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THE IMPACT OF SUPPLY CHAIN INTEGRATION AND INTERNAL CONTROL ON PERFORMANCE AND CUSTOMER SATISFACTION IN JORDANIAN BANKS

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The aim of this dissertation is to obtain a doctoral (PhD) degree

in the scientific field of "management and business administration"

Written by: Hossam B. Haddad .... certified ....

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DECLARATION

I, the undersigned (name: **Hossam Basim Yousef Haddad**, date of birth: 18/03/1983) declare under penalty of perjury and certify with my signature that the dissertation I submitted in order to obtain doctoral (PhD) degree is entirely my own work.

Furthermore, I declare the following:

- I examined the code of the Károly Ihrig Doctoral School of Management and Business Administration and I acknowledge the points laid down in the code as mandatory;

- I handled the technical literature sources used in my dissertation fairly and I conformed to the provisions and stipulations related to the dissertation;

- I indicated the original source of other authors' unpublished thoughts and data in the references section in a complete and correct way, considering the prevailing copyright protection rules;

- No dissertation which is fully or partly identical to the present dissertation was submitted to any other university or doctoral school for obtaining a PhD degree.

Debrecen, 10/07/2018.

Hossam Haddad

Name

signature

INTRODUCTION

In the 21st century, organizations find themselves working in a rapidly changing environment characterized by competition, globalization, diversification, rising expectations and demands of various customers, and the emergence of the performance related issues. In light of this environmental reality, traditional management strategies and practices have become rather ineffective and insufficient to outperform competitors and create more value (TURKULAINEN ET AL., 2017). Thus, organizations argue why some of them succeed while others fail! Organizational performance is considered the most significant issue for all organizations. Moreover, organizations are seeking to specify which factors should influence their organizational performance in order to enhance them.

Since the emergence of the concept of supply chain management (SCM) at the beginnings of the 1980s, it has quickly attracted the attention of academics and professionals alike (SWEENEY, 2012). In recent years, it has obviously become proliferated in works of literature of SCM in service and production. Supply chain management is defined as all the activities that are involved in and associated with the flow and transformation of goods from extraction stage of raw material to the end user and flow of information (HANDFIELD AND NICHOLS, 2002). While MENTZER ET AL. (2001) defined it as flows of services, products, finance or the information from source to the final customer.

SCM related outcomes have received considerable attention from researchers and a wide stream of published research focuses on the effects of SCM on supply chain integration (FLYNN ET AL., 2010; WOOJUNG ET AL., 2016), organizational performance (HEFU ET AL., 2013), financial performance (CIGDEM AND ANAND, 2017; SCHOENHERR AND SWINK, 2015), internal control (HADDAD, 2016; DAGHFOUS AND ZOUBI, 2017), and customer satisfaction (YU ET AL., 2013). In this respect, supply chain management is considered as an effective strategy for organizations to improve performance and boost competitiveness.

Managers keep seeking organizational designs and develop integrations that allow for the support of internal SCI efforts with numerous purposes (TURKULAINEN ET AL., 2017). The integration process for customers and suppliers cannot be left out of internal integration because it represents the basis for the development of both dimensions.

Researchers realized the importance of studying the three dimensions together (customer, supplier and internal integration) and the impact of each dimension on performance.

The links between supply chain integration and financial performance have been widely investigated in the literature (e.g., CIGDEM AND ANAND, 2017; SCHOENHERR AND SWINK, 2015), however, most existing research studies focus on investigating the effects of SCI

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on business performance, financial performance and customer satisfaction (YANG AND WEI, 2013). Very limited studies have investigated the effects of SCI on the financial performance of banking sectors.

Since 1992, the Committee of Sponsoring Organizations of the Treadway Commission (COSO) has been developing a framework to evaluate the internal control in organizations. These procedures are affected by the board of directors, management, and other personnel. It is intended to provide reasonable assurance in regards to the achievement of these objectives: effectiveness and efficiency of operations, the reliability of financial reporting, and compliance with applicable laws and regulations (COSO.1992).

There are five components to support the performance of an organization's vision and mission, strategies and related business of objectives: control of environment, risk assessment, control of activities, quality of information and monitoring. These components work together to enhance the foundation of internal control within organizations by directed leadership and shared values and culture that emphasizes accountability for control.

Supply chain management (SCM) has been investigated by the integration of internal functions and linked them effectively with the external operation supplier and customer in order to make a competitive performance (KIM, 2009). By improving the cross-functional internal integration, it will be possible to achieve a superior supply chain performance. CRAMTON (2001) stated that the reciprocal knowledge generated via the shared information along the supply chain which is increased the mutual understanding among the parties provide an explanation of the importance of the integration with customer satisfaction (YU ET AL, 2013). VAN DER VAART AND VAN DONK, (2008) illustrated that supply chain integration is deemed one of the most important factors of developing performance. FABBE-COSTES AND JAHRE (2008) argued that incomplete understanding regarding the implications of integration remains a challenge for both researchers and managers at the same time according to the type of sectors (industries or services). Customer satisfaction is increasingly becoming a more important corporate goal (DAS ET AL., 2010). Improving customer satisfaction depending on how well partners (external and internal) are integrated (JOHNSTON ET AL., 2004). The shared information with the customers increases the common knowledge of the whole supply chain parties. In this respect, the knowledge influx is linked to higher level of performance (BONTIS AND CROSSAN, 2002). While the performance improves the service quality dimensions, so intuitively, it is logical to expect an increase in customer satisfaction (REICHHELD, 2003). STANK ET AL. (2001) showed an example that according to the specific customer requirement, companies can closely match and design service offerings as a result of the success of the collaboration with customers and suppliers.

WONG ET AL., (2011) argued supply chain integration closely related to customer satisfaction regarding the relationship between customer satisfaction and loyalty. There is an enormous number of transactions with customers when the enterprise is integrated with its partners. It enhances the firms to improved service levels, reduced costs, greater responsiveness, and improved decision making. Customer integration entails gathering information from customers and combining it with existing information for the purpose of service innovation and improvement (EDVARDSSON ET AL., 2012). HEIKKILA (2002) proposes that grasp the customer's wants and needs together with the right service offering contributes to improving the demand chain, which further leads to superior supply chain efficiency and high customer satisfaction. GARVIN, (1988) states that by increasing the number of similar transactions and reaching to the high level of customer loyalty should be a strong connection between financial performance and customer satisfaction.

Integration has been linked to performance; furthermore, many researchers studied the relationship between integration, customer satisfaction, and performance (HESKETT ET AL., 1994, 1997). Considering the main aim of the supply chain is to develop customer satisfaction, and the supply chain integration linked to performance as well, customer satisfaction can be an important variable for the model.

This study seeks to shed light on the role of customer satisfaction in the Jordanian banking sector according to the supply chain integration (customer, supplier and internal integration) while the customer satisfaction measured by using the modified SERVQUAL model. Supply chain integration is connected to customer satisfaction because integration has a major impact on the quality of information, and therefore supply chain integration develops services and customer satisfaction (MAGNUSSON ET AL., 2003).

The definition of the quality of service differs from one person to another; it is an ambiguous and complex concept, owing to the characteristics of services being heterogeneous, intangible, and perishable in terms of production and consumption (PARASURAMAN ET AL., 1985). In addition, there is no agreed definition, but the quality of service can be understood as a comprehensive customer evaluation of a particular service and the extent to which they meet their expectations and satisfaction (AL-JAZZAZI AND PARVES, 2017).

MUALLA (2011) stated that the banks amend, develop and create their effective strategies to determine the different parameters influencing service quality that increase their customers based on the competitive market by evaluating customer satisfaction with respect to the several dimensions that influence the service quality. SERVQUAL model mainly used as a multi-dimensional research instrument for customer satisfaction, which consists of (reliability, empathy, responsiveness, assurance, and tangibility). Three other dimensions were added to this model in

our study which are (financial aspect, access and employee competences) in order to improve the service quality and customer satisfaction. Adding extra three more factors to the model based on the literature review and interviews with the bank managers. These three extra dimensions would improve the service quality model and it fits to the banking sector better than the general model. Thereby providing satisfactory services, this study assists the bank to make the difference in the arena of competition (OSKOOII AND ALBONAIEMI, 2017). This state of affairs seems to make the researchers believe that different dimensions have novel and different outcomes in several sectors and countries. Responding to the increased competition in banking industry, every bank, for its existence and survival, has to ensure every possible step to retain the customers. The reason for adding three dimensions to the SERVQUAL model is forcing the banking system to respond positively the changing needs of customers (BOURNE, 2016; ABDULLAH AND KASSIM, 2009).

Eight modified service quality dimensions were used to measure the service quality of the Jordanian banking sector. This thesis with modified measurement of service quality for banks intended to capture the perceptions of customers about service quality.

The SERVQUAL approach has not been without its critics. The central role of expectations and the significance and meaning of subtractive gap as a measure of quality have given cause for concern (ASUBONTENG ET AL, 1996). More significantly, the universality of the factor structure in its five dimensions across different types of services had been questioned in a number of subsequent studies (CARMAN, 1990; BABAKUS AND BOLLER, 1992). Moreover, these five dimensions are not sufficiently generic. CARMAN (1990) found that it is often necessary to incorporate additional items to dimensions because they are particularly important for some services' categories.

My decision depended on my previous studies and my career and the literature processing convenes me about the importance of this issues. Beyond the literature, my personal reason that I choose this topic is that I have been interested in banking for many years. I hold a master degree in accounting and as a student I was interested in bank management especially in auditing and internal control and the topic of my master thesis was: "Information Technology Governance Control Level in Jordanian Banks Using: Control Objectives for Information and Related Technology (COBIT 5)". Moreover, I worked for an international organization as an internal auditor having a task to cooperate internally and externally with our partners. Being a manager of the Internal Control Department (ICD) in an NGO my main duty was to control the budgeting and help the management to draw the internal and external policies. In this work, I realized the importance of corporation with internal and external partners of the organization, which motivated me to study how to improve the internal and external integration and make the supply chain more

efficient. Having a possibility to be a PhD student I decided to investigate this area. After making detailed literature review, I found that a little number of research had been conducted in the field of banking supply chain especially in integration of bank supply chain.

This study attempts to address this gap in the literature by investigating the effect of SCI and internal control on the financial performance. Moreover, to examine the customer satisfaction of service quality in Jordanian banks.

1. TOPICS AND OBJECTIVES

1.1. The aims of the dissertation

The ultimate goal of this study is to investigate the relationships between supply chain integration, internal control on financial performance and the relationships between service quality dimensions and customer satisfaction in the Jordanian-banking sector. This study aims to achieve the following objectives:

1.   Identify the extent to which SCI, internal control impacts financial performance.

2.   Investigate the impact of internal control on SCI.

3.   The impact of service quality dimensions on customer satisfaction.

4.   To identify service quality dimensions, which can be used to measure customer satisfaction, the effect of the service quality dimensions (tangibles, responsiveness, empathy, assurance, reliability, access, financial aspect, and employee competencies) on the customer satisfaction.

1.2. The objective of the dissertation

Many benefits of SCI have been reported in literature. These benefits include, but are not limited to achieving cost advantages (SAMBASIVAN ET AL., 2009), improving both business and operational performance (FLYNN ET AL., 2010), and maintaining competitive advantage (LI ET AL., 2006). Consequently, organizations seek to improve their SC performance to enhance their overall performance and competitiveness.

Supply chain (SC) is relevant topic to the service-banking sector. There are few works of literature dealing with the service supply chain in the banking sector and no researches found about supply chain integration in the banks. It is important to have a start to discuss this topic. Therefore, I am accepting the recommendation to describe the relevancy of using supply chain concept in the banking sector.

Service supply chain management consists of the management and design of all activities, which involve in the providing and integrating services towards functional and organizational boundaries in order to meet the customer needs of the end customer (YEASEEN ET AL., 2017). SONG AND YANG (2011) stated that there is a similarity between the structure of the service supply chain management and product supply chain, services are created, purchased and transferred in the chain from one to another. The service supply chain structure is an intricate network; it merges the direct and indirect service providers about the integration of services (YEASEEN ET AL., 2017). According to YU AND LIU (2010), service supply chain contains

the customer, service provider, and initial service provider. BALTACIOGLU ET AL. (2007) debated about the service supply chain is managing the information, resources, processes, and service performances from the earliest supplier to the ultimate customer In order to satisfy the customers' needs, the service supply chain reorganizes the service-network in different services. Service supply chain has been defined as the integration of a set of entities (personnel, organizations and enterprises) in order to provide the service directly or indirectly (YEASEEN ET AL., 2017; WU AND YANG ,2009).

MENTZER ET AL. (2001) stated that the supply chain services contributory in the flow of products, services, finances, and/or information from source to the customer by upstream and downstream. The role of the service supply chain refers to the supply and demand chain of service that means the services are integrated with resources, technologies and the management models (HE ET AL., 2010). In order to study the supply chain management practices and performance many works of literature focused on top management leadership; training; product design; supplier quality management; process, management; quality data reporting; employee's, relations; customer's relations; benchmarking; supplier selection; and supplier participation. Both industries; manufacturing and services are attempting to procure inputs that can be utilized to provide value to the end customer (YEASEEN ET AL., 2017).

Usually, banks are a key player in the economic activities of all supply networks in their capacity of managing payments and providing supply chain financing solutions their role in contributing to physical and financial supply chain integration is significant. SILVESTRO AND LUSTRATO (2014) found the banks can contribute to the enablers of supply chain integration, thus help the buyers and suppliers to improve physical and financial supply chain integration. Financial services organizations, mainly banks, are supply chain players which are common to all economic supply chains, regardless of the nature of products and services flowing along the supply chain and regardless of the nature of the organizations participating in the network of supply partners. Banks need to integrate activities along the supply chain, the need for organizational integration, and the need for information integration. Banks contributes the supply chain integration by enablers namely: supply chain coordination, collaboration, information sharing, and information visibility. In the wake of globalization, the financial services crisis and economic recession, there has been growing pressure on manufacturers and service providers to increase liquidity and release cash through the financial supply chain (BLOUNT, 2008; FELLENZ ET AL., 2009). Moreover, the contraction of credit markets has increased the difficulty in accessing conventional sources of credit, so buyers and suppliers are putting pressure on their banks to help them improve the efficiency of working capital along the supply chain (RICHMAN AND MUTTER, 2010).

Due to the important role played by the banking sector in Jordan, being one of the sectors that contribute to the national economy, organizations need innovative solutions to improve the delivered value to the shareholders and customers in order to gain and maintain a competitive advantage as well as to avoid elimination from the banking sector. Managing supply chain integration is one of the solutions that has become popular recently. Although studies conducted in different countries found a strong direct link between supply chain integration on organizational performance no studies were conducted to investigate the impact of supply chain integration on the financial performance in the Jordanian banking sector. Due to the obvious lack of research addressing this issue, this research aims to fill this gap.

In conducting this literature review, a very limited number of studies that investigated the impact of supply chain integration on financial performance were found in the banking sector. Further, very limited studies have investigated the service quality effect on the

customer satisfaction in the banking sector.

Some related studies, such as SILVESTRO AND LUSTRATO (2014), examined the role of banks how they could help buyers and suppliers develop a more holistic understanding of the supply chain, thus improving integration and optimizing internal control. They examined the role of banks in enabling buyers and suppliers to improve supply chain integration, synchronization, and performance.

Additionally, HADDAD (2016) investigated the tools and techniques of internal control that could be applied throughout its dynamic systems by deploying a risk management approach that banks could establish when addressing compliance risk for monitoring and control purposes. Likewise, DAGHFOUS AND ZOUBI (2017) examined the role of knowledge-enabled supply chain management as it enhances the organization's expertise in supply chain management.

Particularly, AGBOR (2011) stated that customer satisfaction has a relationship with service quality. At this point, there is an important need to lead research in the business, economic, and management fields. A little research has clarified the relationship between customer satisfaction and service quality with service quality dimensions. This indicates that there is a need for further studies in this area.

The connection of the supply chain integration and financial performance, and service quality investigated in this study. Supply chain integration can improve the provision of services to supply chain partners that have ultimately effect on the customer satisfaction and business performance and it also increases operational competitiveness, flexibility and productivity (DAUGHERTY ET AL., 1995). Customer satisfaction is an important theoretical as well as a practical issue for most marketers and consumer researchers (JAMAL AND NASER, 2003). This is evidenced by firms focusing on customer satisfaction to cultivate loyalty within their customer base (REICHHELD,

2003) The degree to which customer satisfaction can be enhanced depends on how well the trading partners are integrated (JOHNSTON ET AL., 2004). Mutual knowledge created through information shared along the supply chain increases the probability of a common understanding among the parties (CRAMTON, 2001). Information about customer requirements, expectations, and preferences can be synthesized and acted upon to amend or create service and product offerings.

YU ET AL. (2013) found that there is a positive relationship between internal integration and the dimensions of external integration; customer and supplier integration to financial performance, because of the financial performance connected with the customer satisfaction, for this reason, this study to seek to investigate both. High customer satisfaction should indicate insulation of current customers from competitive efforts, lower costs of attracting new customers, lower costs of future transactions, increased loyalty from the customers, enhanced goodwill for the firm and reduced failure costs (ANDERSON ET AL., 1994).

Evidently, there is an apparent lack of empirical studies concerning SCI and financial performance linkages in the banking sector. Moreover, to the best of our knowledge, this is the first study to investigate the role of supply chain integration and internal control on the relationship between financial performance and customer satisfaction in Jordanian banks.

Lastly, this is the first study to investigate these proposed relationships in Jordan. Therefore, this study contributes to the existing literature by filling these apparent gaps, providing insights for both researchers and practitioner.

This study presents opportunities for future studies to research the same relationships in different sectors, to introduce new variables, or to study the effects of SCI on other financial performance types and the impact of dimensions of service quality on customer satisfaction.

According to the research problem, the main question that can be formulated in this study is "what is the impact of supply chain integration and internal control on the financial performance and the relationships between service quality dimensions and customer satisfaction in the Jordanian banking sector?" From this main question, four research questions were derived. Each research question had been structured to explore the research objective. The research questions are:

1.   Are the supply chain integration subscales and internal control positively related to each other in the Jordanian banking sector?

2.   What is the impact of SCI subscales on the financial performance in the Jordanian banking Sector?

3.   What is the impact of internal control subscales on financial performance in the Jordanian banking sector?

4. Which service quality subscales have the most significant impact on customer satisfaction in the Jordanian banking sector?

1.3. Research methodology

This research adopts both quantitative and qualitative techniques in which the quantitative research captures the structure while qualitative research captures the process (BRYMAN, 2012). This research is considered to be a descriptive and exploratory study concerning the constructs in the research model. These constructs build on variables consisting of supply chain integration, internal control, financial performance and customer satisfaction. The research also includes the examination of the causal relationships of such constructs using samples from one sector in a particular country.

To achieve the objectives of this dissertation, primary data by using questionnaires and secondary data from various reliable sources are used. The scope of the research is limited to Jordan.

Analyzing the data, the following techniques were applied: descriptive data analysis, rho Spearman correlation, normality test, reliability analysis, exploratory factor analysis, and promax rotation method.

1.4. Research hypotheses

Four main research hypotheses ten sub-hypotheses have been formulated and examined, they are as follows:

$H1$: **External integration positively influences financial performance in Jordanian banks.**

    $H1.1$: Customer integration positively influences financial performance.

    $H1.2$: Supplier integration positively influences financial performance.

$H2$: **Internal integration positively influences financial performance in Jordanian banks.**

$H3$: **Internal control positively influences financial performance in Jordanian banks.**

$H4$: **The selected service quality dimensions Tangibility, responsiveness, empathy, assurance, reliability, access, financial aspect, and employee competences positively influence customer satisfaction in the Jordanian banking sector.**

1.5. Structure of the dissertation

The study is composed of 6 chapters as follows:

Chapter 1: Describes the subject, aims, objectives, ethical considerations, the field of study, research hypotheses, methodology and the sections of the thesis.

Chapter 2: The chapter contains a literature review related to the objectives of the dissertation such as an introduction of the banking sector in Jordan. The following topics are discussed: the impact of supply chain integration variables such as external integration (customer and suppliers) and the internal integration, internal control on the financial performance. Moreover, the impact of service quality dimensions on the customer satisfaction.

Chapter 3: The methodology part explains a theoretical framework, research operational definitions, research variables, research population and sampling, development and usage of questionnaires, and techniques for data analysis, validity and reliability analysis, and hypothesis analysis.

Chapter 4: This chapter shows a detailed analysis of the impact of the independent variables and relationships with dependent variables using the above-mentioned techniques.

Chapter 5: This chapter discusses the findings, draw the conclusions of the results, and then recommends solutions bankers and further researchers.

Chapter 6: The last chapter states the main conclusions and novelties of the research.

At the end of the study, appendixes, a list of figures, tables, list of publications, and references can be found.

2. TECHNICAL LITERATURE REVIEW

2.1. Supply chain management

Supply chain management (SCM) has been defined as drawing the roadmap for strategical system coordination of organizational functions and the flow of product, materials, information, and money in whole supply chain within the organization in order to improve and build long-term competitiveness (VEERA ET AL., 2016; ZHANG ET AL., 2015). Supply chain management (SCM) has recently become a prevalent research topic. Particularly, SCM-related outcomes have received considerable attention from researchers and a wide stream of published research focusing on supply chain integration (SCI) considering the key factor of improving the performance and creating value in supply chain management (VEERA ET AL., 2016; FROHLICH AND WESTBROOK, 2001). According to TANCO ET AL. (2015), intensive competition is one of the most important elements that require organizations to enhance their SCs, making SCM one organizational strategy used to improve performance.

According to the COUNCIL OF LOGISTICS MANAGEMENT (2000), CITED IN LI ET AL., (2006), SCM is the state of coordination of business functions within an organization and among organizations engaged in a particular SC that aims to enhance the performance of the organizations and the SC. MENTZER (2001) defined SC as a system composed of a group of parties, i.e., the supplier, customer, producer, and distributor, who are involved, directly or indirectly, in the process of production from the start until the delivery of the products to the ultimate clients. Any organization can be part of numerous supply chains. Within the definitions of the supply chain, moreover, the final consumer is considered a member of the supply chain

The SCM definitions are different among researchers. Table 1 shows the definition of supply chain, and the objectives of the SCM, the philosophy of the SCM (integration), the management of supply chain flows, and relationships of the supply chain. It shows that it is a network of suppliers, manufacturers, warehouses, distributors and retailers who work together through coordinated plans and activities.

SIMCHI-LEVI ET AL. (2009) regarded the ultimate purpose of SCM as being an effective process of integration between SC partners to produce the right quantity of a product, to distribute it to the right place, at the right time, to save SC costs and meet ordering demands.

Concerning customers, creating value is a central theme in defining SCM. JABBOUR ET AL. (2011) defined SCM as an approach intended to provide customers with products or services via the integration of SC operations from suppliers to providers. Similarly, FANTAZY ET AL. (2010) defined SCM as the integration of different business practices that involves planning and controlling materials and information flow from original supplier to the producer and to the end

customer. KHAN ET AL. (2009) considered SCM as a philosophy that aims to enhance the performance of all the partners of the SC.

Table 1: Definitions of Supply Chain

Authors	Definitions and interpretation
GURITNO ET AL (2015)	SCM builds trust, exchanges information on market needs, developing new products, and reducing the number of suppliers.
LU AND SWAMINATHAN (2015)	SCM is the comprehensive approach to deal with the planning and control of materials from suppliers to end users.
MADENAS ET AL (2014); WUTTKE ET AL (2013)	SCM covers materials related to administration of the offer (from raw materials to finished products, including possible recycling and reuse), and the use of process and technology, at optimization and efficiency.
MASON (2009)	SCM increases the efficiency of processes, invites them to investigate the best types of cooperation.
CLM, (2000)	SCM is a systemic strategic coordination of the traditional business functions and tactics across these businesses function within a particular organization and across businesses within the supply chain.
LARSON AND ROGERS (1998)	SCM is the coordination of activities, within and between vertically linked firms, for serving end customers at a profit.

Source: Constructed by the Author

The SCM can be divided into many sub-categories but the most prominent researchers or managers largely categorize them into two categories:

- Physical supply chain (PSC) covers the entire chain from the supplier of goods/raw materials to the end customer with its inter-related network of partners, and contract manufacturers, suppliers, packers, logistic players, and re-sellers working together within the defined parameters (GIO-SHENG TANG, 2014).

- Financial supply chain (FSC) involves the movement of funds and interjects within PSC in order to create liquidity through various supplier or buyer. It aims to improve the financial efficiency of supply chain and substantially reduce the working capital of both buyers and sellers. It allows buyers to extend payment terms while providing sellers' access to better financing rates (SILVESTRO AND LUSTRATO, 2014).

2.2. Supply chain management practices

Due to the significant outcomes of SCM, effective SCM is pivotal for organizations. FAWCETT ET AL. (2008) described several benefits of effective SCM such as superior SC relationships and quality and improved delivery performance, asset management, products and services. According to KOH ET AL. (2007), effective SCM is embedded in its practices. JABBOUR ET AL. (2011) elaborated this statement by defining SCM practices as organizational activities conducted within

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an organization to enhance the effectiveness of SCM. They added that effective SCM is achievable when three conditions are ensured, the effective fulfillment of SCI and coordination, the organization's utilization of resource-based collaboration with its partners, and the involvement of suppliers in the decision-making and information sharing processes. BARROS ET AL. (2013) asserted that SCM practices are always undertaken by organizations to manage and control all sides of the SCM processes.

According to MIGUEL AND BRITO (2011), the evolution of SCM concept contains the process integration view and the strategic view. The process integration view refers to the coordination between SC partners in the business activities that enhance customer satisfaction. On the other hand, the strategic view refers to the assignment of organizational resources and members' efforts to create an SC strategy that improves competitive advantage by lowering costs and enhancing customer satisfaction.

SCM has been investigated in terms of several practices. For instance, INCE ET AL. (2013) conducted a study based on the five practices of supplier integration, customer integration, internal integration, information sharing, and total quality management. LI ET AL. (2006) investigated SCM based on the five practices of supplier integration, customer relationship, postponement, level, and quality of information sharing. Finally, many researchers, as shown in Table 2, used five SCM practices: supplier integration, internal integration, customer integration, information sharing, and postponement. Table 2 summarizes the SCM practices, which were used in these well-cited articles. Consequently, three SCI categories were used in this study based on their prevalence in previous studies: supplier integration, customer integration, and internal integration.

