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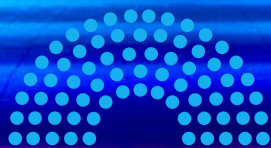
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# Evolution of the use of Financial Tools: A Case Study of MSMEs in the Metropolitan Area of Valle de México

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## Abstract

In Mexico, MSMEs (Micro, Small and Medium-sized Enterprises) cover 99.80% of the economic units and employ 74% of the population. However, the percentage of gross production is 35.90%. This means that despite their strong presence in the indicators of economic units and jobs generated, their assets are limited. There are insufficient financial resources or inadequate financial management, which is a factor that influences the performance and strengthening of its operations.

The study was performed in the metropolitan area of Valle de Mexico, which covers the two federative entities with the highest number of economic units, population and gross domestic product with the highest national contribution.

The objective of this research was to carry out longitudinal case studies of MSMEs in the metropolitan area in order to apply financial tools and identify the effect on growth and its economic-financial situation. The research was qualitative; 6 case studies of different MSMEs were analyzed through three stages: diagnosis, proposal, and implementation of financial tools and evaluation. Data was obtained through in-depth interviews, 6 month-observations and analysis of financial information.

The findings of this research were that in the 6-month period of observations, each case study showed a different situation. Thus, the financial tools had to be applied according to their needs and characteristics. In most situations favorable results were obtained in the administrative control yet, the growth was still not observed in most of the MSMEs.

**Keywords:** Financial tools, Financial Management, MSMEs, Business growth.

**Main Conference Thematic Tracks:** General business & Management, Entrepreneurship & Small Business, Financial Management.

## Introduction

According to the World Bank (2018), from all economic units in the world, 73.6% are micro, 16.5% are small and 3.0% are medium, it means, the 93.1% are Micro, Small and Medium Enterprises (MSMEs). In addition, the World Trade Organization [WTO], (2016), affirms that considering the developed, developing and least developed countries, there are 82.9% micro, 13.8% small and 3.3% medium-sized enterprises in the world. Hence, these economic units represent the largest part of the entire world. And it is important to consider that “in

emerging economies, SMEs contribute up to 45% of total employment and 33% of GDP [Gross Domestic Product]”, (Organization for Economic Co-operation and Development [OECD], 2017).

In Mexico, the MSMEs represent 99.80% of the business units and generate 74% of jobs; it means that they are the Mexican economy base. From this, it is essential to analyze the characteristics and problems they have, with the purpose to get a better situation, obtain economic growth and social stability. Because, according to Sumanjeet y Minakshi (2017), “MSMEs are important for development because they can make a definite contribution to the realization of a country’s central economic purposes and to bring about an efficient utilization of natural, human and capital resources for the achievement of predetermined ends”.

The aim of this research was making studies of MSMEs longitudinal cases in the metropolitan area of Valle de México (Mexico Valley), in order to apply financial tools and identify the effect in the business growth and the MSMEs economical-financial situation. To begin with, hereby it is conveyed literature dealing with characteristics and issues MSMEs present, financial techniques that the Financial Management offers. Eventually, in the Methodology, it is described the kind of investigation executed, plus the compiling technique and analysis of results. In the information analysis section, we thoroughly describe the compiled data acquisition in the researching process. Findings from the study are conveyed in the results acquisition; lastly, our conclusions can be encountered.

### **Related Literature Characteristics and issues of MSMEs in Mexico**

Mexico’s economy has been classified like a developing country (United Nations, 2018) with an efficiency driven in their stage of development, this means that Mexico has the 51<sup>st</sup> place in the global competitiveness, with an index of 4.44 in 2017–2018 (World Economic Forum [WEF], 2017).

Twelve pillars integrate the Global Competitiveness Index: Basic requirements (1-4), efficiency enhancers (5-10), innovation and sophistication (11 y 12) factors subindexes. “According to WEF’s classification, the factor-driven phase is dominated by subsistence agriculture and extraction businesses, with a heavy reliance on (unskilled) labour and natural resources. In the efficiency driven phase, an economy has become more competitive with more-efficient production processes and increased product quality” (Global Entrepreneurship Research Association [GERA], 2018).

A great variety of enterprising activities (that cover all fields and sizes of economic entities) take place in Mexico. From these enterprises, 48.3% are devoted to trading, 38.1% to private non-financial services, 11.6% to manufacturing industry, and 2.0% to the remaining sectors, according to the National Institute of Statistics and Geography (INEGI, 2017).

According to the Ministry of Economy [SE, as abbreviated in Spanish] (2009), Mexican companies are classified considering three main characteristics: field, numbers of employees, and annual sales in millions of pesos (mdp). See Table 1: apart from including the previous data, in accordance to the International Finance Corporation (2009), it also includes their

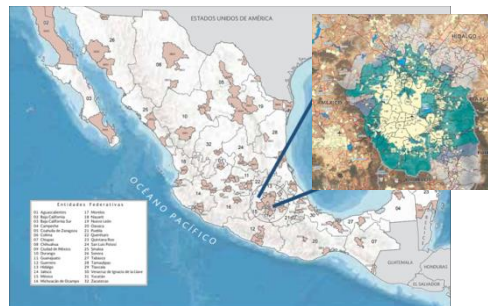
assets and the financing amount that these enterprises have in monetary values; the American dollar (USD) conversion is taken as reference.

*Table 1: Stratification of Micro, Small and Medium Enterprises in Mexico*

Characteristics	Micro	Small	Medium
<b>No. of employees</b>	From 1 to 10	From 11 to 50	From 51 to 250
<b>Revenues (mdp) (USD)</b>	Up to \$4 ≤ \$100,000	From \$4.01 to \$100 >\$100,000 ≤ \$3,000,000	From \$100.01 to \$250 >\$3,000,000 ≤ \$15,000,000
<b>Assets (mdp) (USD)</b>	\$182.1 ≤ \$100,000	\$4,155.4 >\$100,000 ≤ \$3,000,000	\$32,880.9 >\$3,000,000 ≤ \$15,000,000
<b>Financing</b>	< 10,000 USD	< 100,000 USD	< 1,000,000 USD

Each of Mexico's Federative entities (32 in total, according to its political constitution), presents unique characteristics. What is more, 74 metropolitan areas are identified in Mexico and they have 75.1 millions of inhabitants, which represents 62.8% of the nation's population. The national territory can be appreciated in Figure 1; the metropolitan zones are colored.

This investigation focuses on the metropolitan area of Mexico Valley, because it is the biggest and the most important Mexican metropolitan area of the country; it consists of three federative entities: Mexico City, the State of Mexico, and Hidalgo, as is shown in Figure 1.



*Figure 1: The Metropolitan Area of Mexico Valley*

Mexico City is in the metropolitan area of Mexico Valley, and it is regarded as the biggest metropolitan zone of the country, since it comprehends most boundaries and districts, in total 76: 16 in Mexico City, 59 in the State of Mexico, and 1 in Hidalgo. 68% of the territory consists of 52 districts which are in its centre, and hold a minimum of 100 thousand inhabitants. This area spreads over 7866 km<sup>2</sup> and includes 20, 892, 724 residents. It has the biggest average urban density per kilometer. Most of its population is urban; inhabitants employ themselves in non-primary activities, and present a high degree of functional inclusion, since there is a high rate of movement among boundaries and districts: thousands of people transmute everyday according to the Interior Ministry [SEGOB], the Secretariat of Agricultural, Territorial, and Urban Development [SEDATU], the National Population Council [CONAPO], and the INEGI (2018).



Two federative entities of this metropolitan area (Mexico City and the State of Mexico) have most of the population, number of employments, economic units, and the highest total gross production percentage of the country. See Table 2.

*Table 2: Integration of the Metropolitan area Mexico Valley*

<b>Geographical Area</b>	<b>Population</b>	<b>Employment</b>	<b>Economic Units</b>	<b>Gross Domestic Product</b>
National	119 938 473	29 642 421	5 654 014	100%
Mexico City	8 918 653	4 255 757	452 939	17%
State of Mexico	16 187 608	2 754 212	664 785	9%

Based on Table 2, Mexico City is ranked in 2nd place in the country due to the amount of population it has; however, it is the entity that generates more employment; it also has the 2<sup>nd</sup> place for creating economic units, and it provides 17% of the country Gross Domestic Product (GDP). The State of Mexico is the entity with more population; it is the second one in providing employment, but the first one in possessing economic units, and it supplies 9% of the GDP in the nation (INEGI, 2015).

In accordance with the National Survey about Productivity and Competitiveness of Micro, Small, and Medium-sized Enterprises [ENAPROCE, as abbreviated in Spanish], the lack of training of the MSMEs personnel is outstanding. Besides, only about 50% of personnel have studied elementary school and junior high school; therefore, having this academic level and a lack of training, workers do not have technical knowledge about their job, and their performance in their field is deficient (INEGI, 2015).

Another issue to deal with is the low percentage (25%) of control over the administrative-accounting activities, which used to be achieved by using notebooks. It can be asserted that MSMEs endure inexistence of administrative-accounting records and, as a result, difficulty to manage at large-scale, which definitely leads to financial problems.

Aruna (2018) explains “the financial problem of MSMEs is the root cause of all the other problems faced by the MSME sector”. In Mexico, financial problems have their origin in their own characteristics, they have minimum initial investment, and, as a result, there is little or insufficient capital for developing economic activities.

The financial resource MSMEs work with consists of owners personal or family wealth, which is invested in the company and, in this way, the necessary resources are obtained as survival means. Not having enough initial capital is manifested by the lack of trained personnel in the finance area, which needs to guide about the importance of managing financial resources. Therefore, entrepreneurs, who have neither enough initial capital, nor financial education to support their decisions, that is to say, who do not count with counseling, lack a long term vision in their enterprises and only worry on a daily basis.

## Financial Management and Business Growth

Jindrichovska (2013) states that “most small business people only know one-half of what it takes to succeed. The part they are missing is how to manage and grow their business”. The Financial Management is a discipline that helps entrepreneurs to make decisions about Money and to offer financial tools to all kind of enterprises to manage and control financial resources.

Some authors divide these tools in three stages: analysis, planning and control (Perdomo 2002 and Besley & Brigham, 2001). Other experts, in two stages: analysis and planning (Martínez, 2005; Ochoa, 2009; Gitman, 2007 and Brigham & Besley, 2016).

The financial tools classified in the analysis stage are the financial reasons that allow acknowledging the enterprise financial situation. By means of these reasons, we can identify liquidity, credit, operative efficiency, and profit displays. During the planning stage, tools are regularly classified so that enterprises can be supported in order to forecast their figures, such as financial plans, budgets, forecast financial statements, analysis of balance points, work capital management, among others. Whereas tools classified during the control stage are the ones that allow testifying forecast figures with the real ones, for instance, budgetary controls, investment projects, operative and financial leverages.

All these tools belong to Financial Management, and can be applied to any kind of enterprise; such tools support enterprises during the use, record, and control of financial resources. Nonetheless, within MSMEs, it is not easy to apply all financial tools, because they do not have enough records, controls, facilities. In these cases, it is important to adequate these tools to their specific needs and characteristics. Under these circumstances, it becomes harder to identify business growth in MSMEs, which is normally associated to increased sales and profitability.

However, business growth can be seen through different elements in the MSMEs. According to Aguilera and Virgen (2016), “the models for strategy formulation proposed in business administration literature do not integrate business growth aspects in an explicit way”, it is means, that business growth covers more aspects than just the increase in the financial aspect.

In Blázquez, Velásquez, and Verona’s opinion, (2006), there are two main kinds of business growth: the internal and the external one. Internal growth is a form that implies a slower process. It tends to be an initial form of growth; it goes along with companies during their first steps, since their emergence. It requires a considerable effort and a careful planning in order to accomplish the expected results by means of the shareholders’ increases in funding, and the business profits reinvestment. During this stage, enterprises are able to keep a healthy economic situation: they do not accumulate external debts. This internal growth can be appraised in the increase of working-force, production, training programs, investments on facilities, and the entity’s administrative-financial strengthening.

External growth implies obtaining financing through external people or by means of mergers and acquisitions. External growth allows expansion in exchange of leaving the enterprise control in shareholders’ hands that are unrelated to the organization (Blázquez, Velásquez y

Verona, (2006). External growth involves becoming part of internationalization, stop being a MSME, becoming a big enterprise, which encompasses an enlargement in all its transactions.

The MSMEs importance in the world economy is an undeniable fact; nevertheless, the MSMEs characteristics and needs limit their growth; their development relies exclusively on satisfying entrepreneurs' survival needs.

From what has been described, we can judge MSMEs entrepreneurs ignore or do not put into practice Financial Management, and taking this as landmark, a question may be asked: How does the financial tools implementation affect the MSMEs growth in the metropolitan area of Mexico Valley?

We hereby intend to verify the following hypothesis: since the MSMEs lack of information to make decisions about the management and control of financial resources, if financial tools are implemented in accordance to their particular needs and characteristics, and apart from that, a strict tracking of their evolution is followed, then we can identify the effect they have over the growth of the studied enterprise, as a result, using financial tools will be reflected in its tenure and growth.

## **Methodology**

The research was qualitative; longitudinal, descriptive and correlational. It was qualitative, because it is a specific, deep and holistic study about six economic units with different characteristics. It was descriptive because it specifies in detail the circumstances faced, the MSMEs characteristics and needs. Similarly, the study was correlational since we can identify the current relations between MSMEs issues, proposals and results.

This research comprehends six case studies of different MSMEs that were analyzed through three stages: diagnosis, proposal and implementation of financial tools, and evaluation.

During the diagnosis stage, data was achieved through in-depth interviews compiled during October, 2017. The guide to in-depth interviews was integrated with these sections: (1) company profile, (2) issues and solution measurements in the administrative-financial area, (3) operative area, (4) accounting-fiscal area, and (5) knowledge about tools offered by the financial management. Later on, in November and December, 2017, a diagnosis of the case studies was achieved through a deep content analysis of the interviews. At the same time, observation techniques and documentary information analyses were made over the daily actions concerning the MSMEs, our subject matter.

Taking as reference the diagnostic study from the MSMEs, during the second stage, which is called proposal and implementation, some suggestions for solving well-identified issues were made. By means of an implementation plan in administrative-financial, operative, and accounting-fiscal areas, financial tools were applied during a six-month period, from January to July of 2018.

During the evaluation, the third stage, a meticulous record of the results obtained after implementing such proposals was started. Thus, whether there is business growth or not in the MSMEs can be assessed. This stage was covered during July and August, 2018.

### Analysis of MSMEs case studies in Mexico

This section will display the situation of each MSME, the study object. To begin with, by looking at Table 3, an overall evaluation can be made of the enterprises profiles, where the study case took place.

*Table 3: Profile of the economic entities*

<b>Concept</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>
Activity	Business	Manufacture	Services	Services	Services	Business
Size	Small	Micro	Micro	Small	Medium	Medium
Employees	8	4	2	12	55	150
Seniority	10	4	2	16	10	30
Annual sales (mdp)	From \$4.01 to \$100	Up to \$4.0	From \$4.01 to \$100	From \$4.01 to \$100	From \$4.01 to \$100	From \$100.01 to \$250

Hereunder, the analysis of the data compiled in the study of each the six economic entities is displayed. These results were gathered in six tables that correspond to each MSMEs, and show the three stages that the study covered: diagnosis, proposals and implementation, and evaluation. It can also be appraised on the corresponding tables, the results achieved in the three areas that the study implied: the administrative-financial, the operative, and the accounting-fiscal one.

On Table 4, results achieved in the enterprise A are shown; although it started as a micro enterprise, nowadays it is classified as a small one due to its incomes. Taking into account the particular characteristics the enterprise has, it was advised to implement the financial planning tool.

*Table 4: Diagnosis, proposals, and results of the economic entity A*

<b>Area</b>	<b>Problems</b>	<b>Proposals</b>	<b>Evaluation</b>
Administrative	Lack of control in charging clients.	Monitoring charging clients.	Charging clients on time.
Financial	Lack of inventory monitoring.	Investment on inventory systems.	Examining inventories.
	Lack of communication between employer and employee.	Return forms.	Forms to plan incomes, expenses, and purchases.
		To strengthen organizational identity.	To promote and strengthen organizational communication.
Operative	Lack of commitment from employees.	To establish schedules in agreement with employees.	To provide training to personnel.
	Too little training granted to workers.	Periodical training for personnel.	More and better supply and control in warehouses.

Accounting Fiscal	Lack of knowledge of enterprise fiscal topics.	To hire person in charge of the area.	Trained personnel in communication with business people.
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Hereafter, on Table 5 are displayed results achieved from the enterprise B, which is a manufacturing company, and is classified as micro enterprise. The entrepreneur is not full-time in the business; therefore, he received the counseling of implementing the administrative-financial monitoring tool.

*Table 5: Diagnosis, proposals, and results of the economic entity B*

Area	Problems	Proposals	Evaluation
Administrative Financial	Entrepreneur spending half-time in the entity.	Establishing priorities on schedule.	Hiring someone to be in charge of management.
	Lack of organization in administrative activities.	To determine entrepreneur duties and distribute responsibilities. Hiring personnel to support the administrative area.	Specific functions and activities were distributed to personnel already hired.
Production	Lack of supervision of personnel.	To make profiles for post to select personnel.	After hiring someone for management, work load became equal for each business member.
	Lack of training. Constant turnover of staff.	Periodical training.	To provide training to personnel.
Accounting Fiscal	Lack of knowledge of enterprise fiscal topics, which causes confusion while facing new arrangements.	Safeguarding fiscal receipts data in electronic files in a regular and methodical manner.	Better supervision of accounting and fiscal data. Data was finally organized and accessible whenever necessary.
	Lack of organization on safeguarding information of fiscal support.	Frequent meetings with the accountant.	

Table 6 displays an analysis of data corresponding to enterprise C, which is micro and offers technical services. It has been working for two years and it requires strengthening its market. This company received the suggestion of implementing a work capital management, which involves cash accounting accounts, accounts receivable, inventories, and suppliers.

*Table 6: Diagnosis, proposals, and results of the economic entity C*

Area	Problems	Proposals	Evaluation
Administrative Financial	Disagreement between clients and suppliers about pre-established deals.	To establish client and supplier policies.	Internal agreement: until the end of their second working year, it will be granted an over 30-day credit in order to strengthen the market.
	Lack of credit.	Trace, monitoring, and control of cash, clients, and suppliers.	

Operative	Works as an intermediary and relies on the supplier's service. Lacks of a spare parts inventory.	Hiring technicians to assure service. Acquiring spare parts and supervising inventory.	A technician will be hired. Entrepreneur accepted making inventory.
Accounting Fiscal	Total lack of knowledge of the accounting and fiscal matter.	Hiring someone knowledgeable in the area.	Hiring accountant to deal with accounting and fiscal obligations.

On Table 7 we can see the results of enterprise D, which is small and offers food services. This business is very well placed, and due to this reason, it has made alliances with companies that have become permanent clients. It has long-term growth expectations. It was advised to improve its management of work capital.

*Table 7: Diagnosis, proposals, and results of the economic entity D*

Area	Problems	Proposals	Evaluation
Administrative Financial	A jack-of-all-trades entrepreneur. Lack of supervision on accounts receivable and money.	To distribute responsibilities. To record and trace accounts receivable.	To assign responsibilities to workers. Close cash control (receipts and disbursements). To identify precise data of workers in debt.
Operative	It requires surveillance on food flows. There is a lack of supervision on the presentation of menus.	A software implementation to manage food. To print catalogues of menus.	The software application for training employees. A catalogue is in process.
Accounting Fiscal	Does not know about accounting and fiscal matters.	To hire an accountant services.	Accounting and fiscal obligations are under control.

On Table 8, enterprise E information is displayed. This is a small company and is identified as a legal entity; it offers environmental counseling. The problem is it is in debt; therefore, it should look for financial support alternatives.

*Table 8: Diagnosis, proposals, and results of the economic entity E*

Area	Problems	Proposals	Evaluation
Administrative Financial	Cash shortage. Interest payment.	To allow cash flow. Renegotiate its debt. To search support alternatives in the Environment Secretariat.	To develop a cash flow giving priority to transactions. An agreement with the financial institution to extend the debt dateline and reduce the interest rate.

Operative	It must update its equipment.	To plan updating the cash flow.	Renting equipment is seen as an option.
Accounting Fiscal	Ignorance about accounting and fiscal matters	Hiring an accountant.	Updated accounting and fiscal duties.

The Medium-sized enterprise F is shown on Table 9. It consists of a legal entity devoted to trading. It is a company with troubles for overcoming accounts receivable; consequently, it should improve its work capital management.

*Table 9: Diagnosis, proposals, and results of the economic entity F*

Area	Problems	Proposals	Evaluation
Administrative Financial	There is no financial planning.	Development of financial planning.	Financial planning becomes affected by the enterprise owners' personal expenses.
	Lack of client tracing.	Regular visits to clients, datelines revision, discounts in each route.	Acknowledgement of signature changes in contracts of clients.
	Family enterprise; duplicity in commanding.	Organization chart development.	The chart organization was updated.
	Turnover of staff.	Revision of posts profiles.	Personnel was hired for Human Resources Department.
Operative	There are no policies in sales department (discounts).	Development of sales conditions policies.	Attachment to sales terms: discounts, amounts, endorsements with people in charge stated.
	Lack of rout supervision.	Daily reports from supervisors who monitor clients.	A punctual tracing of clients by means of supervisors.
Accounting Fiscal	Entrepreneurs ignore accounting and fiscal matters.	Hiring an expert on the area.	Updated accounting and fiscal duties.

Based on the information provided in synthesis on Tables 4 and 9, hereby we have already depicted the most significant issues of the six MSMEs that were studied, and the solution alternatives implemented during a period of six months, as well as the results achieved. It can be clearly appraised that the financial tools implementation demands time, and that the positive financial results cannot be assessed in such a short period.

## Results

Through this research, it was seen that MSMEs must use financial tools to achieve business growth. It is highly transcendental to affirm that these financial tools have to be adequated to characteristics and needs of the economic entities.

However, to make this possible, first, the economic entity must be strengthened in its internal structure by, for example, achieving an adequate management of financial and material goods, reinforcing its infrastructure, training staff, establishing a formal and professional organization, making use of technology, among others. Once this stage is over, business growth begins, which is reflected in the size scale of the company, as shown in Table 10, which corresponds to MSMEs characteristics.

