis is rejected in favor of the alternative hypothesis. From the P-value, the t-test results are significant at the 0.05 level as established for the hypothesis test. Extending the interpretation of the results, it can be inferred that other factors or dynamics are contributing to the growth of e-commerce, not just the overall economic growth as seen in the growth in Total Manufacturing Shipments.

Such factors can then be investigated to help explain the substantial growth in B2B e-commerce over the sixteen-year period under analysis. In the following sections, several significant factors are discussed that have contributed to the growth of e-commerce and also to the timing of that growth.

### **Integration of Multiple Systems**

To remain competitive and to improve supply chain performance, companies formulate and implement a variety of supply chain strategies. Supply chain integration includes a broad range of supply chain strategies that focus on improving cooperation and coordination with other organisations in the core company's supply chain (Lee & Whang, 2001).

G.C. Stevens (1989) began the discussion about supply chain integration in one of the earliest publications about supply chain management. He proposed that a range of resources need to be coordinated and harmonised as a complete system in order to achieve an integrated supply chain (Stevens, 1989). This statement is an indication of the complexity encountered when working towards the integration of multiple systems and multiple functions that must be synchronized for effective supply chain management.

Lee and Whang (2001, p. 2) assert that "information technology, and in particular, the Internet, play a key role in furthering the goals of supply chain integration. While the most visible manifestation of the Internet has been in the emergence of electronic commerce as a new retail channel, it is likely that the Internet will have an even more profound impact on business-to-business interaction, especially in the area of supply chain integration." IT (information technology) integration has also been described as "an enabling mechanism that positively impacts supply chain flexibility and supply chain agility" (Swafford, Ghosh & Murthy, 2008). The authors further describe their view of integration as a "domino effect" where IT integration "enables a firm to tap its supply chain flexibility which in turn results in higher supply chain agility and ultimately higher competitive business performance" (Swafford, Ghosh & Murthy, 2008). From this perspective, IT integration has a direct impact on responsiveness to customers. This is a factor that is a fundamental objective of high level customer satisfaction that ultimately drives e-commerce sustainment.

Other research has shown a lack of substantial progress for IT-enabled supply chain effectiveness. For example, Singh, Lai and Cheng (2007) quoted a previous study which reported that less than 20% of companies surveyed perceived that SCT [supply chain technology] had provided an acceptable rate of return on the investment (Singh, Lai & Cheng, 2007). The authors suggest that the lack of success might be attributed to "a lack of alignment between SCT and organisational processes" (Singh, Lai & Cheng, 2007).

As mentioned above, the Internet has become the main technology that makes e-commerce possible. Implementing new e-commerce platforms and



other Internet-based applications require significant investments of time and money for large corporations. The following sections delve into the integration of multiple systems and how maturity models are related to these systems for different environments. First, the various systems involved are described.

### **Systems for the Growth of E-Commerce**

Success of any strategy depends on alignment of any number of associated factors and compatible tactical actions. Deployment of the latest information technologies represent such a strategy and requires carefully calibrated alignment of other technology applications where interdependencies exist.

In the late 1990s, as the new century approached, many corporations concentrated their efforts on a variety of technology updates including: enterprise resource planning (ERP), e-procurement, customer relationship management (CRM), supplier relationship management (SRM) and e-commerce. Among those technologies, e-procurement and e-commerce are mirror images of the same digital business transaction (Johnson and Whang, 2002). This corresponds with a similar description of sales and purchasing being mirror images, nominally seen as opposite sides of the desk, for traditional business transactions.

Claycomb, Iyer and Germain (2005) developed and tested a model of B2B e-commerce. Their discussion also addressed the differences of B2B as a “selling technology” or as a “purchasing technology” (Claycomb, Iyer & Germain, 2005). The list of factors in their model that were significant predictors of B2B use included but were not limited to:

- B2B compatibility with current systems
- Cooperative norms with customers
- Size (of company)
- Technocratic specialization (Claycomb, Iyer & Germain, 2005).

Gunasekaran, Marri, McGaughey, and Nebhwani (2002) discussed the e-commerce impact in eight different areas related to Operations Management:

- Marketing
- Purchasing
- Design
- Production
- Sales and Distribution
- Human Resources Management
- Warehousing
- Supplier Development.

Clearly, the impact is viewed as being pervasive throughout all aspects of Operations Management and similar expectations apply for supply chain activities as well.

In another study, Bendoly and Kaefer (2004) found support for their hypothesis that B2B e-commerce initiatives would be more successful when following the successful implementation of ERP systems. This finding is consistent with the "Process re-engineering" factor from Ehie and Madsen (2005) because successful ERP implementations often involve redesign of the process which in turn will make it easier to apply a B2B technology to that process. These assertions are also consistent with the factor identified as "B2B compatibility with current systems" as described by Claycomb, Iyer and Germain (2005). Bendoly and Kaefer (2004) focused very specifically on transactional efficiencies (TE) as the primary benefits of B2B e-commerce. They utilize ten TE dimensions in their survey instrument. Each dimension involved saving time, saving money or improving productivity in a given functional area. The ten dimensions were ultimately extracted as four factors based on the highest factor loadings:

- Communications
- System development
- Personnel
- Capital (Bendoly & Kaefer, 2004).

Along with the multiple systems involved, a new wrinkle has been added to the discussion in the form of cyber security. In fact, researchers have begun to make clear impact statements that organisations of all types are often underinvesting in critical cyber security (Gordon *et al.*, 2015, Fielder, *et al.*, 2016) with potential devastating losses looming. Zafar and Ko (2016) suggested that the rampant information security threats have made the value of the chief technology officer or chief information officer increase significantly for organisations needing to protect their supply chains. The Internet has become the main technology that fuels e-commerce, but significant investments of time and money are required to protect the viability of these systems.

This means that the multiple systems that enable e-procurement and e-commerce need to be successfully integrated in order to grow the volume and value of transactions processed electronically. If ERP is added to the mix that means that three different systems must be integrated which adds to the complexity. As indicated by the research discussion above, successful ERP implementation should precede the implementation of other e-commerce technologies. Attempting to implement multiple systems simultaneously may present significant challenges to the firms that depend on effective functioning of those systems.

## **Maturity Models**

The concept of “maturity model” is primarily attributed to the Software Engineering Institute at Carnegie Mellon University dating back to the 1980s (Larson & Gray, 2018). The Capability Maturity Model (CMM) is intended to evaluate an organization’s level of evolution for software project management and the use of best practices for software development projects (Larson & Gray, 2018). Other maturity models have been developed for environments that share some of the common elements of project management but differ significantly from software development. The Project Management Institute introduced their own model in the 1990s and then a second revision of their maturity model in 2004 that is applicable to a broader range of projects rather than software development (Larson & Gray, 2018).

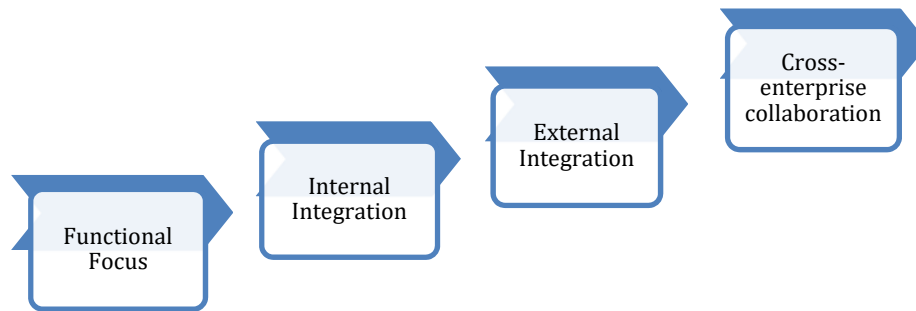
Holland and Light (2001) proposed a stage maturity model that focused specifically on the different levels of adjusting to ERP systems. The three stages begin by continuing to manage with existing legacy systems as the ERP project is initiated. The second stage is notable because the ERP implementation is complete and the capabilities of ERP are beginning to show some reasonable level of effectiveness. In the third stage, ERP has become “normalized” throughout the organization (Holland & Light, 2001). Strategic value can then be derived in the third stage through other extensions of ERP such as “customer relationship management, knowledge management and supply chain planning” (Holland & Light, 2001).

Consulting companies have also made significant contributions based on a firm’s actual experiences with a large number of clients. PRTM proposed the supply chain maturity model which consisted of four different levels: Functional Focus, Internal Integration, External Integration and Cross-Enterprise Collaboration (PRTM, 2003).