Table 2: Summary of Prior Literature Used of SCM Practices

SCM Practices	References
Customer integration	ABDALLAH ET AL. (2014); FLYNN ET AL. (2010); TAN ET AL. (2002); WONG ET AL. (2005); JABBOUR ET AL. (2011); NARASIMHAN AND KIM (2002); LI ET AL. (2006); LOTFI ET AL. (2013); WONG ET AL. (2013); LII AND KUO (2016)
Supplier integration	ABDALLAH ET AL. (2014); FLYNN ET AL. (2010); TAN ET AL. (2002); WONG ET AL. (2005); JABBOUR ET AL. (2011); NARASIMHAN AND KIM (2002); LOTFI ET AL. (2013); LI ET AL. (2006); WONG ET AL. (2013); LII AND KUO (2016)
Internal integration	ABDALLAH ET AL. (2014); FLYNN ET AL. (2010); TAN ET AL. (2002); JABBOUR ET AL. (2011); NARASIMHAN AND KIM (2002); LOTFI ET AL. (2013); WONG ET AL. (2013); LII AND KUO (2016)
Postponement	ABDALLAH ET AL. (2014); WONG ET AL. (2005); JABBOUR ET AL. (2011); LI ET AL. (2006)
Continuous process flow	FLYNN ET AL. (2010)

Information sharing	ABDALLAH ET AL. (2014); FLYNN ET AL. (2010); TAN ET AL. (2002); WONG ET AL. (2005); JABBOUR ET AL. (2011)
Inventory and cost management	WONG ET AL. (2005)
Lean	YINAN ET AL., (2017)

Source: Constructed by the Author

Figure 1 includes 40 studies referred dealing with the integration of supply chains from 2002 to 2017. Using web of science database https://login.webofknowledge.com, the following keywords were utilized: integration, supplier integration, customer integration and internal integration to gather related studies (Figure 1). The results revealed many facts that are relevant to this research and figures and tables were constructed to explain the nature and relationships between the factors.
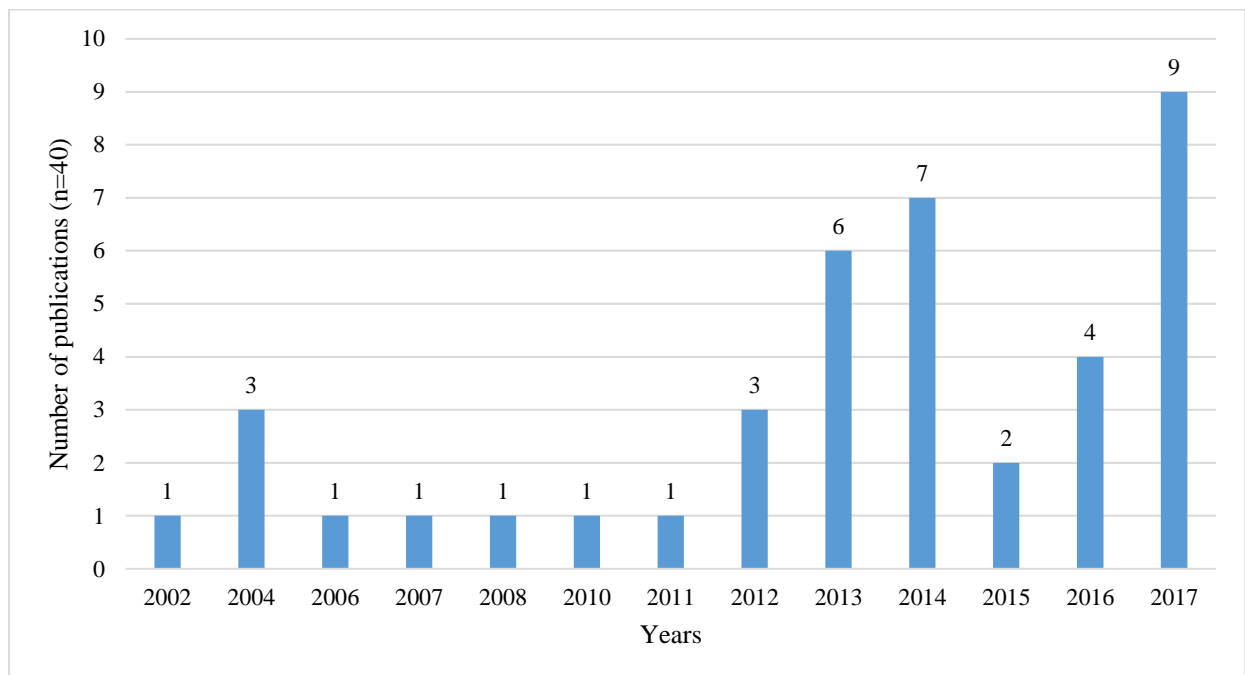
Figure 1: Number of the Paper Published 2002-2017

Source: Constructed by the Author

Before 2002 contributions had been modest (NARASIMHAN AND KIM, 2002) prompting researchers to move forward with much research on supply chain integration over the years. There is clear progress in the number of researchers in 2013 and 2014 with six studies being conducted 2013 (HEFU ET AL., 2013; WUTTKE ET AL.,2013; JITPAIBOON ET AL., 2013; ZHANG ET AL., 2015; YU ET AL., 2013; PAMELA, 2013) and seven in 2014. Furthermore, the studies increased in 2017 up to nine conducted by (YINAN ET AL.,2017; CIGDEM AND

ANAND,2017; TURKULAINEN, ET AL.,2017; AYOUB ET AL., 2017; VEERA ET AL., 2016; DAGHFOUS AND ZOUBI,2017; VANPOUCKE ET AL., 2017; RAMESHWAR ET AL., 2017; KABUYE ET AL., 2017). The interest of researchers digging deeper into the integration of supply chains and actively contributing to subsequent studies points to its importance (WOOJUNG ET AL., 2016; VISHAL AND RAVI, 2016; YANG,2016). Supply chain integration was studied in many sectors from them 40 studies are illustrated in Figure 2. The highest number of SCM publications delt with financial services.
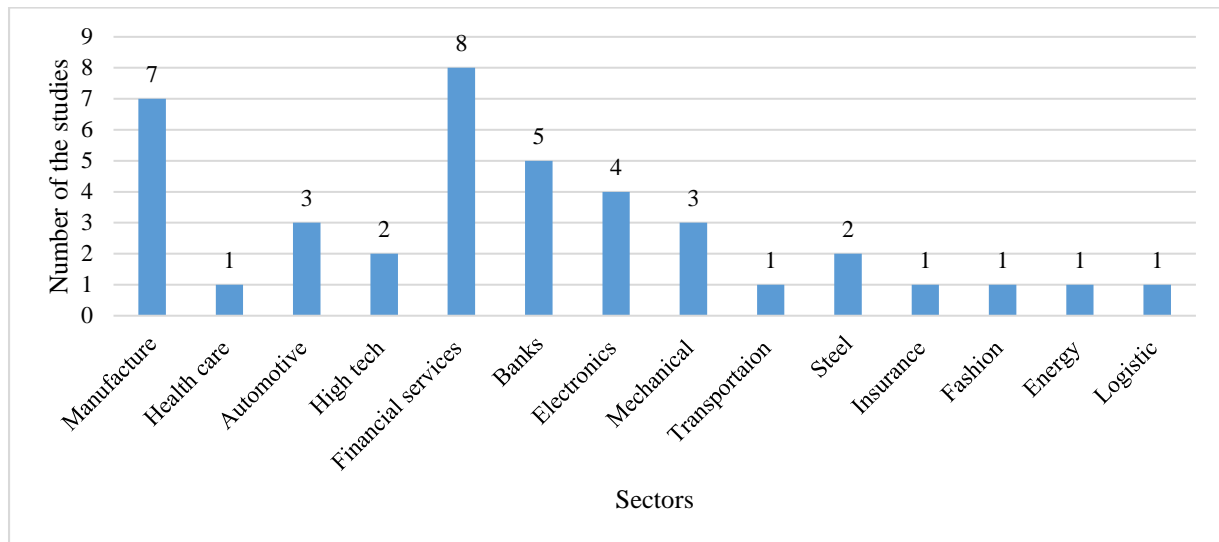
Figure 2: Publications in Supply Chain Integration by Sectors

Source: Constructed by the Author

Three SCM practices were identified as the most cited ones in extant literature presented by Figure 3. These practices are supplier integration, customer integration and internal integration. These practices represent SCI and cover upstream, downstream and internal operations.
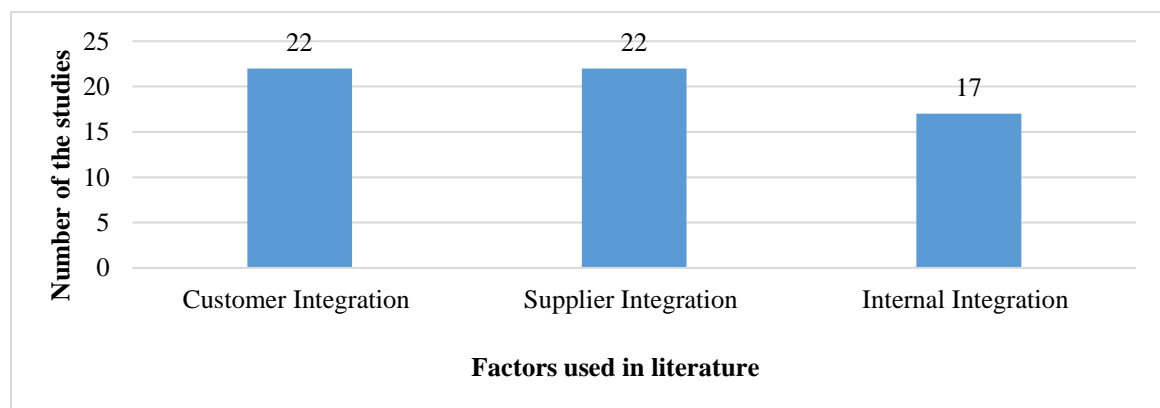
Figure 3: The Most Important SCI Factors

Source: Created by Authors According to Analysis of 40 Studies

2.3. Supply chain integration

FLYNN ET AL. (2010) argued that supply chain integration implies the collaboration among the industrialists and other supply chain partners in order to develop an effective and efficient movement of materials, resources, parts, and information to produce products and services that are valuable to the customer quickly and with low cost. While YINAN ET AL., (2017) has defined the supply chain integration as cooperation plans and activities between suppliers, manufacturers, warehouses distributors and retailers which aim to develop the products by transforming the raw materials to a finished good for the customers. FIELD AND MEILA (2008) pointed out that the literature in supply chain management has been focused on the products and materials, and the experimental studies were based on manufacturing cases and physical chains.

Based on research of SLIVESTRO AND LUSTRATO (2014) of the supply chain integration, the supply chain council has developed a Supply Chain Operation Reference (SCOR) model in order to epitomize the realization, analysis and understanding the supply chain performance. Academics and professionals recognize this as a framework. An extensive review of supply chain integration literature focused on dimensions of customer integration, supplier integration and internal integration which integrates all potentials, strategies and effective processes and practices into cooperative and synchronized processes to fulfill the customer needs (FLYNN ET AL., 2010).

Two major classifications of supply chain integration are known as external integration that contains customer and suppliers) and internal integration (LII AND KUO, 2016; ABDALLAH ET AL., 2014). Most of the supply chain integration studies focused on the exchanging of the commodity and the flow of information more than the financial procedures or the flow of the cash (SLIVESTRO AND LUSTRATO, 2014).

From a financial perspective, the cash flow from one organization to another includes expenses, investment, receipts, and in addition, the processes with partners that demonstrate the financial supply chain working in parallel with physical supply chain. Regardless of the type of the products, services, or information flow, the payment is considered intrinsic on the financing of production and trade. Thus, the financial supply chain is popular in all supply chains.

SCI is an effective method that enhances the performance of organization's suppliers and customers (FLYNN ET AL., 2010) and facilitates external and internal business functions Moreover, YANG AND WEI (2013) highlighted the importance of SCI as a means to reduce the costs of controlling economic exchanges and transactions between partners and to prevent opportunistic behavior, which is a consequence of others' interests.

Two types of performance evaluation have been conducted in the literature: the traditional that is based on financial performance, while the other one depends on maintaining the customer

satisfaction (CHANG, 2009). Furthermore, the researchers pointed out contemporary performance evaluation through financial and non-financial indicators strongly associated with strategies and the relationships (RAFAELA ET AL., 2015). Customer satisfaction can be measured by a qualitative performance (information, responsiveness, risk management effectiveness), however, the quantitative performance can only be measured directly on cost or profit (CHANG, 2009).

We can state that when achieved integration is high, the organization works as a unified whole and is able to transfer, process, and exploit information across the organization.

2.3.1.Supplier integration

Many researchers have attempted to conceptualize supplier integration in different ways, and multiple expressions such as the relationship between buyers and supplier (CARR AND PERSON, 1999), supplier involvement (CARR AND PEARSON, 2002), and supplier collaboration (CORSTEN AND FELDE, 2005) were used in place of supplier integration as synonyms. Regardless of the differences in terminology used to measure the supplier integration, the main purpose of supplier integration is to exceed one single organization's limits to coordinate processes easily.

FLYNN (2010) AND KIM (2013) POINT TO NARASIMHAN AND KIM'S (2002) suggestion for a supply chain integration measurement model that supposes the measure of the supplier and customer integration.

These two items are very important areas of supply chain, the information sharing, for instance, is the interchange of information between the partners. The external integration is how the organization works intimately with its partners (suppliers and customers).

VAART AND DONK (2008) presented a comparative review of the studies about supply chain integration and they found that it was hard to find a positive attitude between the supplier results and the performance of the focal firm. Several studies (PAMELA, 2013; SEZEN, 2008) considered the relevant areas of supplier integration as information sharing between the company and its suppliers' production plans, quality and design, and direct quality improvement programs. Supplier integration seeks to achieve a smooth, efficient materials flow within the supplier network, and to prevent potential obstacles in the process of procurement and production.

The sharing of information with suppliers boosts greater confidence while reducing dysfunctional conflict between buyers and suppliers and allowing for effective communication. PAMELA (2013) stated that with supply chain and supplier integration, they could exchange the knowledge and information and develop the relationships to manage materials and flow of information collaboratively and to improve procurement and production.

LI ET AL. (2006) has defined the supplier integration as how the organization can be able to manage, develop and maintain relationships with its suppliers for the long run. The management and development of the relationship is considered a strategic part of the supplier integration process. MIGUEL AND BRITO (2011) argued the benefit of constructing long-term relationships with suppliers is to reduce the cost of the transaction via trust and reputation. KIM (2013) defined supplier integration as "an organizational process of buying firms and its suppliers sharing and applying operational, financial, and strategic knowledge in order to generate mutual benefits." Suhaiza and PREMKUMAR (2005) argued that the organizational integration with suppliers indicates that supplier's participation and influence on the organizational decisions has an effect through the strategic and official partnerships characterized by long-term relationships. The supplier integration consists of the interchange of information, knowledge, and materials in different directions.

There is no particular form for the supplier partnerships; it can be flexible and could be modified according to the objective of the partnership. The relations between the organizations and suppliers have a positive impact by encouraging trust and developing the long-term relationships by selection and improvement of suppliers' functions, information sharing and communication (MZOUGHI ET AL., 2008). The interactive relationship between suppliers and organizations allows them to share responsibility, which lets the suppliers work effectively to select the excellent elements in technologies, to reduce the cost and to support the design (LI ET AL., 2006). Indeed, the participation of suppliers in the design process authorizes manufacturers to select the preferable parts and facilitates designing and evaluating products with minimum costs (TAN ET AL., 2002).

Because of the cooperation and coordination among organizations, the wasted efforts and time can be decreased or eliminated (YANG AND WEI, 2013). In this respect, many researchers demonstrated the fundamental role of supplier integration in differentiating organizations by constructing the competitive advantage and improving the whole supply chain performance (e.g., ABDALLAH ET AL., 2014; FLYNN ET AL., 2010; TAN ET AL., 2002; WONG ET AL., 2005; JABBOUR ET AL., 2011).

Agreeing with the authors that the supplier integration is how the organization can be able to manage, develop and maintain relationships with its suppliers. Organizations have effect through the strategic partnerships characterized by long-term relationships with its suppliers by the interchange of information, knowledge, and materials. Supplier Integration has a positive impact by encouraging trust and developing the long-term relationships and allowing sharing responsibility, to work effectively, to select the excellent elements in technologies, and to reduce costs.

2.3.2. Customer integration

LAU ET AL. (2010) stated that the only one who can make a decision and have the ability to evaluate the products is the customer because the customer owns a potential purchasing power to be a decision-maker from a marketing point of view. LI ET AL. (2006) pointed that there are three stanchions built upon the customer integration concept: relationships, complaints, and customer satisfaction. According to the pillars, customer integration has been defined as a group of practices that relate to managing customer complaints, building long-term relationships with customers, and improving customer satisfaction. LI ET AL. (2006). Moreover, the information and information sharing according to interactions with the customers and the organization enhance the customer integration. Additionally, the relationships between customer and organization enable the organization to raise the level of competences (FLYNN, 2010).

Another definition of customer integration conducted by KIM, (2013) is the organizational practices of identifying, explaining and using customers to produce specific product according to their needs and maximize their expectations and satisfaction. While customer integration was defined according to MENTZER ET AL. (2001), as an interactive way to get information from organization's customers, as products, inventory, markets and production processes. LAU ET AL. (2010) shed light on information sharing through customer integration between customers and organization itself. The feedback obtained by organizations from their customers provides them with all information associated with operations such as inventory.

LI ET AL. (2006) argued that the relationship with customers should be considered as an important element of supply chain management practices. A solid relationship with customers will be useful to enhance the supply chain programs. SUHAIZA AND PREMKUMAR (2005) stated that the organization's close cooperation with its customers is one of the most important components of the supply chain, therefore, follow-up with customers is essential to get their feedback. According to feedback from the customers, the organizations can build a different decision from the competitors that distinguish their products and services, enhance loyalty for the customers, and make a benefit for customers (LI ET AL., 2006). Customer needs and their preferences are the main core of customer integration for supply chain management that will help the organization to construct vital relationships with customers (SWINK ET AL., 2007).

LOTFI ET AL. (2013) highlighted that customer integration was considered that the customer opinions were included in the production process by making the relationship much easier between the customer and the manufacturer.

Knowing clearly the organization's goals, intentions, and strategy can decrease uncertainty in the minds of customers. Nevertheless, the advantage of clarity might be outweighed by the loss of closeness and flexibility in highly formalized structure breeds (KOUFTEROS ET AL., 2014). Supply chain integration increases efficiency by sinking the uncertainties of supply and demand, and increasing control of business operations. Implementers of supply chain efficiency are pleased with increased financial performance (DAVIES AND JOGLEKAR, 2013), cost reduction, and/or improved customer awareness. The financial economics literature also recognizes that superior efficiency offers organizations an improved ability to handle uncertainty and decrease risk (KULATILAKA AND TRIGEORGIS, 2004).

The importance of customer integration becomes prioritized for the organizations also in product development (e.g. ENKEL ET AL., 2005; FANG, 2008). However, there are many organizations that cannot do it successfully (ENKEL ET AL., 2005). The inherent risk may be a reason for the customer to take into consideration integration with the manufacturers. The nature of customer integration is essential and a social process thus, not only technological tools can provide the solutions for all the problems in customer integration (RAGATZ ET AL., 2002). Hence, another factor should be considered in order to improve the customer integration, this is the supplier.

Integration with external associates requires major resources, both tangible and intangible. For instance, integrating with customers can involve the acceptance of a new information technology or the effective contribution of customers in product development. Likewise, organizational members could be asked to allocate their knowledge and information through customers and organization (KOUFTEROS ET AL., 2014).

Customer integration is the method of acquiring and assimilating customer needs and wants information and allied knowledge (SWINK ET AL., 2007). If design-integrative efforts are not up to date based on customer requirements and opportunities, they are likely to create solutions that may be internally efficient yet externally unproductive.

CIGDEM AND ANAD (2017) have found that customer integration has a positive relation with financial performance. Customer integration alone is not enough for the full development of higher business performance capabilities. Noticeably specific needs arising from well-functioning contacts and strategic alliances with customers may be of limited value if a business is not capable to adjust products and process specifications to meet those needs (NARASIMHAN ET AL., 2010).

We can conclude that customer integration considers as an interactive way to get information from an organization's customers which enhancing loyalty, building a different decision from the competitors' customers. Moreover, customer integration helps organizations to develop their services. Customer integration is a method of acquiring and understand customer needs and wants

information and allied knowledge. The crucial point is that the customer is the basic source of the values that an enterprise creates. Thus, processes have to be designed to integrate the requirements of the customer into the processes of the supplier.

2.3.3. Internal Integration

According to (KIM, 2013) the internal integration can be defined as all the practices of merging together and developing the internal resources and information to generate a sharing knowledge that exceeds the boundaries of individual functions or sections, to help the external integration and to achieve the goals. Furthermore, the collaboration of the manufacturer with suppliers efficiently by processes, activities, and strategies efficiently to satisfy customer needs is called internal integration (FLYNN ET AL., 2010). Joint planning, functional collaboration, information sharing, and teamwork boost the performance of organizations and its internal integration in order to sure meet customers' expectations and on time delivery.

Internal integration is a forming long-term plan in link with processes and practices into organized and synchronized processes to meet customer needs and preferences and to transact efficiently with the suppliers (KOTCHARIN, 2012). The aim of internal integration is to smooth product movement of resources, money, product, and information to satisfy the customers quickly and at low cost (FLYNN ET AL., 2010).

LOTFI ET AL., (2013) argued that the integration among the departments and processes inside the organization to satisfy and meet customer needs is internal integration. Internal integration is the coordination between departments and functions creating an integrated system in order to satisfy the expectations and customer needs as well as boost the performance. More attention needs to be paid to cooperation among functional departments, like inventory, sales, and distribution (LOTFI ET AL., 2013).

AYOUB ET AL. (2017) note that internal integration is a mix of various departments and starts with raw materials and converting process until distribution. BOON-ITT (2009) suggested that researchers had to focus on coordination and combine the sales, inventory, marketing, production and procurement. ABDALLAH ET AL. (2014) stated that the significant factor that effects supply chain positively is the internal integration. Even further, internal integration relies on the cooperation of the organizations among the departments and functions that create the value through cooperation.

Complex organizations are composed of many varied, interconnected parts. Complexity hinders the capability of organization members to identify and take action in relation to issues of strategic significance. Information barriers and unusually narrow-minded interests are all possible negative effects of structural complexity, and they present significant challenges to the quest of alliance,

knowledge sharing, and agreement in decision-making (CIGDEM AND ANAD, 2017; KOUFTEROS ET AL., 2014).

A flatter organizational structure is less complex as it contains less organizational layers throughout which information needs to pass through to reach decision makers (KOUFTEROS ET AL., 2014). It also helps build communication and coordination faster and easier. Flatness increases the number of stakeholders at every level; when a problem is jointly solved via the focal plant and its partners, the employees in charge of solving the problem are able to interact directly with those who experience the situation (ROTH AND KOSTOVA, 2003).

Managers who have a wide range of experiences and skills are better prepared to work across functional and departmental lines. The exposure to various functions inside an organization that managers obtain from structural processes, like job rotation, is a significant facilitating factor to internal integration. A manager who gains experience within a broad set of organizational units is in a better position to cooperate with personnel from any organizational unit. Such a manager understands the barriers impeding communication and collaboration internally and externally. Moreover, by working in a mixture of functional areas, managers create relationships (ADLER AND KWON, 2002). Subjective accounts from practitioners propose that internal integration is an initial step toward achieving supply chain integration (SWINK ET AL., 2005). The literature significantly demonstrates the relationship between external supply chain integration and new product development. Previous studies pointed out that an organization's ability to integrate its customer and supplier could develop their new products performance and business performance as well (KOUFTEROS ET AL., 2014; FLYNN ET AL., 2010). We can observe that the internal integration is a group of practices of merging together and developing the internal resources and information. Internal integration helps to generate a sharing of knowledge that exceeds the borders of individual functions. Internal integration helps the external integration to achieve the goals, forming a long-term plan to meet customer needs. Internal integration shows the coordination between departments and functions creating an integrated system, and gaining experience within a broad set of departments to cooperate with any organizational unit.

2.4. Internal control

In 1992, COSO's internal control – integrated framework became one of the most widely accepted internal control frameworks in the world. The framework states that internal control differs according to the context, industry and nature of business. Internal control may cause conflict if not clearly defined, especially when it is built into law, regulations or rules. Internal control is extensively characterized as a procedure that is affected by the board of directors, management and other personnel (COSO, 1992). According to AGBEJULE AND JOKIPII (2009), when these

three objectives are properly achieved, internal control should be considered effective; internal controls are to provide administrative management with applicable assurance that financial data is accurate and reliable and that the banking organization conforms to policies, plans, procedures, laws, regulations and contracts; resources are defended against loss and fraud; assets are utilized financially and efficiently; and established objectives for operations or projects can be met. Generally, banks set up internal control systems to identify and oversee risks. They are utilized to reinforce risk management systems. All banks ought to have individual internal control systems capable of providing an assurance that risks are managed in an effective way. Therefore, the objective of an effective internal control system is to provide an assurance that a bank is efficiently and effectively directing its operations according to its mission statement, that its management data and financial reporting are dependable, and that it advances incompliance with applicable laws, and regulations. If a bank does not have viable internal control system, it is conceivable that the bank could be vulnerable (LÄNSILUOTO ET AL., 2016). Internal control is now linked to risk management. Internal control should cover the identification and mitigation of risks the new recognition with internal controls is that it exits to assist the organization in managing its risks and promote effective governance processes (HADDAD, 2016). COSO (1992) distributed a point of interest report on internal control: Internal Control - Integrated Framework, referred to as "COSO". The framework classifies an organization's internal control system into five integrated components as shown in Figure 4, which should be built into business forms over the whole organization as way to accomplish its goals. These are derived from the way management runs a business and are integrated with the management process. The components are control environment, risk assessment, control activities, information and communication and monitoring activities.
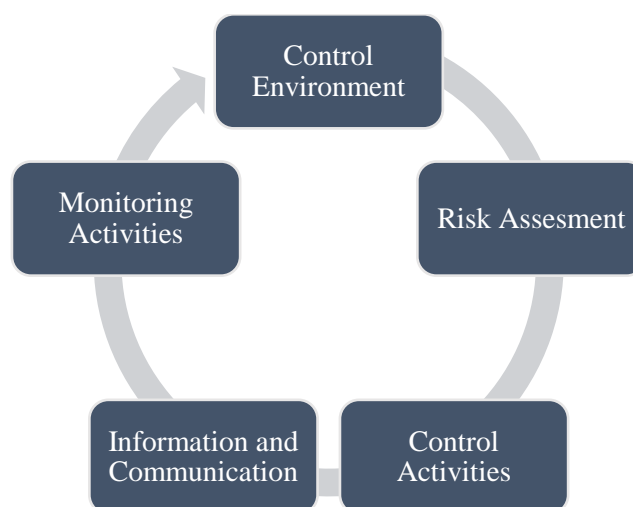

Figure 4: Integrated Internal Control Framework

Source: Author's Own Design Based on COSO's Internal Control Framework

The first component, control environment, allows an organization to set sensible goals and guarantee that the organization has adequate assets to seek after them (LÄNSILUOTO ET AL., 2016). According to BOWLING AND RIEGER (2005), a control environment assures bankers that they are in the business of risk management. It reflects the agreement on risk management and the appetite for taking risk. In addition, it includes the banks structure, board of directors, human resource policies and procedures, responsibilities and ethical values. Moreover, this component addresses the methods and style in which internal control initiatives are implemented (HENDERSON AND MEDIA, 2016).

The second component is risk assessment. It includes risk analysis, taking into consideration the probability and impact as a basis for deciding how they should be managed (BOWLING AND RIEGER, 2005). It is the identification and analysis of relevant risks to achieve the predefined objectives (COSO, 1992).

The third component is control activities. These are the policies and procedures that can help in ensuring that management's orders are completed appropriately and effectively (HENDERSON AND MEDIA, 2016). In addition, control activities occur throughout the banking organization at all managerial levels and within all functions. They incorporate a scope of activities, such as authorizations, approvals, checks, reviews of operating performance, security of resources and segregation of duties (COSO, 1992).

According to HENDERSON AND MEDIA (2016), the fourth component, which is information and communication, is used to provide training to the employees responsible for the control activities. The human resources department might, for example, conduct classroom training with the workers instructing them on all risk management strategies. However, COSO (1992) states that information must be identified, caught and communicated in a structure and time period that lets individuals complete their obligations. Information system produces reports containing operational, financial and compliance-related information make it possible to run and control the business.