*Table 10: MSMEs characteristics*

Concept	MSMEs					
	A	B	C	D	E	F
Economic activity	Trade	Manufacturing	Services	Services	Services	Trade
Constitution	Physical	Physical	Physical	Physical	Legal	Legal
No. of employees	Person	Person	Person	Person	Entity	Entity
Revenues (mdp)	8	4	2	12	55	150
	$\geq 4$	$< 4$	$\geq 4$	$\geq 4$	$\geq 4$	$\geq 150$
Assets (mdp)	$< 4,155.4$	$< 4,155.4$	$< 4,155.4$	$< 32,880.9$	$< 4,155.4$	$> 32,880.9$
Financing (USD)	$\leq 100,000$	$\leq 100,000$	0	0	$< 1,000,000$	$> 1,000,000$
Type of market	Regional	Local	Regional	Local	Regional	Regional
Organizational Structure (areas)	6	2	2	5	5	7
Technology use	Software Machinery	Software Machinery	Only computer equipment	Only computer equipment	Software Machinery	Software Machinery

Characteristics shown on Table 10 confirm that MSMEs grow steadily, and that time is a deciding factor. We can observe enterprise F, which has had the longest working period (see Table 3), has the highest growth; on the other hand, enterprise C, which has just started operations, is placed on the lowest growth level.

We can also observe on Figure 2 that the size scale of the six enterprises studied grows progressively on account of the reinforcement of their internal structure. This internal strengthening is achieved with the support of Financial Management.



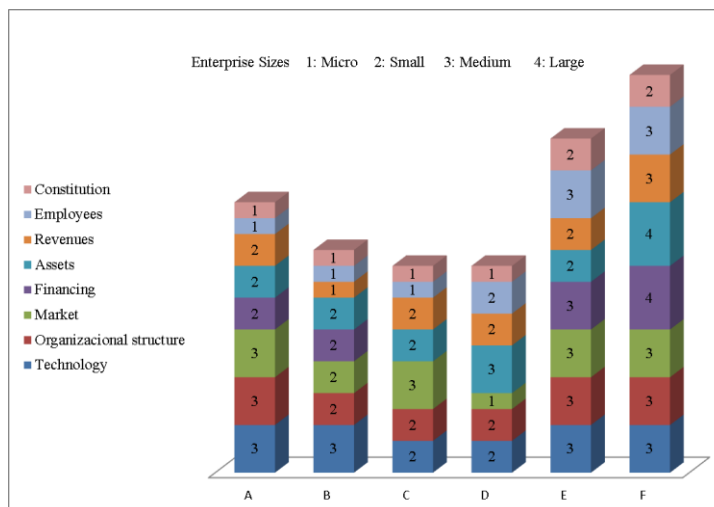


Figure 2: Business Growth in the MSMEs of Metropolitan Area of Valle de México

All factors achieved during this research are displayed on Figure 2; by studying it, we can acknowledge the effect of Financial Management implementation on the MSMEs growth. These elements were classified according to each entity's size. Number 1 corresponds to Micro, 2 to Small, 3 to Medium-sized, and 4 to Large enterprises. Determining factors are the following: constitution (legal entity or physical person), number of employees, revenues (mdp), assets (mdp), financing (USD), type of market, organizational structure (areas), and technology use.

In accordance with the former information, it can be asserted that MSMEs business growth comprises these elements, and that these later ones constitute quantitative and qualitative aspects in their internal structure.

## Conclusion

Financial Management is a discipline that offers diverse tools, which ought to be adapted to the MSMEs needs in order to apply them to specific circumstances they go through; only in this way, they will be indeed useful for this sector.

Until these financial tools are used, the result can be appraised: the business growth will be present in the MSMEs operations. Generally, the business growth can be evaluated through figures (sales increase, profitability, etc); however, regarding MSMEs, it appears first in different elements or factors and, as a result of internal strengthening, later on will be conveyed in profitability. It is worthwhile mentioning that business growth is not achieved immediately: it assessed in each MSME in a different manner.

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# An Empirical Study on Adoption of Digital Banking in Oman

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## Abstract

Digitalization of banking services provides lots of opportunities to banks in enhancing their customer base, improving service quality and maximizing revenues. Within this background, this study aims to explore empirically, factors influencing the adoption of digital banking by retail customers in Oman. Primary data was collected through a structured questionnaire from 200 retail banking customers on the basis of the snowball technique. Factor analysis was applied to identify the most influencing factors and satisfaction level that leads to adoption of digital banking. The findings of the study show that five factors namely perceived usefulness and ease of use; security, privacy and trust; cost effectiveness; awareness of digital services and web design features were found to have significant influence in the adoption of digital banking among retail customers.

**Keywords:** digital banking, e-banking, internet banking, online banking, customer adoption, Oman.

**Main Conference Thematic Tracks:** Marketing Management

## Introduction

The concept of electronic banking has been introduced in 90s due to growing popularity of internet usage. In 1967, the world's first ATM was installed by Barclays in north London. In 1995, Wells Fargo financial services company in the USA has introduced online transactions to the benefits of the customers (Michal and Tomasz, 2009). It has been observed in recent time that the banking and financial service industries across the globe have undergone a significant change in the service delivery due to advancement in technology, prompting the customers to adopt electronic platform for the usage of their services (Sathye, 1999). Presently, ATM, debit and credit card, internet banking, tele banking, mobile banking, e-bill payment, electronic fund transfer, emails etc., are the most prominent mode of digital banking services and also considered as cheapest mode of distribution channel for banking operations comparatively physical branches. Digital banking circumscribes composite services delivered through electronic mode, which aim at serving both banks and consumers as a means of providing a convenient, faster and better experience than traditional banking. Digital banking is a vibrant operational mechanism where banks can add value to customers by providing useful benefits in terms of bank products and services. The digital adoption is a critical success factor in banking these days, due to the need to improve end-to-end integration of internal and external services (Ananda, 2017). Hence, banking companies across the globe are heavily investing on digital technologies in order to reduce cost and risk, speeding up of transaction, enhance service

quality, provide customised services and improve competitiveness in the market (Sujeet Kumar Sharma et al., 2018). Digital banking offers customers an easy access to banking services (Adapa, 2011) without physically visiting the banks (Zheng, 2010).

## Literature Review

Numerous studies were conducted across the globe to identify various factors influencing the adoption of digital banking related areas. The technology adoption model (TAM) (Davis, 1989) appears to be most widely used to examine the determinants of information technology acceptance among the users (Taylor and Todd, 1995; Agarwal and Prasad, 1999; Fu et al. (2006); Alryalatet et al., 2013, Olushola and Abiola, 2017) as it is valid in predicting the individual's information technology acceptance. As per TAM, the behaviour of adoption of computer technology is determined by perceived usefulness and perceived ease of use of the system (Yi Sun Wang et al., 2003). Therefore, this study is extended TAM in the context of digital banking.

Factors influencing customers to adopt e-banking service channels have been a topic of research in the developed world (Satye, 1999; Karjaluoto et al., 2002; Pikkarainen et al., 2004; Walfried M. Lassar, 2005; Yiu et al, 2007). Mobarek (2007) in his study indicated that delivery channels are lacking in meeting the customer demands by not making them aware of e-banking and up to date technology. A study conducted in Lebanon to explore the critical factors influencing the e-banking adoption, it was found that customer's intention, attitude, perceived behavioral control, trust, perceived usefulness, and perceived ease of use were the factors influencing the adoption (Sankari A. et al., 2015). Davis et al., 1989 in technology acceptance model (TAM) regarding the users acceptance of technology said that 'perceived usefulness' are one of the factors influencing the adoption of technology. Many studies have reported that there is a significant relationship between perceived usefulness and attitude towards usage of mobile banking (Venkatesh & Morris, 2000; Luarn and Lin, 2005; Hanafizadeh et al., 2012).

Guriting and Ndubisi, 2006 reported that perceived usefulness is one of the most popular factors utilised in the existing internet banking literature. In the study conducted by Pikkarainen et al., (2004), among the several factors influencing intention to use internet banking, perceived usefulness was the most influential factor. Gounaris and Koritos (2008) supported the findings of Pikkarainen et al., (2004), perceived usefulness was one of the most important factors of online banking adoption. A study conducted by Jaruwachirathanakul and Fink (2005) confirmed that perceived usefulness is able to encourage the adoption of online banking.

Gounaris and Koritos (2008) concluded that perceived ease of use has an impact on the intention to use online banking, while Pikkarainen et al., (2004) and Eriksson et al., (2005) failed to establish such relationship. Chen and Barnes (2007) have also found that perceived ease of use is significantly affecting customer adaptation intentions. Several studies have reported that perceived ease of use has a positive effect on perceived usefulness (Amin, 2007; Cheng et al., 2006; Al-Somali et al., 2009). According to Amola and Shahir (2016) security concerns were reported as one of the major reasons behind customer resistance to mobile

banking services. On the other hand, a study by Wu (2005), indicates that internet banking improves client safety by reducing the need to carry large amounts of cash.

Recent studies have indicated that trust is also a prominent factor on user willingness to adopt electronic mode of service delivery channel (Sujeet et al, 2018). A study conducted by Alnsour and Al-Hyari (2011), has stated that awareness of security leads to trust and this trust has a direct impact on the usage of e-banking services. Floh and Treiblmaier (2006) suggested that financial institutions improve their screen designs and have their navigation combined with an integrative banking system. A study by Kumbhar (2011) has examined the cost effectiveness of ATM service on the core service quality dimension which was significantly affecting on overall customer satisfaction in ATM service provided by commercial banks. Ala'Eddin and Hassan (2011) in their study of e-banking functionality and outcomes of customer satisfaction investigated that transaction fee was an important element to facilitate the use of e-banking, and it was reflected on customer satisfaction. The quality of services of e-banking services has been considered as an item to find the factors influencing customer satisfaction in a study conducted by Anand and Sonal (2017). The results of the study conducted by Harihara Sudhan and Pavithra (2012), recommends the Banks to give demo information regarding the usage of internet banking services in their banks website.

## Methodology

### a) Sample and data collection

The sample is obtained from the population of retail banking customers across Oman. The sample frame used in this study is specifically the digital banking users. The customers were identified using snowball sampling technique (Ananda and Sonal, 2018). The data was obtained from the retail banking customers using digital banking services across Oman. A total of one thousand questionnaires were mailed to the respondents through a web link of the questionnaire. Out of 655 responses received (response rate 65.5 percent), the study considered only two hundred completed responses (answering all statements) with a successful response rate of 20 percent. Table 1 provides demographic profile of the respondents to the survey.

*Table 1: Demographic profile of sample data*

Demographic Variables	Categories	No. of Respondents (N=200)	Percentage
<b>Gender</b>	Male	139	69.5
	Female	61	30.5
<b>Age (in years)</b>	18-25	9	4.5
	26-30	50	25
	31-40	80	40
	41-50	50	25
	51-60	11	5.5
	Bank Muscat	116	58
	National Bank of Oman	27	13.5

<b>Bank-wise customers</b>	Bank Dhofar	15	7.5
	Oman arab Bank	9	4.5
	HSBC Bank	9	4.5
	Bank Sohar	9	4.5
	Bank Nizwa	7	3.5
	Ahli Bank	5	2.5
	Alizz Bank	5	2.5
<b>Profession</b>	Govt. Employee	78.6	39.3
	Private Employee	95.4	47.7
	Business	10	5
	Self-Employee	4	2
	Housewife	6	3
	Student	6	3
	Others	0	0
<b>Length of digital banking usage</b>	Less than 1 year	17	8.5
	1-5 years	102	51
	5-10 years	52	26
	10-15 years	14	7
	Above 15 years	15	7.5

Source: Primary Data

#### b) Design and measurement

The study has applied a cross sectional study design with a quantitative approach. Based on the previous studies, a closed item self-administered structured questionnaire was used as survey instrument to collect responses from retail banking customers. The questionnaire comprised of demographic profile of the respondents and twenty six statements related to adoption and satisfaction level of digital banking users in Oman. All the statements of survey instrument represented using a seven point Likert scale (1 = strongly disagree, 2 = disagree, 3 = somewhat disagree; 4 = neither agree nor disagree, 5 = somewhat agree, 6 = agree, 7 = strongly agree).

Based on the previous studies, six principal dimensions have been identified to measure the adoption of digital banking in the perception of retail banking customers (Table 2).

Table 2: Digital banking adoption factors

Sl. No.	Principal Factors	Discription	Sources
1	Perceived Usefulness	Degree to which a person believes that using a particular system would bring customers certain gains	Guriting and Ndubisi (2006); Gounaris and Koritos (2008); Hanafizadeh et al., (2012)
2	Perceived Ease of Use	Degree to which a person believes that using a particular system would be free from effort	Gounaris and Koritos (2008); Al-Somali et al., (2009); Chen and Barnes (2007)
3	Security, Privacy and Trust	Convincing customers that their information and transaction are	Hernandez and Mazzon, (2007); Alnsour and Al-

		secure; try to bring the customers into confidence.	Hyari (2011); Amola and Shahir (2016);
4	Cost effectiveness	Lower fees than conventional mode.	Kumbhar (2011); Worku G, Tilahun A. and Tafa M. A (2016); Ala'Eddin and Hassan (2011)
5	Awareness of Digital Banking Services	Customers' awareness about the availability services through technology mode.	Amutha D (2016); Amola and Shahr (2016); Harihara Sudhan and Pavithra (2012)
6	Web Features	Quality of web design in order to enhance usability and usefulness.	Floh and Treiblmaier (2006); Lichtenstein and Williamson (2006);

*Source: Compiled by the authors*

Figure 1 delineates the model which forms the basis for the further empirical analysis. This research model is derived on the basis of the review of previous relevant studies.

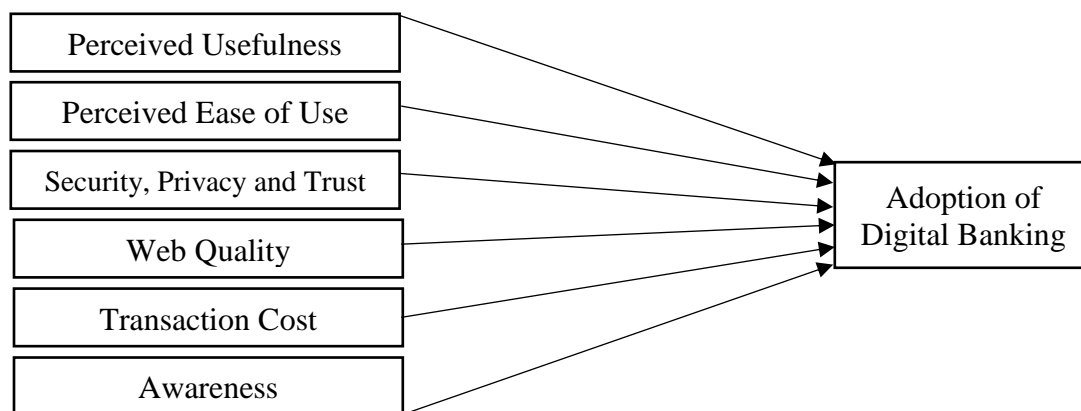


Figure 1: Research Model

### c) Data tools and analysis techniques

Descriptive statistics such as mean, number of respondents and standard deviation were calculated for the factors. The data was analysed by finding the mean scores of the various factors. The factor analysis was applied to measure the perceived factors of digital banking and overall satisfaction which leads to adoption of digital banking. Factor analysis has been performed for the six dimensions by utilising principal component extraction process with Varimax rotation. The reliability test was conducted using Cronbach alpha to test internal consistency of all constructs used in this study.

## Results

### a) Descriptive statistics of digital banking adoption



Table 3 provides the descriptive statistics of the items and the main factors considered for the study.

*Table 3: Descriptive statistics of attributes*

Factors	Items	Items		Factors	
		Mean	Standard Deviation	Mean	Standard Deviation
<b>Perceived Usefulness</b>	Digital banking would enable me to speed up my transaction time	6.1450	1.41917	5.86	1.07
	Digital banking services improves my job efficiency and effectiveness	5.8600	1.33390		
	Digital banking is convenient way to manage my financial transactions	6.0700	1.20930		
	Digital banking gives me greater control over my financial transactions	5.7750	1.32026		
	Digital banking operations increases my e-skill level	5.4500	1.34781		
<b>Perceived Ease of Use</b>	Digital banking is more user friendly than visiting the bank branches	5.8100	1.36867	5.68	1.01
	System interaction with digital banking is clear and understandable	5.5250	1.19856		
	Interaction with Digital Banking transactions is flexible	5.5200	1.25598		
	Digital banking service made easy to do the things what I want to	5.8800	1.13226		
<b>Security, Privacy and Trust</b>	My transaction through digital banking is safe and free from monetary losses	5.2750	1.32596	5.29	1.12
	Usage of digital banking services does not harm my privacy	5.2450	1.36907		
	My transactions through digital banking channels is error free and reliable	5.2050	1.36833		
	My transactions processed through digital banking is trustworthy and dependable	5.4350	1.21373		
<b>Cost effectiveness</b>	Transaction cost in digital banking system is relatively cheaper	5.6250	1.32785	5.18	1.19
	Digital banking transactions provides discounts on online booking/buying	4.7700	1.62180		
	Digital banking service provides value added benefits	5.1650	1.35534		
<b>Awareness of Digital Banking Services</b>	Digital banking system provides latest and accurate information	5.6150	1.10584	5.72	0.93
	I am aware of possible risk associated with digital banking services	5.7500	1.20197		
	I am comfortable in performing digital banking transactions	5.8550	1.15353		
	I am Confident in using digital banking devices	5.6600	1.31646		
<b>Web Features</b>	Quality of contents provided in the digital banking channel are relevant, objective, well written, professional and updated regularly	5.5100	1.18614	5.98	0.88
	Design of digital banking portal should be attractive	6.0250	1.10929		
	Contents of digital banking system should be well organised	6.2400	1.05735		

	There should be an efficient interactive facilities for the customers in the digital banking system	6.1500	1.04545
<b>Overall Satisfaction</b>	I am satisfied with my digital banking transactions	5.7700	1.05005
	I intend to continue usage of digital banking facilities	6.0800	1.02413
	Mean	5.670	
	Median	5.889	
	Minimum	1	
	Maximum	7	
	Standard deviation	0.853	

*Source: Prepared by the authors*

### b) Exploratory factor analysis

An Exploratory factor analysis using SPSS was conducted on the survey data. This analysis was used to determine the factors influencing the adoption of digital banking. All the 26 items were analysed using principal component analysis. Keiser-Meyer-Olkin (KMO) measure of sampling adequacy (Kaiser, 1974) and Bartlett's test of sphericity (Bartlett, 1954) were the two tests applied for the justification of implementing the technique of factor analysis. KMO measure of sampling adequacy was 0.930 and Bartlett's test of sphericity was significant at 0.000 level. The results of KMO and Bartlett's test of sphericity indicated high sampling adequacy (Hutcheson and Nick, 1999) and justified to proceed with factor analysis (Coakes and Ong, 2011) showed in Table 4. The results of these two tests are indicated in Table 5.

*Table 4: Factor Analysis of influencing factors for adoption of digital banking*

Items	Initial Eigen values			Extraction sums of squared loadings			Rotation sums of squared loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total	% of variance	Cumulative%
1	12.594	48.439	48.439	12.594	48.439	48.439	4.788	18.414	18.414
2	1.967	7.565	56.003	1.967	7.565	56.003	4.182	16.083	34.497
3	1.459	5.610	61.614	1.459	5.610	61.614	3.317	12.758	47.255
4	1.091	4.195	65.809	1.091	4.195	65.809	3.056	11.753	59.009
5	1.007	3.872	69.681	1.007	3.872	69.681	2.775	10.672	69.681
6	.837	3.218	72.899						
7	.750	2.885	75.784						
8	.661	2.541	78.325						
9	.580	2.230	80.555						
10	.549	2.113	82.668						
11	.510	1.960	84.628						
12	.455	1.749	86.377						
13	.413	1.587	87.965						
14	.369	1.419	89.384						
15	.360	1.384	90.768						
16	.340	1.309	92.077						
17	.305	1.173	93.250						
18	.285	1.097	94.347						

19	.268	1.032	95.379
20	.229	.881	96.260
21	.201	.775	97.035
22	.194	.747	97.783
23	.186	.716	98.498
24	.153	.589	99.088
25	.138	.529	99.617
26	.100	.383	100.000

*Extraction method: Principal Component Analysis*

*Source: Output of SPSS 23 Econometrics Software*

The critical attributes having a significant influence on the dimensions of digital banking explained in Table 4 using the extraction method of principal component analysis.

*Table 5: KMO and Bartlett's tests*

Kaiser-Meyer-Olkin measure of sampling adequacy	.930	
Bartlett's test of sphericity	Approx. Chi -square	3810.064
	Degree of freedom	325
	Significance	0.000

*Source. Output of SPSS 23 Econometric Software*

The factor analysis was used to identify the critical dimensions of digital banking. From Table 4 it is observed that factor analysis was able to extract nearly 70 percent of the total variance. Numerous studies have proved that cumulative percent of variance accounted is the criteria used for the extraction of the number of components. It is advised that in order to retain the components, the cumulative percentage of variance accounted for is at least 70 percent and sometimes 80 percent. The rotated factor matrix, resulting from a varimax rotated principal axis factor extraction of the independent variables using the 1.0 Eigen value cut off criterion, is shown in Table 7, which indicates that five factors emerged and reports their factor loadings.