BearingPoint applied the maturity model concept to business processes and utilized a five-stage model very similar to the CMM (Fisher, 2004). The five states of process maturity for the business process maturity model are: siloed, tactically integrated, process driven, optimized enterprise and intelligent operating network (Fisher, 2004). Notably, the authors emphasize that progressing from one state to the next state is not a simple “linear path” and that many “hurdles” must be overcome to reach the next level (Fisher, 2004). De Bruin and Rosemann (2005) and Rosemann and vom Brocke (2010) extended and built upon the work by Fisher and other models that are business process oriented.

Lockamy and McCormack (2004) looked at supply chain maturity through the lens of business process maturity since the main functions in supply chain management are in fact business processes. Their model is similar to the CMM and includes the following five levels from low maturity to high maturity: ad hoc, defined, linked, integrated and extended.

From the wide spectrum of maturity models, we prefer the one proposed by PRTM (2003) as it matches our perspective very closely. It also matches the integration process that is described in the seminal work by Johnson and Whang (2002). The four different levels of the model make the direct connection between maturity level and integration. Figure 2 is an adapted version of the PRTM model.



**Figure 2.** Four Stages of Supply Chain and Systems Maturity Model

**Note:** Adapted from PRTM (2003); Johnson & Whang (2002)

The first stage is “Functional Focus” which consists of the very basic use of newly implemented technologies. Relative to the future stages, this stage is very immature. The second stage is “Internal Integration” which means that maturity has improved but only inside the focal company. Integration within the company means that communication, cooperation and information sharing has improved substantially compared to the Function Focus level. At the third stage, “External Integration” is now the focus. Drawing upon the success with Internal Integration, the company now extends the initiative outward into the supply chain. Customers and suppliers will be induced to work with the focal company to integrate systems and business processes. The fourth stage, “Cross-enterprise collaboration,” represents the ultimate goal in integration, moving beyond the fundamental “External Integration” to engage suppliers and customers in a manner that suggests that there is no boundary separating the central company and the supply chain partners. From the discussion, a gradual progression of an organization’s maturity in systems integration is evident. Instant integration is not possible.

If we refer back to Table 2, we notice that the largest year-over-year increase occurred from 2004 to 2005 for E-Shipments in the Manufacturing sector at 34.9%. This is the largest single year increase in E-Shipments by a wide margin. From the maturity model perspective, this significant increase suggests that strategic alignment and the maturity of multiple systems had begun to gain traction in 2003 and 2004 and then surged ahead in 2005.

By the same logic, the lackluster performance for 1999, 2000, 2001 and 2002 can be partially attributed to a lack of maturity in systems integration. In particular, those companies with a need to integrate two or more systems encountered many setbacks and found the systems integration to be more challenging than expected.

## **Beyond 2005**

Gartner conducted a Survey of CIOs which was published in January 2005 and the number one priority cited by CIOs was Business Process Improvement (Gartner, 2005). This indicates that business processes that were being designed into the technology systems could be further improved. As with any process, there is always room for improvement.

While 2005 wins the medal for the highest growth percentage for e-commerce, the growth of e-commerce did not plateau from that point onward. Seven out of ten years saw double-digit percentage increases in e-commerce from 2006 through 2015. Despite the economic downturn in 2009 with a setback of nearly -13% for e-commerce and another setback of -2.9% in 2015, e-commerce growth averaged 10.6% per year during the period from 2006 through 2015. Total Manufacturing Shipments grew at a rate of only 1.97% during those same years. It is also notable that the decline in e-commerce in 2009 and 2015 was less severe than the decline in Total Manufacturing Shipments for those years.

The continued double-digit growth is partially explained by the business process improvement focus as identified by the CIOs in Gartner's survey (Gartner, 2005). Late starters also translated to later maturity and later integration for some companies and some industries. Other companies experienced difficulties or very modest growth prior to 2005 and then began to gain momentum with e-commerce during the subsequent period from 2006 onward.

## **Company Examples**

This study has relied on aggregated data for the U.S. manufacturing sector to evaluate the growth of e-commerce. To provide further confirming evidence, a brief discussion of company examples follows. General Electric (GE), Dow Chemical, and Cisco Systems will serve as snapshots of specific company e-commerce initiatives during the timeframe of our analysis.

GE Polymerland is a plastic resins operation which became a GE division after it was acquired from Borg-Warner Chemicals in 1988 (Handfield & Nichols, 2002). GE Polymerland entered the e-commerce age with their site launch in 1997 and is hailed as one of the few early successes by multiple accounts (Handfield & Nichols, 2002; Kurtzman & Rifkin, 2001). From 1999 to

2000, the division increased e-commerce sales by “twelfefold” and reached sales of \$1.2 billion in 2000 which also amounted to 25% of GE’s total sales for resins (Handfield & Nichols, 2002). One key factor for the success is noted as the involvement of long-term, existing customers when GE planned the e-commerce site (Handfield & Nichols, 2002).

The story of Dow Chemical is another example of focusing on the customer. The e-commerce initiatives at Dow began with the planning of the “Customer Interface Initiative” as publicised in 1999 (Dow Press Release, 1999). Dow selected Ariba as the provider to implement their B2B infrastructure. They announced plans to invest \$100 million in e-commerce programs in 2000 (Dow Press Release, 2000) and subsequently signed a five-year deal with IBM to support all of the Dow Chemical e-commerce systems (Dow Press Release, 2001). From the Dow Customer Service Solutions Fast Facts, the company processed approximately “3 million order items last year with a 98.2% accuracy rate” and “eBusiness services enable the automation of close to 20% of our orders and invoices – providing almost 5,000 customers globally with 24/7 web access to their order and invoice details” (Dow Customer Service Solutions, 2011).

In the case of Cisco Systems, the e-commerce narrative tells the story of a recovery from a supply chain disaster. In 2000, distorted information in the company’s internal systems led Cisco to expand capacity, hire additional workers and place massive orders with their key suppliers (Handfield & Nichols, 2002). The internal planning information did not match what was happening in the marketplace and in fact demand data was distorted because customers had been double and triple ordering Cisco products in an effort to get those products despite waiting two or three months for the most popular Cisco items (Handfield & Nichols, 2002). Ultimately in 2001, had to write off \$2.5 billion in excess inventory and announced a company-wide layoff of more than 8,500 employees (Handfield & Nichols, 2002). Subsequently, Cisco took control of their supply chain and did so through extensive use of technology. Cisco’s efforts are viewed as an outstanding example of “business transformation ... using Internet technology to integrate its core processes and culture.” The following list highlights some of the results that indicate Cisco’s leadership in supply chain management and their ability to leverage the Internet:

- “90 percent of orders [are] taken online.
- Monthly online sales exceed \$1 billion.
- 82 percent of support calls [are] now resolved over the Internet.
- Customer satisfaction has increased significantly” (Schroeder, 2008).

These company examples provide a description of the great potential benefits that can be derived from e-commerce and successful supply chain system integration. The examples also suggest the need to consider the systems integration and maturity model to guide company efforts. These are just three individual companies or divisions out of many thousands making the transition to B2B e-commerce. From the growth percentages of the aggregated data for e-commerce, we can infer that thousands of other companies have achieved similar positive results in the long-run with their e-commerce initiatives.

## **Discussion**

Based on the results from this study, a prescriptive recommendation emerges that can guide the actions of supply chain managers and information systems managers. Requisite e-commerce, e-procurement and ERP are not the patent relief for all corporate challenges. Managers should strive to set reasonable expectations and timelines based on available capital and other resources. The maturity model and its different stages of integration form a very useful set of tools for planning the implementation of new technology systems and processes involving infrastructure and other dynamic interconnected systems integration. Managers who are resolved to plan and execute a maturity model under a closed-loop repetitive cycle of the scientific method that facilitates theorizing, implementing, assessing and improving will see their organisations progress through the stages of the model successfully. Reaching the fourth level of the model, cross-enterprise collaboration, is achievable as a long-term goal. With advanced training and information sharing about the maturity model, other managers, system users and supply chain partners can be developed as important supporters in the long-term efforts that are needed to achieve the benefits of e-commerce.