Effective communication should be structured in a more extensive manner and stream down, across and up the banking organization. All workforces must get a clear message from top management that control obligations must be considered important. They must understand their own part in the internal control system and how individual activities relate with the work of others. They should have a method for communicating significant information upstream. Furthermore, there should be effective communication with external parties, for example, clients, suppliers, regulators and shareholders (HADDAD, 2016).

Finally, the fifth component, monitoring activities, according AGBEJULE AND JOKIPII (2009) is a procedure of assessing the quality control. It covers continuous and periodical assessments of

the supervision of internal controls by management. It guarantees that controls are working as proposed and that they are altered appropriately. Also, the process will depend primarily on an assessment of risks and the effectiveness of ongoing monitoring procedures (COSO, 1992). Monitoring incorporates all management oversight of the organization's systems of internal control (AGBEJULE AND JOKIPII, 2009).

According to AYAGRE ET AL. (2014), the internal control components and business processes must collaborate continuously for a sound, effective internal control framework. The consistent and collaborative interaction of an internal control system with business procedures is essential for the effectiveness of an inner control framework. Control goals and measures that are derived from the monitoring and assessment of risks must be integrated into operational business units and business practices through an effective data. Furthermore, communication of control component that guarantees smooth stream of data to the work force in charge of internal controls over the organization is necessary.

2.5. Banking supply chain

Banking supply chain importance should be expressed clearly and its significant should be highlighted in a more detailed way. Services today dominate most developed economies and even countries with a traditional focus on manufacturing. Service supply chain is an important platform of service operation and management (HENNEBERG ET AL., 2013). Service supply chain integration is an operation of the organization' making collaboration internally and externally (JOO ET AL., 2011). Service supply chain integration has got comparatively less concern than manufacturing, service industries have not received the same importance (JIAN AND LIU, 2014). In addition, at the same time, special attention in supply chain operation has been given to integrate service resources to co-create values and improve competitive advantages of the whole supply chain (JOO ET AL., 2011). What's more, the main concern is how to use the manufacture supply chain to develop service supply chain and whether the manufacture supply chain is validation enough for the services. The ability of building, running, maintaining and terminating the network and taking advantage of network resources of supply chain considers a network to compete successfully (RITTER ET AL., 2002).

Banking sector can imagine the material as a money, capital as an investment, the information as an economics, and employees. This relationship needs a supplier that represents the depositors and the customers as investors. Banks are the solvency meter in societies, house of trust for several parties, while the investments concern by the private investments and public financial needs. On the other hand the economic information is to protect outside financial information to improve the financial performance by getting competitive advantage for the shareholders and achieve the

profitability which increase the customer satisfaction. In another words the other parties such as specific information all departments are involved such as legal, human resource etc. Internal integration in the banking sector means the flow of information between the departments of the bank.

2.5.1. The structure of banking supply chain

Globally Banks are more intimately linking their systems with the systems of their clients. As banks become more attuned to what is going on in clients' supply chains, they can make better financing decisions for them. Real-time, actionable data availability is speeding up supply chains to get more transparency and visibility into them. Banks are creating new Web applications to support a digital open account so the buyer and seller have visibility into the transaction. Financial supply chain management is an outgrowth of the physical supply chain in the trade business.

The information and cash is the main subject for the supply chain for the banks, so supply chain integration in the banks implies the cooperation plans, activities among the supply chain partners (Supplier, bank, and customer) which work in harmony to achieve the same business goals through the integrated business process and information sharing. In order to develop supply chains in banks the following are essential: an effective and efficient movement of resources, parts, and information to produce bank product and services that are valuable to the customer quickly and with low cost.

After having an interview with Dr. Adli Kandah, the general manager of the association of banks in Jordan, we can answer several questions according to the real situation in Jordanian banks.

1. The money and information are the most important parts of the supply chain in the banks.

2. The suppliers in the Jordanian banking sector case can be the depositors and lenders.

3. Customers in the banks can be individuals, institutions (small and medium enterprises and government), banks, service providers, and others.

4. The interaction between the external supply chain (customer and suppliers) and internal integration improve the performance and customer satisfaction, which have an important impact overall supply chain.

5. The Jordanian banking sector aligns the cash and information flow of the supply chain.

6. There are tiers of the suppliers and customers, for example, the banks can take loans from foreign or local banks under the license granted to it by the central bank of Jordan.

7. Liabilities in the balance sheet contains loans and advances are general descriptions of debt obligations bank owe and must show on their balance sheet as part of total liabilities. Formal contracted loans are typically designed as "notes payable" on a balance sheet, whereas advances

or purchases on credit are recorded as accounts payable. That means the banks are able to get loans.

7. Central bank plays an essential role by drawing the policies, bylaws, and internal regulations.

8. The central bank is the last lord of the stumbling banks.

The structure of banking supply chain, which is explained in Figure 5, shows a supply chain structure of the banking sector, which is different from another supply chain sectors.
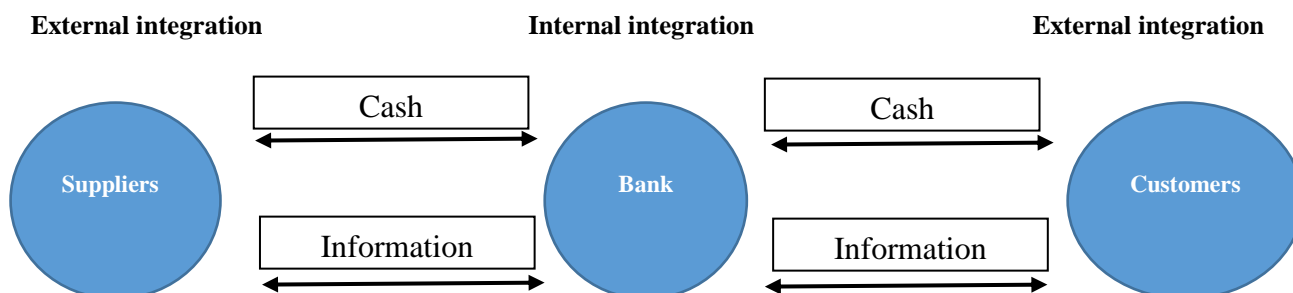
Figure 5: Banking Supply Chain

Source: constructed by the Author

Banking supply chain it is normal that the suppliers and customer are the same entities, which is not the case at other supply chains. The movement of cash and information are the most important factors of a banking supply chain movement of materials has a smaller importance.

Nowadays the competition increasing in the market and the customers' demand associated with high quality, the trend of the markets has been changed, and suppliers get about from manufacturing goods to provide services or integrate of both product and services. Customer satisfaction and retention, service contract revenue, higher margins can be achieved by the integration of the parties of the supply chain (EDVARDSSON ET AL., 2008). COVA AND SALLE (2008) revealed in their study that partnership among the buyer and supplier is complicated because of buy-sell relationship, it is a process, which creates a common value with coordination and interaction to each other. ELLRAM ET AL., (2004) stated that service supply chain management involves information, processes, capacity, service performance, and funds from the earliest supplier to the final customer. Therefore, it is needful to know by supplier exactly what have to offered, how to create a value with the customer and how the customer felt by obtaining the value.

The banks has first, second and more tires of suppliers and customers. Suppliers and customers are other banks, enterprises, NGO's, government and private people. It is a special feature of a bank supply chains that many suppliers of a bank are the customer of the same bank. Being a supplier and customer at the same time is not exceptional in other supply chains but in general, suppliers are on the upstream and customers are on the downstream on the supply chain and they are not

suppliers and customers of the same partner. The most important factors of supply chains in the banks are flow of cash and information, which can be the focus points in the analysis of supply chains in the banking sector. In the thesis, the flow of information was in the center along of the supply chain. Where there is a flow of cash, internal and external partners are connected through cash transfer, the cooperation between these people and/or units is necessary to integrate the supply chain.

2.5.2. The linkage SCI, internal control and quality of service

Increased competition in the banking **sector** has been a key feature of this sector (CARLOS ET AL., 2006). Several changes have occurred recently, changes in consumer demand for services, technology, and the entry of new competitors from outside the sector. Many financial institutions have developed strategies to prevent accidental loss of customers. Customer loyalty is an important feature that organizations are persistent in maintaining long-term relationships with their customers. JOHNSTON, (1997) noted that there was dissatisfaction from customers side, prompting banks to pay attention to generating perceived value for their customers. CRM and data warehousing are at the core of many banks' concerns, but obstacles remain to identify customer information and how to use it effectively in order to create value for its customers (LOVEMAN, 1998). Other researchers also found that supply chain integration significantly improve financial performance (CAO AND ZHANG, 2011; WOOJUNG ET AL., 2016). Moreover, ZHANG ET AL. (2015) stated that the organization should invest the resources to develop trust with customers and suppliers in order to achieve a better financial performance. Furthermore, the interaction of internal and external integration significantly related to both market share and financial performance (DRÖGE ET AL., 2004). MELE ET AL. (2010) pointed out that there is an existence of a network of inter-organization processes. The new development process is not only a chain of intra-organizational activities, but it is also a set of information and resources. TESSAROLO, (2007) found that external integration depends on the capability to acquire information by sharing with external entities in the development process by means of network relationships. The integration becomes essential to make a value for the entity; each company is a partner with its external entities to set up the strategies, procedures, and behaviors into collaborative, synchronized and manageable processes (DAS ET AL., 2006; ZHAO ET AL., 2011).

OKIRO AND NDUNGU (2013) stated that in order to enhance the reliability of financial performance, there must be a regulatory framework similar to internal control systems including internal audits, direct or indirect, to increase the transparency and accountability among information providers in the organization. According to SABINE AND HENRY (2018), the internal control has problems associated with lower revenues. Because of that, we should explore

the links between disclosure of material weakness and frauds. Internal control provides an independent appraisal of the quality of managerial performance to carry out the assigned responsibilities for better revenue generation. MICHAEL AND NICK (2018) mentioned that an effective internal control system connects with the organizational success to achieve its revenue target (ROBERT ET AL., 2018). The internal control helps the management in achieving organizational goals. It is an invaluable prop for the management to make the right decision and providing pertinent information on a continuous basis" (FOWZIA, 2011). SCHOENHERR AND SWINK (2015) argued that financial performance is an important driver in supply chain integration by driving processes and efficiencies in order to make a decision and improve the strategy to solve the problem.

FLYNN ET AL. (2010) recognize that money, products, materials, and information, is a resource which needs to be managed along the supply chain, Moreover the goal of supply chain integration is to achieve effective and efficient flows of products and services, information, money and decisions, to provide maximum value to the customer at low cost and high speed.

PARASURAMAN ET AL. (1988) argue customers assess the service quality between what they are looking for according to their needs and what they expect with what the actual perceived services that they are getting. PARASURAMAN ET AL. (1985, 1988) proposed the SERVQUAL model to fill the gap between customers' expectations and perceptions and actual service performance.

Service quality can be measured using five dimensions: tangibility, reliability, assurance, responsiveness, and empathy. In literature, authors are assured about the intimate relationship between service quality and customer satisfaction, and they praise that the higher the service quality conduct, the higher the customer satisfaction especially in the banking sector (RISHI AND DEEPAK, 2017; LEE AND MOGHAVVEMI, 2015; SHANKA, 2012; SIDDIQI, 2011; SURESHCHANDAR ET AL., 2002). PARASURAMAN ET AL. (1988) argued that service quality and customer satisfaction are two diverse notions but closely related to each other in the service.

2.5.3. The benefits of integration

Since the late of the1980s, there have been rising assents about the strategic importance of supply chain integration (BOWERSOX ET AL., 1989). Effective linkages are needed with external operations for the parties along the supply chain (LEE, 2000). To implement an effective supply chain, firms need coordination between them. (FROHLICH AND WESTBROOK, 2001). Supply chain integration aim is to provide maximum value to its customers (BOWERSOX ET AL., 1999). WENG (1995) stated that with supplier-buyer integrated supply chain; companies can attain

higher profits than those with low level of integration. VICKERY ET AL. (2003) find positive direct relationships between supply chain integration and customer service, which means supply chain collaboration, is helpful in enhancing company's financial performance. Supply chain integration is achieving competitive advantages (BOWERSOX ET AL., 1989; KIM, 2009). An integrated approach offered the following aspects: cost; supply chain capacity; management; equipment inventory owning, holding and use; information and communication systems; and facility requirements (FRANKEL, 1999). The benefit of integration improves the competitive advantage, communication, flexibility, segment customers; maximize profitability, collaboration and cooperation along supply chain. The cost of integration can be the cost of information exchange between internal and external partners.

2.6. Performance and financial performance

According to FABBE -COSTES AND JAHRE (2008) there are different types of performances taken into account to describe the impact of supply chain integration on the organization performance. On another hand, HUO (2012) highlighted that the financial performance for organizations has to be the major measure of supply chain performance because it maximizes the shareholder profit. BOYER (1999) stated that the financial performance expression has been used as the main core of an organization's performance. Firm performance can be also viewed as service effectiveness and cost effectiveness (RICHEY ET AL., 2010). Performance can be also measured by cost, quality, delivery and flexibility. Performance concept is a complicated issue, HUO (2012) debating qualitative and quantitative concept is comprehensive and broader than performance concept. This presents a clear picture of organization, as many researchers have advocated (KAPLAN AND NORTON, 2001). The concept of numerical performance that has been stated by BEAMON (1999) cannot describe adequately the performance and is difficult to use for qualitative assessment.

However, FLYNN ET AL. (2010); LIU ET AL. (2009) mentioned the limitations of relying solely on financial criteria for performance. Several authors focus on the benefits that associated with supply chain integration containing efficiency, quality, delivery and flexibility as an operational performance (YINAN ET AL., 2017; CIGDEM AND ANAND; 2017). From a theoretical point of view, most of the studies (CIGDEM AND ANAND; 2017; SCHOENHERR AND SWINK, 2012; DRÖGE ET AL., 2004; FLYNN ET AL., 2010; JITPAIBOON ET AL., 2013) on supply chain management display that there is a significant relationship between supply chain integration and performance. In particular, DAS ET AL. (2006) addressed the problem of some weaknesses in empirical studies, particularly that there is not permanent improvement in all performance dimensions. Furthermore, JITPAIBOON ET AL. (2013) provide evidence that "the direct

relationship of supply chain integration to financial performance is non-significant". Organization performance has been an extremely significant matter for every organization. It has been very important for managers to know which factors affect an organization's performance in order for them to take suitable steps and to use resources in an efficient and effective way (MAFINI AND POOE, 2013). Operational and financial performance is used as an indicator to evaluate the organization's performance (TAN ET AL., 2002). Table 3 shows the studies that contributed to the performance study

Table 3: Measures, Methods and Scales for Supply Chain Integration

No.	Author	Methodology	Operationalization of SCI	Operationalization of Performance
1	RAFAELA ET AL. (2015)	SEM	SI, CI, II	Operational performance and customer satisfaction
2	CAO AND ZHANG (2011)	SEM	Supply chain collaboration	Financial performance
3	DRÖGE ET AL. (2004),	Regression	SI, CI, II	Financial performance
4	JITPAIBOON ET AL. (2013)	SEM	SI, CI	Operational and Financial performance
5	OMAR ET AL. (2012)	SEM	SI	Operational and Financial performance
6	SARAF ET AL. (2007)	PLS	SI, CI	Financial performance
7	SCHOENHERR AND SWINK (2015)	Regression	SI, CI	Financial performance
8	SWINK ET AL. (2005)	SEM	II	Financial performance
9	SWINK ET AL. (2007)	Path Analysis	SI, CI, II	Financial performance
10	TRACEY (2004)	Path Analysis	SI, CI, II	Financial performance
11	YU ET AL. (2013)	SEM	SI, CI, II	Financial performance
12	ZHANG ET AL., (2015)	SEM	SI, CI	Financial performance

SI: Supplier Integration, CI: Customer Integration, II: Internal Integration

Source: Constructed by the author

Some studies have been collected dealing with the financial and operational performance, while other authors have been separated.. A number of authors contributed to supply chain integration by using several methods such as the structural equational model, regression, partial least squares, and path analysis. Many factors were researched in these studies: supplier integration, customer integration, internal integration and supply chain collaboration. All the factors that have been

studied show the impact on performance of each factor such as operational performance, financial performance, and customer satisfaction

ELLIOTT (2011) has defined the financial performance as the return an entity obtains from the resources it controls. This return is available from the profit and loss account and provides a means to assess past management performance how effectively resources have been utilized and the capacity to generate cash flows. Financial performance is an alternative concept to corporate overall performance. Profitability and market growth are important ratios to evaluate the financial performance. Financial performance connected to the organizations' links with external integration (supplier and customer) of supply chain partners and internal integration (HUO, 2012). The annual reports and mid-year reports are more reliable for investors because they believe that it provides a fair view of the organization's financial performance. Regardless of if there are any threats or challenges to the organization's viability and continuing existence, the investors are looking for greater transparency to protect their investments (ELLIOTT, 2011).

FABBE-COSTES AND JAHRE (2008) argued that the supply chain integration studies emphasize organization's performance that can be classified into three categories: operational, financial, and strategic performance. The operational performance considered complicated and multi-dimensional. It includes the improvement of supply chain linked with the organization to help to reduce the cost, shrink the time and increase the inventory turnover. Many financial ratios can be taken to measure the profitability such as return on assets by dividing the net income upon the total assets and total equity divided by net income upon total equity. These profitability ratios, for instance, can improve the economic goals (CHENHALL AND LANGFIELD, 2007; MORGAN, 2012). By market assessment, it could improve the market goals relying on revenue measures including growth in sales, market share and sales, which is known the strategic performance (WOOJUNG ET AL., 2016). In order to make right decisions at the proper time, the management needs information to build these decisions. The sound internal control provides information that reflects the financial statements through a report on the financial performance of the organizations and its position for the users (GLENDINNING, 1998).

GASPARETTO (2004) stated that producing information is one of the main cores of accounting business performance. Monetary values can be measure financial performance. HENDRIKSEN AND VAN BREDA (1999) mentioned that using financial and non-financial information is equally important to measuring the performance. Generally speaking, financial performance has been measured using a set of financial ratios, a benchmark to measure performance against budget (TARAWNEH, 2006).

Evaluating performance by supply chain integration, types of performance can be from pure operational logistics performance to broad strategic performance. Financial and non-financial

information is equally important to measure performance. Financial performance is the return of an entity that obtains from the resources it controls. Researchers found mainly positive but also non-significant relationships between supply chain integration and financial performance.

2.7. Banking sector in Jordan

2.7.1. The Jordanian banking system and banking services

Currently, various changes have happened while the business environment has different aspects of economic, social, political and technological challenges to which the organizations pay more concern to regardless type of sector, size of investment and location (PAOLUCCI ET AL., 1998). The globalization, sharp competition, short of life cycle of products and services, purchasing behavior, fragmentation of markets, and customer preferences are considered the core of the challenges (MCCRACKEN AND WALLACE, 2000). The profits, market share, and competitive advantage of organizations erode constantly because of these challenges. Organizations develop their strategies, rapid interactions and flexible, innovative approaches, in order to survive and maintain competitive advantage in the business environment according to customer needs and competition. Geographic location has put Jordan in many major challenges such as wars in Iraq, Syria and Palestine. However, security provides a safe business environment. This and cheap labor are key factors in attracting investment in Jordan.

At the beginning of the last century, in 1920, Jordan was under British Mandate and there was no Jordanian-banking sector at the time, but there were branches of foreign banks operating in Jordan such as the British Bank. The British Bank established the Central Bank of Jordan as well as the Jordanian currency. It has since opened two branches of the British Bank in the Middle East and founded the Arab Bank in 1936 and 1949 respectively (CBJ, 2018). In 1955, the Central Bank of Jordan was renamed the National Bank of Jordan, until the year 1960. It was then restored to the Central Bank of Jordan (AL-ABED, 2003). Currently, the Central Bank of Jordan regulates the financial operations of banks and institutions operating in Jordan. By 1964 Central Bank of Jordan was established as an independent legal entity with capital fully owned by the Jordanian government. Several tasks implemented by the Central Bank of Jordan are regulating and supervising all banks, issuing of banknotes and coinage in Jordan, providing necessary liquidity for licensed banks and managing reserves of banks, in addition, maintaining monetary stability (ABJ, 2013).

The Jordanian banking system is composed of the Central Bank of Jordan and all licensed banks operating in the Hashemite Kingdom of Jordan. Licensed banks operating in Jordan include all banks (commercial and Islamic) and non-Jordanian banks shown in Figure 6. Licensed

membership for banks is mandatory for all Jordanian banks and branches of non-Jordanian banks operating in Jordan. Appendix 1 shows the type of banks and the year of establishment for each.
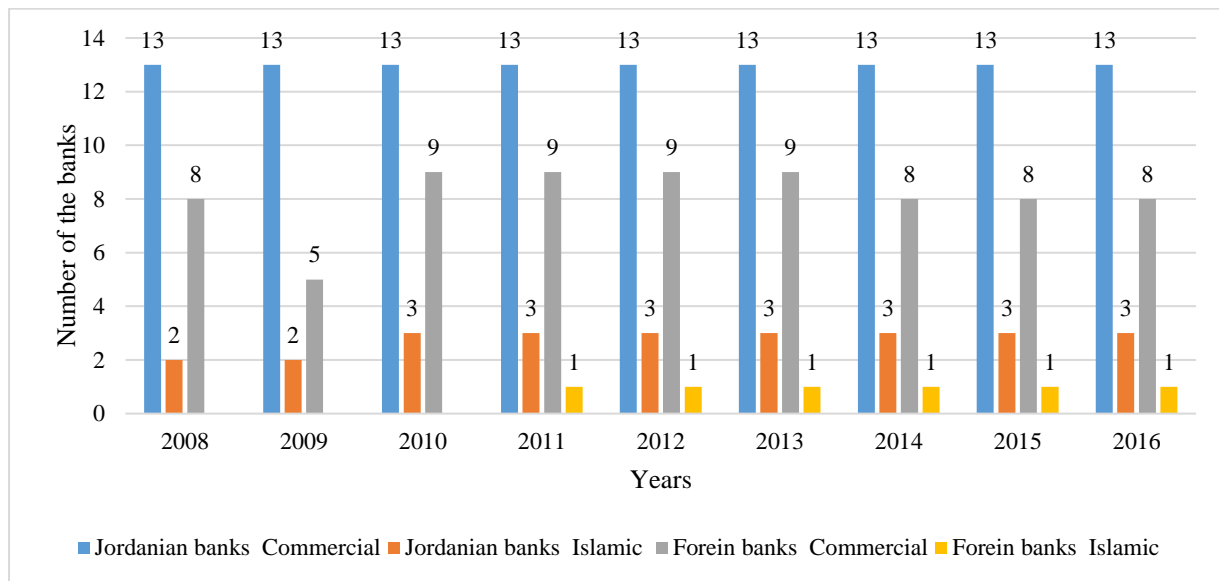
Figure 6: Number of Type of the Jordanian Banks 2008-2016

Source: Created by the Author Using the Source ABJ (2016)

The features of these banks are not so special and different that they can affect the SERVQUAL model in Jordanian banks the basic services of these banks are very similar (service of bank accounts or deposits, bank loans for individuals, plastic cards, conversion services, corporate banking, treasury and investment services, electronic services and other services). Therefore, the SERVQUAL model can be used for each bank type.

The Jordanian banking sector consists of three types of banks

1. Commercial bank is a type of financial institution that accepts deposits; offers checking account services; makes business, personal and mortgage loans; and offers basic financial products like certificates of deposit (CDs) and savings accounts to individuals and small businesses. A commercial bank is where most people do their banking, as opposed to an investment bank.

2. Islamic banks, representing the system of natural processes or business transactions that take place according to the values and principles of Islam called "Sharia". The Sharia based on not acceptance to offer a business in term of goods or services with an interest rate which considered as forbidden.

3. A foreign bank is a type of International Bank that is obligated to follow the regulations of both the home and host countries. Because the foreign banks' loan limits are based on the parent bank's capital, foreign banks can provide more loans than subsidiary banks."

The Jordanian banking sector ranked the first between the sectors. Figure 7 shows that banks have the biggest percentage of the value traded in Amman Stock Exchange (ASE). Moreover, the banking sector plays an essential role in Jordan's economy.

The values traded at the Amman Stock Market

30,2

51,6

18,2

■ Banks   ■ Other services   ■ Industry
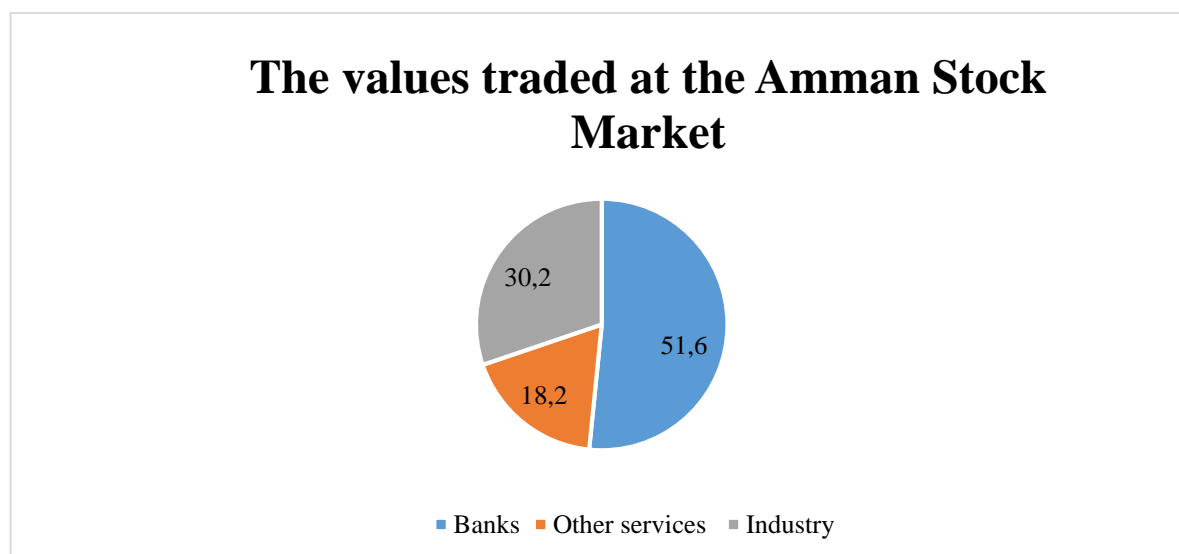
Figure 7: Distribution of Jordanian Sectors 2016

Source: Created by the Author Using the Source ASE, (2016)

The number of banks operating in Jordan reached 25 banks, in addition to the Central Bank of Jordan (CBJ) at the end of 2016. Sixteen of which are Jordanian banks (three of which are Islamic banks) which is based on Figure 9. Nine of them are foreign banks (of which one is an Islamic bank). The services of these banks cover most parts of Jordan through a network of branches that consist of 808 branches and 86 offices. As for the workforce, human resource in the Jordanian banking sector consisted of about 20573 persons at the end of 2016. All employees are well educated in many fields of administrative sciences such as economics, accounting, marketing, finance and information technology. The banking density indicator (the population to the total number of branches of banks operating in the kingdom) reached to 12126 people by the end of 2016 (ABJ, 2016). The banks continually seek to increase the number of their branches to cover geographical locations. To keep in touch with their customers and facilitate the process of the client's getting the best banking services, the Jordanian banks do their best to reach the customer and to be close to them. Figure 9 shows the evolution of the number of bank branches and ATMs for commercial, Islamic, and foreign banks together. According to the annual reports of the Central Bank of Jordan during 2016, 25 new branches were opened by 13 banks and two banks opened seven branches outside Jordan during 2016 (Central Bank of Jordan, 2018). For the sake of extending their services to the largest number of customers, banks tend to increase the number of ATMs in city centers, malls, and dynamic locations. ATMs owned by banks in Jordan provide

a large spectrum of banking services around the clock. They enable customers to withdraw cash in Jordanian dinar, inquire about the balance, change the PIN Code, in addition to other services that are available in most ATMs, the most important of which are having a brief account statement, applying for a checkbook, and other services.