*Table 6: Communalities*

Item No.	Communalities	Initial	Extraction	Cronbach's alpha
	<b>Overall alpha</b>			0.954
	<b>Perceived Usefulness</b>			.920
Q1	Digital banking would enable me to speed up my transaction time	1.000	.633	
Q2	Digital banking services improves my job efficiency and effectiveness	1.000	.598	
Q3	Digital banking is convenient way to manage my financial transactions	1.000	.778	
Q4	Digital banking gives me greater control over my financial transactions	1.000	.744	
Q5	Digital banking operations increases my e-skill level	1.000	.620	
	<b>Perceived Ease of Use</b>			.912
Q6	Digital banking is more user friendly than visiting the bank branches	1.000	.616	
Q7	System interaction with digital banking is clear and understandable	1.000	.718	

Q8	Interaction with Digital Banking transactions is flexible	1.000	.615	
Q9	Digital banking service made easy to do the things what I want to	1.000	.668	
<b>Security, Privacy and Trust</b>				.926
Q10	My transaction through digital banking is safe and free from monetary losses	1.000	.682	
Q11	Usage of digital banking services does not harm my privacy	1.000	.723	
Q12	My transactions through digital banking channels is error free and reliable	1.000	.681	
Q13	My transactions processed through digital banking is trustworthy and dependable	1.000	.768	
<b>Cost effectiveness</b>				.907
Q14	Transaction cost in digital banking system is relatively cheaper	1.000	.557	
Q15	Digital banking transactions provides discounts on online booking/buying	1.000	.776	
Q16	Digital banking service provides value added benefits	1.000	.734	
<b>Awareness of Digital Banking Services</b>				.907
Q17	Digital banking system provides latest and accurate information	1.000	.607	
Q18	I am aware of possible risk associated with digital banking services	1.000	.591	
Q19	I am comfortable in performing digital banking transactions	1.000	.812	
Q20	I am Confident in using digital banking devices	1.000	.834	
<b>Web Features</b>				.920
Q21	Quality of contents provided in the digital banking channel are relevant, objective, well written, professional and updated regularly	1.000	.649	
Q22	Design of digital banking portal should be attractive	1.000	.704	
Q23	Contents of digital banking system should be well organised	1.000	.821	
Q24	There should be an efficient interactive facility for the customers in the digital banking system	1.000	.702	
<b>Overall Satisfaction</b>				.926
Q25	I am satisfied with my digital banking transactions	1.000	.633	
Q26	I intend to continue usage of digital banking facilities	1.000	.598	

*Source: Output of SPSS 23 Econometric Software*

The Table 6 of communalities portraying the values in the extraction column indicates the proportion of each variable's variance that can be explained by the principal components. Cronbach alpha method is used for testing the reliability of the instrument. Reliability test is used to check whether or not the respondents' score on each item tend to the scores related to the other item (Bryman and Bell, 2007). The value of Cronbach alpha greater than or equal to 0.75 is considered to be acceptable (Nunnally, 1978) and indicates that the construct reliability is good. The Cronbach value of 0.954 indicates excellent internal consistency

including the alpha coefficients of the five dimensions were above 0.9 which is highly reliable as explained in Table 6.

*Table 7: Rotated factor matrix*

		<b>Rotated Component Matrix<sup>a</sup></b>				
		<b>Component</b>				
<b>Items</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Q1	Digital banking would enable me to speed up my transaction time	.667				
Q2	Digital banking services improves my job efficiency and effectiveness	.613				
Q3	Digital banking is convenient way to manage my financial transactions	.713				
Q4	Digital banking gives me greater control over my financial transactions	.762				
Q5	Digital banking operations increases my e-skill level	.568				
Q6	Digital banking is more user friendly than visiting the bank branches	.588				
Q7	System interaction with digital banking is clear and understandable	.557				
Q8	Interaction with Digital Banking transactions is flexible	.568				
Q9	Digital banking service made easy to do the things what I want to	.650				
Q10	My transaction through digital banking is safe and free from monetary losses		.755			
Q11	Usage of digital banking services does not harm my privacy		.782			
Q12	My transactions through digital banking channels is error free and reliable		.737			
Q13	My transactions processed through digital banking is trustworthy and dependable		.629			
Q14	Transaction cost in digital banking system is relatively cheaper					.450
Q15	Digital banking transactions provides discounts on online booking/buying					.860
Q16	Digital banking service provides value added benefits					.753
Q17	Digital banking system provides latest and accurate information					.473
Q18	I am aware of possible risk associated with digital banking services				.454	
Q19	I am comfortable in performing digital banking transactions				.760	
Q20	I am Confident in using digital banking devices				.759	
Q21	Quality of contents provided in the digital banking channel are relevant, objective, well written, professional and updated regularly		0.467			
Q22	Design of digital banking portal should be attractive			.700		
Q23	Contents of digital banking system should be well organised			.837		
Q24	There should be an efficient interactive facility for the customers in the digital banking system			.794		
Q25	I am satisfied with my digital banking transactions				.528	
Q26	I intend to continue usage of digital banking facilities			.589		

Extraction Method: Principal Component Analysis

Rotation Method: Varimax with Kaiser Normalization

a. Rotation converged in 7 iterations.

*Source: Output of SPSS 23 Econometric Software*

Table 7 shows the rotated factor matrix for the questionnaire. Factor analysis extracts 26 components with only 5 factors. Tabachnick and Fidell (2001) stated variable with factor loadings more than 0.45 were chosen in this study because loadings equal to 0.45 is considered average. After performing Varimax Rotation Method with Kaiser Normalization, Factor 1 (perceived usefulness and ease of use) comprised of nine items with factor loadings ranging from 0.56 to 0.76. The items in Factor 1 are Q1 - Q9. Factor 2 (security, privacy and trust) comprised of five items with factor loadings ranging from 0.68 to 0.78. The items in Factor 2 are Q10- Q13 and Q21. Factor 3 (web features) comprised of four items with factor loadings ranging from 0.58 to 0.83. The items in Factor 3 are Q22-Q24 and Q26. B2 and B3. Factor 4 (awareness of digital services) comprised of four items with factor loadings ranging from 0.45 to 0.76. The items in Factor 4 are Q18-Q20 and Q25. Factor 5 (cost effectiveness) comprised of four items with factor loadings ranging from 0.56 to 0.62. The items in Factor 5 are Q14-Q17.

About 70 percent of the total variance in the 26 variables is attributed to the five dimensions influencing digital banking. From Table 4, the dimension of perceived usefulness and ease of use explains a variance 4.788 which is 18.414 percent of total variance, security and trust dimension contributes 4.182 which is 16.083 percent, the dimension of web features explains 3.317 which is 12.758, awareness explains 3.056 contributing to 11.753 percent and cost effectiveness explains 2.775 explaining 10.672 percent of variance.

## Findings

The factor loadings in the study indicated that perceived usefulness and ease of use; security privacy, and trust; Web features; awareness; and cost effectiveness are the six factors influencing adoption of digital banking in Oman which is supported by various studies (Yousuf, Ali, Hafedh & Khamis 2013; Daneshgadeh and Yildirim, 2014; Jeong Yoon, 2013). The justification is provided by the five pertinent dimensions extracted by principal component method of factor analysis. The study revealed five factors (perceived usefulness and ease of use; security, privacy and trust; web features; awareness of digital banking services; cost effectiveness) have a significant influence on the adoption of digital banking services.

The total variance of 70 percent for Eigen value greater than one sufficiently proves the significance of the dimensions and the remaining 30 percent of the variance is explained by other variables. Among all these factors, the first factor (perceived usefulness and ease of use) accounts for 48.44 percent which is considered to be the most important factor influencing adoption of digital banking.

The first factor, perceived usefulness and ease of use extracted by the principal component analysis has factor loadings identifying perceived usefulness and ease of use. This factor is found to be one of the most important factor influencing the intentions of customers for adoption of digital banking (Sankari A, et al., 2015). The main reason that individuals use

the internet banking is because they find the system useful and perceived ease of use for making transactions in banking.

Besides perceived usefulness and ease of use, security, privacy and trust concerns have always been reported as one of the major reasons among customers in banking services (Wang Yi, et al., 2003). The principal component analysis results has extract this factor as one of the influencing factors for adoption of digital banking. According to Amola and Shahir (2016), security concerns have been one of the reasons for customer resistance to mobile banking services. Awareness of security leads to trust, which can have a direct impact on the digital banking usage (Alnsour and Al-Hyari, 2011). According to Williams, Rana, Dwivedi and Lal (2011), trust is considered to be influential determinant in influencing adoption of information systems. Existence of trust will certainly increase customers' involvement in digital banking and increase their eagerness in providing sensitive information

Easy web navigation, clarity and understandable transaction and easy interaction has a significant impact on usage of e-banking (Natasha et al., 2014). In this study, principal component analysis identified web features as one of the factor influencing usage of digital banking. It is very important to have a good user interface to enhance the easiness to obtain information from banking websites. This will help the customers to understand the entire process on the website.

In this study, awareness of service is another important factor identified to be influential in usage of digital banking services. Therefore, it is very important for the customers to be aware of the digital banking services. Lack of awareness or knowledge about the technology and accessibility of services of digital banking can be one of the many factors that inhibit adoption of digital banking services (Bindiya. T, et al., 2011). Hence we can say that awareness of digital banking is important for customers to decide whether they are willing to adopt digital banking systems.

In order to utilize the digital banking services, the customers are required not only to have suitable electronic devices but also internet services including subscription, service charges and communication charges. According to Kuo and Yen (2009); Luarn and Lin (2005); Wu and Wang (2005), the cost of accessing wire services, financial consideration may have a significant influence on the customer's behavioral intentions (Kuo and Yen, 2009). Cost being one of the factors extracted by principal component analysis is considered to have an influence on usage of digital banking.

## **Conclusions**

The aim of the study is to identify the factors influencing adoption of digital banking services from the perspective of retail banking customers in Oman. The study used extended TAM as a theoretical framework. The contribution of this study is an extension of TAM in the context of digital banking which is quite different from the previous studies. From the results of the study, it is observed that five factors namely perceived usefulness and ease of use; security, privacy and trust; cost effectiveness; awareness of digital services; and web design features influence significantly the digital banking adoption among retail customers in Oman. Customers perceive that using the services of digital banking not only increases the speed of

transactions and improves their job efficiency but also increases their e-skills. Hence, by improving the service quality of all the identified factors would help the banks in increasing the usage as well as level of satisfaction among the customers in Oman. Lack of awareness of various digital banking services can be one of the factors leading to dissatisfaction. A well organized and interactive interface have a positive impact on the customer satisfaction.

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# Does Organizational Commitment Matter? Linking Socially Responsible Human Resource Management, Turnover Intentions and Organizational Citizenship Behaviour

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## Abstract

Current research explores frameworks on the connection between Socially Responsible Human Resource Management (SR-HRM) - including the three areas that affect their roles, being legal application, employee-oriented and overall expedition; and staff turnover implications as well as corporate awareness. This research focuses on the hotel industry in Kyrenia, Northern Cyprus more specifically relating to the corporate commitments including but not limited to affective, protraction, established commitment. Structural Equation Modeling (SEM) was carried out on the data that had been collated from numerous staff members in a number of hotels that had been highlighted as appropriate for this research, with demographic variables serving as control variables for the study.

The results indicated that the application of SR-HRM methodologies that promote staff focused, legally compliant and overall CSR application play a substantial part in decreasing employee turnover plans, while demonstrating a significant relationship with corporate awareness conduct. Nevertheless, focusing on the staff as well as carrying out the overall facilitation, demonstrated an increased level of significance in the framework compared to the legal commitment. Both sets of variables within this study, demonstrated that organizational commitment also played a significant role.

**Key Words:** socially responsible HRM, organizational citizenship behavior, turnover intentions, organizational commitment.

**Main Conference Thematic Tracks:** Organizational Behavior, HRM, General Business and Management

## 1. Introduction

Companies and large businesses generally improve their effectiveness, whilst at the same time generating a progressive prestigious external outlook, which eventually will improve their business performance (Aguilera, Rupp, Williams & Ganapathi, 2007; Lee, 2008; Newman, Qing Miao, Peter S. Hofman & Cherrie Jiuhua Zhu, 2016). Within organizations of this nature, and more specifically where social awareness is encouraged, the

integration of social and monitored responsibilities is designed to allow companies to embrace their processes and to appreciate their strength to improve financial and legal benefits. Therefore, Socially Responsible Human Resource Management (SR-HRM) offers a vital part in relation to addressing stay and employees through Corporate Social Responsibility (CSR) (Shen and Zhu, 2011; Shen and Benson, 2014; Newman et al., 2016). So with the application of SR-HRM corporations can achieve the goals previously mentioned. Some research has highlighted that CSR, when introduced to an organization, can create noteworthy results on a number of aspects relating to employee intentions. More specifically with the introduction of SR-HRM a company can improve many aspects of employee results including occupational satisfaction (Valentine & Fleischman, 2008; Vlachos, Panagopoulos & Rapp, 2013; Du, Bhattacharya & Sen, 2014), obligation (Kim, Lee, Lee & Kim, 2010; Farooq, Payaud, Merunka & Valette-Florence, 2014; Hofman & Newman, 2014) and more pertinent to this study, organizational behavior (OCB) (Rupp, Shao, Thornton & Skarlicki, 2013; Newman, Nielsen & Miao, 2015).

It is considered that much of the existing studies, that have been undertaken on this topic have been carried out on a multi-dimensional application in relation to SR-HRM although it can be classified in to a number differing dimensions, thereby enabling further research. Within this research, there have been three categories explored in SR-HRM, those being Legal Compliance (LC-HRM), Employee Oriented (EO-HRM) and General Facilitation (GF-HRM) based upon the suggested model of Shen and Zhu (2011). The three dimensions were tested against OCB engagement of staff in a number of Hotels in Kyrenia, Northern Cyprus. Moreover, this paper investigates the association within SR-HRM, turnover intentions, at the same time as carrying out mediation examination of Organizational commitment on the previously indicated relationship. This research was carried out in Five Star hotels in Kyrenia (Girne), Northern Cyprus.

## **2. Theoretical Background and Hypotheses**

### **2.1 Socially Responsible Human Resource Management (SR-HRM)**

HRM has been explained by numerous academics. According to Hendry (1995), Human Resource Management (HRM) is defined as a process of managing and encouraging commitment of staff in a specific manner to achieve operational targets. More recent research demonstrates that there is an inclination towards responsibility and ethical behavior in HRM (Anderson et al., 2014; Greenwood, 2013; Jamali et al., 2015; Lämsä et al., 2016; Manroop,

2015; Morgeson et al., 2013; Rupp et al., 2013; Waldman et al., 2006). Socially responsible HRM can be explained as training of staff ethically, allowing a balance of life/work, equal prospects, transparent communications, participation in decision making and focused leadership, which together will assist the focus of the staff (Cooke & He, 2010; Greenwood, 2013; Hobson, 2011, Jamali et al., 2015; Riivari & Lämsä, 2017).

This paper examines the three dimensions of SR-HRM, being Legal Compliance (LC-HRM), Employee Oriented (EO-HRM) and General Facilitation (GF-HRM) according to the model outlined by Shen and Zhu (2011). In former discussed dimensions, LC-HRM and EO-HRM are related to the growth of staff welfare, whereas GF-HRM observes the participation of employee towards the interaction of CSR from an external view point (Shen and Zhu, 2011; Shen and Benson, 2014; Newman et al., 2016). The LC-HRM provides a structure from which the corporation can observe the regulations set by the International Labour Organisation (ILO) and labour laws. LC-HRM comprises of Health and Safety executive, employment hours, salaries, equal opportunities and enforcement of Child Labor laws (Rowan, 2000; Rhoades and Eisenberger, 2002). Employee Oriented Human Resource Management is focused on the personal aspects of employee and family related factors outside of a company. Thus it is able to monitor and support staff providing a beneficial network enabling staff to be part of caring organization together with encouraging personal enhancement (e.g. teaching, commentary, consultancy). Furthermore, management training including but not limited to higher involvement, power distribution and decision making (Legge, 1998; Waring and Lewr, 2004; Shen and Zhu, 2011). General CSR Facilitation (GF-HRM) is the creation of a framework from which best practices of HRM can implement CSR targets for assessment and review. Therefore by generating an environment of healthy HRM the employee retention will be assisted and help the interests of all parties internal and external – stakeholders. By applying these practices it can/will offer sustainability and efficiency in long and/or short term organizational development Shen and Zhu, 2011).

Organizations who are socially accountable will inevitably enforce the previously described dimensions of SR-HRM to ensure that they not only comply with current international and local regulations they will also be able to push the boundaries further to encourage improved levels of status in the work place and improve staff performances. Furthermore, by encouraging such GF-HRM practices, there is inevitably an opportunity to



expand company and employee CSR enterprises for example, support for development with in communities (Bhattacharya, Sen & Korschum, 2008), ecologically friendly pollution reduction (Dixon-Fowler, Slater, Johnson, Ellstrand & Romi, 2013), reduction in poverty action (Jenkins, 2005) and awareness of climate alteration (Eberlein & Matten, 2009; Le Menestrel & de Bettignies, 2002). Therefore, through SR-HRM it can be generate substantial affects both externally to the organization and internally, however this particular study focuses on the effects of SR-HRM on staff and employees in the hotel industry in Girne (Kyrenia), Northern Cyprus.

In the scope of SR-HRM, it is the employees' wants, prospects, social awareness and personal issues that are empathized with and nurtured in a similar way as their roles within the greater sphere of the success of the organization are expressed (Hearn et al., 2015; Kujala, 2010; Shen and Zhu, 2011). Therefore as a result a collaboration between work and family can be affected (Beauregard & Henry, 2009; Hobson, 2011; Lämsä et al., 2016), which in turn can promote a emergence of organizational commitment (Keenoy, 1990; Wilson, 1997). When defining SR-HRM, it should be noted that there are 2 distinctive areas of knowledge; labor law awareness and knowledge (LC) (Rowan, 2000) and Employee-Oriented awareness (EO) (Waring & Lewer, 2004). The EO related focus is specifically on the welfare and growth of individuals in an organization. LC-HRM enables a structure or framework from which accountability and focus can be administered and satisfied. This, in conjunction with EO-HRM which focuses on the individual growth and improvement of personal/family needs ensure that employees are legally and socially protected (Kazlauskait\_e et al., 2013; Shen & Zhu, 2011).

## **2.2 SR-HRM and Organizational Commitment (OC)**

The practices of HRM within an organization are considered to have a serious impact on the employees' attitudes and actions, which in turn can be extended to obligations and alterations (Storey, 1989). A combination of economic and staff motivation can both be positively influenced by ethical HRM and therefore enhance the status of the company with its clients (Wilson, 1997). This can be viewed by the improvements of share prices (Hannon & Milkovich, 1996). The relationship between HRM and OC has been researched by scholars as a point of great interest (Grover & Crooker, 1995; Huselid, 1995; Delaney & Huselid, 1996; Haar & Spell, 2004; Bagraim & Sader, 2007). There are a number of factors that have

been examined through much of the literature being, accessibility of HRM (Grover & Crooker, 1995; Bagraim and Sader, 2007), apparent value of HRM practices (Haar and Spell, 2004; Bagraim & Sader, 2007), satisfaction and HRM (Meyer and Allen, 1997), knowledge (Chiu and Ng, 1999; Bagraim and Sader, 2007), apparent control of work (Halpern, 2005) and value of gender (Chiu and Ng, 1999). According to the experiential results through the researches, it is apparent that HRM procedures that emphasize the interests of staff are positively linked to OC. Therefore, social awareness and credit is supported, which in turn confirms that the regulations and there effects on staff are more significant than the policy/principles themselves (Fiske and Taylor, 1991).

There are three characteristic features that impact upon OC, Affective Commitment (AC), Continuance Commitment (CC) and Normative Commitment (NC), however depending on circumstances the characteristics may fluctuate. Therefore, the presence of SR-HRM will impact significantly the view that will be expected to be researched for the relationship between HRM and OC (Shen and Zhu, 2011). As a result this paper looks to add knowledge to the literature by reviewing and gauging the characteristics that effect the SR-HRM. Meyer and Allen (1991 and 1997) presented the following framework for detailed analysis of employee commitment within a company:

Affective Commitment (AC): employees who feel attached to an organization through positive feelings and identify emotionally to their company, thereby creating a commitment from the employee to the company and a desire to retain their position.

Continuance Commitment (CC): the economic and social expense to remain at an organization due to there being nothing better creates a commitment and the employee retains their position.

Normative Commitment (NC): a moral responsibility towards a company or individual makes an employee remain due to a sense of obligation for the benefits that have been received from the said organization.

The amount of the above mentioned characteristics of OC and the relative intensity can be impacted upon by several factors, for example, the strategies of the company, the variables of demographic spread and the nature/culture of the employees (Randall, 1992; Haar and Spell, 2004; Bagraim and Sader, 2007). A number of studies on these three aspect

of OC have been carried out on a cross-cultural and international scale in countries like Australia, China, South Africa, South Korea, Europe and Turkey (Chen and Francesco, 2003; Cheng and Stockdale, 2003, Iverson and Buttigieg, 1999; Bagraim and Sader, 2007; Lee, Allen, Meyer and Rhee, 2001; Vandenberghe, Stinglhamber, Bentein and Delhaise, 2001; Wasti, 2002), from which the validity of these characteristics have been accepted.

There are predictors that highlight on AC and SR-HRM, for example, above average labor principles together with democracy in the working environment, thereby an identifiable and respectful environment is perceived by staff towards their company. An practice that relates to family is welcomed and therefore a positive relation through AC (Grover and Crooker, 1995). Noted elements of equality, impartiality and healthy competition in staff recruitment, employee training and advancement are clear indicators of effective SR-HRM. If staff are prepared and supplied with the right knowledge, certificates and rewarded for the positive intentions their route forward to promotion and further development is improved inside the corporation (Meyer and Allen, 1991). An organization whereby these features are present and encouraged via HRM and SR-HRM routines can generate a resistance for the staff to prevent them from leaving the company. Furthermore if staff feel empowered by the company, they will feel that by leaving it may cost them significantly which explains SR-HRM and CC. The development and assignation of NC exists due to the worth provided by the organization towards employees which is then reciprocated in return. Where SR-HRM arrangements like flexible working hours are offered to the staff that need it the most, this highlights the movement towards improved standard provisions which in turn creates NC (Bagraim and Sader, 2007).

### **2.3 SR-HRM and Turnover Intentions**

Taking in to consideration the previously discussed data and information known about SR-HRM together with its relationship to a number of performance and behavioral results, it can be considered the SR-HRM has a connection with differing features for example turnover intention. Research gathered from a number of studies suggests that features like equal employment options together with work/life stability are indicators of positive results and performances by employees (e.g. Allen, 2001; Aryee, Chu, Kim, Ryu, 2012; Jawahar & Hemmasi, 2006; Johnston, Griffeth, Burton & Carson, 1993; Lämsä &

Piilola, 2015; Lee & Hong, 2011; Perry-Smith & Glum, 2000; Thomas & Ganster, 1995). Social Exchange Theory can be utilized to back this suggestion (Blau, 1964). Therefore whenever a company suggests or commences effective activities that enhance employees' lives it generates a form of obligation to respond (Gerstner and Day, 1997; Lamber, 2000; Ackers, 2003; Goodstein, 1994). This is a precursor of SR-HRM which can affect employees' perceptions and create a lower degree of Turnover Intention. By introducing these elements, a corporation improves the feeling of trust and obligation to retain from within. Therefore as the staff's degree of obligation improves, it is clear that the majority of staff will refrain from wanting to depart from their employment. This interaction between employee and organization generated by SR-HRM highlights the improved awareness of staff towards their working environment thereby encouraging their behavior to encompass commitment towards the organization, which in turn will result in less turnover intentions.