## **Limitations**

The data in this study are aggregated data for the entire U.S. Manufacturing sector. The data are also secondary historical data as collected and processed by the U.S. Census Bureau by utilising multiple reports related to the manufacturing sector. This limits the granularity of the analyses. Consequently, the analyses are primarily deductive in nature and are based on the conceptual application of a maturity model. The model is intuitively appealing and has been utilized in practice by various consultants with ensuing effective results in several actual e-commerce applications.

## **Conclusion**

This study informs both theory and practice by examining the growth data of B2B e-commerce for the U.S. Manufacturing sector in a longitudinal

manner for a sixteen-year period. Statistical analysis indicated that other factors contributed to the growth of e-commerce, not just the overall growth of business activity. A maturity model provides a framework for discussing stages of integration and the progression over an extended timespan. The maturity of an organisation relative to systems integration is strongly suggested as a significant factor that determines the success and therefore the growth of e-commerce and related Internet-based business applications. Synchronising the maturity of multiple systems is also discussed as a key factor that affects the growth rate. The overall slow growth rate of e-commerce in its early years can be partially explained by the lack of systems integration maturity. The slow growth of e-commerce in the first few years of the recent digital onslaught, and the lag prior to the start of a growth spurt provide evidence that the advancement from one level to a higher level of maturity requires a substantial amount of time. Based on this understanding, the deductive arguments in this study can serve to inform managers who are planning new or enhanced e-commerce systems so that they engage their plans amidst realistic expectations for future e-commerce and related systems implementation.

## References

- Albrecht, C. C, Dean, D. L. & Hansen, J. V. (2005). Marketplace and technology standards for B2B e-commerce: progress, challenges, and the art of the art. *Information and Management*, 42(6), 865-875.
- Bendoly, E. & Kaefer, F. (2004). Business technology complementarities: Impacts of the presence and strategic timing of ERP on B2B e-commerce technology efficiencies. *OMEGA*, 32(5), 395-405.
- Claycomb, C., Iyer, K. & Germain, R. (2005). Predicting the level of B2B e-commerce in industrial organizations. *Industrial Marketing Management*, 34, 221-234.
- Davenport, T.H. (2000) *Mission Critical: Realizing the Promise of Enterprise Systems*, Boston, MA, USA: Harvard Business School Press.
- Davenport, T.H. & Brooks, J.D. (2004). Enterprise Systems and the Supply Chain. *Journal of Enterprise Information Management*, 17(1), 8-19.
- De Bruin, Tonia & Rosemann, Michael (2005). Towards a business process management maturity model. In Bartmann, D., Rajola, F., Kallinikos, J., Avison, D., Winter, R., Ein-Dor, P., et al. (eds.) *ECIS 2005 Proceedings of the Thirteenth European Conference on Information Systems*, 26-28 May 2005, Regensburg, Germany.



- DeLone, William H. & McLean, Ephraim R. (2004). Measuring e-Commerce Success: Applying the DeLone & McLean Information Systems Success Model. *International Journal of Electronic Commerce*, 9(1), 31-47.
- Dow Chemical Company (1999). Press Release retrieved from [www.dow.com](http://www.dow.com) (11 July 2012).
- Dow Chemical Company (2000). Press Release retrieved from [www.dow.com](http://www.dow.com) (July 11, 2012).
- Dow Chemical Company (2001). Press Release retrieved from [www.dow.com](http://www.dow.com) (July 11, 2012).
- Dow Chemical Company (2011). Dow Customer Service Solutions retrieved from [www.dow.com](http://www.dow.com) (July 11, 2012).
- Ehie, I.C. & M. Madsen, M. (2005). Identifying critical issues in enterprise resource planning (ERP) implementation. *Computers in Industry*, 56, 545-557.
- Fielder, A, Panousis, E., Malacaria, P., Hankin, C. & Smeraldi, F. (2016). Decision support approaches for cyber security investment. *Decision Support Systems*, 86, 13-23.
- Fisher, D.M. (2004). The business process maturity model. A practical approach for identifying opportunities for optimization. BPTrends. Retrieved from [http://www.bptrends.com/resources\\_publications.cfm](http://www.bptrends.com/resources_publications.cfm). (12 May 2018).
- Gartner (2005). Gartner Survey of 1,300 CIOs Shows IT Budgets to Increase by 2.5 Percent in 2005. Retrieved from <https://www.gartner.com/newsroom/id/492096>. (12 May 2018).
- Gordon, L A., Loeb, M. P, Lucyshyn W. & Zhou, L. (2015). The impact of information sharing on cybersecurity underinvestment: A real options perspective. *Journal of Accounting and Public Policy*, 34(5), 509-519.
- Guinipero, L.C. & Sawchuk, C. (2000). *E-Purchasing*. Goshen, NY, USA: JGC Enterprises.
- Gunasekaran, A., Marri, H.B., McGaughey, R.E. & Nebhwani, M.D. (2002). E-commerce and its impact on operations management. *International Journal of Production Economics*, 75, 185-197.
- Handfield, R.B. & Nichols, Jr., E.L. (2002). *Supply Chain Redesign: Transforming Supply Chains into Integrated Value Systems*. Upper Saddle River, NJ, USA: Prentice Hall.

- Hazen, B. T. & Byrd, T.A. (2012). Toward creating competitive advantage with logistics information technology. *International Journal of Physical Distribution and Logistics Management*, 42(1), 8-35.
- Holland, C.P. & Light, B. (2001). A Stage Maturity Model for Enterprise Resource Planning Systems Use. *The DATA BASE for Advances in Information Systems*, 32(2), 34-45.
- Johnson, M.E. & Whang, S. (2002). E-Business and Supply Chain Management: An Overview and Framework. *Production and Operations Management*, 11(4), 413-423.
- Larson, E.W. & Gray, C.F. (2018). *Project Management: The Managerial Process* (7th edition, pp. 529-532). New York, NY, USA: McGraw-Hill/Irwin.
- Lee, Hau L. & Whang, Seungjin. (2001). E-Business and Supply Chain Integration. *Stanford Global Supply Chain Management Forum*, SGSCMF-W2-2001.
- Lockamy, A. & McCormack, K. (2004). The development of a supply chain management process maturity model using the concepts of business process orientation. *Supply Chain Management: An International Journal*, 9, 272-278.
- Kurtzman, J. & Rifkin, G. (2001). *Radical E: From GE to Enron - How to Rule the Web*. New York, NY, USA: John Wiley & Sons.
- PRTM. Business Wire. Pittiglio, Rabin, Todd and McGrath. (2003). PRTM Research Shows Leaders Boost Financial Performance with Supply Chain Best Practices. June 4, 2003. Business Wire: Waltham, Mass. Retrieved from: <https://www.businesswire.com/news/home/20030604005443/en/PRTM-Research-Shows-Leaders-Boost-Financial-Performance> (29 Dec 2018).
- Rosemann, M. & vom Brocke, J. (2010). The Six Core Elements of Business Process Management. In *Handbook on Business Process Management 1*, vom Brocke, J and Rosemann, M. (eds.), *International Handbooks on Information Systems*, New York, NY, USA: Springer.
- Schroeder, Roger G. (2008). *Operations Management: Contemporary Concepts and Cases.*, (Fourth Edition,) New York, NY, USA: McGraw-Hill/Irwin.
- Singh, N., Lai, Kee-hung, & Cheng, T.C.E. (2007). Intra-Organizational Perspectives on IT Enabled Supply Chains. *Communications of the ACM*, 50(1), 59-65.

- Stevens, G.C. (1989). Integrating the Supply Chain. *International Journal of Physical Distribution & Materials Management*, 19(8), 3-8.
- Swafford, P., Ghosh, S. & Murthy, N. (2008). Achieving supply chain agility through IT integration and flexibility. *International Journal of Production Economics*, 116, 288-297.
- U.S. Census Bureau, E-Stats (2000 through 2017). Retrieved from <http://www.census.gov/estats> (12 May 2018).
- Zafar, H. & Ko, M. S. (2016). The value of the CIO in the top management team on performance in the case of information security breaches. *Information Systems Frontiers*, 18(6), 1205-1215.
- Zhu, L., Li, L., Zhang, Y. & Shi, Q. (2017). Strategic IT investment in B2B e-commerce platform on user loyalty considering variable investment cost. *International Journal of Networking and Virtual Organisations*, 17(2-3), 290-313.