The Figure 8 shows the number of the branches. Banks have increased from 506 to 808 branches which means the banking sector has more 302 new branches in Jordan to provide comprehensive banking services, electronic services, cash withdrawals and deposits, this implies there is a high demand for banking and financial services.
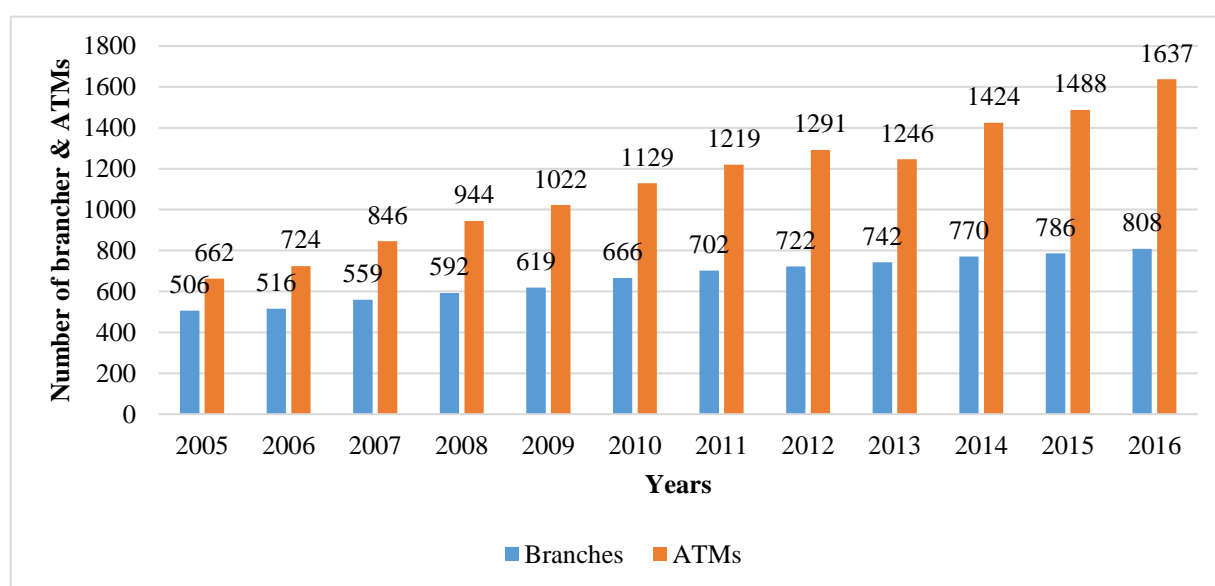
Figure 8: Number of Banks Branches and ATMs in Jordan 2005-2016

Source: Created by the Author Using the Source ABJ, (2016)

In order to keep up with the developments in the financial services sector, to face the growing number of ATM users, and to reach the customers and achieve high turnover, the Jordanian banking sector has been developed to make an added value for the banks at the end. Moreover, the ATMs have increased from 506 machines in 2005 up to 1637 machines in 2016 that is simply 1131 new machines entered into the Jordanian markets to serve the customer and boost the confidence and competitiveness by improving the quality of financial services.

Developments experienced by banks operating in Jordan were important and are where we can find the growths of the main items in the balance sheet in terms of total assets, as illustrated in Figure 9, at the banks operating in Jordan. It is noteworthy here that the banks are classified into three main categories to include the Jordanian commercial banks, the Islamic banks and the foreign banks for the branches of banks operating in Jordan (Figure 9).
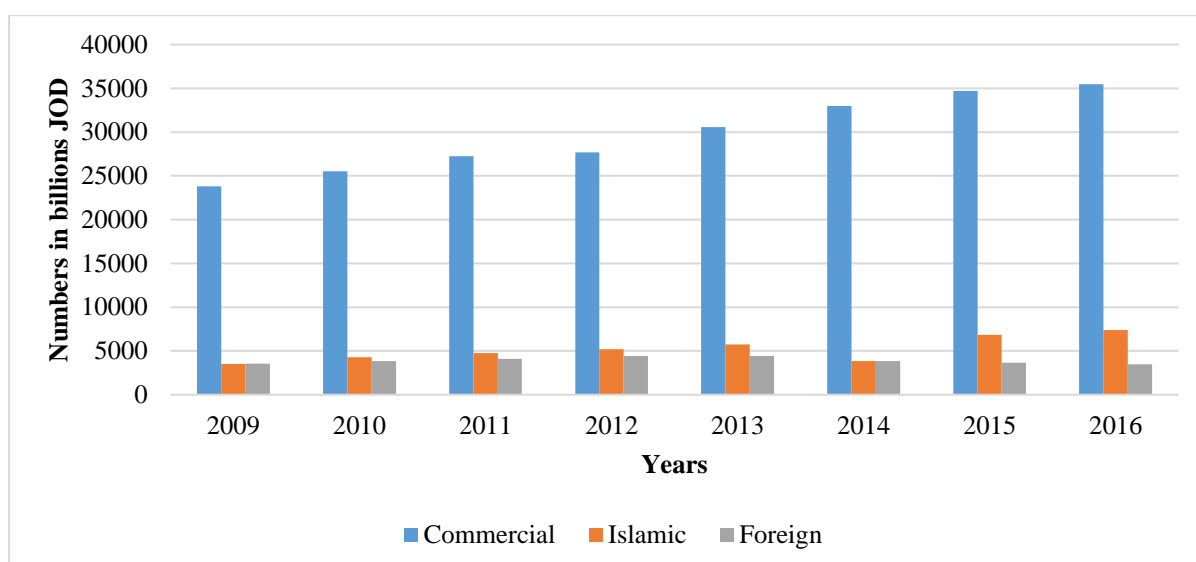
Figure 9: Types of Banks to Their Total Assets in Jordan

Source: Constructed by the Author Using the Source of ABJ (2016)

The total assets of banks operating in Jordan increased by 2.6% at the end of 2016, reaching to JD 46.4 billion distributed as follows in 2016: JD 35.5 billion for Jordanian commercial banks (76.5%); JD 7.4 billion for the Islamic banks (16%) and JD 3.5 billion for foreign banks (7.5%). Figure 10 shows the deployment through the years 2009-2016 for the profitability of Jordanian bank performance by using the return on assets.
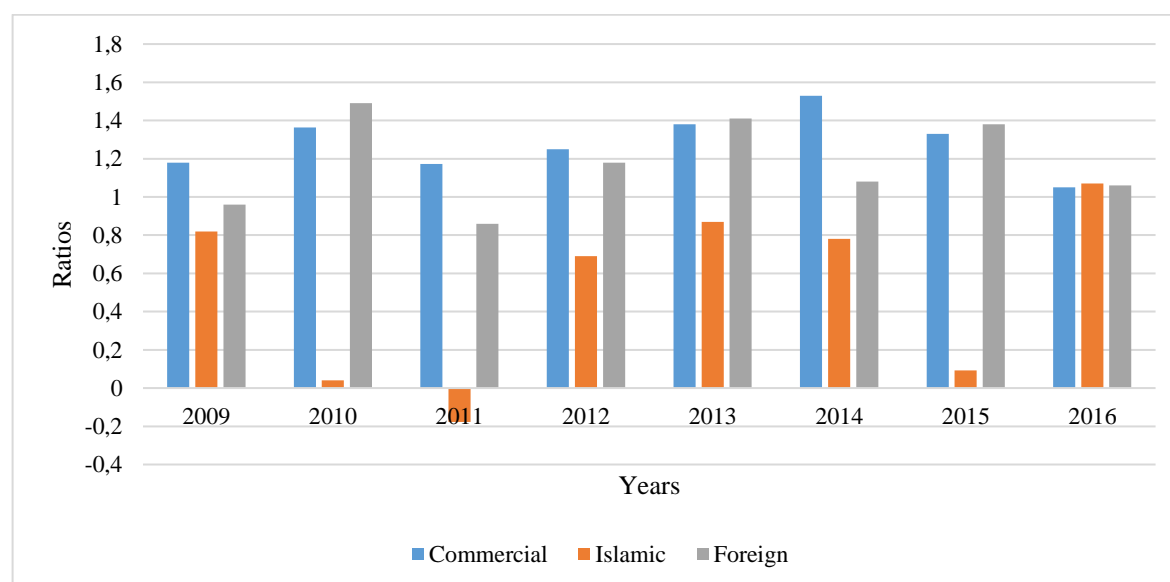
Figure 10: Return on Assets According to the Type of the Bank

Source: Constructed by the Author Using the Source of ASE (2016)

The average return on assets decreased of banks operating in Jordan. In 2015 it was 1.28 while in 2016 it was 1.05 with a decrease of 0.22%. The average return on assets of Jordanian commercial

banks was 1.05 while the ratio was 1.07%, for Islamic banks and 1.06% for foreign commercial banks during the year 2016. The average return on equity, as shown in Figure 11, decreased in banks operating in Jordan. In 2015 it was 9.17% while in 2016 it was 8.13% with a decrease of 1.04%. The average return on equity of Jordanian commercial banks was 8.21% while the ratio was 11.19%, for Islamic banks and 6.47% for foreign commercial banks during the year 2016.
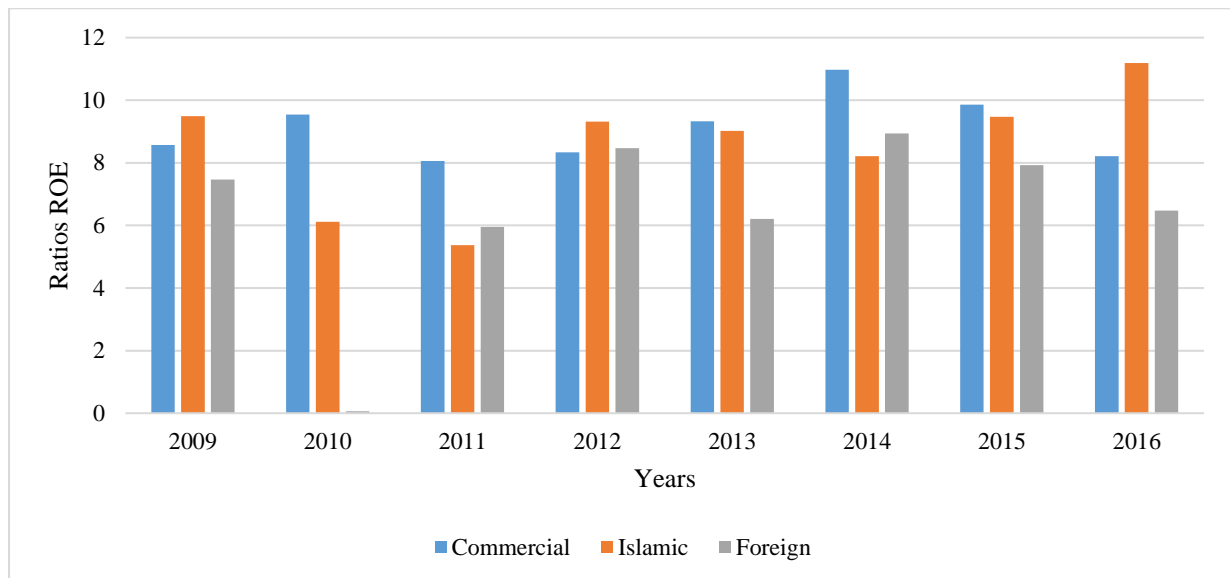
Figure 11: Return on Assets According to the Type of the Bank

Source: Constructed by the Author Using the Source of (ASE, 2016)

2.8. Customer satisfaction

In the last decade, service quality has been studied in depth, and the management realized the importance of understanding the nature of service quality dimensions and measured it across many different service settings. They did this to allow subsequent actions to be taken and improve the strategies and increase the customer satisfaction and give them value (AWAN ET AL., 2011). Banking attention has increased towards quality of service and they have been making greater efforts to reach a high level of service quality in order to satisfy the clients (TITKO ET AL., 2013). The definition of the service differs from person to another. It is an ambiguous and complex concept, owing to the characteristics of services being heterogeneous, intangible, and perishable in terms of production and consumption (PARASURAMAN ET AL., 1985). FISK, BROWN, & BITNER, (1993) acknowledged four characteristics of services: intangibility, heterogeneity, inseparability and perishability, in the IHIP framework. Later, in the book of RUSELL AND TALEOR (2011) there are eight characteristics of services: intangibility, variable output, higher customer contact, perishability, inseparability, decentralization, more often consume than product and emulation.

There is no agreed definition, but the quality of service can be understood as a comprehensive customer evaluation of a particular service and the extent to which they meet their expectations and satisfaction (AL-JAZZAZI AND PARVES, 2017).

As the competition has increased between Jordanian banks, it has resulted in the attraction of a greater number of customers by the provision of quality services according to customers' expectations. How service quality in Jordanian banks effective in customer satisfaction is the main core of the present study. The rapid growth of the Jordanian banking sector creates a competitive environment and times banks to understand customer perceptions of quality of service in order to attract customers in a competitive market. In order to develop the service standards and techniques, managers have to be willing to understand the gap between perceptions and expectations of customers (TITKO ET AL., 2013). Because of the increased awareness of the banks' customers, they are concerned about the service quality or if they should to continue with their current bank or switch to other banks, depending on their level of satisfaction (AWAN ET AL., 2011).

MUALLA (2011) stated that the banks amend, develop and create their effective strategies to determine the different parameters influencing service quality that increase their customers based on the competitive market. To evaluate how service quality differs and may be influenced by dimensions on the customer satisfaction, this research uses a survey consisting of similar models of bank service quality that were developed previously and validated by literature in the context of customer's satisfaction of Jordanian banks (AL-JAZZAZI AND PARVES, 2017).

Particularly, this study considers eight dimensions of service quality (tangibles, responsiveness, empathy, assurance, reliability, access, financial aspects, and employee competences) that have an impact on customer satisfaction to identify each factor's potential impact on the Jordanian banking sector.

Banks have imperative needs in the competitive market to find methods, systematically attain, monitor, and maintain service quality in order to reach the optimal customer satisfaction. Indeed, Jordanian banks need to shed light on many aspects that concern customer and are relevant to their banking needs. It will be worth to advise and create the approach to satisfy existing customers and target new customers (AL-JAZZAZI AND PARVES, 2017).

The banks try to satisfy the customers by increasing service quality perceived, in this respect, PARASURAMAN ET AL. (1985) stated the importance of a strong relationship between quality of service and customer satisfaction. It is obvious the higher level of perceived service quality achieve increased customer satisfaction while less perceived service quality will affect the expected service quality and the customer will be dissatisfied (JAIN AND GUPTA, 2004). Moreover, negative discrepancy between perceptions and expectations, a 'performance-gap', as

they call it, causes dissatisfaction; however, a positive discrepancy leads to consumer delight (KUMBHAR, 2012).

Service quality affecting service satisfaction at the encounter specific level and aggregation level play a critical role in customer satisfaction. Furthermore, the value of obtaining product and service one of the main essential factors related to customer satisfaction. As a result, it is clear that there is a strong relationship between customers and service value. Customer satisfaction measures the performance of the organizations according to their needs. The measure of customer satisfaction provides a service quality measure. Customers can be providing judgments on product and services to express their points of view about the services by providing judgments on service aspects (AL-JAZZAZI AND PARVES, 2017).

Organizations are generally seeking to reduce costs and maximize profitability by increasing customer-related sales. This has increased the interest of academics and companies in customer satisfaction, particularly in terms of corporate value through customer satisfaction (WILSON ET AL., 2008). The customers become the main core for the organizations, especially after shifting to the post-consumption, which makes the organizations committed to render further services according to the customer needs (DAVID ARMANO, 2009).

The organizations plan strategies and structures, to reach the target customers and to maximize their satisfaction. Then, they embark in product design, awareness creating and segmentation for the markets. Customer relationship implies providing for target customers superior value over competitors (KOTLER ET AL., 2002).

In today's marketplace if organizations fail to provide product and service quality, they will lose customers who will run away to the competitors (CHENG AND RASHID, 2013). Consumers are becoming more demanding, and their quality expectations have been raised, as a result, organizations must be customer-centered, deliver superior value to the customers, build relationships with customers and finally, work on market engineering. Today's, organizations trace their customers' expectations, performance, customer satisfaction and even the competitors as well.

The business environment in the international banking sector has changed rapidly and dramatically over the past decade (PAUL AND TREHAN, 2011). Over the last decade, the business environment has changed, especially in the banking sector. The banks have a share of responsibility, and the impact of the global financial crisis on consumer perceptions and behavior has been analyzed through several studies (AKINBAMI, 2011; BENNETT AND KOTTASZ, 2012; GRAU,2013). The banking industry plays an important role in the economy. Because of development in technology, and changing customers' needs and the governmental regulations and policies, we can obviously see the challenges due to increased competition in the market. Banks

have a prime concern to satisfy the customer's needs, and they keep a close eye on the level of customer satisfaction. This strategy helps the banks with customer retention for a longer period. The cost of making new customers is higher than the cost of retaining customers (BENNETT AND KOTTASZ, 2012).

In an environment of mature and sharp competitive pressures, companies are focusing to maintain a loyal customer base, especially in the financial services sector, where deregulation has created an environment that allows consumers the considerable choice in satisfying their financial needs. The organization's attention has been paid on each manufacturing and service for improving service quality and customer satisfaction (WANG ET AL., 2004). Organizations realized that it is hard to maintain the competitive advantage in the long run. Therefore, service quality was adopted since 1880's according to MOORE (1987) AND LEWIS (1989).

Jordanian banks provide banking services, which include the traditional and non-traditional services like retail banking, bank loans for individuals, corporate banking, electronic services and other services. There is the extreme need to examine the impact of services quality on customer satisfaction in Jordanian banks.

In spite of a lot of research that has been focused on service quality, still, there is a critical need to pay attention to the quality of the Jordanian banking industry. Few studies have been conducted relative to the dimensions of service quality in this context. In order to address the existing research gap, this study aims to identify various dimensions of service quality from the customers' perspective, to establish the relationship between service quality and customer satisfaction in Jordanian banks, and examine how the quality of services affects the customer satisfaction. It can be assumed that this study will provide a platform for discussing the issues on service quality and customer satisfaction in the Jordanian banking industry.

According to SHARMIN ET AL. (2016) satisfaction is the customer's feeling of the outcome of an evaluation process between what was received from the service and the commodity compared with his expectations. Satisfaction is related to wants and needs, the purchase decision and the purchase itself. This is consistent with the definition of ZEITHAML AND BITNER (2003). The satisfaction is the customer's right judgment whether the goods and services meet expectations and needs and provides a satisfactory level of consumption-related fulfillment. KOUTSOTHANASSI ET AL. (2017) examine the conceptual framework that connects the links between both physical services and interactive features and the impact on customer loyalty. KUMAR ET AL. (2009) pointed out that high quality of service affects customer satisfaction and increases their loyalty.

BATRA AND SHILPA (2017) argue the types of products and services the banks offer for their clients are similar to the competition has been increased, furthermore, making it harder to satisfy

the existing customers and attract new ones. Satisfaction level of customers is related to the type of the product and services offered by banks. That is affected by the bank's reputation, positive or negative feedback, customer loyalty, and profitability. TERRENCE AND GORDON (1996) debate that in order to increase customer satisfaction and loyalty, many banks need to focus their strategies towards improved service quality.

BATRA AND SHILPA (2017) contend that comparing the satisfaction level of customers in public and private banks in India, it has been shown the differences in satisfaction level of customers of both types of banks. It is suggested to restructure policies and new innovation strategies in order to meet the customer needs and satisfaction. Nowadays, the banks become more seamless by accepting deposits and providing loans to various types of financial and non-financial services as well as other services to satisfy customers.

Due the knowledge of the financial issues and the needs of the customers, work upon their satisfaction makes an added value for the banks. Many features could be useful for the banks, allowing effective and efficient targeting, e.g.: cost reduction, accounts do not have to be opened or closed, credit ratings, and mitigating marketing expenses.

STORBACKA ET AL. (1994) AND HESKETT ET AL. (1994) discussed the relationship among customer satisfaction, customer loyalty and profitability. Nowadays, the vision of organization leadership can express the relationship between customer satisfaction and the profitability. HESKETT ET AL. (1997) state that customer loyalty is considered a direct result of customer satisfaction and due to that, it increases the spur, profit, and growth. At the meanwhile, the managers pay attention to many common factors to make a value for the organization, which affects the financial performance by reaping earned profits. The investments do not go towards only the technology and the people, but also it extends to support the frontline offices, the type of the services, training the employees, and key performance indicators for employees on each level (HESKETT ET AL., 1994).

GRÖNROOS (1984, 1991) argues that for the service management customer loyalty is an important determinant to generate profit, moreover, customer satisfaction is connected with the customer loyalty (REICHHELD ET AL., 1990).

According to Figure 12 several factors are connected with customer loyalty and their satisfactions. These are factors, such as financial measures, lending, deposit, and the number of the service that actually used by the customer (HESKETT ET AL., 1994).

Figure 12: Service Profit Chain

Source: Constructed by the Author

Service-profit chain based on relationships between profit, customer satisfaction, loyalty, employee satisfaction, and productivity (HESKETT ET AL., 1994). Profit and growth are achieved by customer loyalty, moreover, the loyalty is a direct result of customer satisfaction. Satisfaction is influenced by the services that have been provided to customers. On another hand, employee satisfaction is important how they submit the services and the support for the policies and services with high quality and deliver the result for customers (HESKETT ET AL., 1994) . The organizations seek for long-term profitability, and for this reason, they adopt the service-profit chain audit to determine what drives increase their profit and suggests ideas to develop their strategy. The managers have been working hard to determine how they define a loyal customer. Banks face challenges to provide financial services for the companies because they have been restricted by many controls such as the rules and regulations not being sufficient, lack of lending capacity and tools, shortage of an enabling environment, an inadequate financial and information technology and infrastructure, also, some companies are lacking management skills to improve their work as well. In addition, the banks work with the companies in order to spur their financial transparency, moreover, they must be equipped to offer sustainable products and services for the customers. Maintaining of customers' run-off risk and their satisfaction and loyalty is directly related to the service quality (LONE, 2017).

THE CENTRAL BANK OF JORDAN (2018) has defined the financial consumer protection that identifies the relationship between providers of financial and banking services and their customers to ensure the consumers' rights in terms of fairness, transparency, as well as protecting their rights when complaining. In addition, financial consumer protection involves raising consumer awareness and enables them to take well-informed financial decisions through encouraging them to improve their knowledge and skills needed to manage their assets. The financial consumer protection is one of the key elements to achieve financial inclusion as well as having a comprehensive framework for financial consumer protection that leads to boosting confidence and competitiveness in the financial and banking system. Thus, the financial consumer protection

improves the quality of financial services encouraging individuals and increasing their access to financial services (CBJ, 2018).

The Central Bank of Jordan issued "instructions on dealing with customers fairly and transparently" in 2012 and enforced it in 2013. The instructions tackled a number of issues including transparency and credit controls of retail portfolio, limits on certain commissions and fees on banking services, protecting customers' dormant accounts and effectively solving consumers' complaints (CBJ, 2018).

Customer satisfaction is generally defined as a feeling or judgment by customers towards products or services after they have used them (JAMAL AND NASER, 2003). Customer satisfaction in service banking industries has been approached in two ways; satisfaction as a function of disconfirmation, and as a function of perception (DAVIS AND HEINEKE, 1998). Integration supply chain can be defined as the ability of a bank to coordinate interdependence activities and optimize the operations with its supply chain partners. Supply chain integration is a continuous process that can be optimized only when banks, customers, and suppliers work together to improve their relationships and when all participants are aware of key activities at all levels in the chain.

2.9. Services quality

In user-based approach, quality is compared with satisfaction, the highest quality means the best satisfaction of consumers' preferences (YARIMOGLU, 2014). The organizations realized the service quality brought a sustainable and competitive advantage. Service quality and customer satisfaction are very critical success factors for the companies that are thinking about the competitiveness, development and growth in the market (BILJANA AND JUSUF, 2011). Different definitions of service quality have been taken by researchers, they state that it is a conformance to requirements whilst, JURAN (1988) stated that the meaning of service quality is: fitness for use. According to STEVENSON (2002), quality implies the ability to exceed customer expectations consistently.

According to RAUCH ET AL. (2015) in order to conduct a comprehensive evaluation of a company, the management has to compare its performance with its customers' expectations and of the performance of companies in the same industry. Services quality is briefly defined as, how the services provided able to meet or exceed the customer's expectations. LAROCHE ET AL. (2004), argued that there is a link between provided service quality, customer satisfaction, and loyalty. The researchers agreed on the definition of services quality saying that the service delivery can coordinate or match with or override the desires of shoppers. Service-quality improved customer satisfaction and cost management to increase profit (STEVENSON, 2002).

Services require an unmistakable framework for quality elucidation and measurement (ZEITHAML AND BITNER, 2001). Service quality it is related to experience and credence, which is difficult to evaluate and measure.

PARASURAMAN ET AL. (1985, 1988) suggested a model for service quality to measure the scale of the difference between what consumers expect and the perceptions, calling it SERVQUAL. PARASURAMAN ET AL. (1988) proposed ten dimensions for service quality as follows: tangibles, reliability, responsiveness, competence, courtesy, credibility, security, access, communication and understanding the customer. Recently, there has been an increase in the number of the researches looking for developing the service quality as an instrument in banks. Service quality is considered as a multidimensional construct, most of the researches used SERVQUAL model in order to measure the service quality for the banks and its customer satisfaction. Service quality in the SERVQUAL model consists of five dimensions: reliability, responsiveness, assurance, empathy, and tangibles. These dimensions are used in the service quality gap.

The service quality gap implies that there is a difference between expectations of customers and the perceptions of the services (PARASURAMAN ET AL., 1991). The quality concept differs between manufacturing and service industry. Yet there are many characteristics has differentiated the service industry from manufacturing services. WALTERS AND DANA (2004) highlighted the characteristics of services as explained below.

Intangibility means that services are invisible, cannot be touched, tasted and/or smelled and it becomes difficult for the customer to evaluate the quality. Customer satisfaction affected by the intangible side through the service performance. Heterogeneity implies that there are no services will be the same, it is a challenge for the quality of services. Simultaneity indicates that services are produced and consumed at the same time, formulating in the interaction of employees and customers. Perishability is due to the nature of the service not being abe to be saved, stored, resold, or returned.

Banks' attention has increased towards quality of service to satisfy their customers. The rapid growth of the Jordanian banking sector creates a competitive environment. Banks should understand customer perceptions of quality of service in order to attract customers. To develop the service standards, managers have to understand the gap between perceptions and expectations of customers. Satisfaction is the customer's feeling of the outcome from the service compared with expectations. Services quality is briefly defined as, how services are provided to meet the customer's expectations.

In the first SERVQUAL model there were Likert-type items to measure the perceived level of service provided and the expected level of service quality. As the SERVQUAL model evolved, the original ten dimensions were reduced to five dimensions.