Accordingly we make the following hypotheses:

**Hypotheses 1a:** Socially responsible human resource management is positively linked with turnover intention.

**Hypotheses 1b:** Organizational commitment mediates the positive relationship between socially responsible human resource management and turnover intention.

## **2.4 SR-HRM and Organizational Citizenship Behavior (OCB)**

The Social Exchange Theory is the connection in the theory of researching the subject of commitment and performance in the area of HRM practices which has substantial connections together with its impact on staff behavior and outlooks (Ayree, Law and Law, 2007; Snape and Redman, 2010). A number of papers also indicate that Social Identity Theory will assist the research on this topic (Shen and Benson, 2014; Shen and Zhu, 2011). Through SR-HRM applications, OCB is highlighted through the initiation of a sense of identity. The introduction of the idea that staff are at one with the organization generates an identification, the affects the staff's observations (Ashforth and Mael, 1989). Through these observations, the employees' reaction to being identified within a company generates a positive result through OCB to a higher degree (He, Pham, Baruch and Zhu, 2014; Shen and Benson, 2014). When an organization has an increased degree of a positive reputation, it can

improve the staff's self-esteem, which in turn improves the identification within the company. This is as described in the Social Identity Theory (Ashforth and Mael, 1989; Pratt, 1998; Tajfel and Turner, 1985). The implementation of SR-HRM processes, highlight CSR practices for involving employees which in turn improves the external company image and therefore the stakeholders interests. Furthermore, this practice will impact upon the employees' confidence to continue working for the organization. As a result this is related to the enhancement of an identification with the company together with improving self-belief of workers who are employed in companies with effective SR-HRM practices (Bauman and Skitka, 2012; Brammer et al., 2007; Turker, 2009). This will create a feeling of employees considering the company's interests the same as theirs (Dutton and Dukerich, 1991).

Likewise, this can generate further commitment by employees in various other aspects (e.g. OCB), with which the company continues to benefit through attaining corporate goals, which further still promotes staff self-respect. It was discovered that by initiating an employee reward scheme and integration with CSR elements, that motivation and improved corporate identification would generate greater effects on staff behavior (Shen and Benson, 2014). The SR-HRM applications initiate the interaction between employees and an organization through encouraging fiscal, social and/or emotive requirements of employees (Blau, 1964; He et al., 2014; Gould-Williams, 2007), which in turn generates a feeling of reciprocation in workers to participate in constructive attitudes towards the company, for example OCB, which directly assists the firm.

This paper investigates the specific elements of SR-HRM practices in hotels as the organization, in respect of valuable actions of employees through identification increase (LC-HRM and EO-HRM), or via CSR initiatives (GF-HRM) which improves the confidence of workers by generating an external status by being employed by a company with a good reputation. Furthermore the extensive use of LC-HRM to accentuate the use of welfare, health and safety and equal rights for employees also generates a degree of reciprocation obligation via OCB is another element of this study. In general in relation to the above mentioned matters it would be clear to affirm that EO-HRM applications affect forms of OCB to greater degrees via the reciprocating of replies created by an organization that has carried out these tasks without enforcement by legal process and encouraging the interest in

employees' needs. Further studies should be carried out as the area of direct influence has reduced research levels (Shen and Benson, 2014).

Thus we create the next hypotheses:

**Hypotheses 2a:** Socially responsible human resource management is positively linked with organizational citizenship behavior.

**Hypotheses 2b:** Organizational commitment mediates the positive relationship between socially responsible human resource management and organizational citizenship.

### 3. Methods

#### 3.1 Analysis

1. To test the hypotheses, a two-step modeling approach as suggested by Anderson and Gerbing (1988) was employed. Initially we undertook a CFA on all survey items in the measurement model through the use of SPSS22. to verify whether the items captured the intended constructs.

Give the fit index recommendations of Hu and Bentler (1999) , the measurement model was considered satisfactory enough to proceed with hypothesis testing.

2. SEM using SPSS 22, and AMOS 22 to test the study hypotheses as SEM mediation models have been shown to perform better than traditional regression analysis (Iacobucci, Saldanha & Deng, 2007, Emeagwali, 2015)

SR-HRM (1,2,3) TO OC (1,2,3) and then to TI and OCB.

#### 3.2 Data Collection

The empirical work of this research comprised of data collection from staff at a number of hotels situated in Kyrenia, North Cyprus, through questionnaire surveys. These were planned for the precise objective of the present study with the foundation based upon earlier literature studies (e.g. Shen and Benson, 2014; Newman et al., 2016). The participants were selected from the full-time staff members in non-managerial positions. All the hotels were of 5-Star variety with good reputations and high volume of customers together with CSR applied practices. A total of 460 respondents were collated, from April to May 2018, with a pilot test carried out before the main analysis from two 5 Star hotels in another nearby

city called Famagusta with 89 respondents, thereafter modifications were completed on the model questionnaire. A high number of responses were noted due to the permission and support of managers and the participants were from a wide range of working hours. The paper-based (recycled) questionnaire was designed anonymously and participation was voluntary.

### 3.3 Measures

Through the current study, a model was proposed, which comprises of demographic variables being; gender, age, nationality, level of education, marital status and employment status (only full-time were selected for final analysis), duration of employment and employment department. Furthermore the survey consisted of primary variables that included; SR-HRM (LC, EO, GF), OC, OCB and TI that were designed on a 5-point Likert scale. After the literature, SR-HRM is defined as an independent variable (Newman et al., 2016), while TI and OCB are dependent variables (Shen and Benson, 2014; Lämsä and Piilola, 2015). Furthermore, OC (Shen and Zhu, 2011) is considered as a mediator. Plus demographic variables are managed during the course of the hypothesizing process (Organ and Ryan, 1995).

The conceptual model is shown in Figure 1.

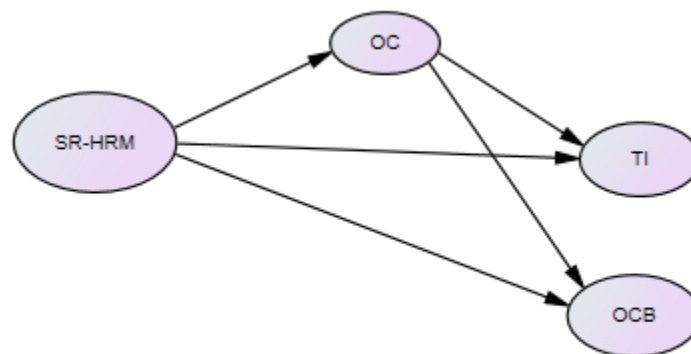


Figure 1.

### Conceptual Model

#### 4. Analysis and Results

To proceed with testing the hypothesized model of this research, SPSS Version 23 and Amos 22 were employed. Explanatory and Confirmatory Factor Analyses (EFA and CFA) were carried out on all parts of the questionnaire for measurement of validity and clarification of all selected parts in opposite for research purposes. The previously indicated tests, highlighted that they were individually fit for analysis and therefore good to move ahead. The Hypothesized model was found to be a fit model for defined variables goodness-of-fit ( $\chi^2:1849.381$ ). Reliability test was performed on all selected items (See Appendix 1 – Pattern Matrix) and Alpha was scored at 0.869. Factor Analysis indicated a clear Pattern Matrix with neither factor crossing nor loading. Degree of Freedom = 377; CFI = 0.788; RMSEA = 0.58 and Chi-Square Probability level was found significant (0.000). The previously mentioned reports on the statistical model fit that was conducted via SEM has also shown lower correlations and significance when compare with having additional items for measuring factors. Ergo, the elimination process for acquiring proper items for measuring the proposed theoretical model was discovered to be significant and has enhanced goodness-to-fit and overall model fit characteristics (PCLOSE = 0.000). Furthermore, regression weights have shown lesser level of P-value in the absence of mediator variables (from 0.047 to 0.1), from which the mediation effect of Organizational commitment can be seen on the existing relationship between SR-HRM and Turnover Intentions as well as Organizational Citizenship behavior. Correlations from model fit analysis, is demonstrated in the following Figure:



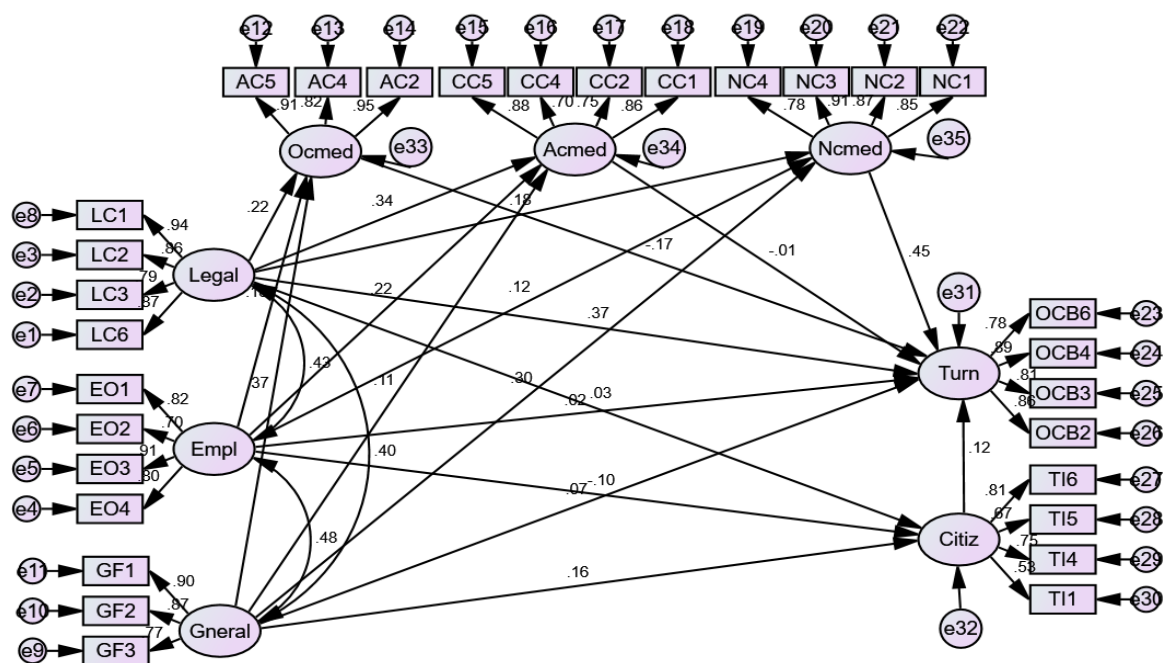


Figure 2  
Correlation from model fit Analysis

Reliability Statistics	
Cronbach's	
Alpha	N of Items
.869	30

Table 1  
Cronbach Alpha Analysis Table

As it is illustrated in the above table, SR-HRM has been divided into 3 distinctive categories that are LC (Legal), EO (Empl) and GF (General), while Organizational Commitment has been divided in to AC (OCMED), CC (ACmed) and NC (NCmed). According to the results, NC demonstrates higher correlations with other variables that CC and AC. The model highlights significance in the relationship that exists among LC, EO, and

GF with TI and OCB. P-value was found to be significant ( $p < 0.05$ ). Although the results of this research are in consensus with prior research, there are minor dissimilarities. For example, compared to the research by Shen and Zhu (2011), NC is much stronger. Furthermore, it can be noted that all relationships amongst variables were found to be significant. This is while due to existence of control variables such as culture or background, the strength has been reduced in comparison to earlier studies on this topic (e.g. Shen and Zhu, 2011; Newman et al., 2016). EO-HRM and GF-HRM highlight and increased level of significance in the fitted model compared to LC-HRM. Mediation effect of OC has been demonstrated in the model and it can be viewed from various analyses that have been carried out on the collated data. Direct effects of SR-HRM can be noted through the above model.

## 5. Conclusion

Numerous organizations are applying a variety of SR-HRM practices and these strategies are combining to develop and boost performance levels in firms. With the use of proper CSR and HRM strategies, organizations can attain increased levels of achievements, whether it be internally or externally. Once you have motivated enough employees and supplied sufficient skills, it is expected that improved performance levels can be attained which in turn will be appreciated by stakeholders and their interests. Furthermore, it should be noted that an organization should utilize all areas of SR-HRM and take them all into account when applying such matters. To utilize a small part of these policies will not be sufficient to maintain and retain employees. Therefore, all three of the distinct characteristics of SR-HRM should be administered effectively to improve results. The size of the subject matter should not misunderstood, as the differences in the studies that to date have been carried out in varying cultures and places highlights the necessity. EO-HRM demonstrates a direct effect on OCB, specifically relating to the fact that EO-HRM directly affects employees' and as a result it can be clearly seen through their OCB involvement. This highlights the fact that this kind of SR-HRM applications can clearly improve employee behavior. Nevertheless, EO has demonstrated the least significant relationship with NC, while LC also shows a similar weak link with NC, as opposed to GF, which shows the least linkage with CC. The results of this paper support and underwrite the existing literature with regard to confirming the relationship which occurs between GF-HRM and OC. There are earlier studies on the matter of SR-HRM

and its relationship with loyalty (Bhattacharya and Sen, 2001, 2004), revenue (Hickman et al., 1999) and a number of aspects that relate to organizational performance with staff in a firm (Graves and Waddock, 1994; Parker, 2002; Orlitzky, Schmidt and Rynes, 2003; Spar and La Mure, 2007; Shen and Zhu, 2011). This paper confirms this relationship together with its significance in the hotel (4 and 5 Star) in a different location, which signifies another style of culture and/or background in contrast to previous research which had been carried out earlier.

It is established that for the hotel industry, plus extending to other industries, to achieve a higher degree of performance and to improve their staffs' behavior on a larger scale, it is crucial to implement correct SR-HRM practices. It should however be noted that this does not mean that by simply focusing on these applications will be satisfactory. EO-HRM exposes a greater level of significance within this paper with TI and OCB, but it does not indicate the irrelevance of further dimensions of SR-HRM, namely GF and LC. Employees can be enabled to be accountable for numerous aspects that in relation to stakeholders external interests for the firm (e.g. communal, justifiable behavior and poverty). With the presence of allegiance and commitment this can promote a better level of performance for personnel. Once a firm has generated a complete comprehension and relationship with employees, the staff will actively look to perform centered on the requirements of the company, thereby creating an environment which will be advantageous to the firm as a whole. The awareness of staffing is of critical importance and should not be overlooked, subject to the desire of the company to create a better working impact for their employees and the stakeholders. Therefore, implementing regular reminders and open communication for employees reinforcing the organizations' SR-HRM practices and ensuring constant feedback is supplied, demonstrating the benefits to the employee and the organization. Furthermore, as well as improving the awareness and altering the conscious awareness of staff, it can be beneficial to inspire employees to demonstrate and participate in OCB thereby increasing the ownership via SR-HRM enterprises (Bauman & Skitka, 2012; Shen and Zhu, 2011; Gond et al., 2010). With the proper and correctly application of SR-HRM, the engagement of staff in conjunction with the organization to a higher level, will inevitably improve the organizational performance. This paper supports the aforementioned idea offers further contribution to HRM literature within this evolving topic with in the

tourism sector together with the regional and cultural extension of the subject, as previously most of the research on SR-HRM has been carried out in differing locations to the Middle East, and certainly more specifically in Cyprus. With the attraction of Kyrenia (Girne) as an attractive destination for tourism, the potential is vast in the region. With well-designed, modern, luxury hotels offering a wide selection of recreational facilities, along with an increasing number of universities enrolling many thousand international students, if all combined together with effective HRM and more particularly SR-HRM characteristics can evolve and improve significantly the performance on the hotel industry. This can be both externally and internally and at differing features (i.e. maintenance, management, recruitment and sponsorship). As a result this research looks to add to the existing literature, plus assisting managers and organizations to review and improve their perceptions.

### **5.1 Limitations and Future Research Recommendations**

There are a number of restrictions affecting this study which could be addressed in further research. The data collection process was carried out over a two month period and although before the conduction of data collection in the hotels, which CSR and SR-HRM practices previously existed, the data collection would improve complete understanding should the process have taken 2 years or more. This can assist as a key role of reducing errors and responses. Furthermore, this study was restricted to one specific location with a limited number of hotels which were considered satisfactory for the data collection. Further studies should expand the geographical region and broaden the scale of the area of research. Additionally, further approaches can be embarked upon, for example, in-depth groups or individual interviews with staff members will clearly expand the data. One final aspect that could be considered would be the division of employees in to areas of responsibility (e.g. senior management, managers and junior staff) or introducing into the equation leadership as an individual factor.

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## Appendix

### Appendix A

**Pattern Matrix<sup>a</sup>**

	Factor							
	1	2	3	4	5	6	7	8
LC1		.871						
LC2		.776						
LC3		.735						
LC6		.879						
EO1			.661					
EO2			.873					
EO3			.823					
EO4			.672					
GF1							.719	
GF2							.803	
GF3							.639	
AC2								.479
AC4								.706
AC5								.507
CC1				.807				
CC2				.753				
CC4				.561				
CC5				.770				
NC1					.603			
NC2					.550			
NC3					.919			
NC4					.645			
OCB2	.848							
OCB3	.790							
OCB4	.901							
OCB6	.730							
TI1						.436		
TI4						.642		
TI5						.670		
TI6						.846		

Extraction Method: Maximum Likelihood.

Rotation Method: Promax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

## Appendix B

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
Citiz	<---	Legal	.037	.077	.479	.632	par_26
Citiz	<---	Empl	-.141	.102	-1.388	.165	par_27
Citiz	<---	Gneral	.195	.087	2.248	.025	par_28
Ocmed	<---	Legal	.237	.054	4.370	***	par_29
Acmed	<---	Legal	.332	.053	6.236	***	par_30
Ncmed	<---	Legal	.161	.049	3.258	.001	par_31
Ocmed	<---	Empl	.235	.071	3.317	***	par_32
Acmed	<---	Empl	.254	.069	3.679	***	par_33
Ncmed	<---	Empl	.127	.064	1.987	.047	par_34
Ocmed	<---	Gneral	.412	.061	6.736	***	par_35
Acmed	<---	Gneral	.112	.058	1.944	.052	par_36
Ncmed	<---	Gneral	.275	.056	4.949	***	par_37
Turn	<---	Legal	.353	.055	6.463	***	par_23
Turn	<---	Empl	.028	.064	.437	.662	par_24
Turn	<---	Gneral	.071	.060	1.195	.232	par_25
Turn	<---	Ocmed	-.153	.049	-3.114	.002	par_38
Turn	<---	Acmed	-.010	.052	-.201	.840	par_39
Turn	<---	Ncmed	.484	.059	8.218	***	par_40
Turn	<---	Citiz	.096	.037	2.607	.009	par_44

### Associate Professor Dr. Panteha Farmanesh

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# The Impact of Marketing Mix Elements on Forming Mental Images about Islamic Banks in Jordan: An Empirical Study

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## Abstract

This study aims to investigate the impact of the marketing mix elements (MME) within the banking industry and how this leads to the forming of mental images (FMI) for Islamic Jordanian banks (IJB). To achieve the objectives of this study, a descriptive analytical approach had been used, through the design of a questionnaire which was distributed to a study sample which consisted of 500 members of the IJB. The study results indicated that there is a statistically significant effect of the total elements of the marketing mix in forming mental image for Islamic Jordanian banks. The study recommended that there is a need for Islamic Jordanian banks to take be vigilant regarding the pricing of Islamic banking services, and encourages the establishment of new branches.

**Keywords:** marketing mix elements; nature of banking service; pricing of banking service; Promotion of banking service; forming mental image.

**Main Conference Thematic Tracks:** Marketing Management, Finance

## Introduction

Service and productivity companies in previous years faced with different challenges in increasing competition and awareness of customers in large and large, led to the imposition of a set of challenges that affected the loyalty of customers and mental image of them elements of the marketing mix, the mental image of customers may be an important factor for the company in making decisions (Kavosh and Asadi, 2014). which leads to increased interest in banking marketing and its effective role through the marketing activities of the banks, where the different banks are moving towards achieving competitive advantage, the relative differentiation in the provision of banking services, And to get closer to them more, in addition to best understanding the wishes of customers and achieve them to mutual benefit between the bank and client (Rajh, 2006).

The mental image of the customers must be taken care, in order to create correct mental images of many things to know about certain things and to acquire a lot of information about them (Kavosh & Asadi, 2014).

They will have certain images in their mind, which makes it difficult to change these images in a decisive way in normal circumstances. Some customers do not give much consideration to information about sales and receipts because some companies go beyond providing this basic information and this may not enhance customer loyalty by the bank. Interest in sales information may be a tool for designing a mental framework (Anitsal et al., 2014).

The strength of the mental image or its weakness, which consists of individuals from different institutions; the level of communication between them and those institutions, extent of their interest, or affected by the activity, through the strength of the relationship between the institution and its customers, which is the institution raise the efficiency of business and increase revenues (Sapre and Nagpal, 2014). Therefore, these images must be identified and measured by statistical analysis, and it is normal for an individual to create a picture of something he did not know.

The problem is that JIB clients work now not reaps a fantastic perception on the banking advertising mix within their banking services. The disposition of the affinity in the banking advertising blending then the perceived image concerning the clients is obscure or unclear. The previous research then writing did now not grant sufficient rationalization for it relationship, despite its honor in accordance with the banks, which are a high-quality thing of the country's economy.

### **Study questions**

**Q1:** What is the impact of MME on FMI in the IJB?

**Q2:** What is the impact of nature of banking service on FMI in the IJB?

**Q3:** What is the impact of Pricing of banking service on FMI in the IJB?

**Q4:** What is the impact of Promotion of banking service on FMI in the IJB?

**Significance of Study:** The importance over this learning lies in the importance concerning MME according to Islamic banks. In addition, the Islamic banking area is one regarding the almost important enterprise sectors between the worlds. MME performs a necessary position between enhancing the FMI rule of the Islamic banking sector. Therefore, that lookup explores or the MME do improve FMI. Finally, it demand bill targets in imitation of admit the absence about composition of the influence over MME over FMI.