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# Alignment between Organisational Critical Activities and Websites in New Zealand Universities

Wei-Hsi Hung  
Kai-Ju Chuang

## **Abstract**

*Purpose – The present study aims to identify the specific types of organisational activities that are strategically crucial for organisations to achieve success, and the websites provide strategic value to these organisations and contribute to their success. Organisational critical activities (OCAs) are recognized as being essential, have been significantly resourced, and receive regular senior management monitoring to assist the organisation to achieve success. This study focuses specifically on the evaluation of the alignment between OCAs and the websites of all New Zealand universities in 2007 and 2017.*

*Method – This study chooses the multiple-case design methodology as its research methodology and aims to identify precisely how websites provide support to OCAs through a series of interviews and website evaluations at eight universities in New Zealand. The respondents include senior management, IT, and web teams. In total, 48 participants were interviewed. This study also utilised a list of top-ranked OCAs, and several findings when comparing changes in OCAs of websites over a 10-year time period.*

*Findings – The case studies revealed that the top-10 OCAs of these universities' websites changed over the past decade, indicating that managements' perspective is constantly evolving. "Strategic information provision", "increase branding awareness", and "maintaining a partnership with other institutions" constituted topics among the top-10 entries in 2017, while they were absent from the top-10 list in 2007.*

*Limitations – Some sub-sites could not be accessed due to security reasons. For example, the finance areas of most websites were inaccessible to the researchers during the web evaluations due to issues of confidentiality.*

*Implications – The analysed results demonstrate that websites are an important and influential platform to conduct the entire range of primary value-added activities in the value chain. In addition, after 10 years of observation, evolutionary changes can be derived and OCAs are also indicated, and adapt to environmental trends to promote sustainable operation of the organisation to conduct the entire range of OCAs to achieve success.*

*Originality – This study is the pioneer that explores the alignment between websites and OCAs over a period of 10 years. It would also be useful to investigate such alignment in other countries and cultural settings.*

**Keywords:** organisational critical activities, case study, website evaluation, interviews.

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## Introduction

Organisational critical activities (OCAs) are activities that must be continually conducted by an organisation in order to be successful in its respective industry. They are recognized as being essential to short, medium, and long-term success, been significantly resourced, and receive regular senior management monitoring and direction. Davis and Roberts (1970) noted that the impetus of government objectives and programs has been an OCA of private institutions in the external environment. However, the meaning of the term “critical activity” being employed in other management areas does not match with the OCA discussed in this study. This provides a line of research to explore knowledge related to OCAs. Particularly in the area of web support, although these activities are critical, some empirical studies have demonstrated that they are not well supported by organisations.

Websites are being integrated into all channels of both smaller and larger organisations because they provide global reach, and are far less expensive than other alternatives (Hall, 2001; Patel, Schenecker, Desai, & Levitt, 1998;

Richter, 2000). Specifically, websites support various kinds of internal, external, and inter-organisational activities, such as marketing and sales (Bhatt & Emdad, 2001; Karakaya & Khalil, 2004; McNaughton, 2001; Sheth & Sharma, 2005; Punyatoya, 2019), collaboration between partners (Glavas, Mathews, & Russell-Bennett, 2019; Glavas & Mathews, 2014; Griffiths, Elson, & Amos, 2001; Sharma, Gupta, & Wickramasinghe, 2006; Williams, Dale, Visser, & Van der Wiele, 2001a, 2001b), branding (Patel et al., 1998; Pelsmacker, Janssens, Sterckx, & Mielants, 2005; Rowley, 2004; Abdullah, Nordin, & Aziz, 2013; Vasudevan & Kumar, 2019), decision-making (Paul, Saunders, & Haseman, 2005; Riggins, 1999; Zhang & Reichgelt, 2006; Mathews & Healy, 2007), transactions (Chatterjee & Ravichandran, 2004; Wen, Chen, & Hwang, 2001; Zhang & Reichgelt, 2006; Mathews & Healy, 2006; Bordonaba-Juste, Lucia-Palacios, & Polo-Redondo, 2012), and strategy, policy, public participation, and public service (Lee-Geiller & Lee, 2019).

Websites especially support value-added activities in the value chain, and affect how organisations perform these activities in their value chains. Chatterjee and Sambamurthy (1999) found that websites constitute a relatively inexpensive, but powerful, platform to perform the entire range of primary value-added activities in the value chain. Using websites to support value-added activities appropriately can provide a substantial competitive advantage to an organisation (Palmer & Griffith, 1998; Abdullah et al., 2013).

While many studies have shown that websites positively support a number of organisational activities, another group of studies has found a negative result. For example, Del Aguila-Obra and Padilla-Meléndez (2006) reported that a shortage of specific research exists analyzing factors that influence Internet technology-adoption by firms. Kowtha and Choon (2001) found that few e-commerce practices relate an organisation's websites to its strategy. Yet, some extant literature on the evaluation of websites in New Zealand, the U.S., the European Union, Asia, and Canada reported that websites do not fully support organisational strategic objectives (Boudreau & Watson, 2006; Lederer, Mirchandani, & Sims, 2001; Tchokogue & Boisvert, 2001; Yu & Koslow, 1999). Although research has determined that websites' designs should contribute to organisations' strategies or objectives in order to operate at peak effectiveness (Boudreau & Watson, 2006; Chorn, 1991; Dann & Dann, 2001; Lederer, Mirchandani, & Sims, 1997; Lederer et al., 2001; Lee, 2001; McNaughton, 2001; Teubner & Klein, 1998; Yu & Koslow, 1999), the results do not seem to be validated. Based on previous contradictory findings, it is logical to make the following inference. Clearly, websites support many organisations' activities. However, whether the websites provide strategic value to these organisations and contribute to their success remains undetermined.

The present study aims to identify the specific types of organisational activities that are strategically crucial for organisations to achieve success. Then, organisations owning websites need to ensure that their websites are supporting these activities. This study terms these types of activities,



“organisational critical activities” (OCAs). This study also evaluates the alignment between OCAs and websites to supply feedback to participants who agreed to be interviewed concerning their perceptions about OCAs in their organisations, and how those OCAs are supported by their organisations’ websites.

This research focuses specifically on the evaluation of the alignment between OCAs and the websites of all New Zealand universities in 2007 and 2017. The methodology employed is the multiple-case design. An evaluation methodology is also utilised, called the “organisational critical activity web support evaluation methodology” (OCAWSEM) (Hung, 2006). OCAWSEM can be used to elicit OCAs from organisations, evaluate whether an organisation’s OCAs are being supported by its websites, and provide guidance on how the organisation can improve its websites.

Identifying OCAs gives organisations an opportunity to elucidate what kinds of activities their websites should support, and ensures that their respective investments contribute to their success. This study provides useful findings, through which both practitioners and academicians can obtain a deeper understanding of OCAs, better elicit OCAs from management, conduct accurate website evaluations, and explore the support of websites for OCAs.

## Literature Review

### Understanding the activities

A fundamental question that should be posed prior to understanding OCAs is “What is an activity?” Turney (1994) asserted that an activity is work performed within an organisation. From a production perspective, it is what people do to input, convert, and output materials to become more useful activities of finished products or services (Odiorne, 1975; Raffish, 1994). Overall, activities exist at strategic, tactical, and operational levels in organisations (Howard, Kochhar, & Dilworth, 2002; Leonard & McAdam, 2002; Svensson, 2002; Lucena, 2011; García-Morales, Jiménez-Barrionuevo, & Mihi-Ramírez, 2011; Choi & Thoeni, 2016; Oet & Onga, 2016). Descriptions of these levels and some corresponding activities are presented in Table 1.

**Table 1. Levels of activities in organisations.**

Levels	Activities at this Level
Strategic	Activities at this level are carried out to oversee the organisation and plan its strategic directions. For example, deploying strategic goals, strategic benchmarking, analysing competitors, setting competitive priorities, and innovation.
Tactical	Activities at this level include functional activities and activities which translate strategic direction into deliverable

activities. For example, translating strategic goals into functional plans, structuring resources, and measurement of efficiency and effectiveness.

Operational Activities at this level are conducted through the utilisation of operational tools and techniques. For example, production activities and system-controlling activities.

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Odiorne (1975) found that when top management loses sight of its overarching purposes, they begin to focus more on controlling subordinate activity, which tends to become increasingly unrelated to useful goals. Moreover, a number of studies described a process as a hierarchical set of interrelated activities that are embedded in a set of rules and resources which can both constrain and enable social action; and a task as one which includes both activities that are directly functional for achieving the aims of the process, and the resources that are either used or modified by the tasks (e.g., Biazzo, 2000; Clark & Baxter, 1992; Convey, 1994; Lee & Dale, 1998; Odiorne, 1975; Tallon & Kraemer, 1998; Zairi, 1997; Lucena, 2011; Huggins, Johnston, & Thompson, 2012; Oh & Han, 2018).