MAURI ET AL. (2013) define service quality as "a multidimensional concept, assessed and perceived by consumers, according to a set of essential parts, grouped in five categories, namely: tangibility, reliability, responsiveness, assurance and empathy". SIDDIQI (2010) states that SERVQUAL model is an appropriate assessment tool to measure the service quality perceptions. Table 4 shows the definition of the service quality.

Table 4: Service Quality Dimensions' Definition

Author's	Dimensions	Definition
PARASURAMAN ET AL. (1988); SHARMIN ET AT. (2016)	Reliability	The ability to **deliver and perform** the promised service accurately depends on reliability, because reliable performance means that the service is accomplished in a specific time, without errors and in the same way.
PARASURAMAN ET AL. (1988); AGBOR (2011)	Assurance	Employees' knowledge and courtesy and their ability to inspire **trust and confidence**. It includes these features: competence to perform the service, politeness, and respect for the customer, effective communication with the customer, the general attitude that the server has, and the customer's best interests at heart.
PARASURAMAN ET AL. (1988); SHARMIN ET AT. (2016)	Responsiveness	*Willingness to **help customers*** and provide prompt service, in other words staff are willing and quick to deliver the service.
PARASURAMAN ET AL. (1988); AGBOR (2011)	Tangibles	*Appearance of **physical facility***, equipment, personnel and written materials. The condition of the physical surroundings is tangible evidence of the care and attention to details exhibited by the service provider.
PARASURAMAN ET AL. (1988)	Empathy	Is the caring, **individualized attention** the institution provides its customers, includes approachability, sense of security, and the effort to understand the customer's needs.
FLAVIAN ET AL. (2004)	Access	Access to service means the ease and convenience at which customers can get into the services that banks make available to their customers. Approachability and ease of contact are the two most important elements of accessibility.
LAKSHMI ET AL. (2013)	Financial aspect	Price is one of the single most important factors that influenced the consumer adoption of banking services
HADDAD (2017); YARIMOGLU (2014)	Employees competences	Competences contain knowledge, skills and abilities, values, motivation, initiative, self-control possession of the required skills, knowledge to perform the service, knowledge and skill of the contact and support personnel, and the research capability of the organization.

Source: Created by Author

2.9.1. Reliability

PARASURAMAN ET AL. (1985-1994) found that reliability means organizations perform the service correctly in the the first time. Moreover, the organization strives to fulfill the promises and pay attention to the result. According to NEWMAN (2001), there is a gap between customer expectations and perceptions. Reliability has been classed as the first dimension of service quality model, SERVQUAL. Studies of SURESHCHANDAR ET AL. (2003) AND LAM (2002) ranked the reliability to the first in the dimensions of the service quality model. The Account, accuracy, keep the promises, providing services on time, accurate information to customers, convenience and dependability are the characteristics of reliability according to the literature.

2.9.2. Assurance

Assurance has been defined as the courtesy and the knowledge by employees and their capacity to transfer the confidence and trust for customers (PARASURAMAN ET AL., 1994). The opinions of researchers have varied around the order of the assurance in the service quality dimensions. However, the skills become the first rank according to GRONROOS (1988). WHILE PARASURAMAN ET AL. (1994) ranked it in the fourth place.

Assurance means keeping customers informed in their native language and listening to customers, regardless their educational levels, ages, and nationality. This dimension of the SERVQUAL model was supported by (ANGUR ET AL., 1999). NEWMAN (2001) states that assurance means the attitudes of the employees and their behavior, and indicates the staff's ability to provide friendly, confidential, courteous and competent services.

2.9.3. Responsiveness

PARASURAMAN ET AL. (1985, 1994) defined the responsiveness as the employees' willingness to help customers and provide prompt service. Many researchers agrees that responsiveness described as the provision of prompt service (JABNOUN AND AL TAMIMI, 2003; LAM, 2002; SURESHCHANDAR ET AL., 2003). NEWMAN (2001) highlighted that the responsiveness of the willing employees is to tell the customers when exactly things will be done, giving undivided attention to them, in addition, to promote the service and demonstrate responses according to their requests. There is an important gap between perception and expectation according to NEWMAN (2001), it is extremely difficult to evaluate the responsiveness dimension. CUI ET AL. (2003) state that the SERVQUAL model was revised to invert the points of views and inconsistent outcomes emerging from several similar studies of SERVQUAL through various cultures and the overlaps among dimensions. The responsiveness was ranked as the third

dimension in SERVQUAL 1994. Moreover, ANGUR ET AL. (1999) AND AVKIRAN (1994) classified the responsiveness first while LAM (2002) ranked it the fourth.

2.9.4. Tangibles

PARASURAMAN ET AL. (1988, 1991) identify the tangibles as physical facilities appearing as equipment, personnel, and communications materials. It is the physical image for the service that the customers will utilize and assess the quality. Tangibles are associated with physical facilities, the tools, and the machine used in order to provide the service, representations of the services like statements, cards (debit and credit), speed, and the efficiency of transactions. Using tangibles linked with customer communications define the tangibles according to an appearance of the branches in terms of appeal (ANGUR ET AL., 1999). Several privileges included in the tangibles such as; external appearance, counter in the bank, overdraft, opening hours, and the speed and efficiency of transactions. OTHMAN (2003) AND JABNOUN AND AL TAMIMI (2003) stated that the tangibles have the same importance as empathy. The authors argued that it is more acceptable to consider that the opening hours of operations under empathy dimension; furthermore, the reliability dimension may contain the overdraft privileges (JABNOUN AND AL TAMIMI, 2003). CUI ET AL. (2003) consider the tangibles as a distinct part showing the consistency across cultures. Investment in equipment and branches' appeal, customers' brochures, statement letters, neatness, cleanliness and the communication can be included in tangibles (NEWMAN, 2001; JABNOUN AND AL TAMIMI, 2003).

2.9.5. Empathy

The customers need to feel that they are priority for the organization that is providing services for them. Empathy means caring, paying personal attention and providing the services to customers (PARASURAMAN, 1994). The core of empathy is conveying the customer's feeling that they are unique and special, regardless the type of service customized or personalized the banks provide caring, individualized attention for their customers.

PARASURAMAN ET AL. (1994) stated that several quantitative studies developed the service quality model dimensions, and they used security, credibility, and access to measure the empathy dimension.

- Security means all kind of safety the customer needs without risk and danger, physical integrity, financial safety, and confidentiality.
- Credibility implies the interactions with customers led to understanding their needs and problems. Credibility is connected with honesty, trustworthiness, reputation, contact personnel, and keeping customers' interests.

- Access indicates that there is an easy way to gain access to the services and having it delivered on time. In addition, the services will be easy to access and accessible by phones such as waiting times, convenient hours of operation, and convenient location of service facility.

GRONROOS (1988) highlighted that building the image of the firm during buyer/seller interactions was the most essential aspect of the customer's perceived service quality which reflected reputation and credibility.

2.9.6. Access to service.

YARIMOGLU (2014) defines access approachability and ease of contact, saying the service is easily accessible by telephone; the waiting time to receive service is not extensive, convenient hours of operation, and convenient location of service facility. Access to service means the ease and convenience at which customers can get into the services that banks make available for their customers. Approachability and ease of contact are the two most important elements of accessibility. Researches show that greater accessibility to services results in customers' increased satisfaction (FLAVIAN ET AL., 2004; LEBLANC AND NGUYEN, 1996). As one of the dimensions of service image, accessibility may have a significant direct or indirect influence on banks' customer satisfaction and loyalty (LADHARI ET AL., 2011).

2.9.7. Financial aspect

The interest policy is a factor refers to pricing policies that adopted by the banks. The interest rate is competitive of the interest rate offers on different loans, deposits, and interest rate charged. Moreover, the customers are comparing the reasonability of the charges among the banks. The categories' charge or penalties imposed liable by financial aspect with the customer satisfaction (LAKSHMI ET AL., 2013). New product characteristics such as perceived ease of use, quality, aesthetics, appeal and value for money must be matched or exceeded with customer expectations toward the product (WILSON & SASSE, 2004). RUST ET AL. (1995) consider a relationship between customer satisfaction and financial aspect. HALLOWELL AND SCHLESINGER (2000) support this theory by stating that there is a relationship between customer satisfaction and customer loyalty on financial aspects. GOLDSTEIN ET AL. (2003) stated that there is a strong positive relationship between customer satisfaction, and revenue growth, how customers recommend the company to other clients. Therefore, the financial aspect has a positive influence on the customer's behavior and their satisfaction reflects on the profitability of the banks. Marketers can assess customer profitability individually by the channel. Many banks measure customer satisfaction, but only a few measure individual customer profitability. The financial aspect shows that were factored are the competitiveness of the interest rates offered on various

deposits and the rates of interest charged on the loans. The financial aspect is related to the reasonability of the charges collected by the bank when compared to other banks, and the number of categories being present to charge the customers or impose penalties.

2.9.8. Employee competences

PHILIP AND MARK (2003) suggested the optimal service resulting from several integration factors related to individual service, employee competencies and organizational strategies of appropriate skills. Human competency is one of the most common areas in the management of people at workplaces (OMOTAYO ET AL., 2014). It is very difficult to enjoy life without doing some productive work, and any activity which has so much importance must evoke strong and positive or negative reactions and these reactions tell how satisfied or dissatisfied one is with his/her work. HADDAD (2017) states that competences contain knowledge, skills abilities values, motivation, initiative, and self- control.

The three extra dimensions are access, financial aspect, and employee competences. Extra dimensions usage based on the literatures and interviews with the bank managers; adding these three dimensions will improve the SERVQUAL model. BUTTLE, (1996) stated in his work about the SERVQUAL that CARMAN, (1990) warns against importing SERVQUAL into service setting contexts without modification and validity checks.

CARMAN (1990) recommended using the access as a dimension of service quality. He stated that "We recommend that items on Courtesy and Access be retained and that items on some dimensions such as Responsiveness and Access be expanded where it is believed that these dimensions are of particular importance". Research shows that greater accessibility to services results in' increased customer satisfaction (FLAVIAN ET AL., 2004; LEBLANC AND NGUYEN, 1996).

Many researchers argued about financial aspect that there is a positive impact on customer satisfaction related to financial aspects. The customers compare the reasonability of the charges among the banks, and, accordingly, they choose the most suitable charge for them (CHOCHOĽÁKOVÁ, ET AL. 2015; SHARMA, 2016). For this reason adding the financial aspects for the SERVQUAL improving the model significantly according to the customer preferences.

Organizational culture reflects the employee competences; it is one of the most common areas in the management of people in the workplace. Competences contain knowledge, skills and abilities, values, motivation, initiative, and self- control (HADDAD, 2017). Employees should not hesitate to find the time to serve the customer better, and know the needs that satisfy the customers, since all these components relate to giving customers necessary knowledge and understand their

specific needs (AWAN ET AL., 2011). All of the above dimensions can improve the SERVQUAL model.

3. MATERIAL AND METHODS

This chapter presents the research methodology that is used to evaluate the effect of supply chain integration dimensions, the internal control on the financial performance, and the service quality on customer satisfaction in the Jordanian banking sector. It will be done through discussing the following: theoretical framework, operational definitions for the main variables, hypotheses, research methods and designs, research population and sample, research duration, data sources, data collection instrument as well as data analysis techniques, reliability and validity of research scales.

3.1. Conceptual framework

The model in Figure 14 describes how the dimensions of supply chain integration and internal control affect the financial performance (CIGDEM AND ANAND, 2017; WOOJUNG ET AL., 2016; JITPAIBOON ET AL., 2013; HADDAD, 2016; FLYNN ET AL., 2010; DRÖGE ET AL., 2004; NARASIMHAN AND KIM, 2002; ABDALLAH ET AL., 2014; KAPLAN AND NORTON, 2001; MAFINI AND POOE, 2013). Moreover, it shows bank's customer's and competitor's orientation, the relationships between the supply chain integration and internal control and the financial performance.

Figure 13 shows the model that represents the effects of service quality dimensions on customer satisfaction using the modified SERVQUAL model. Three new dimensions were added to original SERVQUAL model that consists of five factor. The new added factors are financial aspect, employee competences, and access (PARASURAMAN AND ET AL., 1988; PARASURAMAN AND ET AL., 1991; RISHI AND DEEPAK, 2017; EMERSON ET AL., 2017; HENNAYAKE, 2017; FELIX, 2017; ALSHURIDEH ET AL., 2017; POTLURI ET AL., 2016; HADDAD, 2017).
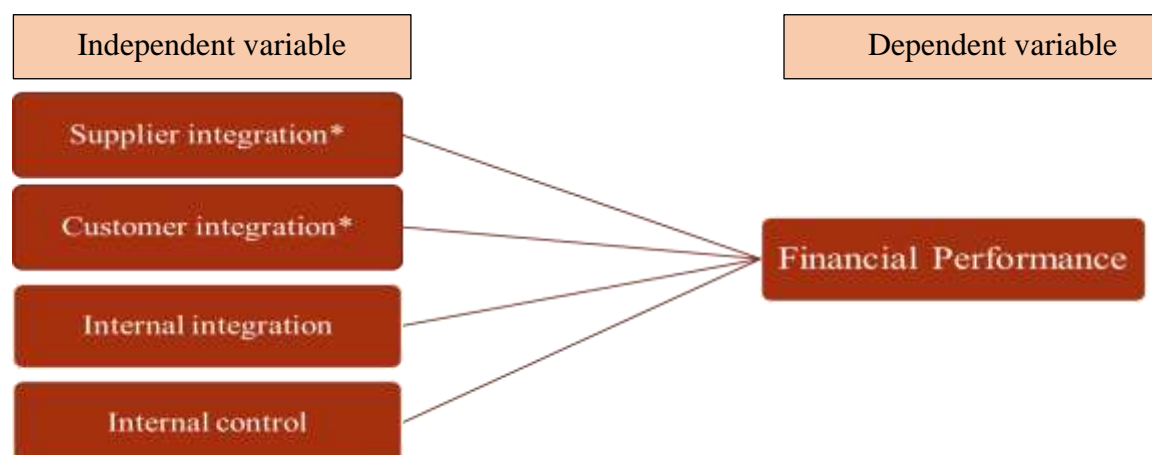
Figure 13: Supply Chain Integration and Financial Performance

*External integration consist of supplier integration and customer integration.
Source: Created by the Author

This study adopted two perspectives of views Figure 13 shows the bankers point of view for the above dimensions on financial performance, while Figure 14 below shows the modified model of service quality dimensions on customer satisfaction according to Jordanian banking sector customers.
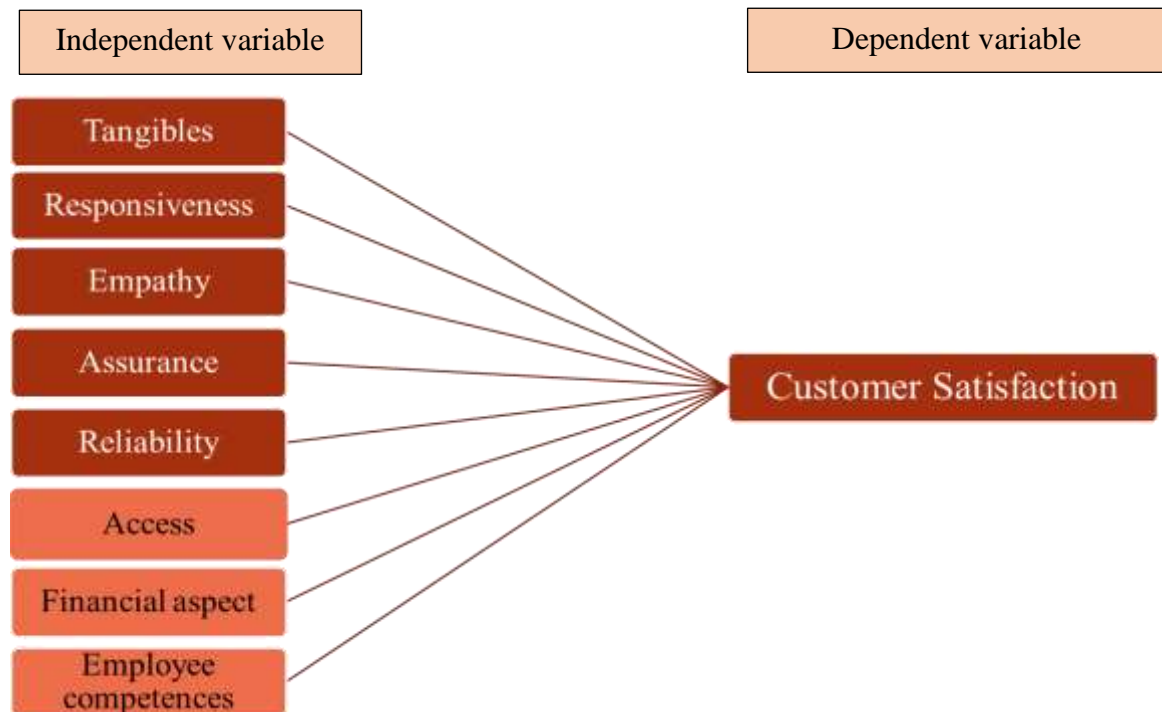
Figure 14: The Service Quality Dimensions on Customer Satisfaction
Source: Created by the Author

3.2. Research variables and operational definitions

The operational definition below developed is based on the literature review, which are in Fiures15 and 16, showing the relationship of supply chain integration and financial performance, and impact of service quality dimensions on customer satisfaction in the Jordanian banking sector. This section provides a theoretical foundation and develops research hypotheses.

3.2.1. Supply chain integration and internal control

3.2.1.1. Independent variables

Supply chain integration refers to a firm's combination of internal functions and the collaboration between the manufacturer, its suppliers, and customers to enhance its competitiveness (LII AND KUO, 2016; FLYNN ET AL., 2010). Integrated systems have a number of advantages and characteristics that are shaped by relying on a number of departments within an organization. The suppliers, customers and internal departments in addition to the internal control should be taken into consideration, whether inside or outside the organization, in order to provide valuable

services to the customers. Based on the literature review, a questionnaire was developed with 34 questions (Appendix 2).

Customer integration refers to building long-term relationships with customers to obtain information about the market, technology, and production of products that comply with customer requirements and enhance their satisfaction (LOTFI ET AL., 2013). Banks have to respond to customers' needs and wants building a long-term relationship with the management to improve customer satisfaction, to manage complaints and feedback, to meet customer expectation, and to have a sense of fair-lay with customers.

Supplier integration refers to building long-term and strong relationships with suppliers to reinforce functional capabilities to attain an ongoing benefit (LI, 2006; CHENG AND RASHID, 2013). The organization should be able to manage, develop and maintain relationships with its suppliers for the long run by managing materials and the flow of information collaboratively, and improving procurement and production. Managing and developing the relationship is considered a strategic part of the supplier integration process.

Internal integration is the level to which a company integrates and connects its internal departments, teams, and information to effectively cooperate and improve performance, competitiveness, and customer satisfaction (FLYNN ET AL., 2010; ZHAO ET AL., 2011; LOTFI ET AL., 2013). The organization's ability to structure their own organizational strategies, according to their collaborative practices and processes, is to satisfy customer needs and wants and achieve competitive consistent integration within an organization, achieve competitive advantage, have interactive functions among department, and conflict solvation and information sharing.

Internal control is extensively characterized as a procedure that is affected by the board of directors, management and other personnel (COSO, 1992). It is intended to provide reasonable assurance in regards to the achievement of the following objectives: effectiveness and efficiency of operations; reliability of financial reporting, compliance with applicable laws and regulations. For the measurement of the effects of independent variables a questionnaire was constructed with following number of questions 8 for customer integration, 8 for supplier integration, 10 for internal integration, and 8 for internal control (Table 5).

3.2.1.2. Dependent variable

Financial performance is the most important measure of success for the banks. Investors and lenders need financial information that is relevant, reliable and comparable across borders. Firm performance refers to how well a firm fulfills its financial goals compared with the firm's primary competitors (BARUA ET AL., 2004; LI ET AL., 2006). In this study, performance is measured by sales growth, profit margin on sales, return on investment (ROI), and growth in return on

investment. These measures have been widely used in previous researches because they are primary yardsticks for most stakeholders (UZMA, 2018; FLYNN ET AL., 2010; NARASIMHAN AND KIM, 2002). Effectiveness of supply chain collaboration should be reflected on such financial metrics. In the questionnaire, six questions are related to the financial performance.

3.2.2. Service quality

3.2.2.1.   Independent variables

Service quality contains a number of dimensions that have an influence on customer satisfaction form the customer's perspective (Appendix 3). The model shows the improved service quality model with the dimensions of tangibles, responsiveness, empathy, reliability, assurance, financial aspect, access, and employee competences (RAUCH ET AL., 2015). Three extra dimensions were added to the original SERVQUAL model.

Tangibles are the physical facilities that appear in equipment, personnel, and communication materials. Tangibility is a physical image of the service when the customers use and appreciate the quality (PARASURAMAN ET AL., 1988, 1991). Tangibles associated with physical facilities, the tools, and the machine used in order to provide the service and representations of the services.

Responsiveness is the employees' willingness to help customers and to provide service for them as well as the employees are willing to tell the customers when exactly things will be done, and giving their total attention to them. In addition to that, they promote the service and demonstrate responses upon customers' requests (PARASURAMAN ET AL., 1985, 1994).

Empathy implies that the customers need to feel as if they are important clients who have the priority in the organizations that provide services for them. Empathy means caring, paying attention personally from the organization that provides services to customers (SIDDIQI, 2010). The core of empathy is conveying the customers' feelings that they are unique and special, regardless the type of service customized or personalized, the banks provide caring, and undivided attention for their customers.

Assurance as the courtesy and the knowledge by employees and their capacity to transfer the confidence and trust for customers. In other words, it means keeping customers informed in the language they can understand and listening to customers, regardless of their educational levels, and ages (ANGUR ET AL., 1999; NEWMAN, 2001).

Reliability is how the organization performs service in a right way and for the first time. It pays attention to the results to make sure that organizations fulfilll their promises. Reliability contains the dependability and consistency of performance (SURESHCHANDAR ET AL., 2003; LAM, 2002).

Access means approachability and ease of contact, the service is easily accessible by telephone, waiting time to receive service is not extensive, convenient hours of operation, and convenient location of service facility (YARIMOGLU, 2014; FLAVIAN ET AL., 2004). Access to service expressed as the ease and convenience at which customers can get into the services that banks make available to their customers.

Financial aspect referring to the bank's profit which is subjectively measured through their profit in recent years, profit increment ratio, the effectiveness of financial management, and financial goals achievement and the effectiveness of financial measures (LAKSHMI ET AL., 2013). Also, the competitive interest rate which is offered on different loans, deposit and the interest rate charged. All these factors motivate the customer to do business with the banks. Moreover, the customers are comparing the reasonability of the charges among the banks and the categories of charging or penalties imposed, hence all these are liable financially to the bank.

Employee competences are one of the most common areas in the management of people at workplace; competences contain knowledge, skills and abilities, values, motivation, initiative, and self- control (PHILIP AND MARK, 2003). The optimal service results from several integration factors related to individual service employee competences and organizational strategy of appropriate skills. The questionnaire for the service quality model has been constructed for the independent variables with questions as follows 5 for tangibility, 4 for responsiveness, 4 for assurance, 5 for empathy,4 for reliability, 3 for access, 6 for financial aspect, and 3 for employee competences (Table 5).

3.2.2.2.   Dependent variable

Customer satisfaction is a measure how services supply their customers. In order to develop the service standards and techniques, managers have to be willing to understand the gap between perceptions and expectations of customers (TITKO ET AL., 2013). Customer's decisions are affected by the service support available after the delivery of the service. Delivery of high-quality service helps to build and maintain long-term relationships with banks' customers. Resulting from this, the banks try to work on customer retention and the market share by aiming at special target markets. How service quality in Jordanian banks affects customer satisfaction is the main core of the present study. The rapid growth of the Jordanian banking sector creates a competitive environment and makes banks understand customer perceptions of the quality of service in order to attract customers in a competitive market. Four questions are related to the customer satisfaction.

Table 5: Variables

The variable	Number of items used to represent each variable	Questions measure each item
Independent variable	-	-
Supply Chain Integration	34 Items	1-34
Supplier integration	8 items	1-8
Customer integration	8 items	9-16
Internal integration	10 items	17-26
Internal control	8 items	27-34
Dependent variable	-	-
Financial performance	6 items	35-40
The variable	**Number of items used to represent each variable**	**Questions measure each item**
Independent variable	-	-
Tangibles,	5 items	1-5
Responsiveness	4 items	6-9
Empathy	5 items	10-15
Assurance	4 items	16-19
Reliability	4 items	20-24
Access	3 items	25-27
Financial	6 items	28-33
Employee competencies	3 items	34-36
Dependent variable	-	-
Customer Satisfaction	6 items	37-40

Source: Created by the Author

3.3. Research population and sample

3.3.1. Study design

A descriptive research design was used to provide a summary of the data and describe the characteristics of the variables (SEKARAN AND BOUGIE, 2010). A correlation design was applied to measure the strength of the investigated relationship between variables. Books, annual reports of the banks, periodicals, journals, references and the Internet, as secondary source, were used for collecting the required data. The survey, as a primary source, was used to collect the relevant data to study the impact of supply chain integration and internal control on financial performance, and service quality on the customer's satisfaction in Jordanian banks.

3.3.2. Population and sampling

The questionnaires were distributed to and collected from all types of Jordanian banks in the year 2018. There are three types of banks in Jordan commercial banks, Islamic banks and foreign banks. Of the 309 respondents received, sixty were rejected due to missing data. Thus, 249 respondents were accepted for data analysis. The sample conveniently consisted of 249 respondents from departments related to the internal control, product development, procurement, compliance, risk management and operations in Jordanian banks. Another questionnaire for the customers was distributed and collected from customers of Jordanian banks from December 2017 to February 2018 from all types of banks. Of the 850 questionnaires received, twenty-five were rejected due to missing data. Thus, 825 questionnaires were accepted for data analysis. The proper sample size was determined to reflect the respondents' opinion (SEKARAN AND BOUGIE, 2010). For developing qualitative and quantitative research plan Table 6 describes the methods used, number of the surveyed people asked, target group differentiated, statistical method, survey time period, and the purpose of the questions.

Table 6: Qualitative, Quantitative Research Plan

Study Number	Number of Respondents or element number	Target group-differentiated	Method	The time of recording the interviews The time of inquiry	The aim of the interviews/ questioner
Qualitative	15	Auditing managers	Non-structured interviews	September 2017	Giving information about the internal control system in Jordanian banks
Qualitative	10	Bank managers	Non-structured interviews	October 2017	Giving a reliable information about the situation in Jordanian banks and areas to study
Qualitative and Quantitative	18	Bank managers and senior employees	Non-structured interviews and Questionnaire	November 2017	Fill questionnaire and to evaluate and correct the questions moreover, to prove extra three factors
Quantitative survey	249	Banks managers	Questionnaire (Factor Analysis)	December 2017 to February 2018	Collecting data about the effect of SCI and internal control on financial performance in banks
Quantitative survey	825	Customers of the Jordanian banks	Questionnaire (Factor Analysis)	December 2017 to April 2018	Collecting data about the effect of service quality dimensions on customer satisfaction in banks

Source: Created by Author

3.3.3. Data collection method

The developed questionnaire consisted of three parts; the first part included the covering letter in which the research goals were explained. The covering letter included the assurance that their responses will be treated confidentially. The second part included questions related to demographic data. Finally, the third part included all statements that measured research independent and dependent variables. Five-Likert scale was applied for the variables, responses as follows strongly agree= 5, agree = 4, neutral = 3, disagree = 2 and strongly disagree = 1.