These do remain taken by means of learning the following:

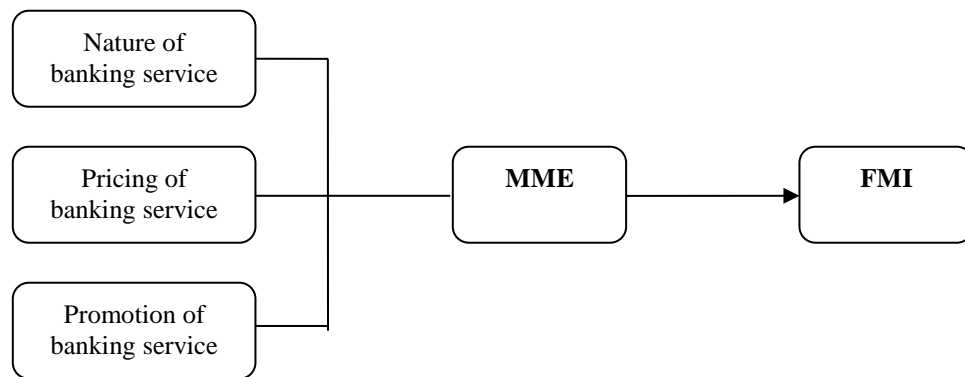
1. Benefits of researchers into MME studies so provide results.
- 2 - Explain the energetic role regarding work on MME within support on FMI.

**Study objectives:** The objective of this study is examining the impact of MME on FMI in Islamic banks in Jordan.

More specific objectives are to find out:

- The effect of Nature of banking service on FMI.
- The effect of Pricing of banking service on FMI.
- The effect of Promotion of banking service on FMI.

**The Study Model:** The proposed model of this study with four independent variables represents MME and its dimensions in addition to, the model include one dependent variable represents FMI as shown in Figure 1.



### Study Hypotheses

**H1:** There is an effect for the MME on FMI.

The sub-hypotheses

H1a: There is no effect for the Nature of banking service in FMI.

H1b: There is no effect of the Pricing of banking service in FMI.

H1c: There is no effect for the Promotion of banking service in FMI.

**H2:** There is an effect for MME of sample study evaluation level depending on demographic variables.

**H3:** There is an effect for FMI of sample study evaluation level depending on demographic variables.

## **LITERATURE REVIEW**

### **2.1 MME**

The marketing process in the banks is aimed at satisfying the customer, maintaining it as a permanent customer and creating a link between him and the bank or the banking service (Kazemi et al, 2013). The marketing mix is one of the most important elements of the marketing process. The marketing mix strongly influences the achievement of a profitable return to the consumer and organization to gain a competitive advantage. This may reflect the success of the marketing process in a competitive environment, gaining consumer loyalty and confidence in the organization, enabling enterprises to enter the market and providing opportunities for expansion and development, ensuring long-term economic growth and progress and services in different categories of customers and regions (Keller et al, 2011). The organization must understand the reality of the open market and difficulty in obtaining the benefits by reorganizing the strategies of its marketing mix according to open market conditions, developing the product and creating it with the customers' demand in different markets (Sapre & Nagpal, 2009).

Marketing is the creative spirit with the driving force to generate motivation for creation, innovation, improvement and development.

The modern banking system, and traditional methods of work expanding and includes new dimensions in these countries that are not included in the developed countries (Al-Khudairi, 2012).

#### **2.1.1 Banking Service**

A group of processes that have the potential value of a set of concrete and intangible elements, perceived by individuals or institutions, through their significance and utilitarian value, which are a source of satisfaction of their current and future financial. The content of the banking service is characterized by the predominance of intangible elements on tangible elements, and these two sets of elements are embodied in two basic dimensions: the utilitarian and dimension (Anitsal et al, 2012). The second dimension is the set of characteristics and features that characterize the direct benefit content of the service, and if the first dimension is related to the customer, the second dimension is related to the banking service, and expresses the level of quality, and raises them to the level of customer expectations and perceptions (Sheng & Teo 2012).

#### **2.1.2 Pricing of banking services**

The price is one of the most important elements of the marketing mix affecting the market, in light of which the relationship between the seller and the buyer or the customer is united, and then the possibility of the continuation of the organization and its success or failure, as

the instability of prices and volatility, will affect the economic movement, Not only research and investigation, in order to provide a product or service to the market for appropriate price policy, which includes a reasonable profit for the organization with the satisfaction of consumers (Anitsal, 2010).

### **2.1.3 Promotion of banking services**

Promotion is one of the essential elements of the marketing mix of any bank. This is because of the vital role of promotion in informing customers about the Bank's services, in convincing them of the benefits of dealing with it, and in the expectations that can be realized, influencing them. The aim of the promotion is to provide the clients with information about the benefits of a particular service, to raise their interest and to convince them to ability of satisfy other needs in order to make them in the company future (Anitsal & Anitsal, 2012). According to this definition, promotion can be seen as a process of communication between the bank and customers. The first function of promotion is to transfer information about the service to the customer; in order to facilitate the process of obtaining information about customers; such a trend is beginning to maintain the use of these services (Kotler, 2003).

## **2.2 FMI**

The mental image is the impression of the image of the thing in mind and more precisely the presence of the image in mind is a mental perception common among members of a particular group towards a particular person or thing which means the mental presentation of anything that cannot be provided to the senses directly, or is a simulation of a sensory experience associated with certain emotions, Towards a certain personality or philosophy, a retrieval of what was stored by memory or imagined senses of perception, smell, hearing, touch, or taste (Reid, 2001).

The term simply refers to the first thing that comes to mind when a company or product is mentioned. The mental image is an honest motive and powerful engines for individuals to look at and understand what is around them and understands it on the basis of this image; they may be formed through direct and indirect experiences. These experiences are related to the emotions, attitudes and beliefs of individuals towards to these things (Gottschalk, 1993).

The way people behave towards products depends on their mental image, and any change in this image will be followed by a change in behavior. Therefore, the nature of this picture, how it is formed and the changes that may occur, are important to be taken care of. Who wants to influence consumer opinion, or measure its trends (Keller, 2011).

## **Methodology**

The methodology refers in accordance with the complete method so much intention stay used, together with the primary philosophical and intent for the study. Methodological considerations mirror the researcher's private preference, whilst the strategies mention in accordance with the methods chronic between the studies.

### **The nature of study**

This study is applied in terms of nature and explanatory in terms of purpose. It works to link the cause and effect between the independent and dependent variable (Al-Najjar et al., 2013). It is also considered deductive, reliance on administrative theories and previous studies, either in terms of study planning are unplanned (non Contrived), because it is taking place in the natural environment of the companies (study population) without the intervention of the researcher, but in terms of time horizon are cross-sectional study, where he performed on sample at a time (Saunders, et al., 2007).

### **3.2 Population**

The education population consists regarding whole IB among Jordan. The lesson sample wish remain selected randomly include all Islamic banks, (74.5%) from the study population according to the central bank of Jordan report (2016). The questionnaire will be distribute by (5) questionnaires per branch, the sample of the study consist of (500) employees. The analysis unit includes branch managers, HR and accountants these banks.

### **3.3 Tests to study instrument:**

#### **3.3.1 Content validity:**

This veracity is meant to ensure that each area of study is accurately represented by a set of paragraphs that are relevant to it, and that these paragraphs actually measure this area (Sekaran & Bougie, 2014). The content of the Spearman Coefficient of Correlation ratios of more than 30% and were statistically significant (AL-Shwiyat, 2013). Table 1 show that the values of correlation coefficients and significance levels are statistically significant, indicating that there is a structural validity of these paragraphs within their own area.

**Table 1 Spearman correlation coefficients for the independent & dependent variables**

<b>Part</b>	<b>Variable</b>	<b>No. of items</b>	<b>Correlations coefficients'</b>	<b>Significant</b>
<b>MME</b>	Nature of banking service	5	.0899	**0.000
	Pricing of banking service	4	0.856	**0.000
	Promotion of banking service	4	0.873	**0.000
<b>FMI</b>		4	0.878	**0.000

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

**Factor analysis:** The factor analysis was applied with the principal component on the responses of the study sample on the items, The loading and communalities values of each factor was calculated for each variable. Table 2 revealed that all loadings and communalities for all factors were high and pointed out that most of statistical resource accepted these results in case they were higher than 0.35 (Sekaran & Bougie, 2014).

**Table 2 the value of loadings**

Nature Of Banking Service, % of Variance: (22.86%)			Pricing Of Banking Service, % of Variance: (18.93%)			Promotion Of Banking Service, % of Variance: (26.14%)			FMI, % of Variance: (31.16%)		
No.	Lo	Comm.	No.	Lo	Comm.	No.	Lo	Comm.	No.	Lo	Comm.
1	0.447	0.675	6	0.471	0.457	10	0.607	0.676	14	0.502	0.625
2	0.495	0.511	7	0.860	0.858	11	0.718	0.568	15	0.747	0.748
3	0.626	0.549	8	0.867	0.824	12	0.774	0.718	16	0.771	0.730
4	0.686	0.494	9	0.518	0.592	13	0.580	0.607	17	0.826	0.751
5	0.453	0.511									
Olkin Measure of Sampling Adequacy						0.866	Sig.		0.000		

### 3.3.2 Reliability & normal distribution test

The tool is consistent with the possibility of obtaining the same data when re-studying using the same study tool on the same individuals under one similar condition. To measure the stability of each variable, the tool has a cronbach alpha. (Sekaran & Bougie, 2014, p268). The results in Table 3 show that the stability of the vertebrae is high for all the variables of the study, with a total of 91.6%.

The results of the one-sample Kolmogorov- smirnov test in table 3 indicated that all Z values for independent and dependent variables were statistically significant, indicating that independent and dependent variables follow normal distribution.

**Table 3 Reliability normal distribution test**

Part	Variable	No. of items	Cronbach Alpha	K-S ( Z)	Sig.
MME	Nature Of Banking Service	5	0.749	0.915	0.495
	Pricing Of Banking Service	4	0.813	0.885	0.462
	Promotion Of Banking Service	4	0.782	1.159	0.159
FMI		4	0.742	1.021	0.289
Total average		17	0.916	0.689	0.524



### 3.4 The characteristics of study sample

Table 4 revealed that which percentage of males represented 65.14% of total study sample, and the percentage of female represented 34.86% and the highest percentage of sample 42.43% have experience more than 10 years, and the second ranked by percentage 28.44% have experience 7-10 years. While the distribution of sample related to qualification degree, the result indicates to the highest percentage of the sample 52.06% For holders over a bachelor's degree, second-ranked holders regarding a master's dimension are represented 21.10% of total study sample. In additional the table 4 show the distribution of sample related to job description which indicate the highest percentage of sample 35.09% have Job description, administrative and 23.62% have marketing and 22.02% have Job description HR. in general the results indicate that the participants are mature enough to limit the impact of MME on FMI in the JIB.

**Table 4 the participants of the study according to personal variables (n=436)**

Demographic information	Frequency	Percentage	Cumulative percent
<b>Gender</b>			
Male	284	65.14	65.14
Female	152	34.86	100.00
<b>Experience</b>			
less than 3 years	42	9.63	9.63
3-6 years	85	19.50	29.13
7-10 years	124	28.44	57.57
more than 10 years	185	42.43	100.00
<b>Qualification</b>			
Diploma	69	15.83	15.83
Bachelor	227	52.06	67.89
Master	92	21.10	88.99
PhD	48	11.01	100.00
<b>Job description</b>			
HR	96	22.02	22.02
Accountant	84	19.27	41.28
Marketing	103	23.62	64.91
Administrative	153	35.09	100.00
<b>Total</b>	<b>436</b>	<b>100.0</b>	

### 3.5 Results & discussion

**3.5.1 MME:** Table 5 shows the means and standard deviations of the Marketing Mix Elements variables, Nature, pricing, promotion of banking service from the perspective of the participants of the study sample working at the Islamic IJB ordered based on their importance which is determined through their means.

**Table 5 the Attitudes concerning MME**

Order	No.	Items	Mean	SD	Skewness	Degree
<b>Nature of banking service</b>						
1	5	The bank works on the quality of services being appropriate from the first time.	4.10	0.85	-0.73	High
2	2	The bank is keen to modernize the banking services provided.	4.06	0.95	-0.73	High
3	4	The bank is keen to provide banking services according to the wishes of its customers.	4.06	0.94	-0.86	High
4	1	Banking services are highly credible.	4.02	0.98	-0.84	High
5	3	The bank is keen on customer knowledge.	3.99	0.97	-0.89	High
<b>( Nature of banking service)</b>			<b>4.04</b>	<b>0.66</b>	<b>-0.84</b>	<b>High</b>
<b>Pricing of banking Service</b>						
1	9	The price of the banking service affects my decisions regarding the choice of service type.	4.09	0.90	-0.87	High
2	6	The price of the banking service is consistent with its quality.	4.08	0.96	-1.16	High
3	8	The bank rates the banking services based on customers' ability to pay.	4.03	0.87	-0.60	High
4	7	The bank offers a range of free banking services.	4.00	0.84	-0.61	High
<b>( Pricing of banking service)</b>			<b>4.05</b>	<b>0.72</b>	<b>-0.74</b>	<b>High</b>
<b>Promotion of banking service</b>						
1	12	The bank's ads are clear and attractive.	4.27	0.80	-0.99	High
2	10	The bank promotes its banking services through newspapers.	4.06	0.92	-0.96	High
3	13	The bank uses mobile text messages to promote its banking services.	4.04	0.88	-1.10	High
4	11	The bank promotes its banking services through its website.	3.86	0.85	-0.61	High
<b>( Promotion of banking service)</b>			<b>4.06</b>	<b>0.62</b>	<b>-0.71</b>	<b>High</b>
<b>General Tendency (MME)</b>			<b>4.05</b>	<b>0.60</b>	<b>-0.78</b>	<b>High</b>

The above table indicates to that amount the tendencies concerning the instruction sample for members of Jordanian Islamic banks about the elements regarding MME have been altogether essential because of whole the variables or their paragraphs. The arithmetic averages ranged beyond 4.04-4.06, 4.06 with a high magnitude level, a vile standard dislodgment about 0.62. The 2nd came of phrases about importance. The variable into financial institution pricing got here at an common worth of 4.05 then a high stage regarding importance, while the changing characteristic over banking features came in last place, yet the ignoble was once 4.04, and the standard deviation is low 0.66, which indicates the importance of these variables in the MME of banking services formation.

The overall results indicate that there is a high level of application of the MME in the JIB, which reached an average of 4.05.

**3.5.2 FMI:** Table 6 shows the attitudes concerning of the FMI variable from the perspective of the participants of the study sample working at the IJB ordered based on their importance which is determined through their means.

**Table 6 the attitudes Concerning FMI**

Order	No.	Items	Mean	SD	Skewness	Degree
1	16	I encourage my relatives and acquaintances to deal with Islamic Banks.	4.17	0.80	-0.69	High
2	15	I feel safe in dealing with Bank.	4.15	0.81	-0.93	High
3	17	Banking services provided by Islamic Banks are characterized by accuracy and reliability.	4.14	0.88	-1.09	High
4	14	I fully believe in the quality of banking services offered by Islamic Banks.	4.04	0.84	-0.53	High
		<b>General tendency (FMI)</b>	<b>4.12</b>	<b>0.62</b>	<b>-0.68</b>	<b>High</b>

The above table indicates so much the developments regarding the lesson pattern beside JIB contributors of FMI had been absolutely important for entire paragraphs. The important arithmetic averages ranged between 4.04-4.17 and the standard deviations of the responses were low ranging from 0.80 to 0.84. The responses to the paragraphs of this variable, and the review of paragraph rank, show that paragraph 16 had the greatest impact on FMI, which provides for an average of 4.17 and a high level of assessment. In the second place in terms of importance was paragraph 15, which states "I feel safe in dealing with Bank" and obtained an average of 4.15, and a high level of evaluation, and ranked last paragraph 14, which states "I fully believe in the quality of banking services offered by Islamic Banks "with an average of 4.04 and a low standard deviation of 0.84.

### 3.6 Hypotheses test

The regression mannequin used to be examined to verify up to expectation there was no high outset into impartial variables, and as the alliance of greater than 80% within twain independent variables or more was considered a relationship, then the kin between to them is tough after explain (Brooks, 2008). . In discipline according to verify to that amount this problem does no longer exist because the regression models used, Spearman's context used to be continuous among the independent, mass 7 indicates up to expectation even is no excessive context into impartial discipline variables according to the quantity that such may have an effect on the results about the regression analysis.

**Table 7 correlation matrix**

Variable	Nature	Pricing	Promotion	FMI
Nature Of Banking Service	1.000			
Pricing Of Banking Service	.0664**	1.000		
Promotion Of Banking Service	.0608**	.0607**	1.000	
FMI	.0742**	.0684**	.0719**	1.000

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

The self-bonding check used to be rendered in conformity with ensure to that amount the statistics used to be broad of the self-correlation problem between the regression model, as weakens the predictability on the model. To verify, the Durbin Watson (DW) test was used, or the end result near nil indicated an intensive advantageous kinship within subsequent residues, and the result shut in accordance with 4 indicated a vivid terrible contextual connection (Hussein, 2015). The most beneficial end result about that checks levels out of 1.5 after 2.5 or suggests that at that place is no idiosyncratic outset in them the adjacent values of the variables (Montgomery, et al. 2001, p216). From table 9 notes that the DW value is assigned the sample of the study is 1.948 which is a two-fold result.

**Testing the first hypothesis:** The first hypothesis state that “There is no significant influence for the MME on FMI”, In order to test this hypothesis, Multiple Linear Regression (LIR) and Stepwise Multiple Regression (SMR) analysis was used.

Which is usually used to predict the value of the dependent variable by a set of independent variables, so that the null hypothesis is accepted if the value of the significance level is greater than 0.05 and rejected if the value of the significance level is less than 0.05. Table 8 shows the results of this hypothesis.

Table 8 shows the effect of using the MME on FMI. The correlation coefficient value was 0.789, which is a statistically significant value, indicating a strong and positive correlation between the uses of the MME in FMI.  $R^2$  0.62 means that the use of combined MME can explain 62% of the FMI in JIB. This is confirmed by the value of F-value 238.030 and the level of significance of 0.000 which is below the significance level of 0.05. Indicates an affinity into the independent variables blended and the structured variable. Based on the above, the null hypothesis is rejected and the alternative hypothesis is accepted.

**Table 8 MLR for effect of the MME on FMI**

Variables	Expected sign	Coefficient	t-Statistic	Prob	Tolerance	*VIF
(Constant)		0.747	5.812	.0000		
Nature Of Banking Service	+/	0.239	5.605	0.000	.0423	2.365

Pricing Of Banking Service	+/	.0212	5.352	0.000	.0422	.2372
Promotion Of Banking Service	+/-	.0383	8.108	.0000	.0399	2.506
R	0.789	F-statistic	238.030			
R-squared	0.623	Prob (F-statistic)	0.000			
Adjusted R Square	0.620	Durbin-Watson statistic	.1948			

All VIF values are less than (10), indicating no self-association problem

In order to determine which variables of the marketing mix elements have the most significant effect in forming mental image in Islamic banks, SMR analysis has been applied. The following table shows the results of this test:

**Table 9 SMR, MME on FMI**

MME	B	Std. Error	T	Sig.	R	Adjusted R Square	F	Sig.
(Constant)	1.114	0.135	8.242	0.000				
Promotion of banking service	0.742	0.033	22.537	0.000	0.734	0.538	507.9	0.000
(Constant)	0.813	0.132	5.812	0.000				
Promotion of banking service	0.493	0.044	11.231	0.000	0.773	0.596	322.1	0.000
Nature of banking service	0.324	0.041	7.962	0.000				
(Constant)	0.747	0.128	5.812	0.000				
Promotion of banking service	0.383	0.047	8.108	0.000	0.789	0.620	238.0	0.000
Nature of banking service	0.239	0.043	5.605	0.000				
Pricing of banking service	0.212	0.040	5.352	0.000				

Table 9 shows that promotion of banking service accounts for 53.8% of the variation in FMI and that promotion, nature of banking service accounts for 59.6% of the variation in FMI. FMI to 62% when adding the pricing variable to the nature of banking service. This shows the value concerning this variable within the effect about FMI of JIB. Different F stages of entire fashions were inside the Sig level. 0 This confirms the worth over regression.

The results over regression coefficients show as the values of entire models at specific T stages are at the degree concerning Sig (0.000) then every the variables inside the gradient regression models, whole much less than 0.05%. This emphasizes the respect on regression coefficients statistically significant.

**Testing the minor hypotheses:** In order to test the effect of MME on FMI in IJB for each variable in isolation, the main hypothesis was divided into three sub hypotheses, Simple regression analysis was used to test the sub hypotheses.

**Testing the first minor hypothesis:** State that there is no significant influence for the Nature of banking service on FMI, for the testing this hypothesis the simple linear regression (SLR) analysis was used. Table 10 shows the results related to the test of this hypothesis.

Table 10 Results of SLR test of the nature of banking service on FMI

Independent Variable	R	R <sup>2</sup>	F-value	Coefficient t	T-value	Sig.
Nature of banking service	0.694	0.480	402.213	0.694	20.055	0.000

Table 10 shows a positive correlation between the nature of banking services on forming mental image and amounted to 0.694. The definition factor  $R^2$  0.48 explains the variation in the dependent variable; that is, 48% of the changes in forming mental image result from the change in the nature of the banking services. This indicates the importance of this variable in improving the forming mental image. The table also shows that there is a positive effect on the nature of banking services in forming mental image and with an impact level of Coefficient = 0.694,  $p > 0.000$ . This is explained by the fact that a single increase in the nature of banking improves the forming mental image by 69.4% T value of 20.055 is statistically significant.

**Testing the second minor hypothesis:** State that there is no significant influence of the Pricing of banking service in FMI, for the testing this hypothesis the SLR analysis was used. Table 11 shows the results related to the test of this hypothesis.

Table 11 Results of simple regression test of the pricing of banking service on FMI

Independent Variable	R	R <sup>2</sup>	F-value	Coefficient t	T-value	Sig.
Pricing of banking service	0.690	0.476	395.390	0.690	19.884	0.000

Table 10 shows a positive correlation between the pricing of banking on FMI and amounted to 0.690. The definition factor  $R^2$  0.47 explains the variation in the dependent variable; that is, 47% of the changes in FMI result from the change in the pricing of banking. This indicates the importance of this variable in improving the FMI. The table also shows that there is a positive effect on the pricing of banking in FMI and with an impact level of Coefficient = 0.690,  $p > 0.000$ . This is explained by the fact that a single increase in the pricing of banking improves the FMI by 69.0% T value of 19.884 is statistically significant.