### Organisational Critical Activities (OCAs)

Organisational critical activities (OCAs) constitutes a broad term that can be applied directly or slightly renamed to any organisation in various industries. Two key words in the definition of OCAs are crucial when reviewing the extant literature: “constantly” and “successful”. Some generic OCAs identified through a review of pertinent literature have been developed (Azzone & Masella, 1991; Burton & Pennotti, 2003; Byrd & Turner, 2001; Feeny, 2001; Porter, 1985; Shortell & Zajac, 1990; Tallon, Kraemer, & Gurbaxani, 2000; Lucena, 2011; García-Morales et al., 2011; Larsen & Pedersen, 2014; Oet & Onga, 2016), as shown in Table 2.

**Table 2. Some generic OCAs identified from the literature.**

Category	Generic OCAs
Marketing-related	Advertising; promoting products; conducting marketing; conducting marketing research; imaging and branding; recruiting; expanding on sale points.
Internal	Conducting general research; innovating and developing products; developing new services; managing information; managing knowledge; assuring product quality; enhancing operational efficiency; measuring cost performance; communicating internally; developing strategic plans; training staff; developing new technology; creating organisational culture.

External and inter-organisational	Maintaining supplier relationships; retaining staff; acquiring material; communicating externally; aligning with external environment; maintaining partnerships.
Service-related	Providing after-sale service; maintaining customer relationships; providing timely customer financial and transaction information; distributing products.

In terms of the interrelationship between OCAs and the environment, numerous scholars have argued that organisations need to adopt certain strategies to fit with the environment (e.g., Chan, Huff, Barclay, & Copeland, 1997; Venkatraman & Camillus, 1984; Venkatraman, Henderson, & Oldach, 1993; Easterby-Smith, Lyles, & Peteraf, 2009; Ambrosini, Bowman, & Collier, 2009; García-Morales et al., 2011; Salmimaa, Hekkala, & Pekkola, 2018). In addition, Miles, Snow, Meyer and Coleman (1978) found that organisations require a general model of adaptation which specifies the major decisions necessary for the organisation to manage internal interdependencies in order to maintain effective alignment with their environment.

This study focuses on eliciting OCAs from the organisation’s perspective. Thus, it is essential to identify the OCAs that are specified by the respondents from the organisation’s perspective. In order to take advantage of environmental changes in a timely manner, organisations may make a change to their OCAs in order to respond to the environment immediately after the environment is altered. This study defines organisational critical activities (OCAs) as follows: “Organisational critical activities” (OCAs) are activities which must be conducted by the organisation constantly in order to be successful in its respective industry. They are recognised as being essential to short, medium, and long-term success in that industry, have been significantly resourced, and receive regular senior management monitoring and direction.

### **Evaluation of websites**

The purpose of the website evaluation in this study is to evaluate how well the websites support the OCAs. In order to achieve this, the most appropriate methodology for website evaluation must be chosen. In line with extant research, four website evaluation perspectives are identified: organisation provider; customer provider; organisation user perspective; and customer user perspective (Widmer & Shepherd, 1999; Chalmers et al., 1998; Huizingh, 2000; Cunliffe, 2000; Konradt, Wandke, Balazs, & Christophersen, 2003).

When adopting the organisation provider perspective, the evaluation of websites is performed by the provider to determine precisely how the websites can add value to the organisation. The value sought is provided to the web

team by management (Widmer & Shepherd, 1999). The most popular approach from this perspective constitutes measuring the performance of websites (Jones & Kayworth, 2002).

When adopting the customer provider perspective, the evaluation of websites is conducted by the provider to identify exactly how the websites can add value to the customer. Since the provider is not the customer, how the websites can add value to the customer is based on what value the provider believes that the websites provide to its customers. The evaluation made from this perspective comprises assessing the content (Chalmers et al., 1998; Huizingh, 2000), quality (e.g., Cox & Dale, 2002; Day, 1997; Dran, Zhang, & Small, 1999; Loiacono, 1999; Mich, Franch, & Gaio, 2003; Olsina, Godoy, Lafuente, & Rossi, 1999; Rettig & LaGuardia, 1999), design (e.g., Gehrke & Turban, 1999; Shneiderman, 1997; Thelwall, 2003; Wan & Chung, 1998) of the websites, and certain evaluation guidelines (Gehrke & Turban, 1999; Rettig & LaGuardia, 1999).

When adopting the organisation user perspective, the evaluation of websites is performed by the user to discover precisely how the websites can add value to the organisation. The user mentioned here can be internal (e.g., the organisation's staff) or external (e.g., the buyers) to the organisation. However, external users cannot realise value to the organisation because they are external to it. Thus, there is little intention to employ external users to evaluate the websites to determine how the websites can add value to the organisation.

When adopting the customer user perspective, the evaluation of websites is conducted by the user to determine how the websites can add value to the customer. During the evaluation, the central focus of the external user is customer satisfaction, which refers to how the websites can meet the needs and satisfy the preferences of customers (Cunliffe, 2000).

The organisation provider perspective is appropriate for the website evaluation in this study, since the primary purpose of this study is to determine how well the websites support OCAs. When the websites support OCAs, they are adding value to the organisation. Furthermore, another purpose of this study is to identify a method that can be employed by website providers to measure and improve their websites. Since the provider should be the evaluator, the evaluation perspective of this study is the organisation provider perspective.

## **Research Design**

This study adopts a qualitative approach to elicit organisation's OCAs, and evaluate whether the OCAs are being supported by its websites (Hung, 2006). This research aims to identify how the websites actually provide support to OCAs through a series of interviews and website evaluations at all eight

universities in New Zealand. The respondents belonged to senior management teams, IT teams, or website teams. The total number of respondents was 48 in 2007. The eight case studies generated the top-15 ranked OCAs of the eight universities in New Zealand, and changes in websites' supportiveness of OCAs over 10 years were reported.

Through a series of interviews at eight universities in New Zealand in 2007, OCAs at the management level were identified. Then, the website's OCAs were evaluated by the amount of information on the websites in both 2007 and 2017. Finally, the alignment practices of the website's support in these years for the OCAs of the eight university were discussed.

An interview guide, a website evaluation framework, and tools of overall support and evaluation process were utilised. The interview guide provides a definition of OCAs and a set of interview questions that can be used to elicit OCAs from management during the interviews. The OCAs interview questions are presented in Table 3.

**Table 3. Questions, sequence, and definition.**

Order	Questions and Definition
1	Please describe your role, your job, and how long you have been in this job.
2	Definition of OCAs: An activity which must be constantly conducted by the organisation in order to be successful in its respective industry.
3	Please describe what are this organisation's OCAs.
4	What is their priority?
5	How do you support and enable these OCAs?
6	Would you suggest other people who know about the OCAs in this organisation to be interviewed?

The set of interview questions comprises two groups. The first group is the main questions. The self-typing approach and the interview method without supplying generic OCAs during the interview are appropriate to elicit OCAs from management for the purpose of this study. The second group is the background questions. The first background question is: Please describe your role, your job, and how long you have been in this job. The second background question is: Would you suggest other people who know about the OCAs in this organisation to be interviewed? The latter question can be utilised to generate future interviewees from the current one. Since the notion of OCAs is novel, a list of well written OCAs is not yet available to management in organisations. Thus, it is less likely that interviewees will reveal the same OCAs.

In terms of a website evaluation framework, OCAWSEM is used to identify a list of OCAs, and reveals which OCAs the websites support well and which they do not. This framework comprises four website evaluation forms.

These forms are based on the criteria of informativeness and interactivity. Overall, the four forms are used to evaluate how well the websites support OCAs from the provider's perspective in order to add value to the business that provides the websites.

In terms of evaluating tools, the OCAWSEM includes a set of tools which can be utilised to determine the overall support given to OCAs from websites based on the results produced from interviews and website evaluations. These tools are as follows: the organisational critical activity repository (OCA repository); a prioritising principle of interview results; two prioritising principles of website evaluation results; and a diagram used to display the overall support given to OCAs by websites.