There are two questionnaires one was designed for the mangers of the banks while the second was designed for the customers, both written in Arabic and in English and distributed by hand and also on Google drive.

3.4. Questionnaire design

The collected data from participants was coded and further subjected to an Excel database. All data was analyzed by using a Statistical Package for Social Science (SPSS) software program. The data analyses was divided into two parts. A: data analyses for demographic information, and B: data analyses for each research question, and testing the study hypothesis. Most of the researchers of the past used the five points Likert Scale due to ease of understanding by the interviewees.

The study sample indicates the extent of his/her agreement on each question according to the scale as shown in Table 7, as follows:

Table 7: Five Likert Scale

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

Source: Created by the Author

Means and standard deviations of samples' responses were used to find respondents, attitudes towards questionnaires statements. The responses are divided to three levels of agreement: high, medium or low as follows:

Thus, BARNETT (2000) shows the three levels as follows:

A - Low degree = 1-2.33.

B - Medium degree 2.34-3.67

C - High degree 3.68-5

Test standard amounting (3) is the output of dividing the sum of the highest value of the scale (5) and the lowest value (1) over 2, that is { (5 +1) / 2 = 3 }. For the purpose of diagnosis sampling unit responses negative and positive as follows: Limits of negative response are 1-2.99 Limits of

positive response are 3-5. The study instrument in its final form directed to managers from internal audit, operations, risk management, information technology, compliance, development of services and products and logistic departments in Jordanian banks.

When the validation of the questionnaire was done with the bank managers they agreed to fulfill the questionnaire but without the name of their banks on the questionnaire. Their opinion was that they did not want to answer the questions putting their banks on the questionnaire because they thought that some questions were confidential. Therefore, The answers of a bank manager cannot be connected to the bank of respondents. So, the fact financial data, for example ROA and ROE cannot be used in the analysis. The aim of presenting the financial ratios in the theses to show that all of the financial ratios are profitable in Jordanian banks and the positive opinion of bank managers about the financial position about their banks can be acceptable. Using attitude questions for collecting information about financial performance when examining the relationship between supply chain integration and financial performance is commonly used by the literature, The questions of financial performance were constructed on the bases of the scientific literature of the area and those questions had been discussed with the bank managers.

3.4.1. Pilot study

In the pilot study forty one bank managers filled the questionnaire and after that the respondents were required to give their perception and opinion of their banks in relation with supply chain and internal control on financial performance. Similarly, questionnaires were distributed to the bank customers from which fifty-three were collected and analyzed. Problematic questions were discussed in interviews with the small groups of managers and customers and the questionnaires were finalized based on these meetings.

3.5.   Techniques for data analysis

We started our analysis by discussing the demographic profile data that is related to the opinion of the managers in the banks on the relationships between supply chain, internal control and financial performance. The next step will illustrate the normality because it is essential to conduct a data screening before the analysis process (PALLANT, 2005). The original data was prepared and screened for missing data, normality and multicollinearity. Normality refers to the degree to which the distribution of the sample data corresponds to a normal distribution, In order to decide the reliability of how it works as a scale, a measurement consistency was assessed by calculating Cronbach's α, a commonly used measure of reliability. Reliability is demonstrated when the items measuring a single construct are highly correlated and when the α-level is relatively high. In

addition, reliability analysis, and principle component analysis (PCA), and a normality test are needed in this stage.

The next step will discuss the correlation of independent items with the dependent variable. Bivariate analysis focuses on the simple correlation based on two variables. It shows whether the two variables have a tendency to move in the same or opposite directions, whether they are positively or negatively correlated. One of the most popular bivariate techniques is correlation analysis. The rank correlation was used to test that two variables were independent. We used the commonly accepted significance level of 0.05 to reject the null hypothesis of independence of the variables. The further step to check the structure of the items of the independent variable by using exploratory factor analysis was done to clarify the validity and reliability of instrument design for independent variables calculating communalities, total variance explained, component matrix, and pattern matrix.

The next step is rotation once the initial factor loadings have been calculated, the factors are rotated. This is done to find factors that are easier to interpret. If there are 'clusters' (groups) of variables — i.e. subgroups of variables that are strongly inter-related then the rotation is done to try to make variables within a subgroup score as possible on one particular factor while, at the same time, ensuring that the loadings for these variables on the remaining factors are as low as possible. In other words, the object of the rotation is to try to ensure that all variables have high loadings only on one factor. There are two types of rotation methods, orthogonal and oblique rotation. In the orthogonal rotation, the rotated factors will remain uncorrelated whereas in the oblique rotation the resulting factors will be correlated. Figure 15 shows the scheme of technical statistical analysis systematically.

Demographical data analysis
Gender, age, academic level, the relationship duration with the bank, type of bank, customers' banks, type of account, type of product and services, the currency, type of connection used to carry out banking transformation, location and job

Check the dependent scale
Reliability analysis, principle component analysis, normality test

Independent items
The correlation of the independent items with the dependent variable

Explarotory factor analysis
Structure of items of independent variable

New subscale
Check the new subscales

Testing hypothese
Check the main component and answer the hypotheses

Figure 15: Scheme of Technical Statistical Analysis

Source: Created by the Author

A decision needs to be made as to how many factors to include. After running the rotation, we checked the new subscales comparing them with the original ones and running the reliability analysis. Finally, testing the hypothesis was done through checking the principle component and answering the hypotheses using the correlation.

3.6. Content and face validity

3.6.1. Validity and reliability analysis

Validity and reliability are among the most important criteria with which to assess the credibility of research outcomes and findings (HUSSEY AND HUSSEY, 1997). Validity and reliability should be reflected in the measurements and variables of the research, in particular, and in the findings in general. They also apply to the way in which these variables were chosen. SAUNDERS ET AL. (2009) pointed out that the measurements should be reliable and precise, so that if another researcher used the same instruments or measurements, that researcher should obtain the same results. The content validity of the questionnaire was assured by an extensive review of related literature, including SCI, internal control, and their measure on financial performance. The face validity of the measurement instrument was evaluated through a pilot study. The following two sections explain reliability and validity respectively, as they apply to this research.

3.6.2. Reliability

Reliability of the measurement scale has to be ensured when scales are employed in a study (PALLANT, 2005). Reliability simply means that the measurement scale should consistently reflect the construct that it is measuring (FIELD, 2008). Thus, a reliable scale should give the user consistent results over time and place. A good measurement scale requires an acceptable level of reliability. Data analysis, according to BRYMAN (2008), relies on a measurement scale being both reliable and valid. Known methods for estimating the reliability of scales include the test-retest method, alternative forms methods, and the internal consistency method. Cronbach's alpha is the most common measure of scale reliability (FIELD, 2008) and shows the extent to which a set of items constituting a scale are inter-related. In the operations management literature, Cronbach's alpha is the most commonly employed reliability indicator and determines how much the items on a scale measure the same underlying dimension.

The values assumed by Cronbach's alpha range between zero and one (0-1). Higher values indicate a higher reliability of the scale and vice versa. As a general rule for good reliability, HAIR ET AL., (2005) recommend that Cronbach's alpha values should be 0.70 or more. However, even though the value of 0.70 or higher is generally preferred, NUNNALLY (1978) recommends that

a lower threshold of 0.60 will be acceptable for work involving the use of newly developed measures such as those in this study. Reliability is defined as how an instrument produces stable and consistent results (SEKARAN AND BOUGIE, 2010). Reliability measures the response the same variable or item gives when the questionnaire is distributed more than one time. Cronbach's alpha coefficient was used to assess the reliability of the measurement scales. All alpha values were greater than 0.70, as shown in Table 8, the highest value of internal integration, was 0.937. Table 9 shows the reliability for the service quality dimensions.

Table 8: Reliability of the Scale's Variables (SCI and Internal Control)

Variables	Number of items	Cronbach alpha
Independent variable	**34**	**0,969**
External integration	**16**	0.923
Customer integration	8	0.902
Supplier integration	8	0.921
Internal integration	10	0.937
Internal control	8	0.885
Dependent variable	**6**	**.0887**
Financial performance	6	.0887
Over all	**40**	**0.975**
Over all by averages	**5**	**0.946**

Source: Created by the Author

Table 9: Reliability of the Scale's Variables (Service Quality)

Independent variables	Number of Items	Cronbach alpha
Independent variable	36	.0938
Tangibles	5	0.843
Responsiveness	4	0.885
Empathy	6	0.896
Assurance	4	0.898
Reliability	5	0.885
Access	3	0.906
Financial aspect	6	0.886
Employee competencies	3	0.906
Dependent variable	4	.0876
Customer satisfaction	4	0.876
Over all	**40**	**0.947**

Source: Created by the Author

3.7. Hypotheses development

MELE ET AL. (2010) stated that there is a network of the inter-organization processes. It is evidence that a new development process not only a chain of intra-organizational activities, it is a combination of information and resources. The external integration relies on the ability to obtain more information via participating with external organizations in the development process by means of network relationships (TESSAROLO, 2007). In order to create a value for the entity, the integration becomes essential; the organization is a partner with its external entities to set up the strategies, procedures, and behaviors into collaborative, synchronized and manageable processes (DAS ET AL., 2006; ZHAO ET AL., 2011).

SCHOENHERR AND SWINK (2015) argued that financial performance is a critical factor in supply chain integration and affected profits by driving processes and efficiencies in order to make a decision and improve the strategy to solve the problem. Other researchers also found that supply chain integration significantly assets financial performance (CAO AND ZHANG, 2011; WOOJUNG ET AL., 2016). Moreover, ZHANG ET AL., (2015) stated that the organization should invest the resources to develop trust with customers and suppliers in order to achieve a better financial performance. Furthermore, the interaction of internal and external integration significantly related to both market share and financial performance (DRÖGE ET AL., 2004).

In their recent empirical investigation, CIGDEM AND ANAND (2017) studied the internal integration and supplier integration with customers having a significant impact on financial performance. FLYNN ET AL. (2010) indicated that, internal and customer integration strongly related in improving the performance more than the supplier dimension. YU ET AL. (2013) stated that supplier integration is positively related to financial performance.

LIN AND WU (2005) proposed that relationships with suppliers and customers are key to improving the financial performance. CUI ET AL. (2003) pointed out that suppliers were considered as provider of raw materials and products, which is not enough, but still they should be important partners in the interaction and flow of skills, information, and knowledge. Internal integration is integration between the internal functions of an organization by coordinating and utilizing internal resources (WONG ET AL., 2013). The findings of CHESBROUGH (2003) reveal new ideas, which can be provided to customers to specify their requirements and express their unmet needs. SILVESTRO AND LUSTRATO (2014) found that the banks could support and help the buyers and suppliers to develop a more holistic understanding of supply chain integration, synchronization and performance. The financial supply chain run parallel to flow of goods and information.

Based on a literature review, the results identified a number of successes. VAART AND DONK (2008) mentioned that the organiuzations improved sharing information between internal functions and suppliers, and customer integration to eliminate obstacles in information and material flow.

WOOJUNG ET AL. (2016) argue that customers and suppliers are the largest sources of improving the financial performance. MSIMANGIRA AND VENKATRAMAN (2014) point out that decision-makers should consider cost, benefits, and risk in the market environment before adopting the strategy. WONG ET AL. (2013) mentioned that the extent to which customers and manufacturers coordinate decisions is related to inventory level, production planning, demand forecasting, order tracking, and products delivery called customer integration. NARASIMHAN AND KIM (2002) stated that supply chain strategies can be evaluated in the light of organization's market whereas, practices and strategies are not only dependent on the nature of the business, environment, technology, but also on the relationship between supply chain integration and diversification and financial performance. Thus, supplier integration, customer integration, and internal integration are expected to have significant impacts on financial performance.

The effect of supply chain integration on financial performance

HUO (2012) stated the organizational capability theory and the capabilities of supply chain integration are the key factors of organizational performance. In order to improve efficiency and effectiveness, VERONA (1999) recommends the integrative capabilities, whether external or internal, to be considered as an approach. The roles of supply chain integration in achieving positive relationships on financial performance have been discussed recently (DEMETER ET AL., 2016; FLYNN ET AL., 2010; KIM, 2013). SWINK ET AL. (2007) stated that there is an impact of strategy integration and processes on financial performance. Furthermore, FROHLICH AND WESTBROOK (2001) found an influence on external integration and financial performance. To achieve a high level of performance the organization has to have with the widest degree of arcs of integration (SCHOENHERR AND SWINK, 2012). Studies supported that supplier integration improves financial performance (DAS ET AL. 2006; NARASIMHAN AND KIM, 2002). The impact of customer integration on financial performance is inconsistent, positive effects of customer integration on financial performance was found by KOUFTEROS ET AL. (2014) AND NARASIMHAN AND KIM, (2002), while FLYNN ET AL., (2010) could not find a positive relationship between customer integration and financial performance. DRÖGE ET AL. (2004) found that supplier and customer integration could enhance market share and financial performance.

Financial performance was captured by six items. For each item, respondents were asked to provide a subjective assessment of financial performance relative to major industry competitors on a five-point Likert scale with endpoints "dissatisfy "(=1) and "strongly satisfied" (=7). In addition, actual values for financial performance were obtained from the annual reports for Jordanian banks such as objective information which shows that all of them are profitable. Comprehensive measurement system including financial and non-financial measures, leading and lagging indicators. In several empirical studies, subjective ratings are used to measure firm performance (PORTER, 1979; VICKERY ET AL., 1993; WARD ET AL., 1994; FLYNN ET AL.,2010; CHANG, 2009; CAO AND ZHANG, 2010; SARAF ET AL., 2007). We propose that internal and external integration contributes to a bank's financial performance, leading to the following hypotheses:

Hypothesis 1. Supplier integration positively influences financial performance.

Hypothesis 2. Customer integration positively influences financial performance.

Hypothesis 3. Internal integration positively influences financial performance.

Internal control and financial performance

NDUNGU (2013) stated that in order to enhance the reliability of financial performance, there must be a regulatory framework similar to internal control systems including internal audits, direct or indirect, to increase the transparency and accountability among information providers in the organization. According to SABINE AND HENRY (2018), the internal control has problems associated with lower revenues. Because of that, we should explore the links between disclosure of material weakness and frauds. Internal control provides an independent appraisal of the quality of managerial performance to carry out the assigned responsibilities for better revenue generation. MICHAEL AND NICK (2018) mentioned that an effective internal control system connects with the organizational success to achieve its revenue target (ROBERT ET AL., 2018). Effective internal control involves revising the controls, which are employed to protect assets, with a continuous review for the reliability and integrity of financial information, assessment of compliance policies, procedures and applicable laws and regulations. The evaluation of the efficiency and effectiveness of the organization is done to achieve the organizational goals. Internal control helps the organization ensure that all management activities are appropriately carried out (KENYON AND TILTON, 2006). The organizations have a responsibility to train, educate, and sensitize their employees on using internal control systems. The internal control effectiveness it based on the skills, competency, and transparency of the people they use it. Control activities protect against any risks that may prevent the company from achieving its objectives and should occur at all levels and in all functions of the organization (DOYLE ET AL.,

2007). There are two types of internal controls preventive and detective. Preventive controls are predicting the problems before they occur, finding a solution, making amendments, and preventing the errors and acts of omission from occurring. Detective controls are used to reveal and report the occurrence of an omission, an error or a malicious action or act, in order to minimize the threat, identify the problem cause, and correct the detective controls by correcting the problems when discovered. Accordingly, the process is modified and the problems are minimized to prevent their recurrence later (SINGLETON, 2006).

Hypothesis 4. Internal control positively influences financial performance
Service quality and customer satisfaction

Service quality is unanimously recognized as an indicator of an organization's competitiveness (PARASURAMAN, ET AL., 1985, 1988). Service performance is considered as a strategic weapon which leads to satisfying the customers in a service industry (RISHI AND DEEPAK, 2017; LADHARI, 2011). Hence, by offering a superior service quality, organizations can obtain a competitive advantage (CRONIN AND TAYLOR, 1994; LADHARI ET AL., 2011). PARASURAMAN ET AL. (1988) argue customers assess the service quality between what they are looking for according to their needs and what they expect with what the actual perceived services that they are getting. PARASURAMAN ET AL. (1985, 1988) proposed the SERVQUAL model to fill the gap between customers' expectations and perceptions and actual service performance. Service quality can be measured using five dimensions: tangibility, reliability, assurance, responsiveness, and empathy. Moreover, CRONIN AND TAYLOR (1994) suggested the SERVPERF model based on the performance. SERVPERF came as a criticism to the gap in the SERVQUAL model because the SERVQUAL model measured the customer satisfaction only after the service was given (CRONIN AND TAYLOR, 1994; GEORGE AND KUMAR 2014). However, the SERVQUAL model is the most commonly used to measure and evaluate the service quality around the world even in the banking sector. Therefore, regardless of the gaining commonality of SERVQUAL, there are various point of views about its operation and effectiveness. Thus, the researcher modified the SERVQUAL model and added new dimensions to it which are access, financial aspect and employee competences (PARASURAMAN ET AL., 1985, 1988; RISHI AND DEEPAK, 2017, CRONIN AND TAYLOR, 1994; SIDDIQI, 2011; ENNEW AND WAITE, 2013; ZEITHAML ET AL., 1988; GEORGE AND KUMAR, 2014; WU AND CHAN, 2011; KANO, 2001; TONTINI ET AL., 2013).

H5: Service quality positively influences customer satisfaction

The relationship between service quality dimensions and customer satisfaction

In literature, authors are assured about the intimate relationship between service quality and customer satisfaction, and they praise that the higher the service quality conduct, the higher the customer satisfaction especially in the banking sector (RISHI AND DEEPAK, 2017; LEE AND MOGHAVVEMI, 2015; SHANKA, 2012; SIDDIQI, 2011; SURESHCHANDAR ET AL., 2002). PARASURAMAN ET AL. (1988) argued that service quality and customer satisfaction are two diverse notions but closely related to each other in the service. Moreover, OLIVER (1993) understood the service quality as an antecedent to the customer satisfaction and significant tool to measure the customer satisfaction. In recent years, several authors argued about and emphasized the relationship between these two common constructs in banking sectors and they found a positive and predictive relationship between service quality and customer satisfaction (CHOUDHURY, 2014; KRISHNAMURTHY ET AL., 2010; LENKA SUAR AND MOHAPATRA, 2009; SELVAKUMAR, 2015; SIDDIQI, 2011). Ultimately, the service quality dimensions, which are tangibility, reliability, assurance, responsiveness, empathy, access, financial aspect, and employee competencies, are for assessing the banking service quality on customer satisfaction in Jordanian banking sector. The next section presents the sub-hypotheses.

The relationship between tangibility and customer satisfaction

In the banking sector, the tangibility dimension becomes intrinsic in service quality according to the tangible facets of servicescape, such as equipment, physical facilities, and visual appeal (PARASURAMAN ET AL., 1985; SURESHCHANDAR ET AL., 2002). Subsequently, in the banking sector, it can be said that it is a significant influence of tangibility on customer satisfaction (ANANTH ET AL., 2011; RISHI AND DEEPAK, 2017; SANJUQ, 2014). Similarly, many researchers found meaningful influence in this relation (CHOUDHURY, 2014; KRISHNAMURTHY ET AL., 2010; SELVAKUMAR, 2015).

PARASURAMAN ET AL. (1985) and IWAARDEN ET AL. (2003) defined the tangibility as an appearance of physical facilities, equipment, personnel, and communication materials. Furthermore, it may be defined as the ease in the visibility of resources necessary for providing the service to customers, the appearance of employees and management team and professional employees, brochures and booklet that will have a view to customer satisfaction.

Whilst ANANTH ET AL. (2011) found that the attractive looking, physical facility, and visually appealing could be considered as positive indicators of tangibility on the customer satisfaction in the banking sector. Nevertheless, various researchers found that there is a positive effect on the relationship between customer satisfaction and the tangibility in the banking sector (MUNUSAMY ET AL., 2010; SHANKA, 2012; LAU. ET AL., 2013; AND SANJUQ, 2014).

Moreover, KRISHNAMURTHY ET AL. (2010) AND SELVAKUMAR (2015) emphasized that tangibility has a positive impact on customer satisfaction in banking services. ANANTH ET AL. (2011) illustrated in the banking sector that the sophisticated equipment and attractive ambiance viewed as the impact of tangibility on customer satisfaction. Thus, based on the above arguments, this leads to the development of the following hypothesis

H5a: Tangibility positively influences customer satisfaction in the Jordanian banking sector.

The relationship between reliability and customer satisfaction

Researchers have demonstrated that the reliability dimension of service quality has a positive impact on customer satisfaction (PARASURAMAN ET AL., 1985, 1988). ENNEW AND WAITE (2013) revealed that reliability could be considered the extent to which customers can rely on the service promised by the organization. PARASURAMAN ET AL. (1985) has defined reliability as the organization's capability to tool up the service dependently and independently. As a standard of service quality, the reliability has a significant impact on customer satisfaction (PARASURAMAN ET AL., 1988). ZEITHAML ET AL. (1990) defined reliability as the ability to do and perform the required service to customers dependably, accurately and as promised, treating the problems faced by customers. Taking actions to solve the problems, performing the required services right from the first time, or providing the services at the proper time are critical. Maintaining an error-free record is the paradigm of reliability in terms of service quality, which has an important impact on customer satisfaction (PARASURAMAN ET AL., 1988). YANG AND FANG (2004) contend that the main dimensions in retaining customers in banking services are accuracy in completing orders, maintaining precise record and quote, accuracy in billing, and maintaining promised services. These are the basic views of reliability. The extant literature has also revealed reliability has a positive relationship with customer satisfaction in the banking sector (RISHI AND DEEPAK, 2017; KRISHNAMURTHY ET AL., 2010; LEE AND MOGHAVVEMI, 2015; SHANKA, 2012; SELVAKUMAR, 2015). Therefore, based on the above arguments, we reached to this hypothesis.

H5b: Reliability **positively influences customer satisfaction in the Jordanian banking sector.**

The relationship between assurance and customer satisfaction

The assurance dimension of service quality indicates the employee's competence and knowledge, courtesy and the ability to build bridges of trust with customers (PARASURAMAN ET AL., 1985). Assurance is defined as the knowledge and good manners or courtesy of employees

(IWAARDEN ET AL., 2003). Further, it is defined as the ability of employees, with the help of the knowledge possessed to inspire trust and confidence that will strongly strike the level of customer satisfaction (PARASURAMAN ET AL., 1988). There is a positive relationship between assurance and customer satisfaction (RISHI AND DEEPAK, 2017; KRISHNAMURTHY ET AL., 2010; SELVAKUMAR, 2015; SHANKA, 2012; MUNUSAMY ET AL., 2010). In the banking sector, assurance is related to the security that a customer feels when conducting his banking transactions (ENNEW AND WAITE, 2013). Providing customer assistance in a courteous manner, accuracy in completing orders, easy access to account details, convenience within the bank, maintaining precise record and quote and an experienced professional team, and maintaining promised services will have a positive impact on customer satisfaction (SADEK ET AL., 2010; YANG AND FANG, 2004). Based on the above discussion, we reached the following hypothesis

H5c: **Assurance positively influences customer satisfaction in the Jordanian banking sector.**

The relationship between responsiveness and customer satisfaction

The responsiveness dimension of service quality is related to the organization's willingness and ability to help customers, provide quick service in proper timeliness of services (KOTLER ET AL., 2009; PARASURAMAN ET AL., 1985). Responsiveness was defined as the interests shown in providing prompt service to customers when required (ZEITHAML ET AL. 1990). The willingness of employees to provide the required service at any time without any inconvenience will have an impact on customer satisfaction (PARASURAMAN ET AL., 1988). Responsiveness is primarily concerned with how service firms respond to the customers via their personnel. The individual attention will increase the customer's satisfaction and so will the attention paid by employees on the problems that face customers, when this happens, a radical shift occurs in their satisfaction (KUMAR ET AL., 2009). Arguably, banking sector responsiveness has a direct relationship with the customer satisfaction (JOHNSTON, 1997; KRISHNAMURTHY ET AL., 2010; SELVAKUMAR, 2015; RISHI AND DEEPAK, 2017; LAU ET AL., 2013). Based on the above statements can state that the responsiveness dimension of service quality will strongly influence the customer satisfaction in banking and therefore, the research proposed the following hypotheses.

H5d: **Responsiveness positively influences customer satisfaction in the Jordanian banking sector.**

The relationship between empathy and customer satisfaction

ENNEW AND WAITE (2013) point out that the empathy dimension of service quality is to be attentive in good communication, understanding of customer needs and friendly behavior, and take care of customer's attention individually. IWAARDEN ET AL. (2003) defined empathy as an ability to take care of customers and pay attention individually for them, especially in providing services. Moreover, PARASURAMAN ET AL. (1988) argued that understanding customer expectations better than competitors and provision of care and customized attention to customer strongly influence the level of customer satisfaction.

ANANTH ET AL. (2011) reveal that the positive impact on customer satisfaction related to convenient working hours, individualized attention, a better understanding of customer's specific needs in the banking sector and the empathy dimension play a crucial role in customer satisfaction (KRISHNAMURTHY ET AL., 2010; SELVAKUMAR, 2015; SHANKA, 2012; RISHI AND DEEPAK, 2017; NAVARATNASEELAN AND ELANGKUMARAN, 2014). According to the above reviews, the study proposed the following hypotheses.

H5e: **Empathy positively influences customer satisfaction in the Jordanian banking sector.**

The relationship between access and customer satisfaction

Access refers to whether the service is convenient, easy to access, and has ease of contact. It includes convenient office times and available times for transactions to be executed. Four measurement items for this construct were taken from FLAVIAN ET AL. (2004) AND LEBLANC AND NGUYEN (1996). Access to service means the ease and convenience at which customers can get into the services that banks make available to their customers. Approachability and ease of contact are the two most important elements of accessibility. Research shows that greater accessibility to services results in' increased customer satisfaction (FLAVIAN ET AL., 2004; LEBLANC AND NGUYEN, 1996). As one of the dimensions of service image, accessibility may have a significant direct or indirect influence on bank customer satisfaction and loyalty (LADHARI ET AL., 2011). The following hypothesis is suggested.

H5f: **Access positively influences customer satisfaction in the Jordanian banking sector.**

The relationship between financial aspects and customer satisfaction

SHARMA (2016) has modified the SEVQUAL model by adding the financial aspects. Significantly, the financial aspect is a very new dimension not similar to any of the original SERVQUAL scale dimension. It refers to the organization's profit that is subjectively measured through profit in recent years, profit increment ratio, the effectiveness of financial management, financial goals achievement and the effectiveness of financial measures (LAKSHMI ET AL.,

2013). The financial aspect dimension of service quality is attentive to the customer according to the financial benefits (SHARMA, 2016). Many researchers argued that there is a positive impact on customer satisfaction related to financial aspects. Many researchers stated (BAUMANNA ET AL., 2017, LAKSHMI ET AL., 2013) that the competitive interest rate has a large impact, which is offered on different loans, deposit and interest rate charged. Moreover, the customers compare the reasonability of the charges among the banks, and, accordingly, they choose the most suitable charge for them (CHOCHOĽÁKOVÁ, ET AL. 2015; SHARMA, 2016). The concept of financial satisfaction, defined as satisfaction with one's present financial situation, continues to be a goal of family policy (ZIMMERMAN, 1995). Researchers have suggested that a framework to explain and predict personal financial satisfaction is needed within the broad context of consumer and family economics (JOO AND GRABLE, 2004). Based on the above publications, the following hypothesis is proposed.