**Testing the third minor hypothesis:** State that there is no significant influence for the promotion of banking service in FMI, for the testing this hypothesis the SLR analysis was used. Table 12 shows the results related to the test of this hypothesis.

**Table 12 Results of simple regression test of the promotion of banking service on FMI**

Independent Variable	R	R <sup>2</sup>	F-value	Coefficient t	T-value	Sig.
Promotion of banking service	0.734	0.538	507.902	0.734	22.537	0.000

Table 10 shows a positive correlation between the promotions of banking service on FMI and amounted to 0.734. The definition factor  $R^2$  0.53 explains the variation in the dependent variable; that is, 53% of the changes in FMI result from the change in the promotion of banking service. This indicates the importance of this variable in improving the FMI. The table also shows that there is a positive effect on the promotion of banking service in FMI and with an impact level of coefficient = 0.734,  $p > 0.000$ . This is explained by the fact that a single increase in the promotion of banking service improves the FMI by 73.4% T value of 22.537 is statistically significant.

### Test the Second hypothesis

To investigate it the means and standard deviation were conducted by demographical variables, and used multivariate analysis of variance (MANOVA).

**Table 13 the means and standard deviation of MME depending on demographic variables**

Variables	Description	Numbers	Mean	Std.
Gender	Male	284	4.064	.0379
	Female	152	4.036	.0446
Experience	less than 3 years	42	3.958	0.621
	3-6 years	85	4.054	0.334
	7-10 years	124	4.089	0.421
	more than 10 years	185	4.102	0.296
Qualification	Diploma	69	4.083	0.458
	Bachelor	227	4.101	0.641
	Master	92	4.026	0.576
	PhD	48	3.992	0.566
Job description	HR	96	4.079	0.583
	Accounting	84	4.032	0.717
	marketing	103	3.979	0.602
	Administrative	153	4.085	0.528

Table 13 revealed that there is an apparent difference in respondents, in order to verify the significant of these differences; the MANOVA was applied to find out the differences, table 14 shows that:

**Table 14 MANOVA of marketing mix elements depending on (demographic variables)**

Source	Sum of Squares	Df	Mean Square	F	Sig.
Gender	0.542	1	0.542	1.686	0.154
Experience	1.987	3	0.662	2.482	<b>0.044*</b>
Qualification	1.142	3	0.380	0.648	0.664
Job description	0.878	3	0.292	1.383	0.256
<b>Error</b>	21.625	<b>425</b>	0.051		
<b>Total</b>	<b>26.265</b>	<b>435</b>			

\*Note: Significance levels at 5% .

Table 14 shows no statistically considerable differences within the responses about the instruction sample in accordance with the aspects about the marketing mixing because regarding the create unstable yet useful qualifications. The worth F did now not hold someone statistical significance. The charge concerning F is 2.482, which is statistically significant. To find out the sources of it differences, the Scheffe check was applied in accordance with rate comparisons. Table 15 indicates the following:

**Table 15 Scheffe depending on Experience**

Experience	Mean	< 3 years	3-6 years	7-10 years	> 10 years
		3.958	4.054	4.089	4.102
less than 3 years	3.958		-0.096	-0.131	<b>-0.144**</b>
3-6 years	4.054	0.096		-0.035	-0.048
7-10 years	4.089	0.131	0.035		-0.013
more than 10 years	4.102	<b>0.144**</b>	0.048	0.013	

**\*\* The mean difference is significant significance levels at 5%.**

Table eleven suggests as the sources on the variations have been among the category over ride less than 3 years, more than x years for the class concerning ride more than 10 years with a common over 4.102, yet the common category on journey much less than three years was once 3.95 years.

### **Test the third hypothesis:**

The third hypothesis, to investigate it the means and standard deviation were conducted by demographical variables, and used MANOVA.



**Table 16 the means and standard deviation of FMI depending on demographic variables**

Variables	Description	Numbers	Mean	Std.
Gender	Male	284	4.146	.0532
	Female	152	4.097	.0378
Experience	less than 3 years	42	4.123	0.416
	3-6 years	85	4.074	0.422
	7-10 years	124	4.115	0.614
	more than 10 years	185	4.168	0.386
Qualification	Diploma	69	3.993	0.574
	Bachelor	227	4.161	0.432
	Master	92	4.143	0.363
	PhD	48	4.185	0.658
Job description	HR	96	4.146	0.475
	Accounting	84	4.172	0.327
	marketing	103	4.035	0.520
	Administrative	153	4.132	0.456

Table 16 revealed that there is an apparent difference in respondents, in order to verify the significant of these differences; the MANOVA was applied to find out the differences, table 13 shows that:

**Table 17 MANOVA of FMI depending on demographic variables**

Source	Sum of Squares	Df	Mean Square	F	Sig.
Gender	5.341	1	5.341	4.697	0.052
Experience	0.686	3	0.229	0.772	0.491
Qualification	0.936	3	0.312	1.649	0.181
Job description	4.254	3	1.418	3.771	0.066
<b>Error</b>	26.842	<b>425</b>	0.063		
<b>Total</b>	<b>39.231</b>	<b>435</b>			

\*Note: Significance levels at 5% .

Table 13 shows no statistically significant differences in the JIB on FMI due to personal variables where F values for all variables not statistically significant.

## CONCLUSION

There is a significant effect for the MME on FMI in JIB.

There is a significant effect for the Nature of banking service on FMI.

There is a significant effect for the Pricing of banking service on FMI.

There is a significant effect for the Promotion of banking service on f FMI.

## RECOMMENDATIONS

Based on the results found the researchers recommends JIB;

1- to pay attention for the pricing of banking services provided to customers, so that provides customers with banking services at competitive prices and encouragement, in order to improve the mental image of customers and attract new.

2- to establish new branches in different regions in different cities in order to facilitate the distribution of banking services as well as easy access to customers.

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# The Mediating Role of Cognition between Technology and Brand Selection: An Indian Retail Context

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## ABSTRACT

The aim of this study is to analyse the intervention impact of organismic variables on the relationship between technology and selection of brand in Indian retail context. The mediation analysis was utilized to test the model for the reason of the study. The model included dimensions of technology namely innovativeness and optimism, cognition (perceived and service quality) and selection of brand (brand choice and preference). The research data were collected from the population of Kanpur region for the purpose of this study. The major finding of this study is that cognition variables which constitutes of perceived quality and service quality, mediates the relationship between technology and brand selection.

**Keywords:** *Brand choice, brand preference, Indian Retail, Mediation effect, Perceived quality, Service quality, Technology.*

## 1. Introduction

Since recent times there has been much research effort on the field of cognition as a major driver of consumer decision making. Tom Peters (1987) said that non-financial measures like perceived quality, customer satisfaction are the real drivers of corporate success. Service quality is another variable which forms the part of cognition. In 1988, Zeithaml *Perceived quality* is the judgment of a consumer about the overall excellence or superiority of a product. Also, Aaker and Jacobson (1994) stated that there is a relationship between the perceived product quality and the level of financial investment. In 1997, Sethuraman and Cole concluded that perceived quality explains the variances in premium consumers who are willing to pay a large amount of money for national brands. The perceived quality of products and the services is fundamental to the theory being advertised by strong brands. In 2004, Ailawadi and Keller emphasized that retailers could create their brand image by attaching something unique to the quality of their service which can drive customers. Further, Chakrabarty et al. (2008) defined SQ as the conformity to the requirements of a customer in the service delivery. Also, Carrillat et al., 2009, added that the service quality of the store is an important factor influencing the customers purchasing behavior. Bansal et al. (2014) along with other researchers (Lee et al., 2014) supported that service quality (SQ) is an antecedent to satisfaction. Another study by Lai et al. (2011) established that perceived value is associated with service quality which leads to the satisfaction of the customer. Also, Hemsley-Brown and Alnawas (2016) studied service quality with brand loyalty establishing that brand passion partially mediates the service quality- loyalty relationship. In summary, this study investigates the mediating role of cognition in the relation between technology and the brand selection in Indian Retail.

## 2. Research Problem

There is an absence of studies which could bring together technology, cognition and brand selection and administer them in context of Indian retail.

### 3. Objective

The objective of this study is

- To empirically examine the mediation effect of cognition variables on the relationship between technology and brand selection in Indian retail scenario.
- To administer and examine the conceptual model of Technological readiness and cognition scales are being developed for the study. The model includes technological dimension, cognition construct and brand selection.
- To find out the role of the cognition in consumer brand purchase in Indian retail.
- To analyse if cognition is positively and significantly related to brand selection.

### 4. Theoretical Background

Holding sway for several decades, the earliest microeconomic models were little more than this, with economic or financial factors being the inputs, and spending or purchasing behavior being the output. With the significance of variables inner to the individual no more deniable, the short-sighted I-O models offered approach to more complex boost life form reaction (S-O-R) models.

The theoretical background of the study is based on the S-O-R i.e. Stimulus- Organism- Response model propounded by Mehrabian and Russell (1974). In line with the Stimulus- Organism- Response model, the stimulus rouses or incites to activity affecting the states of organism (Eroglu et al., 2001). The organism refers to the processes that occur in lieu of the stimulus and intervene with the individual and behavior. These processes consist of the cognitive, emotional states and represent the affective component of the consumer. At last, responses represent the outcome or the final state towards organism which can be characterised by various behaviors depicted by an individual (Donovan et al., 1994; Sherman et al., 1997).

In the current study, stimulus refers to technological characteristics defined by innovativeness and optimism, internal responses such as the perceived quality and service quality depicted by Cognition, represents Organism. Whereas, Consumer's Brand selection process depicts the response in the Stimulus- Organism- Response paradigm as as depicted in the conceptual model (Fig 1). In the hypothesised model the two characteristics of technology (Optimism and innovativeness) will influence the consumer brand selection (Ojha, 2016). Additionally, two cognition variables are hypothesized to mediate the relationship between technology and brand selection (Prasad et al., 2001).

### 5. Literature review

Marketing researchers have praised the advantages of satisfaction (Bitner et al., 2000; van der Wal et al., 2002) and quality, and have notified them as guides of an organisation competitive success or benefit (De Ruyter, 1997). In the other realm, service is one of the most important structures in marketing, due to its final effect on customers' repeated purchases or brand selection, and in fact, those customers who purchase repeatedly are considered as the base or asset of any business (Caruana, 2002). Although these concepts have been used so many times in the literature of marketing, but the nature of relationship between these concepts still remain ambiguous. Therefore, this research intends to study the relationship of the following concepts:

#### 5.1 Technology

Onete et al. (2010) watched that the new client is depicted generally by cynical mindset appeared for routine publicizing and impulse of Internet, the media that appreciated the experience of a making conviction concerning purchasers and from which it gets data that IT arranges the gaining choice. In 2004, Bhatnagar and Ghose watched that the time spent by customers in surfing on the net was differing for different areas. The extra time spent by clients in filtering for information through Internet and more chronically they do in this manner, increasingly the data accumulated online impacts the buy choice.

As demonstrated by Burke (2002) and Li and Zhang (2002) recollecting direction, its levels similarly impacts web shopping i.e. higher taught purchasers are more joyful with using non-store channels, like the Internet for shopping essentially in light of the way that preparation is routinely determinedly associated with an individual's level of Internet training. In the same direction, Wolfinbarger and Gilly (2003) revealed that settlement and accessibility are vehemently associated with web shopping, since they can shop on the Internet inside the sheltered place of their homes. Web shopping in like way offers an interesting state of accommodation for those whose time expenses are believed to be too high to place resources into standard shopping (Grewal and Dharwadkar, 2002). Purchasers can without investing considerable amount of time, separate things, segments, accessibility, and costs more proficiently and adequately than with square and-mortar shopping. Also, Customers see IT as multi utility, purchaser faithfulness, save cost, convincing obtaining decision, sensible esteem, easy to use, advantageous movement, keeping up records and no agents which open the strategy for direct advancing (Narwal and Sachdeva, 2013).

On the premise of respondents answer 10 things were picked particular to our study out of which 4 things demonstrated the most extreme component stacking

- Ease of utilization: the convenience and capacity to hunt down data,
- Aesthetic outline: the inventiveness of a site with fantastic sight and sound and shading design,
- Processing speed: the speediness of internet handling and intelligent responsiveness to a buyer's solicitations, and
- Security: the security of individual and money related data.

According to Park and Kim (2003) consumer-behavior or brand purchase is mainly based on the websites appearance such as images, information quality, and clipings of the product and not on the actual experience (Lohse and Spiller, 1998; Kolesar and Galbraith, 2000). Also, researchers (Hoque and Lohse, 1999; Griffith *et al.*, 2001; Kim et al., 2007) added that the behavior of a consumer is driven by the technological interface, how innovative, is the platform leading to interactiveness and how people interact with the technology. Parasuraman and Grewal (2000) explained technological readiness in terms of optimism (positive outlook towards technology) and innovativeness (referring to the perception of being at the forefront of technology). Further, consumer's behavioral display is governed by their evaluation based on the perception implying how optimistic i.e. a positive attitude they have towards the technology. Hypotheses 1 and 2 have been formulated based on the above literature.

## 5.2. Cognition

In 1992, Bitner suggested that when a customer is exposed to signals from the environment then the customer produces cognitive responses. More recently, it discovered the mediating

presence of emotional and rational/ cognitive processes (Lee, Amir, and Ariely 2009; Rust et al., 1995; Wong, 2004; Yu and Dean, 2001), which we define as relationships among consumer attitudes involving affect and cognition.

### **5.2.1. Perceived Quality**

In conventional showcasing models, the item is the beginning stage for choices about advertising correspondence, dispersion what's more, valuing (to utilize the showcasing blend dialect of customer products showcasing). In a benefit advertising model, the beginning stage for arranging is not an item but rather an administration idea, that is, a thought regarding how the quality-creating assets ought to work and what result they ought to accomplish for the client.

Previous researches in the field of Marketing and Retailing researches have been carried out by assuming that perceived quality influences the consumer behavior reflecting the brand purchase, selection of a particular brand and loyalty. On the other hand various psychological models have suggested that the judgements or the consumer response are partially influenced by the rationality i.e. perception of the quality and current information (Einhorn and Hogarth 1981; Gilbert 1991). In addition, a study conducted by Gotlieb et al. (1994) suggested that the expectations or the outlook of a customer influences the perceived quality inturn affecting the consumer behaviour. Also, the results indicated that perceived quality affects customer satisfaction and the customer's behavioral intentions are further affected by satisfaction.

Something was required in an administration promoting model that supplanted the item includes implanted in the pre-created physical item. The characteristic method for finding the administration arranged proportionate of item elements is to pose the question "What do customers of services find in services as a need-fulfilling arrangement when they don't see and perceive any instant item highlights?" The undeniable answer is by all accounts, "they see and see the procedure they are included in as shoppers of the administration too as the result of this procedure." Hence, while the utilization of physical items can be depicted as result utilization, the utilization of administrations can be described as process utilization (Odekerken-Schroder, 2001).

However a little research has been performed to measure the perceived quality. Therefore the present study is an effort to understand the effect of perceived quality on the brand selection specified by Hypothesis H3a, H3b, H3c and H3d, in the later section.

### **5.2.2. Service Quality**

A vast literature is available on the construct of service quality about whether industries and the various type of services being offered have any influence on the perception of quality of service, how various factors be it cultural or others influence effects of service quality (Bitner, 1995; Carman, 1990; Cronin and Taylor, 1992; Furrer et al., 2000; Teas, 1994; Wilson et al., 2012). Various researchers (Odekerken-Schroder, 2001; Parasuraman et al., 1988) have described quality of service as the variance between expectations of customer and the service to be received. In 2004, Bansal and Taylor identified Service satisfaction and Service quality as the important determinants of service switching. In lieu of the research they specified that quality of service act as a precursor to customer satisfaction. Further, Yang (2001) and Zeithaml (2002) supported that quality of service has become one of the most important factor in assessing the electronic association quality. Santos (2003)

portrayed e-advantage quality as a rule being focussed for customer evaluation and judgment of e-organisation in the e- business settings.

Advantage quality is a problematic and hypothetical construct that is hard to clear up and measure (Cronin and Taylor, 1992). The SERVQUAL appear, at first made by Parasuraman et al. (1988) has been extensively endeavored as a strategy for measuring client impression of association quality. The SERVQUAL contains 5 estimations, particularly physical assets, reliability, responsiveness, accreditation and affectability. Moreover, amidst the earlier decade, SERVQUAL show has been taken a stab at measuring association quality in e-trade settings (Kim and Lee, 2002; Devaraj et al., 2002; Negash et al., 2003; Kuo, 2003; Lee and Lin, 2005)

Research is required on the impact of e-associations on all client reactions, for instance, saw association quality, customer dependability and buys focuses (Ahn et al., 2007; Parasuraman and Grewal, 2000). Understanding the determining factor of association quality, customer reliability and buy wants for web shopping is fundamental for both propelling specialists and online stores administrators. The SERVQUAL size of administration quality starting late has been comprehensively used to evaluate information structure advantage quality (Dyke et al., 1999; Jiang et al., 2002). The hypotheses corresponding to the above literature have been formulated as H4a, H4b, H4c and H4d.

However, the literature has few studies shown in Table 1, which deals with the relationship between rational and emotional processes, how customer familiarity modifies the importance of cognitive or rational versus emotional processes. In response to the to the discussed research gaps, we will draw on psychological data processing theories to contributions to the existing literature.

## 6. Methodology

The current study uses a quantitative approach to test the framework (Fig 1). The study involves survey of randomly selected 100 respondents in total from Kanpur region to gain first-hand information regarding their use of the Internet/ technology for brand selection. Prior to the main survey, a pilot study was conducted which discovered that there were no problems with the structured questionnaire. The consumer survey was structured in such a manner that it would disclose the relationship between attitudes, demographics toward technology and the cognition which comes into picture while purchasing a product.

Total collected data was compiled and analysed by using statistical techniques i.e. factor analysis, mean, standard deviation, a test of significance, ANOVA, correlation and regression etc. and interpreted accordingly. Structured Equation Modelling has been used to check the mediation effect of cognition on technology and brand selection.

### 6.1. Hypotheses

The following hypotheses have been drawn based on the objectives of the study and the available literature support:

**H1**-The Technological dimensions (innovativeness and optimism) are positively related to customer brand selection in Indian retail.



**H2-** The effect of Innovativeness is greater than the effect of Optimism on the following Brand selection criteria: (a) brand choice; (b) Brand preference.

### 6.1.1. For Mediating variable

#### a) Perceived Quality

**H3a:** Perceived quality will mediate the relationship between the optimism and brand choice.

**H3b:** Perceived quality will mediate the relationship between the optimism and brand preference.

**H3c:** Perceived quality will mediate the relationship between the innovativeness and brand choice.

**H3d:** Perceived quality will mediate the relationship between the innovativeness and brand preference.

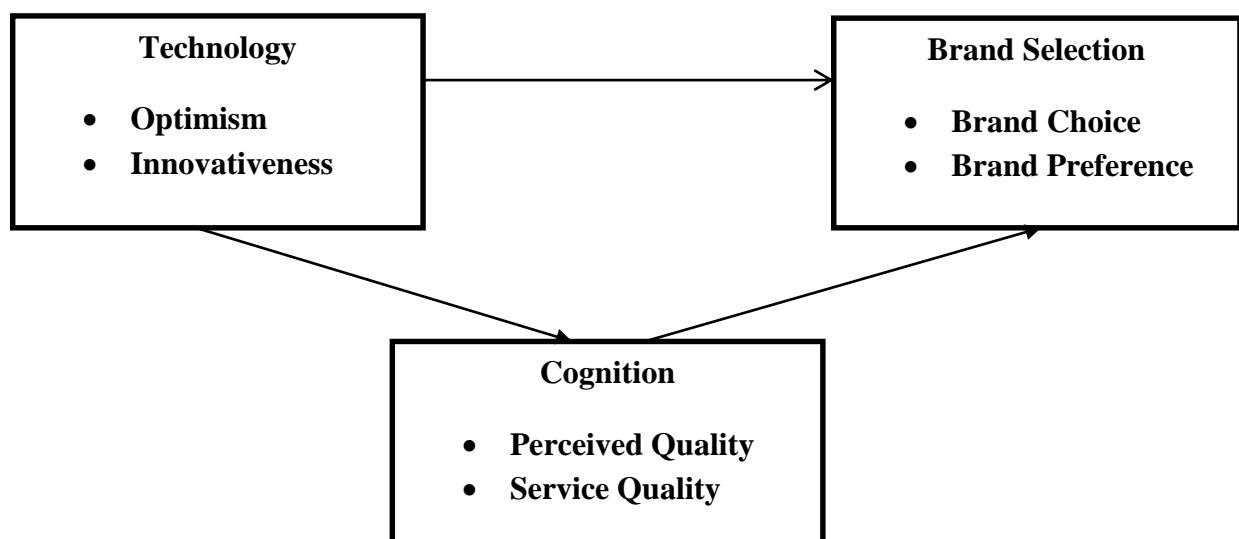
#### b) Service Quality

**H4a:** Service quality will mediate the relationship between the optimism and brand choice

**H4b:** Service quality will mediate the relationship between the optimism and brand preference.

**H4c:** Service quality will mediate the relationship between the innovativeness and brand choice.

**H4d:** Service quality will mediate the relationship between the innovativeness and brand preference.



**Fig 1:** Conceptual Model to study the mediating effect of Cognition.

Table 1: Literature Review						
Sr. No.	Year	Paper Title/Paper Type	Author	Study focus/ Objectives/Findings	Future research avenues	Journal Name/Publisher
1.	2000	Internet shopping, consumer search and product branding	Ward and Lee	<ul style="list-style-type: none"> <li>This study tries to understand the relationship between technology, consumer search and product branding.</li> <li>It helps in getting insight whether technology offers solutions to Internet search and information-processing problems.</li> </ul>	This study needs to be empirically tested in Indian context.	<b>Journal:</b> <i>Journal of product &amp; brand management.</i> <b>Publisher:</b> Emerald
2.	2000	The measurement and dimensionality of brand associations	Low and Lamb	<ul style="list-style-type: none"> <li>The purpose of the research reported here was to test empirically a conceptualization of brand associations that consists of three dimensions: brand image, brand attitude and perceived quality.</li> </ul>	The proposed measures of brand association could be tested in Indian Retail sector.	<b>Journal:</b> <i>Journal of Product &amp; Brand Management,</i> <b>Publisher:</b> Emerald
3.	2005	The impact of information and communication technology on retail property in Malaysia	Razali Et al.	<ul style="list-style-type: none"> <li>The purpose of this paper is to examine the impact of information and communication technology (ICT) on Malaysian retail property.</li> <li>In this study ICT retail impact matrix was developed to assess the significance of ICT on retail property in Malaysia. Major internal factors               <ul style="list-style-type: none"> <li>➤ cyber retailing,</li> <li>➤ attitudes towards technology</li> <li>➤ internal factors</li> <li>➤ retail space and future opportunities.</li> </ul> </li> </ul>	The proposed ICT retail impact matrix has not been empirically tested in Indian context. This can be tested empirically during future research	<b>Journal:</b> <i>Journal of Property Investment &amp; Finance</i> <b>Publisher:</b> Emerald