The OCA repository serves these dimensions by providing a list of generic OCAs. These generic OCAs are presented in Table 2. These dimensions are utilised both to elicit OCAs from management and to extract OCAs from websites. By referring to the OCA repository, evaluators can efficiently assess the websites. In addition, the prioritising principle for interview results is termed the "interview prioritising principle" in this study. The interview prioritising principle is "the activity as nominated by more interviewees is more critical". The prioritising principle for website evaluation results is termed the "web prioritising principle". The two web prioritising principles are "the OCA at a higher level has a higher priority than the one at a lower level" and "the activity which is supported by more sub-sites has a higher priority".

The OCAWSEM includes a list of evaluation process instructions which can be used to guide the utilisation of the components included in the OCAWSEM. Specifically, it comprises nine stages, which can be categorised into three parts, as shown in Figure 1.

<b>The First Part</b>	Stage 1: Identify Management Views Stage 2: Analyse Interview Data Stage 3: Prioritise Organisational Critical Activities
<b>The Second Part</b>	Stage 4: Investigate Web Background Stage 5: Confirm and Generate Organisational Critical Activities Stage 6: Analyse Effectiveness and Efficiency Stage 7: Grouping Stage 8: Prioritising
<b>The Third Part</b>	Stage 9: Overall Support Discussion

Figure 1. Evaluation process instructions of OCAWSEM.

The first part instruction of OCAWSEM includes three stages: Identify Management Views, Analyse Interview Data, and Prioritise OCAs, and are, respectively, Stages 1, 2, and 3 in the evaluation process instructions. The purpose of this part is to elicit a list of prioritised OCAs from management. The second part includes five stages: Investigate Web Background, Confirm and Generate OCAs, Analyse Effectiveness and Efficiency, Grouping, and Prioritising, which are Stages 4, 5, 6, 7, and 8 in the evaluation process instructions, respectively. The purpose of this part is to generate a list of prioritised OCAs from the website evaluation, according to how efficiently and effectively these activities are being supported by the websites. The third part includes Stage 9, which is the Overall Support Discussion. This stage addresses not only the overall support made to OCAs from websites, but also how to improve the web designs if any poor support does exist. Specifically, it asks the evaluator to compare the two lists of OCAs generated from interviews and the website evaluation, and then discuss how well these two lists are matched. The discussion is based on both the content and priority matched between the two lists of OCAs. In other words, if the website is fully supportive of OCAs, the OCA nominated by the management as a top priority should be supported by the websites and be at the top of the supporting list. Stage 9 also requires the evaluator to assign those OCAs that were both nominated by the interviewees and listed in the website evaluation.

This study chooses the case study methodology as its research methodology. Benbasat, Goldstein and Mead (1987) described the case study methodology as a methodology that examines a phenomenon in its natural setting, employing multiple methods of data collection to gather information from one or several entities (i.e., people, groups, or organisations).

This study used all eight universities in New Zealand as field cases, and performed a cross comparison of their websites between 2007 and 2017. The OCAWSEM constitutes a valid and reliable methodology for evaluating the support given to OCAs by the websites.

## Results and Discussion

Through the above research process, this study presents the 15 OCAs of management levels at the eight universities in New Zealand (including North Island and South Island), as shown in Table 4.

**Table 4. Top-15 ranked OCAs at the eight universities in New Zealand (in alphabetical order).**

Rank	OCAs
1	Communication with businesses and local communities
2	Enhancing internal administrative efficiency
3	Facility management
4	Financial management

5	Increasing branding
6	Maintaining partnerships with other institutions
7	Providing student services
8	Recruiting domestic students
9	Recruiting international students
10	Recruiting staff
11	Retaining staff
12	Research development
13	Strategic information provision
14	Sustaining educational and extra funding
15	Teaching and learning

Table 5 presents the top-10 OCAs which appeared to be most supported by the websites of the eight universities in 2007. A higher ranking means that the critical activity support on the websites had more information and more sophisticated functions.

**Table 5. The 2007 top-10 OCAs as supported by the universities' websites.**

Rank	OCAs of the Websites
1	Providing student services
2	Recruiting international students
3	Recruiting domestic students
4	Research development
5	Teaching and learning
6	Enhancing internal administrative efficiency
7	Communication with businesses and local communities
8	Recruiting staff
9	Retaining staff
10	Facility management

In order to generally align with the aims of management, most websites should be enhanced to provide more information and sophisticated functions to support the OCAs of research and development, teaching and learning, increasing branding, and sustaining educational and extra funding activities.

Table 6 shows the top-10 website OCAs in 2017. Compared to 2010, there are several common characteristics in the eight university websites in New Zealand: information diversity; meaningful expressions; rich architecture; and content presentation.

**Table 6. The 2017 top-10 OCAs as supported by the universities' websites.**

Rank	OCAs of the Websites
1	Teaching and learning
2	Providing student services



3	Strategic information provision
4	Research development
5	Recruiting domestic students
6	Recruiting international students
7	Increasing branding
8	Maintaining partnerships with other institutions
9	Communication with businesses and local communities
10	Facility management

**Table 7. Comparisons the results of the OCAs analysis from website evaluations from 2007 to 2017.**

Rank	OCAs 2007	Rank	Change in Rank	OCAs 2017
1	Providing student services	1	+4	Teaching and learning
2	Recruiting international students	2	-1	Providing student services
3	Recruiting domestic students	3	new	Strategic information provision
4	Research development	4	0	Research development
5	Teaching and learning	5	-2	Recruiting domestic students
6	Enhancing internal administrative efficiency	6	-2	Recruiting international students
7	Communication with businesses and local communities	7	-1	Enhancing internal administrative efficiency
8	Recruiting staff	8	new	Increasing branding
9	Retaining staff	9	new	Maintaining partnerships with other institutions
10	Facility management	10	-3	Communication with businesses and local communities

Table 7 presents comparisons of the results from the analysis of the website evaluations. The following findings are evident from this table.

Firstly, the OCAs of the websites of the eight universities, which have continued to change over the past 10 years, show that the management's view of the OCAs of the website has evolved, which also reflects the evolution of the respective industry and the environment. Secondly, the first three OCAs in

2007 showed that they were mainly based on “providing student services”, “recruiting international students”, and “recruiting domestic students”. Compared to the first three OCAs in 2017, “teaching and learning”, “providing student services”, and “strategic information provision” are fundamental, which demonstrates the universities’ emphasis on teaching and student services. At the same time, presenting the “strategic information provision” from the website has become an important item of the senior management team.

Thirdly, the sequence of increasing branding in 2017 rises to the top-10, demonstrating that the management of the universities has increased its emphasis on brand and reputation. Accordingly, the website is used to operate a variety of OCAs to highlight the university's brand. Fourthly, the term “maintaining partnerships with other institutions” enters the top-10 of 2017. However, ranking of the term “communication with businesses and local communities” goes down, but these two terms show the depth of connections and participation of universities in international relations and local relationships. This means that it indirectly promotes university student activities and services, employment performance and business cooperation, and resource networks. Overall, this part should promote organisational competitiveness.

## **Conclusion**

Several tentative conclusions can be made based on the results of this study. Firstly, the OCAWSEM approach is used to observe the operations of eight universities in New Zealand, and can effectively promote OCAs of the organisation. This study identifies the OCAs of the universities in 2007 and 2017, which can be utilised as a reference for organisational management. Secondly, derived from the results of this study using the OCAWSEM approach, the organisation's operators can regularly observe and enhance the website's support for OCAs, in order to optimally adapt to environmental changes and be successful in its respective industry. A case from this study revealed that the top-10 OCAs of these universities’ websites have changed over the past decade, indicating that the perspective of management is continually evolving. Moreover, comparison of the first three OCAs of 2007 and 2010 show that that the teaching and learning, providing student services, and strategic information provisions are primary. The 2017 brand promotion sequence also entered the top-10, indicating that the universities’ management augmented its emphasis on brand and reputation, and used the websites accordingly. Thirdly, the analysed results demonstrate that websites are an important and influential platform to conduct the entire range of primary value-added activities in the value chain. In addition, after 10 years of observation, evolutionary changes can be derived and OCAs are also indicated, and adapt to environmental trends to promote sustainable operation of the organisation.

However, this study possesses certain limitations. Firstly, some sub-sites could not be accessed due to security reasons. For example, the finance areas of most websites were inaccessible to the researchers during the web evaluations due to issues of confidentiality. In addition, this study only evaluated university level sub-sites, and excluded departmental sub-sites, which may limit the generalisability of the findings. Several topics are worthy of future research. It is suggested that future research can apply current research processes to evaluate the alignment of other kinds of technologies, such as mobile technologies and governmental information technologies, with OCAs. It would also be useful to investigate the alignment between websites and OCAs in other countries and cultural settings.