H5g: **Financial aspect positively influences customer satisfaction in the Jordanian banking sector.**

The relationship between employee competences and customer satisfaction

The optimal service resulting from several integration factors related to individual service, is employee competencies and organizational strategy of appropriate skills (PHILIP AND MARK 2003). Human competencies is one of the most common areas in the management of people in the workplace. Competences contain knowledge, skills and abilities, values, motivation, initiative, and self- control (HADDAD, 2017). Many researchers argue that there is a positive impact on customer satisfaction related to employee competences (AWAN ET AL., 2011; SHARMA, 2016; HADDAD, 2017). SHARMA (2016) argues that it is necessary that the employees should know bank's products well, prompt in the service of the bank, and have the necessary knowledge to serve the customers promptly. Employees should not hesitate to find the time to serve the customer better, and know the needs that satisfy the customers, since all these components relate to giving customers necessary knowledge and understand their specific needs (AWAN ET AL., 2011). Accordingly, based on the above reviews, the study formulates the following hypothesis.

H5h: **Employee competences positively influences customer satisfaction in the Jordanian banking sector.**

4. RESEARCH FINDINGS AND THEIR EVALUATION

4.1. Statistical analysis for SCI and internal control on financial performance in Jordanian banking sector

Since a detailed description of study methodology, population, sample, tools used for data collection, and statistical methods is discussed in chapter 3, how to analyze data and obtain results in this chapter. This study used the descriptive statistics and Exploratory Factor Analysis (EFA) and the findings are explained in details below, analysis was conducted using SPSS software.

4.1.1. Respondents' demographic description

The demographic data was gathered from the employees of the banks through the self-administered questionnaire. In Appendix 4, Table 10 shows the results in terms of gender, age, academic level, experience, and job position of the respondents of Jordanian banks.

Sample by gender distribution shows that the 132 of the respondents were male, which made up 53.01% of the population and 117 females were in the sample (46.99%). The results indicated that most of the employees were middle-aged with 66.27% percentage, from 25 to 39 years old.

The results indicated that the majority of them holding Bachelor's degree (65.26%) implies that most of the employees in the Jordanian banks are well educated, which is considered an added value for the banks. Most of them, 84.34% of bank employees have diploma from higher education including bachelor degree, master degree, Ph.D. degree, professional certification. Based on the data in Table 10, it can be noticed that the employees of the banks are committed to their employers as 89.56% of them work there longer than five years. People of the banks can work in four job positions, top management, middle management, supervisory level, and non-managerial level. This 'results indicate that the distribution of job positions of the Jordanian banks reflects the employees experiences and acade.mic level

Instrument reliability

According to SEKARAN (2003), "reliability of a measure indicates the extent to which it is without bias (error free) and, hence, ensures consistent measurement across time and across the various items in the instrument". The reliability of instrument and measurement scales indicates not only consistency but stability as well. EASTERBY-SMITH ET AL. (2002) stated that reliability is primarily a matter of stability. If an instrument is administered to the same individual on two different occasions the question is, will it yield the same result? HAIR ET AL. (2005) stressed that reliability is "an assessment of the degree of consistency between multiple measurements of a variable". According to HUSSEY AND HUSSEY (1997), "reliability is the extent to which the

research findings accurately represent what is really happening in the situation". Regarding this research, reliability was tested by Cronbach's Alpha.

4.1.2. Checking the dependent scale

4.1.2.1. Normality

An assessment of the normality of data is a prerequisite for many statistical tests because normal data is an underlying assumption in parametric testing. For this reason we check the normality for the dependent variable

In the appendix 4, Table 11 shows that the P-value is much less than 0,05 so the null hypotheses is rejected in favor of the alternative hypothesis. Here the rejection of null hypotheses means that the distribution examined is not normal, for this reason we will not use the linear regression and parametric correlation.

4.1.2.2. Reliability for financial performance

The subscale of financial performance shown in appendix 4, Table 12 consists of six items; the Cronbach alpha of reliability is 0.887 therefore indicating that the scale had good reliability. By missing one of the items, reliability could not be improved.

Table 13 in appendix 4 shows the alpha reliability of the financial performance scale. In the last column (Cronbach's Alpha if Item deleted) we can see if we removed the first item "Fin1". The alpha reliability of the remaining five items of the scale would decrease to 0.866. We can conclude that our present scale is better rather than missing items from the scale. We performed a principle component analysis for these six items which shows as we preliminary expected that all the items of financial performance lie on one principle component, which extracts 64.641% of original total variance.

4.1.3. Checking the independent variable

To prepare the test of H1, H2, H3, and H4, the hypotheses first we have tested the correlation between the dependent variable financial performance and the items of independent variables of external integration (customer integration, supplier integration), internal integration, and, internal control using Spearman's non-parametric test, fewer assumptions about the distribution of value in a sample then, a parametric test. This measures the rank correlation between the variables.

4.1.3.1. Correlation

Basic forms of correlation coefficients (e.g., Spearman rho, Pearson) were calculated to examine the strength and direction of the relationship between each set of variables. Correlation analysis is used to describe the strength and direction of the linear relationship between two variables (PALLANT, 2005). The Pearson correlation coefficient (r) is a widely used correlation method

that measures the strength of the relationship between two variables. It can only take on values from -1.00 to +1.00. A correlation of +1.00 indicates a perfect positive correlation (i.e. as one variable increases, so too does the other) and a value of -1.00 indicates a perfect negative correlation (i.e. as one variable increases, the other decreases). Conversely, a correlation of 0 indicates no relationship at all (PALLANT, 2005).

We have tested the correlation between the independent variable, customer integration, supplier integration, internal integration, internal control, dependent variable, and financial performance by using non-parametric test that's a statistical test of significance which requires fewer assumptions about the distribution of value in a sample then a parametric test. It is a measure of rank correlation (statistical dependence between the rankings of two variable).

Customer integration and financial performance

The correlation shows that all of the eight items for customer integration items are significantly as well as positively associated with the dependent variable financial performance. The statistical results illustrate that there are significant correlations (r) between the variables, CI1 (0.468) which is the lowest and highest, which is CI6 (0.661).

Supplier integration and financial performance

The correlation shows that all of the eight items for supplier integration items are significantly positively associated with the dependent variable financial performance. The statistical results indicate that there are significant correlations (r) between the variables, SI7 (0.456) which is the lowest and highest which is SI1, SI6 (0.660).

Internal integration and financial performance

The correlation shows that all the ten items for internal integration items are significantly as well as positively associated with the dependent variable financial performance. The statistical results indicate that there is significant correlations (r) between the variables, II6 (0.575) that is the lowest and the highest which is II8 (0.740).

Internal control and financial performance

The correlation shows that all the eight items for internal control items are significantly and positively associated with the dependent variable of financial performance. The statistical results indicate that there are significant correlations (r) between the variables, IC3 (0.398) which is the lowest and the highest which is IC8 (0.740). We can observe that all the above tested correlations were significant at a $p < 0.0005$ level. All these items can be used in a big factor analysis.

4.1.4. Exploring structure of items of independent variables by factor analysis

Factor analysis was conducted to assess the underlying structure for the multiple items of the research variables. In the first analysis, we can find that there are five factors with eigenvalues above 1. However, from the scree plot and variance table we can see that the items mostly lie on one dimension, where we can decide between 1 and five according to number of factors. On the base of scree plot, we would decide on one component, but on the base of original group of questions and literature, we try to build a model of four-principle component.

4.1.4.1. Explanation of concept in tables

1. Component: As can be seen in the communalities table below,
2. Initial eigenvalues total: Total variance.
3. Initial eigenvalues % of variance: The percent of variance attributable to each factor.
4. Initial eigenvalues cumulative %: Cumulative variance of the factor when added to the previous factors.
5. Extraction sums of squared loadings total: Total variance after extraction.
6. Extraction sums of squared loadings % of variance: The percent of variance attributable to each factor after extraction.
7. Extraction sums of squared cumulative %: Cumulative variance of the factor when added to the previous factors after extraction.
8. Rotation of sums of squared loadings totals: total variance after rotation.
9. Rotation of sums of squared loadings % of the variance: The percent of variance attributable to each factor after rotation.
10. Rotation of sums of squared loadings cumulative %: Cumulative variance of the factor when added to the previous factors.

4.1.4.2. Communalities

The first table of principle component analysis (communalities) Table 14 in appendix 4 shows the communalities before and after extraction. Principle component analysis works on the initial assumption that all variance is common; therefore, before the extraction the communalities are all 1. The communalities in the column labeled extraction reflect the common variance in the data structure. So, we can say that 56% of the variance associated with question 1 is common, or a shared variance. Another way to look at these communalities is in terms of the proportion of the retained factors is represented by the communalities after extraction. The highest communalities have been found at II9 from internal integration scale with extraction 79.4% of the variance, while the lowest communalities have been found at IC7 from internal control scale with extraction 54.1% of the variance. Initial communalities are estimated of the variance in each variable accounted for by all the components or factors. Extraction communalities are evaluated for the variance in each variable accounted for by the factors (or components) in the factor solution. Small values indicate the variables that do not fit well with the factor solution, and should possibly be dropped from the analysis.

4.1.4.3. Total variance explained

Variance explained by the underlying factors. After extraction, some of the factors are discarded and therefore some information is lost. The amount of variance in each variable that can be explained by Appendix 4, Table 15 shows all the factors extractable from customer integration, supplier integration, internal integration and internal control analysis along with their eigenvalues (factors). It is clear that we can notice five factors extracted. The percent of variance is attributable to each factor, as well as the cumulative variance of the factor and the previous factors. It can be noticed that the first factor accounts for 51.297% of the variance, all the remaining factors are not significant. Eigenvalue actually reflects the variance of the extracted factors whose sum should be equal to the number of items which are subjected to factor analysis. The lines of the table show all the factors extractable from the analysis along with their eigenvalues. The eigenvalue table has been divided into two sub-sections, i.e. initial eigenvalues, extracted sums of squared loadings. For analysis and interpretation purpose, we are only concerned with Extracted sums of squared loadings. Here one should note that the first factor accounts for 51.297% of the variance, the second 6.219%, the third 4.532%, the fourth 3.457%, and the fifth 2.988%. All the remaining factors have a lower eigenvalue than 1.

4.1.4.4. Scree plot of the components

The scree plot shows that Figure 16 is a graph of the eigenvalues against all the factors. The graph is useful for determining how many factors to retain. The point of interest is where the curve starts to flatten. It can be seen that the curve begins to flatten between factors 2 and 4.
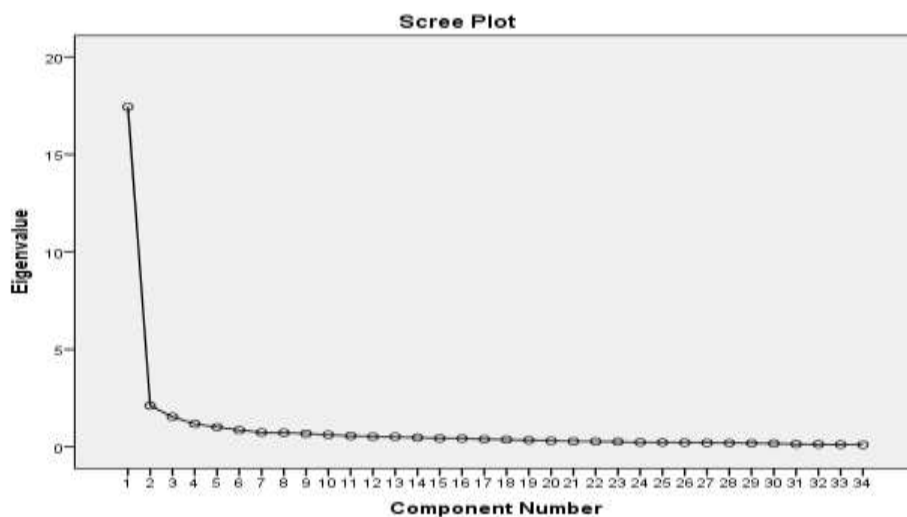

Figure 16: Scree Plot

Source: Created by the Author

So, this plot suggests to retain one factor only. We decided on using four components because our items come from four groups of questions in the literature that has been mentioned. Eigenvalue

is the standardized variance associated with a particular factor. The sum of the eigenvalues cannot exceed the number of items in the analysis since each item contributes one to the sum of variances.

4.1.4.5.   Component Matrix

Appendix 4, shows the Table 16 which represent the loadings of the 34 variables on each factor extracted. The higher the absolute value of the loading, the more the variable contributes to the factor. Each number represent the coefficient of the variable in a factor. (e.g. the coefficient of internal integration II2, in the factor 1 is equal 0.847). These coefficients can help formulate an interpretation of the factors or the components. This is done by looking for a common thread among the variables that have large loadings for a particular factor or component. It is possible to see items with large loadings on more than one factors, which can make interpretation more difficult. The other problem appears on some factors, which seem useless when there are no items that would lie on that factor. In these cases, it can be helpful to examine a rotated solution. The idea of rotation in the rotated component (factor) matrix is to change the factor loadings of items so all factors have a number of items, which lie on them. Rotation does not actually change anything, but makes the interpretation of the analysis easier.

4.1.5. The first trial of the promax rotation

We applied here the promax rotation, which is an oblique one, so it allows factors to be correlated. When using the oblique rotation, the pattern matrix it is examined for factor/item loadings. The pattern matrix holds the loadings (which are of most interest), and each row of the pattern matrix can be thought of as a regression equation where the standardized observed variable is expressed as a function of the factors, with loadings as the regression coefficients. The structure matrix holds the correlations between the variables and the factors, which are generally of less interest in exploratory applications. Do orthogonal and oblique rotations produce noticeable differences? Orthogonal and oblique rotations will produce virtually identical solutions in the unlikely case where factors are perfectly uncorrelated. As the correlation between latent variables diverges from $r = 0.00$, then the oblique solution will produce increasingly clearer results.

4.1.5.1.   Kaiser Meyer Olkin (KMO)

Kaiser Meyer Olkin (KMO) and Bartlett's Test in appendix 4, Table 17 measures the strength of relationship among the variables. The KMO measures the sampling adequacy (which determines if the responses given with the sample are adequate or not) which should be close to 0.5 for a satisfactory factor analysis to proceed. KAISER (1974) recommended 0.5 (value for KMO) as the minimum (barely accepted), values between 0.7-0.8 acceptable, and values above 0.9 are superb. Looking at the table above, the KMO measure is 0.955. There is no significant answer to question, "How many cases respondents do I need to factor analysis?", and methodologies differ. A

common rule is to suggest that a researcher has at least 10-15 participants per variable. In general over 300 respondents resulted that sampling analysis is probably adequate. There is universal agreement that factor analysis is inappropriate when sample size is below 50.

Bartlett's test is another indication of the strength of the relationship among variables. These test the null hypothesis that the correlation matrix is an identity matrix. An identity matrix is matrix in which all of the diagonal elements are 1 and all off-diagonal elements (term explained above) are close to 0. Due to this, the null hypothesis should be rejected. From the same table, we can see that Bartlett's Test of Sphericity is significant (0.000). That is, significance is less than 0.05. i.e. the significance level is small enough to reject the null hypothesis. This means that the correlation matrix is not an identity matrix. KMO and Bartlett's Test of sampling adequacy indicates that the relationship among the variables is strong 0.955 and it is close to 1 that means the responses given with the sample are adequate. In other words, the KMO is well above the recommended acceptable level of 0.5 as the obtained value is 0.955. Moreover, results confirm that the KMO test supports the sampling adequacy and it is worth conducting a factor analysis. Bartlett's test of sphericity is conducted for confirming the relationship between the variables. If there is no relationship then it is irrelevant to undertake factor analysis. Bartlett's Test of Sphericity tests the null hypothesis to see if the correlation matrix is an identity matrix. An identity matrix is matrix in which all of the diagonal elements are 1 and all off-diagonal elements are 0.

4.1.5.2. Communalities

All the communalities were big enough to continue the analysis, (the thumb rule is to be above 0.25). The highest communalities have been found at II9 from internal integration scale with extraction explained 76% of the variance, while the lowest communalities has been found at SI7 from supplier integration scale with extraction 43.3% of the variance.

4.1.5.3. Total Variance Explained

When components are correlated, sums of squared loadings cannot be added to obtain a total variance. As shown in the Appendix 4, Table 18 used Promax rotation method because there was no hope to get more than one independent (orthogonal) factor. In this respect, we used the oblique Promax rotation and we decided to utilize four components in order to prove the four groups of questions in the literature that has been mentioned. In addition, we eliminated some items to prevent cross loading and moved some items from their original subscale to another in accordance the result of the analysis.

4.1.5.4. Pattern Matrix

The rotated solution showed in appendix 4, Table 19 that IC1, and IC8 belong to integration subscale, while CI1 and II3 belong to the supplier integration, showing that several items must

have been removed (CI5, CI8, SI1, SI8, IC4, II1,II2). Below we will present the final model (Table 20,21, 22,23,24).

4.1.6. Principle complete analysis (PCA) with Promax rotation after eliminating unnecessary items

4.1.6.1.   KMO and Bartlett's test

The Kaiser-Meyer-Oklin (KMO) value, as shown in appendix 4, Table 20 at 0.947 noticeably exceeds the recommended value of 0.6, while the Bartlett Test of Sphericity gives a value significant at the 0.01 level (p = 0.000).This model is useful to use because the KMO (.947) is high enough and the Bartlett's test of Sphericity is significant.

4.1.6.2.   Communalities

As shown in appendix 4, Table 21 the top communalities were found at CI2 from internal integration scale with extraction explained at 78.9% of the variance, while the low communalities were found at IC7 from internal control scale with the extraction of 53.3% the variance. All the previous communalities are big enough to continue the analysis (the thumb rule is to be above 0.25).

4.1.6.3.   Total variance explained

We can observe from appendix 4, Table 22 that the percentage of total variance is extracted for each component and altogether 66.678% and the first component explained 11.25, of the variance, second variance explained by this factor 10.719, the third factor explained 7.297 of the variance while the fourth factor is 9.443.

4.1.6.4.   Pattern Matrix

The pattern matrix in appendix 4, Table 23 above reveals that in the final solution the factor one consists of nine items. This factor was labeled internal integration and demonstrated a high internal consistency, which will show when we examine the reliability test later. The second factor consisted of eight items including most of the supplier integration items and two items from customer integration CI1, and the other one from internal integration II3. This factor was identified as the supplier integration and reflected a high internal consistency, as we will examine in the reliability test later. Factor three contained five items relating to control and was labeled "internal control". The internal consistency of this item was also high, as we will examine in the reliability test later. The fourth factor was made up of five items, all of which were related to customer. This factor was called "customer integration" and was found highly reliable. Overall, the factor analysis of the items revealed that from all items with the same response scale, only seven items did not belong to any factor. These four factors were considered subscales of supply

chain integration and internal control in Jordanian banks' scale for further analyses. The factor loadings are proper and there is no cross loading. The rotated solution showed that IC1, and IC8 belong rather to the internal integration subscale, while CI1 and II3 belong to rather the supplier integration.

4.1.7. Reliability test after extraction

GARSON (2008) stated that "Cronbach's alpha is commonly used to establish internal consistency in constructing validity, with 0.60 considered acceptable for exploratory purposes, 0.70 considered adequate for confirmatory purposes, and 0.80 considered good for confirmatory purposes". The derived factors in each construct were tested for reliability to emphasize their internal consistency. As shown in Table 24, the Cronbach's alpha values are ranged from 0.773 to 0.943. The general Cronbach's alpha value of all extracted factors is 0.967. This means that there is also a high-level of consistency in the structure of the data. All values for Cronbach's alpha are above the acceptable level of 0.60. GARSON (2008) explains that Cronbach's alpha reflects the construct validity of a research model. There are a number of different methods for testing the reliability of a scale or an instrument. Cronbach's Alpha (α) is the most widely used to measure the internal reliability of a scale (NUNNALLY, 1978). The range of α is from 0 to 1. Hence, the higher α is the more reliable the scale is. There are wide differences amongst researchers and authors regarding what value of α should be considered acceptable. However, in social science studies, a value of 0.60 is acceptable for hypothesis testing (SEKARAN, 2003). The scales in this study are composite - with composite scales, the internal reliability is considered more important (BRYMAN AND CRAMER, 2005). The general α of this study's scale was 0.9650, which is considerably high. Table 25 summarises the value of the four composite scales in this study, all of them are good, and greater than the lowest level of the accepted reliability in the social sciences (0.60).

4.1.7.1. Reliability

Table 24 in the appendix 4 examine the reliability of the items that consist of thirty-four original items, which after the rotation becomes 27. The overall of the new subscale score of Cronbach alpha of reliability is 0.848. The subscale of internal integration consisted originally of ten items but two of them have been deleted (II1, II2), as well as during the factor analysis, because of cross loading, two other items have been included (IC1, IC8). The final score of Cronbach alpha of reliability is 0.934. The subscale of supplier integration consisted originally of eight items but two (SI1, SI8) have been deleted and two from another subscales were included (CI1, II3) which were deleted during the factor analysis because of cross loading. The final score of Cronbach alpha of reliability is 0.910. The subscale of internal control consisted originally of eight items

but one of them has been deleted (IC4) during the factor analysis due to cross loading. The final score of Cronbach alpha of reliability is 0.858. The subscale of customer integration consisted originally of eight items but two of them have been deleted (CI1, CI8) during the factor analysis because of cross loading. The final score of Cronbach alpha of reliability is 0.872.

4.1.7.2.   Multicollinearity

After the factor analysis, the distribution of the four new principle components was tested. The result showed that these factors are not normal, and for this reason, we used the nonparametric test. The correlations between these factors are no more than 0.80, which means that these factors are valid and that there is no evidence of multicollinearity. However, the correlations between the implementation of supply chain integration, internal control, and financial performance to these factors are at least moderate but no more than 0.80, which means that there is a high level of discriminant validity in the model for the supply chain integration and internal control and financial performance. Most of the correlations are significant at the 0.01 level. This means that most of these inhibitors have no significant relationship with other factors extracted. There are four extracted factors for supply chain integration and internal control correlations between the variables that are positive and moderate. The correlation between these factors and supply chain integration and internal control do not exceed 0.80, showing that all correlations are significant at the 0.01 level. Therefore, it can be concluded that the supply chain integration and internal control construct is a considerable level of discriminant validity. Also, there is no evidence of multicollinearity.

4.1.7.3.   New model after rotation

 Figure 17 shows how the new subscales after rotation illustrate financial performance. The internal integration has the first rank in the model, secondly is the supplier integration, internal control took a place in the third rank, while the last subscale is customer integration.
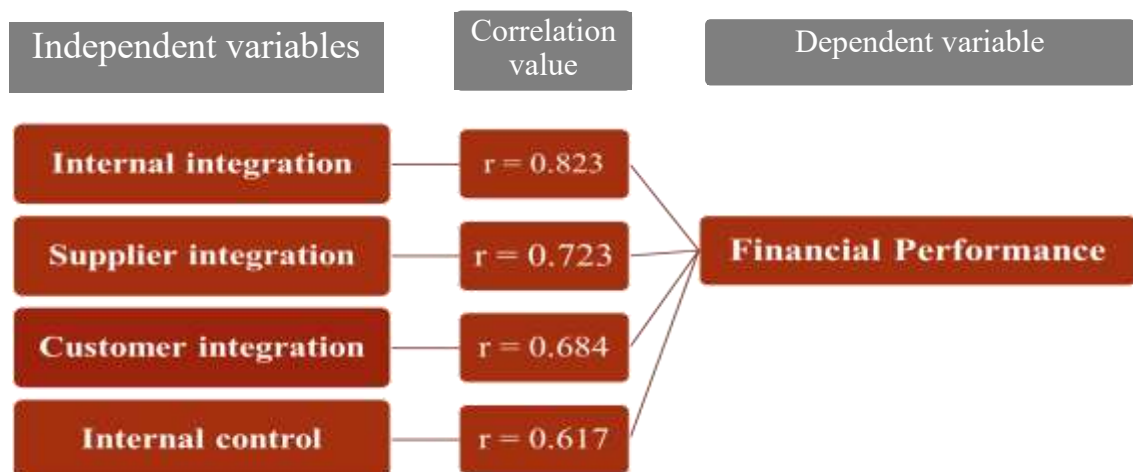
Figure 17: New Subscale for SCI and Internal Control
Source: Created by Author

4.1.7.4.   The hypotheses of the empirical model

The results of exploratory factor analysis (EFA) – with a few modifications – confirmed the existence of four subscales (customer integration, supplier integration, internal integration and internal control) that we originally supposed to influence the financial performance.

The next step we will test the hypotheses of the model of supply chain integration and internal control on financial performance in detail.

*H*1**: External integration positively influences financial performance in Jordanian banks, at α≤0.05.**

A: Customer integration positively influences financial performance.

B: Supplier integration positively influences financial performance.

*H*2**: Internal integration positively influences financial performance in Jordanian banks, at α≤0.05.**

*H*3**: Internal control positively influences financial performance in Jordanian banks, at α≤0.05.**

To check these hypotheses, we have tested the correlation between the dependent variable financial performance and the new factors of independent variables after rotation such as: customer integration, supplier integration, internal integration and internal control using Spearman's non-parametric test which requires fewer assumptions about the distribution of value in a sample than a parametric test. It measures the rank correlation between the variables. Some items must have been removed (CI5, CI8, SI1, SI8, IC4, II1, II2).

4.1.8. Testing normality

The normality test in appendix 4, Table 25 shows the results of Lilliefors corrected Kolmogorov-Smirnov test of normality for the principle components and the dependent variable financial performance and it is clear that almost all (except one) are not normal, for this reason we will not use the linear regression and parametric correlation.

4.1.8.1.   Correlations

Table 26 shows in appendix 4 the correlation of dependent variable and independent variables are as follows in the order of decreasing r-values.

- The first principle of factor affecting financial performance is internal integration (H2).

The correlation shows that the internal integration subscale is significantly positively associated with the dependent variable financial performance (r= 0.823).

- The second principle of factor affecting financial performance is supplier integration (H1b). The correlation shows that the supplier integration subscale is significantly positively associated with the dependent variable financial performance (r= 0.723).

- The third principle of factor affecting financial performance is customer integration (H1a). The correlation Table 26 shows that the customer integration subscale is significantly and positively associated with the dependent variable financial performance (r= 0.684).

- The fourth principle of factor affecting financial performance is internal control (H3). The correlation shows that the internal control subscale is significantly positively associated with the dependent variable financial performance (r=0.617). All the above-tested correlations were significant at a $p < 0.0005$ level when they were observed. The statistical results indicate that all of the research hypotheses are true. The order of principle components based on the measure of correlation is internal integration, supplier integration, customer integration and internal control.

4.2. Service quality and customer satisfaction

4.2.1. Respondents' demographic description:

The analysis of the gathered data revealed the following results in terms of gender, age, academic level, relationship duration with the bank, type of banks, bank preferences, clientee, type of account, type of product and service, currency, type of transactions, the reason of choosing of the bank, location, profession of customers as shown in Appendix 4, Table 27. Sample by gender distribution shows that the males represent 49.9% of the 825 respondents while the ratio of females is 50.10%. The results indicate that most of the answerers (73.47%) are middle-aged from 18 to 39 years old. The distribution by the academic level shows that the most of the repliers have a higher level of education (82.8%). Banks attract new customers, 35.75% of the interviewees have relationship from one to five years and more than half of the respondents (58.96) committed to the banks for 10 years. Most of the customers prefer to deal with Jordanian banks (94.42%) rather than foreign banks (5.75), moreover, the customers of Jordanian banks prefer commercial banks (89.93%) than Islamic banks (10.06%). The repliers are customers of 19 Jordanian banks from wich 73.31% of answerers are the customers of four banks, these are Housing and Trade Bank, Ahli Bank, and Union Bank. The current account (65.09) is the most popular type of accounts that used by customers of the Jordanian banks, the second is the savings account (29.45%) and third is the deposit account (5.45%). In Jordanian banks, there are five types of products and services, bank loans for individuals, corporate banking, electronic services, investment accounts, and service of bank accounts, from these most of the customers use service of bank accounts (60.24%). The interviewees prefer to use the Jordanian Dinars (96.36%) instead of other currencies. The banking transaction that the respondents prefer are in person branch experiences and ATMs (79.99%). The most imperative factors for the customer to select a bank are the quality of service and location of the bank (55.87%). Because Amman is the capital of

Jordan and most of the commercial transactions done in it 68% of banks are located in the capital. Most of the bank's customers work in the private sector (50.56%).