Sr. No.	Year	Paper Title/Paper Type	Author	Study focus/ Objectives/Findings	Future research avenues	Journal Name/Publisher
4.	2009	Using service quality to enhance the perceived quality of store brands.	Huang	<ul style="list-style-type: none"> <li>This paper examines the impacts of dimensions of retail service quality on the perceived quality of store brands: physical aspects, personal interaction, reliability, problem solving and policy.</li> <li>A conceptual model is developed and empirically tested against a sample of supermarket consumers in Taiwan.</li> </ul>	Effect of these factors could be tested empirically in Indian retail.	<b>Journal:</b> <i>Total Quality Management</i> <b>Publisher:</b> Taylor & Francis
5.	2010	Impact of Multiple Perceived Value on Consumers' Brand Preference and Purchase Intention: A Case of Snack Foods	Wang	<ul style="list-style-type: none"> <li>This research investigates relationships between multiple perceived snack foods' product value, brand preference and purchase intention.</li> <li>Findings show significantly positive effects of brand preference on purchase intention, and brand preference as a mediator between multiple perceive-ed product value and purchase intention.</li> </ul>	The proposed exploratory results could be tested empirically in quantitative nature in Indian context.	<b>Journal:</b> <i>Journal of food products marketing</i> . <b>Publisher:</b> Taylor & Francis
6.	2011	Relationship between service gap and perception for mapping of quality attributes into four service quality factors	Sia	<ul style="list-style-type: none"> <li>The study measured the perception model of service quality and established that customer satisfaction is multidimensional along with four service quality factors.</li> </ul>	The study needs to be examined in the Indian context.	<b>Journal:</b> <i>International Journal of Services, Economics and Management</i> <b>Publisher:</b> Inderscience

Sr. No.	Year	Paper Title/Paper Type	Author	Study focus/ Objectives/Findings	Future research avenues	Journal Name/Publisher
7	2012	Retail service quality as a key activator of grocery store loyalty	Martinelli and Balboni	<ul style="list-style-type: none"> <li>This paper demonstrates the crucial role of retail service quality as a key activator in the formation of customer loyalty to the store; the latter is understood in a conative and action sense.</li> </ul>	Concepts need to be tested more empirically in Indian select organisations.	<b>Journal:</b> <i>The Service Industries Journal</i> <b>Publisher:</b> Taylor & Francis
8	2013	Supermarket self-checkout service quality, customer satisfaction, and loyalty: Empirical evidence from an emerging market	Orel and Kara	<ul style="list-style-type: none"> <li>The study attempted to use SSTQUAL (Self-service technologies quality) to measure the service quality for the supermarket (SCS) in the emerging market like Turkey.</li> </ul>	Since India is also an emerging market, therefore this kind of study can also be done to test the market scenario.	<b>Journal:</b> <i>Journal of Retailing and Consumer Services</i> <b>Publisher:</b> Elsevier
9	2014	Prioritisation of departments based on service quality dimensions in Isfahan Steel Company: a MCDM approach	Shahin et al.	<ul style="list-style-type: none"> <li>The study suggested that service quality depends on the personnel satisfaction. It signified that there exist a huge gap between the perceived quality and the service quality.</li> </ul>	Since India is a budding market, therefore this kind of study can also be done to test the market scenario.	<b>Journal:</b> <i>Int. Journal of Productivity &amp; Quality Mgmt.</i> <b>Publisher:</b> Inderscience
10	2015	Perceived brand quality as a way to superior customer crossing by moderating effects.	Vera	<ul style="list-style-type: none"> <li>The purpose of this paper is to assess the relationship between perceived brand quality (PBQ), customer perceived value (CPV) and disposition to pay a higher price (DHP) for a product.</li> </ul>	The proposed development model of PC can be tested empirically in Indian context.	<b>Journal:</b> <i>Journal of Product &amp; Brand Management,</i> <b>Publisher:</b> Emerald

Sr. No.	Year	Paper Title/Paper Type	Author	Study focus/ Objectives/Findings	Future research avenues	Journal Name/Publisher
11	2015	Linkages between self-congruity, brand familiarity, perceived quality and purchase intention: A study of fashion retail brands.	Das	<ul style="list-style-type: none"> <li>The study explores the direct and indirect impacts, mediated through perceived quality, of self-congruity and brand familiarity on purchase intention in a fashion retail branding context.</li> <li>The study tries to find out that self-congruity, perceived quality and brand familiarity positively influence purchase intention.</li> </ul>	The study was region (Kolkata) specific and can be used to develop a more general overview.	<b>Journal:</b> <i>Journal of Global Fashion Marketing</i> <b>Publisher:</b> Taylor & Francis
12	2016	Service quality and brand loyalty: The mediation effect of brand passion, brand affection and self-brand connection.	Hemsley-Brown and Alnawas	<ul style="list-style-type: none"> <li>The findings suggested that physical quality has a stronger and more significant effect on brand passion along with brand affection.</li> </ul>	The study can also be conducted in other industries namely manufacturing etc.	<b>Journal:</b> <i>Int. Journal of Contemporary Hospitality Mgmt</i> <b>Publisher:</b> Emerald
13	2016	The effect of service guarantee strength on service quality of online merchants	Peng et al.	<ul style="list-style-type: none"> <li>The findings suggest that business reputation moderates the relationship between service guarantees and service quality in a network setting.</li> </ul>	The study was conducted in china and therefore can be done in Indian setting.	<b>Journal:</b> <i>Int. Journal of Service Technology &amp; Mgmt.</i> <b>Publisher:</b> Inderscience
Sr. No.	Year	Paper Title/Paper Type	Author	Study focus/ Objectives/Findings	Future research avenues	Journal Name/Publisher

14	2017	Evolution of service quality management and paradigm shift from product to service orientation: a historical review of literature	Mukhtar et al.	<ul style="list-style-type: none"> <li>• The study suggested a shift from product to service orientation.</li> <li>• Also, an extensive literature review of service quality has been done which helps in creating a better understanding.</li> </ul>	A similar study can be conducted in Indian context.	<b>Journal:</b> <i>Int. Journal of Business Forecasting and Marketing Intelligence</i> <b>Publisher:</b> Inderscience
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## 6.2. Research Data Analysis

In Consistency with the earlier research (Gronroos, 1984; Chang and Chen, 1998; Inhofe Rapert and Wren, 1998) the data was analysed.

### 6.2.1. Assessing the validity

#### 6.2.1.1. Construct Validity

When the array of correlations among variables authorizes what is predicted by theory the evidence of construct validity is presented (Cronbach, 1970; Kumar et al., 2013). Construct validity of the research measures was examined by convergent validity. In the event that there was solid basic connection between the segments measurements, then they are uniting on a typical build, in this manner giving proof of setting up merged legitimacy (Narver and Slater, 1990; Churchill and Iacobucci, 2006). The correlations matrix shown in Table 2 reveals that there are fairly high and significant correlations between all the dimensions that constitute the technology, cognition, and brand selection as was theoretically predicted; providing evidence of convergent validity. Other evidence for convergent validity of the instrument of research is that the alpha coefficient values were all high and reliable. The alpha coefficients reflect the degree of cohesiveness among the scale items that provide an indirect indicator of convergent validity (Cronbach, 1970; Parasuraman et al., 1991).

#### 6.2.1.2. Assessing Reliability

The dependability or reliability of the examination builds was surveyed by looking at the Cronbach's Alpha Coefficient. Nunnally (1978) contend that if the alpha coefficients are above 0.60, they demonstrate the dependable measures. The foundation that is utilized as a part of the examination to analyse the unwavering quality of every variable is that if the variable dependability is under 0.60, so it is thought to be of poor dependability. In the event that the variable dependability is more than 0.60, then it is considered as a sound and dependable measure. Table 3 demonstrates the unwavering quality coefficients for the examination develops. The table demonstrates that the unwavering quality coefficients of all the examination factors were over the cut - off point, 0.60, of alpha utilized as a part of this exploration. The reliability coefficients for every one of the factors went from 0.717 to 0.926. Thus, the measuring instrument what's more, the builds are of sound and great unwavering quality and can be depended upon to lead the exploration information investigation.

**Table.2. Inter-correlations between all the Constructs under study.**

Variables	1	2	3	4	5	6
Optimism	1.00					
Innovativeness	0.649	1.00				
Perceived Quality	0.665	0.379	1.00			
Service Quality	0.663	0.541	0.621	1.00		
Brand choice	0.533	0.317	0.439	0.520	1.00	
Brand Preference	0.325	0.440	0.442	0.345	0.574	1.00

Note: Correlations are Significant at  $P < 0.01$ .

**Table.3. Reliability Coefficients for the Research Constructs**

<b>The Technology Dimensions</b>	<b>No. of items</b>	<b>Reliability Coefficients</b>
Optimism	6	0.919
Innovativeness	9	0.716
Overall technology impact	15	0.926
<b>Cognition Variables</b>		
Perceived Quality	4	0.809
Service Quality	9	0.749
Overall cognition Implementation	13	0.908
<b>Brand Selection Measures</b>		
Brand choice	3	0.748
Brand Preference	4	0.805
Overall Brand Selection measure	7	0.853

### 6.3. Testing the Model and Hypotheses

The measurable techniques used to investigate the information and to test the expressed speculations are engaging insights, reliability or dependability, correlations, multiple regression analysis, and regression partial correlation. Examine information were reasonable for regression analysis and could test the exploration theories keeping in mind the end goal to accomplish the exploration destinations. The study's model was tried utilizing relapse examination on two separate stages. In the first place, multiple regressions were run to test the relation between the constructs measurement and execution. Second, a partial regression analysis were utilized to test the relation between every measurement of technology and brand selection while monitoring for every variable of cognition to look at if its factors intercede the relation.

Various researches (Preacher and Hayes, 2004) demonstrated that the greater part of intervention examinations is guided by the techniques illustrated in 1986 by Baron and Kenny. Further, past researches (Lasser et al., 2000; Chang and Chen, 1998; Chumitaz and Paparoidamis, 2004) in the field of service quality has utilized this approach for testing the impact of interceding factors. Therefore, the approach utilized as a part of this study to look at interceding factors impact is as per the following; initially, the first relationship between every measurement of technology and brand selection also, execution is measured without controlling for the impact of intervening factors. Three measurements must be inspected on this relationship, these measurements are: the extent of the  $r$  coefficient, the heading of the relationship (positive or negative) and its hugeness. Second, the multiple regression relationship is directed between every measurement of technology and brand selection while controlling for the impact of each interceding variable. Third, the regression partial correlation is in three choices; the first option is inspecting the greatness of the  $r$  coefficient on the off chance that it increments or reductions or continues as before. The second option is inspecting the sign or heading of the partial correlation. In the event that the sign or bearing is certain then the diminishing or increment in the  $r$  coefficient is inspected to choose the impact of the intervening variable.



In the event that the sign or heading of the fractional relationship is negative it demonstrates that controlling for the interceding variable negatively affects the first relationship between two factors. The third option is looking at the importance of multiple regression correlation which is demonstrated by inspecting the likelihood esteem, P esteem, of the test. This study utilized the customary alpha,  $\alpha = 0.05$ , which can be contrasted and the P estimation of the incomplete relationship test to look at in the event that it is critical or not. On the off chance that the P estimation of the fractional relationship is under 0.05; then the fractional connection is noteworthy and the relationship between two factors is held while controlling for the impact of the intervening variable. The suggestion is that controlling for the intervening variable may influence the relationship between two factors however their connection is still critical and the impact of the interceding variable on their relationship is controlled by the greatness of change in the r coefficient. This shows the intercession theory is in part bolstered and the interceding variable incompletely intervene the first relationship between two factors. On the off chance that the relapse incomplete connection is non-noteworthy; the suggestion is that the interceding variable has a generous impact or impact on the relationship between two factors and controlling for this variable is probably going to make the first relationship non-huge. This demonstrates the intervening speculation is completely bolstered and the interceding variable completely intervene the first relationship between two factors.

In the first place, since one of the principle speculations of the study is to look at the intervention part of cognition on the relationship between technology and brand selection, it was important to take the composite score of every cognition variable; useful and specialized, so as to direct the relapse examination with and without the interceding factors. Second, past exact research (Gronroos, 1984; Lasser et al., 2000; Robinson, 1999; Kang and James, 2004) utilized the dimensions as interrelated in an intuitive manner. Third, there are significant and positive correlations among the dimensions of optimism and innovativeness, which range between 0.474 and 0.659. This provides support for using the composite score of the technology to represent its comprehensiveness in the analysis.

## 7. Findings

The multiple and simple regression analyses were employed to test the research model and examine its hypotheses on two phases. Table 4 exhibits the multiple regression results of the technology and brand selection. The findings indicate that there is a positive and significant relationship between the technology dimensions and all brand selection dimensions. Table (4) shows that the 24.5 % (R Square) of the variation in brand choice is explained by the technological dimension. Table 4 also shows that the 21.6 % (R Square) of the variation in brand preference is explained by the technological dimensions, respectively. The analysis has shown that the strongest effect of service quality is on the brand choice, 24.5% (R square), which indicates the crucial impact of optimism on brand choice. Table 4 exhibits the multiple regression results of the innovativeness on the brand preference. The findings specify that there is a positive and significant relationship between the technology and brand selection. Table 4 shows that the 21.7 % (R Square) of the variation in brand preference is explained by the technology.

The original value of regression coefficient between the Optimism and brand choice is shown at the top of Table 5. The regression partial correlation results indicate that service quality partially mediates the relationship between the optimism and customer brand choice. The regression r coefficients have decreased between the optimism and brand choice when

controlling for the cognition variable but the relationships are still held significant. This reveals that H3a and H4a are partially supported.

**Table.4. Multiple Regression Analysis for Technology and Brand Selection**

Dependent Variables	Brand Choice		Brand Preference	
Multiple Regression Results	R square	Sig. F	R square	Sig. F
	0.245	0.000	0.216	0.000
Independent Variables	Standardized Beta- Coefficients	Sig. T	Standardized Beta- Coefficients	Sig. T
Optimism	0.561	0.000	0.418	0.000
Innovativeness	0.113	0.196	0.067	0.458

**Table.5. Optimism and Brand Choice: The Original Regression Coefficient is 0.561 (0.000)**

The cognition Variables	The Regression Partial Correlation- Rxy.z	Change in the Regression Coefficient Decreased By	The Regression Partial Correlation Significance (Partial P Value Sig)	Effect of the Mediating variables
Perceived Quality	0.337	0.160	0.000	Partial
Service Quality	0.250	0.201	0.001	Partial

The original value of regression coefficient between the Optimism and brand preference is shown at the top of Table 6. The regression partial correlation results indicate that service quality partially mediates the relationship between the technology and customer brand choice. The regression r coefficients have decreased between the optimism and brand preference when controlling for the cognition variable but the relationships are still held significant. Consequently, H3b and H4b are partially supported.

**Table.6. Optimism and Brand Preference: The Original Regression Coefficient is 0.418 (0.000)**

The cognition Variables	The Regression Partial Correlation- Rxy.z	Change in the Regression Coefficient Decreased By	The Regression Partial Correlation Significance (Partial P Value Sig)	Effect of the Mediating variables
Perceived Quality	0.326	0.162	0.000	Partial
Service Quality	0.313	0.183	0.000	Partial

The regression partial correlation indicates that Innovativeness have a substantial effect on the brand choice as shown in Table 7. The regression  $r$  coefficients have increased between the innovativeness and brand choice when controlling for the cognition variable and indicates that the relationships are highly significant. Thus, H3c and H4c are fully supported.

**Table.7. Innovativeness and Brand Choice: The Original Regression Coefficient is 0.334 (0.000)**

The cognition Variables	The Regression Partial Correlation- $R_{xy.z}$	Change in the Regression Coefficient Decreased By	The Regression Partial Correlation Significance (Partial P Value Sig)	Effect of the Mediating variables
Perceived Quality	0.247	0.213	0.001	Full
Service Quality	0.395	0.060	0.029	Full

Similarly, the original value of coefficient of regression between the Innovativeness and brand preference is shown at the top of Table 8. The regression partial correlation results indicate that service quality fully mediates the relationship between the technology and customer brand preference. The regression  $r$  coefficients have increased between the innovativeness and brand preference when controlling for the service quality variable but the relationships are highly significant. The similar findings revealed in the analysis of innovativeness and Brand preference by controlling the cognition variable which was found to be highly significant. The results indicate that H3d and H4d are fully supported.

**Table.8. Innovativeness and Brand Preference: The Original Regression Coefficient is 0.248 (0.000)**

The cognition Variables	The Regression Partial Correlation- $R_{xy.z}$	Change in the Regression Coefficient Decreased By	The Regression Partial Correlation Significance (Partial P Value Sig)	Effect of the Mediating variables
Perceived Quality	0.247	0.213	0.101	Full
Service Quality	0.395	0.060	0.660	Full

**Table.9. Summary of the Research Hypotheses Testing Results**

Hypothesis	Hypotheses Testing Results
H1	Fully Supported
H2	Fully Supported
H3a	Partially supported
H3b	Partially supported
H3c	Fully Supported

H3d	Fully Supported
H4a	Partially Supported
H4b	Partially Supported
H4c	Fully Supported
H4d	Fully Supported

The finding of this study reveals that cognition variables have mediated the relation between the technology dimensions and dimensions of brand selection. In general, the cognition factors have stronger mediation effect on the relationship between innovativeness and brand preference than their effect on the relationship between optimism and brand choice.

## 8. Conclusion

The study reveals that Innovativeness has a stronger effect on brand selection relative to optimism. A major finding of this study is that cognition variables mediate the relationship between Technological readiness and brand selection. The study found that the cognition variables have stronger mediation effect on the relationship between optimism and brand selection than their effect on the relationship between innovativeness and brand selection in Indian retail scenario. Specifically, perceived quality partially mediates the relationship between optimism and brand choice. Perceived quality partially mediate the relationship between innovativeness and brand preference, meanwhile; this variable fully mediates the relationship between optimism and brand choice.

Finally, service quality partially mediate the relationships between optimism and brand choice, meanwhile; service quality fully mediate the relationships between innovativeness and brand preference. This provides strong evidence to the existing service quality literature that advocates that service quality has a positive influence on business performance. The article concludes with a discussion of applications of the scale used and the implications along with the future research aimed at deepening our understanding of cognition role in brand selection.

## 9. Research Limitations and Implications

There are a number of limitations to this study which the authors acknowledge. Firstly, the study is region specific and cannot be generalised over other regions. Also other factors such as service quality, interactive marketing, organisational behavior, human resource and attitude etc. can be included in the future researches. There may be variations in the importance of various factors from industry to industry. Also, the results may vary in a different setting considering the present study was conducted in the Indian scenario.

Various literature analysis or classification schemes namely bibliometric analysis, meta-analysis can also be applied to gain a better understanding. Other integrated techniques like FUZZY, Analytical Hierarchical analysis, TOPSIS and various others can also be applied for better results. Also, the current study is limited to the Cognitive component of the brand selection; therefore in future research emotional component of the human can also be included. Finally, researchers might study other determinants of service quality in the hotel industry and discover the extent to which those determinants help to develop and improve the level of quality of service.

### 9.1. Implications for Managers or Practitioners

The present study claims a substantial contribution to the existing Stimulus- Organism- Response model or theory in the Indian retail context. The findings suggest that a customer care training as well as adopting a relational and consumer-centric approach would help the brands to provide a better experience to customers by focussing on the service quality being provided. Also, the research provides key insights for managers such that it would lead to strengthening of the relation between service and loyalty (Helmsley- Brown and Alana's, 2016).

### 9.2. Implications for Academicians

The main implications for the academicians are:

- A bibliographic record provided in the literature review so far of the present research may work as a guideline for future research in this field of study.
- It might help in selection of appropriate technique by the researcher. The modelling techniques and their advantages and disadvantages might work as a source of learning and development.
- The model development process might be helpful for academicians to develop and understand the various levels of customers or how the customers behave in different areas of interest.
- The assessment of issues related to purchase decision may be used as teaching support for the development of case studies.

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## Transpiring Journey of Innovative E-Commerce

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### Abstract

The paper aims to understand how innovative e-commerce has been explored in the last decade by providing a systematic review of the existing literature on innovative e-commerce. An extensive literature review was carried out on innovative e-commerce spread over various journals identified from the e- academic databases of EBSCOS, Scopus, Science Direct and Emerald. A total of 68 conceptual and empirical articles on innovative e-commerce research spanning from 2008 to 2018 were analysed based on the various classification schemes. Innovative e-commerce is becoming a key concept in the field of marketing. Research on customer engagement has gained a significant pace in the last 8 years (2010-2018) but most of the articles on innovative e-commerce have come from developed countries and the literature is comparatively silent in the developing nations. The developing nations need to foster an environment which can help in cultivating innovation especially in the case of e-commerce as innovation is its backbone. Also, the lacunae in the literature needs to be filled and lot of research is needed in the particular area. The current study unveils the favorable organizational outcomes can that can be achieved derive by constructing and managing an innovative e-commerce. The more an organization knows about the technological advancements and the customer's preferences, the better adept it will be to enact the innovations in e-commerce. Therefore, understanding innovative e-commerce is imperative in that context; this review will help the organizations to comprehend that in a better way. This study acknowledges limitations with respect to its exclusive search criteria, which might affect its generalizability. This study exhibits the favorable outcomes organizations can derive by building and managing innovation in e-commerce. This is the first identifiable systematic literature review of innovative e-commerce that offers a detailed understanding of the present state of innovative e-commerce research on a solo platform and delivers a comprehensive innovative e-commerce conceptualization.