## **References**

- Abdullah, Z., Shahrina, Nordin, M., & Abdul Aziz, Y. (2013). Building a unique online corporate identity. *Marketing Intelligence & Planning*, 31(5), 451-471.
- Ambrosini, V., Bowman, C., & Collier, N. (2009). Dynamic capabilities: an exploration of how firms renew their resource base. *British Journal of Management*, 20, S9-S24.
- Azzone, G., & Masella, C. (1991). Design of performance measures for time-based companies. *International Journal of Operations and Production Management*, 11(3), 77-85.
- Benbasat, I., Goldstein, D. K., & Mead, M. (1987). The case research strategy in studies of information systems. *MIS Quarterly*, 11(3), 369-386.
- Bhatt, G. D., & Emdad, A. F. (2001). An analysis of the virtual value chain in electronic commerce. *Logistics Information Management*, 14(1/2), 78-84.
- Biazzo, S. (2000). Approaches to business process analysis: A review. *Business Process Management Journal*, 6(2), 99-112.
- Bordonaba-Juste, V., Lucia-Palacios, L., & Polo-Redondo, Y. (2012). The influence of organizational factors on e-business use: analysis of firm size. *Marketing Intelligence & Planning*, 30(2), 212-229.
- Boudreau, M.-C., & Watson, R. T. (2006). Internet advertising strategy alignment. *Internet Advertising Strategy*, 16(1), 23-37.
- Burton, H. O., & Pennotti, M. C. (2003). The enterprise map: A system for implementing strategy and achieving operational excellence. *Engineering Management Journal*, 15(3), 15.

- Byrd, T. A., & Turner, D. E. (2001). An exploratory analysis of the value of the skills of IT personnel: Their relationship to IS infrastructure and competitive advantage. *Decision Sciences, 32*(1), 21-54.
- Chalmers, M., Rodden, K., & Brodbeck, D. (1998). The order of things: Activity-centred information access. *Computer Networks and ISDN Systems, 1-7*, 359-367.
- Chan, Y. E., Huff, S. L., Barclay, D. W., & Copeland, D. G. (1997). Business strategic orientation, information systems strategic orientation, and strategic alignment. *Information Systems Research, 8*(2), 125-150.
- Chatterjee, D., & Ravichandran, T. (2004). Beyond exchange models: Understanding the structure of B2B information systems. *Information Systems and eBusiness Management, 2*(2), 169-186.
- Chatterjee, D., & Sambamurthy, V. (1999). Business implications of Web technology: An insight into usage of the World Wide Web by US companies. *Electronic Markets, 9*(1/2), 126-131.
- Choi, Y., & Thoeni, A. (2016). Social media: is this the new organizational stepchild?. *European Business Review, 28*(1), 21-38.
- Chorn, N. H. (1991). The "alignment" theory: Creating strategic fit. *Management Decision, 29*(1), 20-24.
- Clark, A., & Baxter, A. (1992). ABC + ABM = Action: Let's get down to business. *Management Accounting, 70*(6), 54-55.
- Convey, S. (1994). Eliminating unproductive activities and processes. In B. J. Brinker (Ed.), *Activity -Based Management* (pp. C3-1-C3-6). Boston: Warren, Gorham and Lamont.
- Cox, J., & Dale, B. G. (2002). Key quality factors in Web site design and use: An examination. *International Journal of Quality and Reliability Management, 19*(7), 862-888.
- Cunliffe, D. (2000). Developing usable Web sites: A review and model. *Internet Research: Electronic Networking Applications and Policy, 10*(4), 295-307.
- Dann, S., & Dann, S. (2001). *Strategic Internet marketing*. Sydney: John Wiley and Sons Australia.
- Davis, J. W. A., & Roberts, E. B. (1970). The management of department of defence laser research contracts: Introduction. *The Journal of Business, 43*(1), 44-55.
- Day, A. (1997). A model for monitoring Web site effectiveness. *Internet Research: Electronic Networking Applications and Policy, 7*(2), 1-9.

- Del Aguila-Obra, A. R., & Padilla-Meléndez, A. (2006). Organizational factors affecting Internet technology adoption. *Internet research, 16(1)*, 94-110.
- Dran, G. M., Zhang, P., & Small, R. (1999). Quality Web sites: An application of the Kano model to Web-site design. Paper presented at the Fifth Americas Conference on Information Systems, Milwaukee, USA.
- Easterby-Smith, M., Lyles, M. A., & Peteraf, M. A. (2009). Dynamic capabilities: Current debates and future directions. *British Journal of Management, 20*, S1-S8.
- Feeny, D. (2001). Making business sense of the e-opportunity. *MIT Sloan Management Review, 42(2)*, 41-51.
- García-Morales, V. J., Jiménez-Barrionuevo, M. M., & Mihi-Ramírez, A. (2011). The influence of strategic dynamic capabilities on organizational outcomes through the organizational learning process. *Industry and Innovation, 18(7)*, 685-708.
- Gehrke, D., & Turban, E. (1999). Determinants of successful Web-site design: Relative importance and recommendations for effectiveness. Paper presented at the Proceedings of the 32nd Hawaii International Conference on system Sciences, Hawaii.
- Glavas, C., & Mathews, S. (2014). How international entrepreneurship characteristics influence Internet capabilities for the international business processes of the firm. *International Business Review, 23(1)*, 228-245.
- Glavas, C., Mathews, S., & Russell-Bennett, R. (2019). Knowledge acquisition via internet-enabled platforms: Examining incrementally and non-incrementally internationalizing SMEs. *International Marketing Review, 36(1)*, 74-107.
- Griffiths, J., Elson, B., & Amos, D. (2001). A customer-supplier interaction model to improve customer focus in turbulent markets. *Managing Service Quality, 11(1)*, 57-66.
- Hall, J. R. (2001). Forecasting the future of e-business. *Air Conditioning, Heating and Refrigeration News, 213(15)*, 20.
- Howard, A., Kochhar, A., & Dilworth, J. (2002). A rule-base for the specification of manufacturing planning and control system activities. *International Journal of Operations and Production Management, 22(1)*, 7-29.
- Huggins, R., Johnston, A., & Thompson, P. (2012). Network capital, social capital and knowledge flow: how the nature of inter-organizational

- networks impacts on innovation. *Industry and Innovation*, 19(3), 203-232.
- Huizingh, E. K. R. E. (2000). The content and design of Web sites: An empirical study. *Information and Management*, 37(3), 123-134.
- Hung, W. H. 2006. Supporting Organisational Critical Activities from Web Sites: An Evaluation Methodology Development. Unpublished doctoral dissertation. The University of Waikato.
- Jones, M. C., & Kayworth, T. C. (2002). An exploratory assessment of Web site performance: The role of expertise and site objectives. *Journal of Internet Commerce*, 1(1), 17-32.
- Karakaya, F., & Khalil, O. (2004). Determinants of Internet adoption in small and medium-sized enterprises. *International Journal of Internet and Enterprise Management*, 2(4), 341-365.
- Konradt, U., Wandke, H., Balazs, B., & Christophersen, T. (2003). Usability in online shops: Scale construction, validation and the influence on the buyers' intention and decision. *Behaviour and Information Technology*, 22(3), 165-174.
- Kowtha, N. R., & Choon, T. W. I. (2001). Determinants of Web site development: A study of electronic commerce in Singapore. *Information and Management*, 39(3), 227-242.
- Larsen, M. M., & Pedersen, T. (2014). Organizational Reconfiguration and Strategic Response: The Case of Offshoring. In *Orchestration of the Global Network Organization* (pp. 403-432). Emerald Group Publishing Limited.
- Lederer, A. L., Mirchandani, D. A., & Sims, K. (1997). The link between information strategy and electronic commerce. *Journal of Organizational Computing and Electronic Commerce*, 7(1), 17-34.
- Lederer, A. L., Mirchandani, D. A., & Sims, K. (2001). The search for strategic advantage from the World Wide Web. *International Journal of Electronic Commerce*, 5(4), 117-133.
- Lee, C. S. (2001). An analytical framework for evaluating e-commerce business models and strategies. *Internet Research: Electronic Networking Applications and Policy*, 11(4), 349-359.
- Lee, R. G., & Dale, B. G. (1998). Business process management: A review and evaluation. *Business Process Management Journal*, 4(3), 1463-7154.

- Lee-Geiller, S., & Lee, T. D. (2019). Using government websites to enhance democratic E-governance: A conceptual model for evaluation. *Government Information Quarterly*.
- Leonard, D., & McAdam, R. (2002). The strategic impact and application of the business excellence model: Implications for quality training and development. *Journal of European Industrial Training, 26(1)*, 4-13.
- Loiacono, E. T. (1999). WebQual: A Web quality instrument. Paper presented at the Fifth Americas Conference on Information Systems, Milwaukee, USA.
- Lucena, A. (2011). The organizational designs of R&D activities and their performance implications: empirical evidence for Spain. *Industry and innovation, 18(02)*, 151-176.
- Mathews, S. W., & Healy, M. J. (2006). " From garage to global" The Internet's influence on international market growth, An Australian SME perspective. *International Council for Small Business*.
- Mathews, S. W., & Healy, M. J. (2007). The Internet and information capability reduces perceived risk of internationalisation: An Australian SME perspective. *International Journal of Organisational Behaviour, 12(1)*, 71-87.
- McNaughton, R. B. (2001). A typology of Web site objectives in high technology business markets. *Marketing Intelligence and Planning, 19(2)*, 82-87.
- Mich, L., Franch, M., & Gaio, L. (2003). Evaluating and designing Web site quality. *IEEE MultiMedia, 10(1)*, 34-43.
- Miles, R. E., Snow, C. C., Meyer, A. D., & Coleman, H. J., Jr. (1978). Organisational strategy, structure, and process. *Academy of Management. The Academy of Management Review (pre-1986), 3(3)*, 546-562.
- Odiorne, G. S. (1975). *Management and the activity trap*. London: Heinemann.
- Oet, M. V., & Ong, S. J. (2016). From organization to activity in the US collateralized interbank market. *Research in International Business and Finance*.
- Oh, S. Y., & Han, H. S. (2018). Facilitating organisational learning activities: Types of organisational culture and their influence on organisational learning and performance. *Knowledge Management Research & Practice, 1-15*.

- Olsina, L., Godoy, D., Lafuente, G. J., & Rossi, G. (1999). Specifying quality characteristics and attributes for Web sites. Paper presented at the International Conference on Software Engineering, USA.
- Palmer, J. W., & Griffith, D. A. (1998b). Information intensity: A paradigm for understanding Web site design. *Journal of Marketing: Theory and Practice*, 6(3), 38-42.
- Patel, J., Schenecker, M., Desai, G., & Levitt, J. (1998). Tools for growth in e-commerce. *Informationweek*, 712, 91-104.
- Paul, S., Saunders, C. S., & Haseman, W. D. (2005). A question of timing: The impact of information acquisition on group decision making. *Information Resources Management Journal*, 18(4), 81-100.
- Pelsmacker, P. D., Janssens, W., Sterckx, E., & Mielants, C. (2005). Consumer preferences for the marketing of ethically labelled coffee. *International Marketing Review*, 22(5), 512-530.
- Porter, M. E. (1985). *Competitive advantage: Creating and sustaining superior performance*. New York: The Free Press.
- Punyatoya, P. (2019). Effects of cognitive and affective trust on online customer behavior. *Marketing Intelligence & Planning*, 37(1), 80-96.
- Raffish, N. (1994). How much does that product really cost? In B. J. Brinker (Ed.), *Activity -Based Management* (pp. A2-1-A2-7). Boston: Warren, Gorham and Lamont.
- Rettig, J., & LaGuardia, C. (1999). Beyond "Beyond Cool": Reviewing Web resources. *Online*, 23(4), 51-55.
- Richter, R. (2000). New threats - rivals stampede into online energy supplement: The new energy economy. *Oil and Gas Journal*, Fall, 66-70.
- Riggins, F. J. (1999). A framework for identifying Web-based electronic commerce opportunities. *Journal of Organizational Computing and Electronic Commerce*, 9(4), 297-310.
- Rowley, J. (2004). Online branding. *Online Information Review*, 28(2), 131-138.
- Salmimaa, T., Hekkala, R., & Pekkola, S. (2018). Dynamic Activities for Managing an IS-Enabled Organizational Change. *Business & Information Systems Engineering*, 60(2), 133-149.
- Sharma, S. K., Gupta, J. N. D., & Wickramasinghe, N. (2006). A framework for designing the enterprise-wide e-commerce portal for evolving organisations. *Electronic Commerce Research and Applications*, 6(2), 141-154.



- Sheth, J. N., & Sharma, A. (2005). International e-marketing: Opportunities and issues. *International Marketing Review, 22(6)*, 611-622.
- Shneiderman, B. (1997). Designing information-abundant Web sites: Issues and recommendation. *Human-Computer Studies, 47*, 5-29.
- Shortell, S. M., & Zajac, E. J. (1990). Perceptual and archival measures of Miles and Snow's strategic types: A comprehensive assessment of reliability and validity. *Academy of Management Journal, 33(4)*, 817-832.
- Svensson, G. (2002). Beyond global marketing and the globalisation of marketing activities. *Management Decision, 40(6)*, 574-583.
- Tallon, P. P., & Kraemer, K. L. (1998). A process-oriented assessment of the alignment of Information Systems and business strategy: Implications for IT business value. Paper presented at the Fourth Americas Conference on Information Systems, Baltimore, USA.
- Tallon, P. P., Kraemer, K. L., & Gurbaxani, V. (2000). Executives' perceptions of the business value of information technology: A process-oriented approach. *Journal of Management Information Systems, 16(4)*, 145-173.
- Tchokogue, A., & Boisvert, H. (2001). Maximising your Web site's value. *CMA Management, 75(9)*, 24-27.
- Teubner, R. A., & Klein, S. (1998). Planning and designing Web-based electronic commerce: A case study in the insurance industry. *Australian journal of information systems, Special Edition*, 86-96.
- Thelwall, M. (2003). A layered approach for investigating the topological structure of communities in the Web. *Journal of Documentation, 59(4)*, 410-429.
- Turney, P. B. B. (1994). Activity-based management. In B. J. Brinker (Ed.), *Activity -Based Management* (pp. B2-1-B2-9). Boston: Warren, Gorham and Lamont.
- Vasudevan, S., & Peter Kumar, F. J. (2019). Changing realty: altering paths of brand discovery for real estate websites in India. *Property Management*.
- Venkatraman, N., & Camillus, J. C. (1984). Exploring the concept of "fit" in strategic management. *Academy of Management. The Academy of Management Review, 9(3)*, 513-525.
- Venkatraman, N., Henderson, J. C., & Oldach, S. (1993). Continuous strategic alignment: Exploiting information technology capabilities for competitive success. *European Management Journal, 11(2)*, 139-148.

- Wan, H. A., & Chung, C. W. (1998). Web page design and network analysis. *Internet Research: Electronic Networking Applications and Policy*, 8(2), 115-122.
- Wen, H. J., Chen, H. G., & Hwang, H. G. (2001). E-commerce Web site design: Strategies and models. *Information Management and Computer Security*, 9(1), 5-12.
- Widmer, T. G., & Shepherd, C. D. (1999). Developing a hospital Web site as a marketing tool: A case study. *Marketing Health Services*, 19(1), 32-33.
- Williams, A. R. T., Dale, B. G., Visser, R. L., & Van der Wiele, T. (2001a). B2B, old economy businesses and the role of quality: Part 1 - the simple alternative. *Measuring Business Excellence*, 5(2), 39-44.
- Williams, A. R. T., Dale, B. G., Visser, R. L., & Van der Wiele, T. (2001b). B2B, old economy businesses and the role of quality: Part 2 - the more complex possibilities. *Measuring Business Excellence*, 5(3), 24-29.
- Yin, R. K. (2003). *Case study research: Design and methods* (3rd ed.). London: Sage Publications.
- Yu, H. L., & Koslow, S. (1999). How well do firms implement strategy when they design Internet Web pages. *Australasian Marketing Journal*, 7(2), 59-73.
- Zairi, M. (1997). Business process management: A boundaryless approach to modern competitiveness. *Business Process Management Journal*, 3(1), 64-80.
- Zhang, A., & Reichgelt, H. (2006). Product complexity as a determinant of transaction governance structure: An empirical comparison of Web-only and traditional banks. *Journal of Electronic Commerce in Organisations*, 4(3), 1-17.

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