**Keywords** innovative e-commerce, Literature review, e-commerce, innovation in e-commerce

**Paper type** Literature review

### Introduction

In the current scenario, the ongoing competition and the technological upgradation have led many innovation researchers to focus upon the various stages of the process of innovation. Also, the strong wave of globalization and the development in information technologies have radically changed the face of business. E-commerce, the new face of business, has become the heart of economic transformation (Hasan and Harris, 2009). The concept of an e-shopping mall have gained the attention to help the brick and mortar companies and compete with the rivals to attract more and more customers (Tan et al., 2009). E-commerce is an enormous business and getting huge every passing day. According to the estimates of eMarketer report, the retail e-commerce sales will climb up to 31 percent (USD 32.8 billion) lagging behind to china and Indonesia in the Asia pacific region. Also, online shoppers will jump to 41.6 percent in 2022 and one fourth population will be online this year owing to the penetration of internet and smartphones. Further, the e-commerce market of India is attracting foreign

investments along with the domestics. For example, the recent sweep of Flipkart by Walmart and the investments made by Chinese retailer Alibaba in Big basket and Paytm. In recent years, e-commerce – i.e., the process of buying and selling products online (Ramanathan *et al.*, 2012) – has reframed business techniques to generate substantial growth, entering newer and emerging markets which ultimately leads to higher profitability.

Innovative e-commerce is an attractive research area owing to its novelty and exponential growth. In contemporary times though, e-commerce has great affinity among the researchers and practitioners, to the best of the authors' knowledge, there is still a significant gap in terms of systematic literature review that could determine the present stand of innovative e-commerce research. This makes it more vital for a review to present the research map of innovative e-commerce and the direction where this research is heading towards. The current paper exhibits a comprehensive literature review of the transpiring journey of the concept of innovative e-commerce research conducted between 2008 and 2018 which have been published in academic journals and a classification of this research. It is observed in the process that practitioner publications and reports also contain a significant claim and say on innovative e-commerce, but these were not selected for inclusion as their focus was on academic publication. The of the paper is organized as follows: first, the research methodology used in the study is described; second, the method for classifying innovative e-commerce research articles is presented; third, the innovative e-commerce research articles are analysed and the results of the classification are reported; and finally, the conclusions and implications of the study are discussed. Also, the current research addresses the following research questions:

RQ1: What are the themes of research that are addressed in innovative e-commerce studies?

RQ2: What is innovative e-commerce?

RQ3: What are the implications of current innovative e-commerce research?

## **Research Methodology**

The aim of this review method is twofold: firstly, to reflect the present state of innovative e-commerce research and secondly, to summarize the unexploited areas of innovative e-commerce that upcoming research should emphasise on. The review criteria are an essential stage for the systematic review to overcome the selection bias and needs to be streamlined at first hand (Luederitz *et al.*, 2016; Kitchenham *et al.*, 2010). To attain the aforesaid objective, four leading academic databases including Emerald, Scopus, Science Direct and EBSCOS were reconnoitred to recognise the articles on innovative e-commerce. The current paper analyses literature traversing from 2008 to 2018. Articles were acknowledged in the “title of the article, article abstract, and keywords” section of the said databases using keywords as “innovative e-commerce”; “e-commerce innovation”; “innovative electronic commerce”, “electronic commerce innovation”, “e-commerce”. Further, to continue the search process precisely according to the objectives of the present study, above keywords were used with the subject limits of “Social sciences”; “Business, management and accounting”; and “psychology.” Also, the study followed the inclusion and exclusion criteria considering the assumptions of earlier

studies to make sure that the relevant studies are incorporated (see table 1). As shown in Table 1, the selected search criteria, excludes reports, masters and doctoral dissertations, textbooks and the conference papers (Chan and Ngai, 2011). Further, Table 2 presents the extant state of innovative e-commerce with majority of studies being conducted on online platforms and retail. Additionally, figure 2 represents the distribution of relevant studies per period of time for the current study.

Figure 1: Review criteria

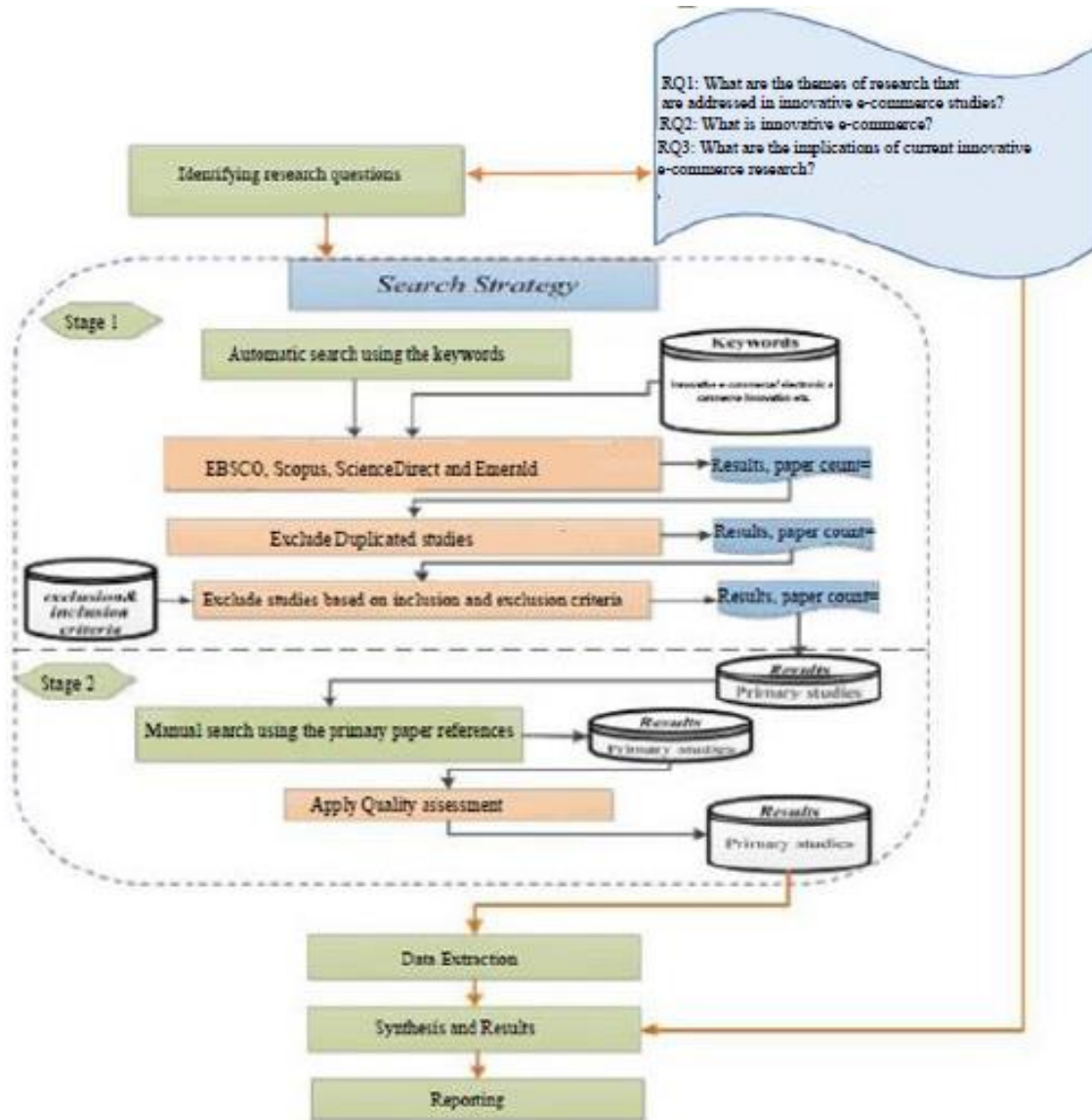


Figure 2: Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
Full-text	Uncompleted studies
Published within selected period of time ( 2008-2018)	Non English
Published in the above selected database	Outside the selected time
Study manuscript written in English.	Duplicated studies
In the domain of e-commerce or electronic commerce	

Table2: Articles found in the e-databases and finally taken articles for analysis per time period

Keyword	No. of articles found			Total	Articles taken for final analysis			Total
	2008-2011	2012-2015	2016-2018		2008-2011	2012-2015	2016-2018	
"Innovative e-commerce"	7	26	45	78	3	7	11	21
"Innovative electronic commerce"	6	15	38	59	-	5	10	15
"e-commerce innovation"	5	9	21	35	1	2	6	9
"Electronic commerce innovation"	8	6	9	23	1	2	2	5
"e-commerce"	16	12	19	47	8	4	6	18
<b>Total</b>	<b>42</b>	<b>68</b>	<b>132</b>	<b>242</b>	<b>11</b>	<b>28</b>	<b>29</b>	<b>68</b>

Figure 3: Year wise distribution of relevant studies

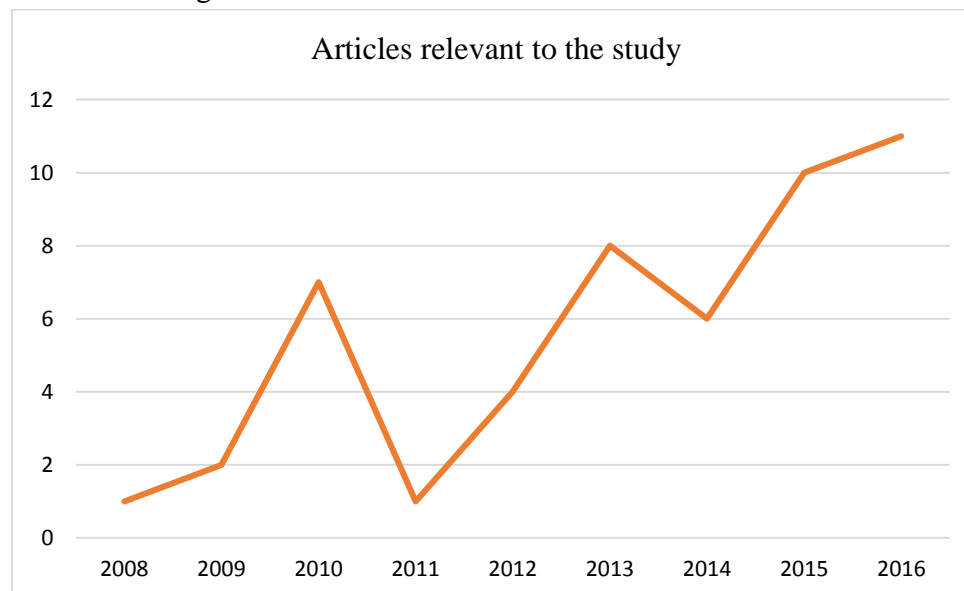


Table 3: Orientation of innovative e-commerce studies per time period

Time	Year	Country	Study	Empirical (quantitative)
<b>2008-2011(11)</b>				
2008(1)	2008	Netherlands	Brand and Huizingh (2008)	✓
2009(2)	2009	Malaysia	Intan Salwani et al.(2009)	✓
	2009	Australia	Hasan and Harris (2009)	✓
2010(7)	2010	Italy	Ordanini and Rubera (2010)	✓
	2010	US	Garbarino and Maxwell (2010)	✓
	2010	Spain	Hernández et al. (2010)	✓
	2010	Japan	Sumita and Yoshii (2010)	✓
	2010	Italy	Ordanini and Rubera (2010)	✓
	2010	Australia	Ferguson et al. (2010)	✓
	2010	US	Hwang (2010)	✓
	2010	US	Hwang (2010)	✓
2011(1)	2011	Chile	Grandon et al. (2011)	✓

**2012-2014(28)**

2012(4)	2012	China	Wang (2012)	✓
	2012	Taiwan	Ramanathan et al. (2012)	✓
	2012	US	Winter (2012)	Conceptual
	2012	Europe	Gielens (2012)	✓
2013(8)	2013	Taiwan	Li et al. (2013)	✓
	2013	Taiwan	Liu et al. (2013)	✓
	2013	Korea	Yoo et al. (2013)	✓
	2013	Canada	Huang and Benyoucef (2013)	✓
	2013	China	Wang et al. (2013)	✓
	2013	Turkey	Ergun and Kescu (2013)	✓
	2013	India	Gangeshwer (2013)	✓
	2013	Hong Kong	Yan and Chun Yu (2013)	✓
2014(6)	2014	China	Lim (2014)	✓
	2014	Taiwan	Ming-Hsien et al. (2014)	✓
	2014	Turkey	Savrul et al. (2014)	✓
	2014	Taiwan	Ho (2014)	✓
	2014	US	Mosteller et al. (2014)	✓
	2014	Australia	Cheung (2014)	✓
2015(10)	2015	Saudi Arabia	Abdullah Al Somali et al. (2015)	✓
	2015	Malaysia	Kurnia et al. (2015)	✓
	2015	Romania	Vasiliu and Cercel (2015)	✓
	2015	European countries (14)	Falk and Hagsten (2015)	✓
	2015	Europe	Demko-Rihter and Halle (2015)	Conceptual
	2015	Italy	Nadeem et al. (2015)	✓
	2015	Indonesia	Rahayu and Day (2015)	✓
	2015	Romania	Christnel and Ovidiu (2015)	✓
	2015	Spain	Romero et al. (2015)	✓
	2015	Spain	Medrano I and Olarte-Pascual (2015)	✓

**2016-2018(29)**

2016(11)	2016	US	Petkova (2016)	✓
	2016	China	Zhang and Benyoucef (2016)	✓
	2016	Korea	Kang et al. (2016)	✓
	2016	China	Yan et al. (2016)	✓
	2016	Israel	Lissitsa and Kol (2016)	✓
	2016	Brazil	Tontini (2016)	✓
	2016	China	Zhang et al. (2016)	✓
	2016	Malaysia	Busalim (2016)	✓
	2016	Europe	Bilinska-Reformat and Stefanska (2016)	✓
	2016	Spain	Medrano and Olarte-Pascual (2016)	✓
2017(10)	2016	Serbia	Kalinic and Marinkovic (2016)	✓
	2017	Eastern and Western Azerbaijan	Choshin and Ghaffari (2017)	✓
	2017	Thailand	Tangchaiburana and Techametheekul (2017)	✓
	2017	India	Kaur and Singh (2017)	Conceptual
	2017	US	Yim et al. (2017)	✓
	2017	UK	Kawaf and Tagg (2017)	✓
	2017	US	Lin et al. (2017)	✓

Time	Year	Country	Study	Empirical (quantitative)
2018(8)	2017	US	Wang and Yu (2017)	✓
	2017	Greece	Pappas et al. (2017)	✓
	2017	UK	Nisar and Prabhakar (2017)	✓
	2017	Spain	Escobar-Rodriguez and Bonson-Fernandez (2017)	✓
	2018	Hong Kong	Leung et al. (2018)	✓
	2018	European Union	Valarezo et al. (2018)	✓
	2018	China	Chen et al. (2018)	✓
	2018	Brazilian	Turban et al. (2018)	✓
	2018	US	Lee and Trimi (2018)	✓
	2018	China & Finland	Hallikainen and Laukkanen (2018)	✓
	2018	UK	Li (2018)	✓
	2018	Italy	Palese and Usai (2018)	✓

## Analysis and Results

The current section is divided into three sub-sections describing the year-wise, country-wise, journal wise and study orientation type distribution of the 68 relevant articles. The study further discusses the conceptualization and the Summary of design principles for innovative e-commerce.

### *Year-wise distribution of articles with respect to the study orientation*

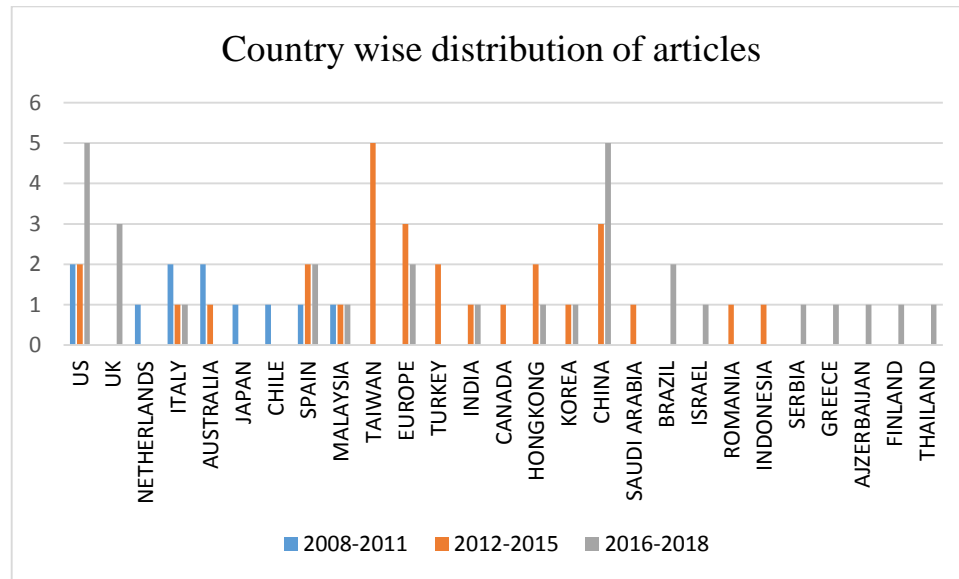
E-commerce, the buzz-word to the present-day reality, have seen a remarkable growth, changing the way individuals transact. The online market space has been burgeoning in terms of travel, gadget service, matrimonial sites, fashion accessories, and others. The e-commerce companies have been constantly innovating themselves so as to provide what was not available in the brick and mortar format. Year 2008 has a special significance as it denotes the time when an emerging economy like India put 10 satellites into the orbit, Apple launched the iPhone, Internet Governance Forum was held counting in that Indian economy survived the major shock of global financial meltdown. Also, the biggest payment gateway PayPal Credit was acquired by eBay and the storefront services were launched resulting in a massive upsurge in the e-commerce sales. As evident from the Table 3, the innovative e-commerce has gained an exponential pace in the last 6 years (2014-2018).

### *Country-wise distribution of the articles in different time periods*

The study conducted a country wise classification of the literature to identify the intensity of the research worldwide (Fatma and Rahman, 2015). To determine the country of study, respondent countries were reported for the studies that mentioned respondent locations and the first authors of the publication were reported for conceptual studies as well as the ones wherein respondent location was not specified (Fetscherin and Usunier, 2012). The study found that 68 articles have been from 22 countries as depicted in figure 3.



Figure 3: Country wise distribution of articles



### *Principles for design of e-commerce*

The designing principle of e-commerce revolve around four components with the advent of Web 2.0. (Huang and Benyoucef, 2013; Constantinides et al. 2008) namely Usability given by Li and Du (2011) which includes effectiveness, efficiency and satisfaction; System quality (Lia et al., 2006); Information quality which is the source of foundation for e-commerce innovation (Molla and Licker, 2001; Hasan and Abuelrub, 2011), and Service quality acting as the critical component of innovation in electronic commerce (Wolfenbarger and Gilly 2003; Ojha, 2017 in press). Table 4 represents the designing principles of innovative e-commerce.

Table 4: Designing principles of e-commerce

Principle	Theme	Reference
Usability	User friendly, Navigation, ease of use, error/ exception handling, accessibility, consistency, augmented reality, speed, simplicity, personalization	Hasan and Abuelrub (2011); Bakshi, 2015; Kok et al., 2017; Teo et al., 2015; Nugroho and Santosa, 2015; Turban et al., 2018; Sreedhar, 2018
System quality	Access, security, payment gateway, appearance, content, order processing, operation and computation	Hasan and Abuelrub (2011); Chen et al., 2017; Hussain and Raghavan, 2017; Rouibah et al., 2015; Turban et al., 2018; Kim et al., 2017
Information quality	Accuracy, Relevance, authority, sufficiency, updated info, usefulness	Jaiswal et al., 2010; Hasan and Abuelrub, 2011; Chen et al., 2015; Kim and Peterson, 2017; Wang et al., 2016; Yuan et al., 2018
Playfulness	Curiosity, interest, enjoyment, attractive appearance	Rouibah et al., 2015; Turban et al., 2015; Kim et al., 2017

Service quality	Reliability, responsiveness, assurance, feedback mechanism, attention to users	Sharma and Lijuan, 2015; Du and Tang, 2014; Purani and Sahadev, 2015; Kim and Peterson, 2017; Palese and Usai, 2018
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## Findings and Discussion

The assessment of 68 articles highlighted the changes in the landscape of e-commerce. The results indicated that most of the studies have been conducted in developed countries of USA, UK and other European Nations. Owing to the multidisciplinary nature of the study, the study suggests that the academic research is still immature. The significant contribution of the study is the prevalent theme that helps in designing the e-commerce which supports the innovation and thus transition of e-commerce to s-commerce where customers are considered the important stakeholders and hence are been taken care of. Further, it gives a tour of the journey of e-commerce encompassing the concept of flash sales to beacon technology and currently the chatbot technology with new upgradation on the way. The study supports the implementation of the various designing principles by incorporating the sound mechanism of customer involvement.

The study has implications for the managers and the academic professionals. First, the management needs to recognise current status of e-commerce applications and capabilities in order to develop their strategies. Second, they need to focus upon the innovations which can keep the customers engaged. Third, in the presence of fierce competitors something extra needs to be provided which makes the customers believe that they value for the organisation. Also, this paper would be a valuable tool for the academicians as it creates a clear picture of the status of innovative e-commerce and where the various emerging economies lie in terms of the research area. The study helped in identifying the research gaps which helped in conceptualising the concept. Additionally, the gaps identified can act as the future avenues of research for the active researchers in the field of marketing and innovation.

## Conclusion

The current study provided a systematic review of a dynamic concept of innovative e-commerce. Further, the study highlighted that customers are an important stakeholders in the present times owing to the socialisation the electronic commerce and henceforth, innovation is an essential component which needs to be kept in mind by the various e-commerce companies.

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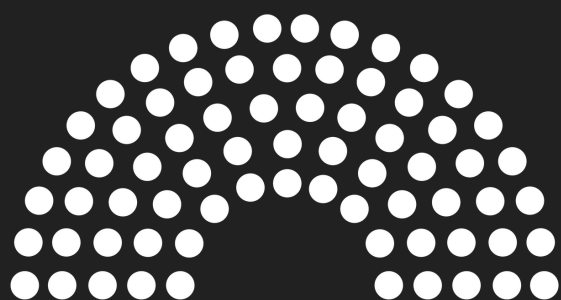
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