4.2.2. Instrument reliability

According to SEKARAN (2003), "reliability of a measure indicates the extent to which it is without bias (error free) and, hence, ensures consistent measurement across time and across the various items in the instrument". The reliability instrument and measurement scales indicate the consistency and stability. EASTERBY-SMITH ET AL. (2002) stated that "reliability is primarily a matter of stability. If an instrument is administered to the same individual on two different occasions the question is, will it yield the same result? ". HAIRE ET AL. (2005) stressed that reliability is "an assessment of the degree of consistency between multiple measurements of a variable". According to HUSSEY AND HUSSEY (1997), "reliability is the extent to which the research findings accurately represent what is really happening in the situation". Regarding this research, reliability has been tested by Cronbach's Alpha.

4.2.3. Checking the dependent scale

4.2.3.1. Normality test

The P- value is less than 0.05, therefore, the null hypotheses is rejected in favor of the alternative hypothesis appendix 4, Table 28. The rejection of null hypotheses means that the distribution examined is not normal, so linear regression and parametric correlation cannot be applied.

P-value is less than (or equal to) α, then the null hypothesis is rejected in favor of the alternative hypothesis. In addition, *P*-value is greater than α, then the null hypothesis is not rejected. The distribution examined is not normal therefore linear regression and parametric correlation is not used.

4.2.3.2. Reliability for customer satisfaction

The subscale of customer satisfaction consists of four items; the Cronbach alpha of reliability is 0.876, which indicates that the scale has good reliability appendix 4, (Table 29).

The alpha reliability of the customer satisfaction scale is displayed on appendix 4, Table 30. With removing the "CS1" from the last column, the alpha reliability of remaining three items of the scale would decrease to 0.809. The table and factor analysis shows that CS3 items could be missed, but we decided to keep it because the Cronbach's alpha is higher than 0.60, which is acceptable, but we do not want to reduce the size of a very small subscale.

We applied here a principle component analysis to check that the items of dependent variable lie on one dimension. The communalities of extraction are shown in appendix 4, Table 31 to clarify the principle component analysis. The top communalities were found at CS2 from customer

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satisfaction scale with extraction 83.6% of the variance, while the lowest communality were found at CS3 from customer satisfaction scale with extraction 53.9% of the variance. All the items of customer satisfaction lie on one principle component, which extracts 73.684% of original total variance illustrated in appendix 4, Table 32 to analyze the Principle component analysis. Because the Cronbach alpha is good and principle component analysis showed one principle component this scale for dependent variable is quite good.

4.2.4. Checking the independent variable

To check this hypothesis, we have tested the correlation between the dependent variable customer satisfaction and the items of independent variables of service quality which are tangibility, responsiveness, empathy, assurance, reliability, financial aspects, access, and, employee competences using Spearman's non-parametric test which requires fewer assumptions about the distribution of value in a sample than a parametric test. It measures the rank correlation between the variables

4.2.5. Correlation of the service quality and customer satisfaction

Tangibility and customer satisfaction

All the five tangibility items have significant and positive correlations with customer satisfaction, variable Tan1 (0.436) is the lowest and variable Tan5 (0.551) is the highest value.

Responsiveness and customer satisfaction

The four responsiveness items are also significantly and positively associated with customer satisfaction with the lowest and highest correlation values of Res3 (0.548) and Res1 (0.641) respectively.

Empathy and customer satisfaction

The six empathy items and customer satisfaction are significantly and positively correlated having the lowest item of Emp6 (0.465) and the highest of Emp5 (0.654).

Assurance and customer satisfaction

The statistical results indicate that there are significant and positive correlations between the four items of independent variable and customer satisfaction (Assur4 (0.576) the lowest and the Assur3 (0.682) the highest).

Reliability and customer satisfaction

As the result of the analysis variable Rel4 (0.548) has the lowest and variable Rel5 (0.700) has the highest correlation value. The five reliability items are significantly and positively associated with the dependent variable customer satisfaction.

Access and customer satisfaction

Three access items and customer satisfaction are also significantly and positively correlated. The minimum and maximum correlation values are Acc3 (0.597) and Acc2 (0.668) respectively.

Financial aspect and customer satisfaction

Financial aspect consisting of six items are correlated significantly and positively with customer satisfaction having the minimum value of Fin2 (0.456) and maximum value of Fin5 (0.670).

Employee competences and customer satisfaction

All the three employee competences' items are significantly and positively associated with the dependent variable with the smallest value of Ecom3 (0.702) and the biggest value of Ecom1 (0.728).

4.2.6. Structure of items of independent variables

4.2.6.1. Factor analysis

Factor analysis assessed the relationship structure between research variables. The first analysis we found that there are four factors with eigenvalues above one. Variance table (Table 33) we can see that the items mostly lie on one dimension, so we can decide on one component; but we can decide between one and four according to the number of factors. Taking into account that we originally had eight groups of questions we will use the maximum possible number of principle components which proved to be four so we try to build a model of four principle components.

4.2.6.2. Commumalities

In the first trial of the principle component analysis, all the communalities were proper between 74.5%, which has been found at Emp2, and 44.1%, which was referred at Emp6 both from empathy scale.

4.2.6.3. Total variance explained

The factors extractable from (tangibility, responsiveness, empathy, assurance, reliability, access, financial aspect, employee's competences) the analysis and the related eigenvalues are in appendix 4, Table 34, four factors were extracted. There were four values above the eigenvalues of one and they are listed as items 1-4. Notice that the first factor accounts for 53.424% of the variance, while all the remaining factors are weak.

4.2.6.4. Component matrix

The eight subscales on the one factor extracted is shown in Appendix 4, Table 34. The higher the absolute value of the loading, the more the variable contributes to the factor. These factor loadings can help formulate an interpretation of the factors or components. It is possible to see items with large loadings on more than one of the factors (cross loading) which can make interpretation more difficult. Some factors seem useless which make a problem especially difficult when there is no item that lies on that factor. Upon that it is more helpful to examine a rotated solution. The idea of rotation is the same as we mentioned before. Rotation does not actually change anything, but makes the interpretation of the analysis easier.

4.2.7. The first trial of the promax rotation

4.2.7.1. Communalities

All the communalities are big enough that the analysis should be continued (the thumb rule is to be above 0.25). The highest communalities has been found at Emp2 from empathy scale with extraction explained 75.4 % of the variance, while the lowest communalities have been found at Emp6 from empathy scale with extraction 41.1 % of the variance.

4.2.7.2. Total variance explained

In appendix 4, Table 35 displays the eigenvalue, which is divided into three sub-sections (i.e. initial eigenvalues, and extracted sums of squared loadings and rotation of sums of squared loadings). For analysis and interpretation purpose, we are only concerned with the extracted sums of squared loadings. Above, the table shows the eigenvalues and percentage of variance that are explained again. Clearly, the first factor of the initial solution is much more important than the second. The last column shows rotated factors, which explain just the same amount of variance as the two factors which of the initial solution the division of importance between the two rotated factors, which is very different. The original sum of squared loadings of components were 19.233, 1.957, 1.290, and 1.030. After rotated, the sum of squared loadings of components are 17.077, 16.136, 10.386, and 13.144. We extracted an appropriate number of factors. Rotation will ensure that the variability explained is more or less evenly distributed between the factors.

4.2.7.3. Pattern matrix

Pattern matrix that shown in appendix 4, Table 36 consist of the data of four factors look to have emerged, in spite that there are some variables of the factor loading are too small to be displayed. There are four factors determined: factor 1, reliability, assurance, access and employee competences, factor 2, empathy and responsiveness, factor 3, financial aspect and factor 4, tangibility. Pattern matrix provides an information for unique contribution of a variable to a factor. We used the loading greater than 0.4 according to (STEVENS, 2012). At this stage, we reached

rotated solution, and we can see the factor scores. Pattern matrix shows how the factor scores have been computed. In the solution, all four components are almost proper because at least five items belong to each component, but the cross loading problem still exists. In the following stage, step by step, we left several items that we could reach the model without cross loading.

4.2.8. Principle component analysis (PCA) with promax rotation after missing unnecessary items. Below we will present the final model

4.2.8.1.   KMO and Bartlett's test

The KMO in appendix 4, Table 37 shows 0.972 is high enough, exceeds greatly 0.6. The value of Bartlett's test of sphericity is significant ($p < .001$), which indicates that we have a good model.

4.2.8.2.   Communalities

Communalities are proper because all of the items above are bigger than 0.25. According to appendix 4, Table 38, the highest communalities were found at Emp3 from empathy scale with extraction 76% of the variance, while the lowest communalities were found at Emp4 from empathy scale with extraction 51.4% of the variance.

4.2.8.3.   Total variance explained

The initial eigenvalues as shown appendix 4, Table 39 shows that the first four factors are meaningful as they have eigenvalues higher than one. Factors 1, 2, 3 and 4 explain 53.188%, 5.769%, 4.003, and 3.249% of the variance respectively is a cumulative total of 66.208% (completely acceptable). The extraction sums of squared loadings provides similar information based only on the extracted factors. The original sum of squared loadings were 16.488, 1.788, 1.241, and 1.007. After rotated the sum of squared loadings are 14.614, 13.668, 9.854, and 11.354.

4.2.8.4.   Pattern matrix

The Pattern Matrix shows appendix 4, Table 40 and the factor loadings for the rotated solution. Factor loadings are similar to regression weights (or slopes) and indicate the strength. The solution has been rotated to achieve an interpretable structure. When the factors are uncorrelated, the Pattern Matrix and the Structure Matrix should be the same and not the case here.

4.2.8.5.   Structure matrix

The structure matrix shows the correlations between the factors and the items for the rotated solution appendix 4, (Table 40). In the following section, we will analyze the relationship of the new subscales that we have received in this last analysis.

4.2.8.6.   Component correlation matrix

In appendix 4, Table 42, the component correlation matrix shows that factor 1, 2, 3 and 4 are statistically correlated.

4.3. The new subscales – checking the reliability

4.3.1. Reliability

Reliability has been examined as shown in appendix 4, Table 43 for the items, which include thirty-six items originally, as well as after the rotation becomes thirty-one, the new subscale score of Cronbach alpha value is 0.969. The new subscale of assurance, reliability, access, and employee competencies are originally made up of fifteen items; but three of them have been deleted (Assur2, Assur3, Assur4) because of cross loading. The final Cronbach alpha is 0.951. The subscale of responsiveness and empathy originally inculed ten items; two of them have been deleted one form responsiveness subscale (Res1), and the other one from empathy subscale (Emp6), the final score of Cronbach alpha here is 0.931. The subscale of the financial aspect consisted originally of six items where none of them have been deleted, the total Cronbach alpha value is 0.886. The subscale of tangibility initially consisted of five items, no items have been deleted, and the final score of Cronbach alpha is 0.843.

4.3.1.1. New model after rotation

Comparing the new model of service quality in Figure 18 with an old one in figure 18, we can observe that now we have four subscales in the new model instead of the eight subccales in the initial model.
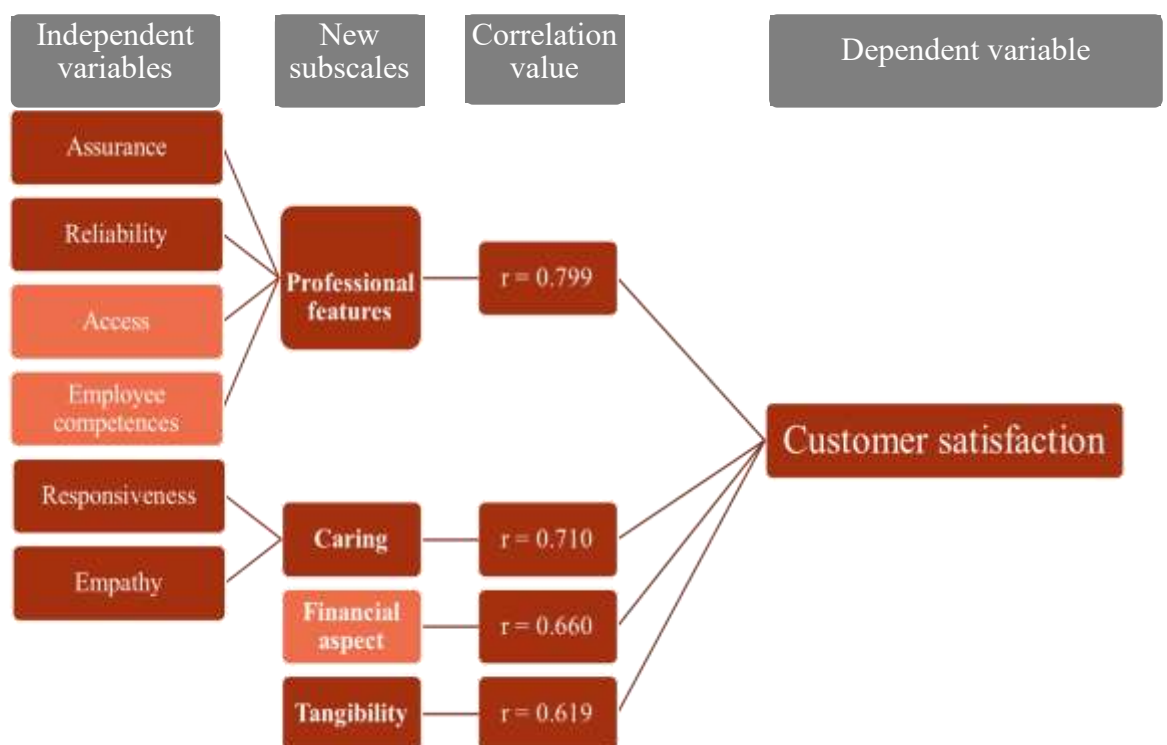
Figure 18: New Service Quality Model

Source: Created by Author

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The first subscale contains four dimensions, which are assurance, reliability, access and employee competences. The second subscale consists of two dimensions responsiveness and empathy. The third and the fourth subscales, financial aspect and tangibility are separate factors.

4.3.1.2. *Reliability of all variables*

The subscale of service quality and customer satisfaction in Jordanian banking sector consists, shown in appendix 4, Table 44 and Table 45, of thirty-one items, the Cronbach alpha of reliability is 0.969, which indicates that the scale has high reliability. The total items showes the reliability for each item on each factor. By missing one of the items, reliability could not be improved.

4.3.1.3. *Hypotheses testing*

The results of Lilliefors corrected Kolmogorov-Smirnov test of normality for the principle components and the independent variable are shown in appendix 4, Table 46 to service quality and it is obvious that almost all (except one) are not normal, for this reason we will not use the linear regression and parametric correlation.

4.3.2. Answering the hypotheses from correlation

The first subscale affecting customer satisfaction consists of assurance, reliability, access and employee competences dimensions, and this subscale is in significant and positive relationship with customer satisfaction (r = 0.799). The second subscale contains responsiveness and empathy, which is significantly and positively correlated to customer satisfaction (r = 0.710).

The third subscale, financial aspect correlation to customer satisfaction is positive nad significant too (r = 0.660). Finally, the fourth subscale, tangibility and customer satisfaction has a correlation value of 0.619 that also means a significant and positive relationship.

All tested correlations were significant at the p < 0.0005 level are illustrated in appendix 4,Table 47. The statistical results indicate that all of the research hypotheses are true. The order of principle components based on the measure of correlation is tangibility, responsiveness, empathy, assurance, reliability, access, employee competences, and financial aspect.

4.4. Discussion

4.4.1. The impact of supply chain integration on financial performance

The main purpose of this research is to investigate the impact of supply chain integration on financial performance in the Jordanian banking sector. The findings emerging from hypotheses testing proved that there is a statistically significant impact of supply chain integration on the financial performance. These results confirmed what earlier studies have found concerning the

presence of the significant impact of supply chain integration on financial performance (CIGDEM AND ANAND, 2017; VEERA ET AL. 2016; DEMETER ET AL. 2016; WOOJUNG ET AL. 2016; SCHOENBERR AND SWINK, 2015; HUO, 2012; JITPAIBOON ET AL., 2013; SCHOENBERR AND SWINK, 2012; CAO AND ZHANG, 2011; FLYNN ET AL. 2010; RICHEY ET AL., 2010; LI ET AL., 2006; KIM, 2013; DAS ET AL. 2006; DRÖGE ET AL., 2004; NARASSIMHAN AND KIM 2002; STANK ET AL.2001; VERONA 1999).

4.4.1.1.   *Customer integration positively influences the financial performance*

The results clarify that the internal integration and supplier integration are more strongly related to the improvement of financial performance than customer integration. The results indicate that Jordanian banks depend on relationships with their customers to enhance and develop financial performance and banks share knowledge with their customers. These findings are consistent with previous studies that indicate the importance of supplier integration, customer integration, and internal integration to enhance financial performance. However, the customer integration was the third most effective factor on financial performance, which means the internal integration and supplier integration affect more the financial performance than customer integration.

Our findings that customer integration is significantly related to financial performance are consistent with the findings of several previous studies (ZHANG ET AL., 2015; FROHLICH AND WESTBROOK, 2001; SCHOENBERR AND SWINK, 2012).

4.4.1.2.   *Supplier integration positively influences the financial performance*

The result shed light on the idea that the supplier integration has a positive and significant impact on financial performance. Supplier integration was the second most effective factor that related to the improvement of the financial performance. Supplier integration may not contribute to financial performance directly but instead interacts with customer integration in improving financial performance reflecting the importance of banks' integration with both downstream and upstream supply chain partners. The literature does not unanimously agree on the positive relationship between supplier integration and financial performance. Therefore, studies that aggregate supplier and customer integration in a single construct (external integration) may be drawing inaccurate conclusions. In general; the literature on the relationship of supplier integration with performance has very mixed findings. While some studies (KOUFTEROS ET AL., 2014; SWINK ET AL., 2007) found that supplier, integration was negatively related to certain aspects of financial performance, YU ET AL. (2013); AND STANK ET AL. (2001) found a positive relationship between supplier integration and financial performance

4.4.1.3.   Internal integration positively influences the financial performance

The results show that internal integration has a positive and significant effect on financial performance. The results revealed that the internal integration has the highest impact on financial performance comparing with other factors. The result pointed out that the Jordanian banking processes are integrated and connected with the departments and employees by sharing the information, depending on the relationship between the departments, to effectively incorporate, enhance and develop financial performance. Internal integration capabilities are the major drivers of a bank's financial performance.

The internal integration plays a cornerstone role in enhancing the communication networks between employees and managerial levels. Accordingly, it will decrease the formality of the relationship between them giving employees the sense of freedom to share different perspectives, opinions and knowledge between each other. In the same direction, decreasing the level of formality and removing boundaries between departments will encourage employees to suggest and share new ideas and changes in regards to daily normal business processes, which will be reflected on the efficiency and effectiveness of the work, decreasing work pressure and increasing employee's loyalty and motivation. Eventually, these reasons collectively will contribute to enhancing an organization's overall financial performance.

When we compare our results with those from previous research on supply chain integration, our findings that internal integration was significantly related to financial performance are consistent with several studies (LOTFI ET AL., 2013; FLYNN ET AL., 2010; STANK ET AL. 2001).

4.4.2. The impact of internal control on financial performance

The results reveal the internal control has a positive and significant effect on financial performance. The result indicates that Jordanian banks rely on internal control to enhance and develop financial performance, and the internal control is effective and efficient in Jordanian banks. Internal control implies sharing more knowledge with the board to help in evaluating and developing plans to achieve a higher financial performance. Internal control provides guidelines for managers to direct their SCI efforts to achieve superior performance.

The concept of internal control and the financial performance assessment process are closely linked. They complement each other. The goal is to identify gaps, propose corrections and plans in the future, minimize risks and make the right decisions. Performance evaluation is, therefore, part of internal control. Internal control is conducted in diverse legal and cultural environments; in organizations that vary in purpose, size, complexity, and structure; and by persons within or outside the organization. If the control is the process of measuring and correcting the performance, the evaluation of performance is an analysis of the results showing the strengths and

weaknesses discovered during the completion of activities within the organization. These findings are consistent with previous studies that indicate the importance of internal control on enhance financial performance (HADDAD, 2016; IIA, 2013). Whenever there is a high level of knowledge sharing between the departments, it is considered a part of internal integration. The internal integration will play a big role in new strategy development that will also address the financial goals. In other words, the financial goals and plan will be developed in accordance with the internal processes and integration, such as the interactive collaborative processes and practices among organization departments that will be positively reflected on the performance, production and waste reduction. All of the mentioned dimensions will affect the organization's financial aspects and will represent an organization's internal control. Moving in a similar direction, an increase in supply chain integration will lead to customer satisfaction, which will lead to an increase in market share and eventually an increase in profit.

4.4.3. Service quality positively influences customer satisfaction

The relationship between service quality and customer satisfaction is examined in the Jordanian banking sector, using the modified SERVQUAL model and adding three dimensions, which are access, financial aspect, and employee competences in the basic model. The result shows that the service quality has a positive and significant effect on customer satisfaction. This implies that the customers of the Jordanian banking sector are convenient and satisfied with the service quality provided by the banks. Moreover, the financial services meet the customers' expectations and their needs. These findings are consistent with previous studies that indicate the importance of service quality on enhancing customer satisfaction. (SHAHRAKI. 2014; BHATNAGAR, 2016; RISHI AND DEEPAK. 2017; GOH ET AL. 2016; HENNAYAKE, 2017; FELIX, 2017; ALSHURIDEH ET AL. 2017; CHRYSI ET AL. 2017; POTLURI ET AL. 2016; AKHTAR AND ZAHEER, 2014; YARIMOGLU, 2014; MARKOVIĆ ET AL., 2015; BIHARI AND MAHAPATRA, 2016; ELENI ET AL. 2017).

4.4.3.1. *Tangibility positively influences customer satisfaction in the Jordanian banking sector*

The results reveal that tangibility has a positive and significant effect on customer satisfaction. The results pointed out that the tangibility is the fourth factor of service quality dimensions. Moreover, the result indicates that Jordanian bank customers were satisfied with the physical appearance such as employee's neat appearance, modern looking equipment, and the materials that associated with the service and easy to use. Many studies defined tangibility as those things related to appearance, equipment, personnel, and communication (PARASURAMAN ET AL., 1988, 1991; ZEITHAML AND BITNER 2001, 2003; JABNOUN AND AL TAMIMI, 2003).

According to Othman (2003), the tangibles are the external appearances. The results impliy that the customers of the Jordanian banking sector are satisfied and they do view tangibility as an important factor. These findings are consistent with previous studies (SHAHRAKI. 2014; ANANTH, ET AL., 2011; RISHI AND DEEPAK, 2017; SANJUQ, 2014; CHOUDHURY, 2014; KRISHNAMURTHY ET AL., 2010; SELVAKUMAR, 2015) and inconsistent with one study (ALBARQ, 2013) that found opposite relationship between tangibles and customer satisfaction.

4.4.3.2. *Responsiveness positively influences customer satisfaction in the Jordanian banking sector*

Responsiveness and empathy together form the second factor. The results reveal that responsiveness has a positive and significant effect on customer satisfaction. The result shows that the customers were satisfied with the responsiveness of the employees. Findings indicate that the employees willing to help the customers, bank employees are able to respond the requests and they have confidence to tell the customer when the services will be performed. Several authors identify the responsiveness as being willing to help the clients and give quick service; it is communicated to customers by the length of time they have to wait for assistance and attention to problems. These findings are consistent with previous studies (PARASURAMAN ET AL., 1985-1994; JABNOUN AND AL TAMIMI, 2003; LAM, 2002; SURESHCHANDAR ET AL., 2003; NEWMAN, 2001; ZEITHAML AND BITNER, 2001, 2003; JOHNSTON, 1997; KRISHNAMURTHY ET AL., 2010; SELVAKUMAR, 2015; RISHI AND DEEPAK, 2017; AND LAU. ET AL., 2013).

4.4.3.3. *Empathy positively influences customer satisfaction in the Jordanian banking sector*

Empathy and responsiveness together form the second factor. Empathy also proved to be significantly related to customer satisfaction. With the good communication and understanding of customer needs and friendly behavior, empathy will be achieved (ENNEW AND WAITE, 2013). The result implies that the customers of the Jordanian banking sector are satisfied by the empathy dimension when branches are in a convenient location, they get a care, good operating hours, and they have understanding for their needs. In addition, understanding the customer expectations will influence better performance among competitors. These findings are in line with previous studies (KRISHNAMURTHY ET AL., 2010; SELVAKUMAR, 2015; SHANKA, 2012; RISHI AND DEEPAK, 2017; NAVARATNASEELAN AND ELANGKUMARAN, 2014).

4.4.3.4. Reliability positively influences customer satisfaction in Jordanian banking sector

The results pointed out that the reliability takes a place as first factor of service quality dimensions together with assurance, access, and employee competences. The results show that reliability has a positive and significant effect on customer satisfaction. The expectation in the bank is to have sympathies with customer's problems and to keep bank records. Findings impliy that Jordanian bank customers were satisfied with the reliability dimensions, such as the bank keeps its records accurately, banks did the promised service on time, or the staff is helpful for problems. Moreover, PARASURAMAN ET AL. (1985) found the reliability is ability to perform the customer-required services. These findings are consistent with previous studies (RISHI AND DEEPAK, 2017; KRISHNAMURTHY ET AL., 2010; LEE AND MOGHAVVEMI, 2015; SHANKA, 2012; SELVAKUMAR, 2015).

4.4.3.5. Assurance positively influences customer satisfaction in the Jordanian banking sector

Assurance is in the first factor together with reliability, access, and employee competences. A positive and significant effect was found with the assurance dimension on customer satisfaction in the Jordanian banking sector. The customers of Jordanian banks has showed their satisfaction of the assurance dimension in that the bank employees have a knowledge, courtesy, and ability to inspire confidence in customers. The Jordanian bank employees are polite, they have a sufficient knowledge, and are trustable as well. Many studies point out the positive effect between assurance and customer satisfaction (RISHI AND DEEPAK, 2017; KRISHNAMURTHY, ET AL., 2010; SELVAKUMAR, 2015; SHANKA, 2012; MUNUSAMY ET AL., 2010).

4.4.3.6. Access positively influences customer satisfaction in the Jordanian banking sector

Access is in the first factor together with reliability, assurance, and employee competences. The results show that the access dimension significantly influence customer satisfaction in the Jordanian banking sector. PARASURAMAN ET AL. (1994) stated that access could be considered as when services are easy to access and there is timely delivery. Moreover, approachability and ease of contact are relevant. Access was included in empathy in the SERVQUAL model that has been developed by PARASURAMAN ET AL. (1994). This result implies that according to the customer's perspective, the access dimension was perceived with significantly positive expectations in the Jordanian banking sector. The finding asserted that the customers are looking for easy ways of receiving the service offered, more choices to receive the

service, and also the facility to receive the chosen service by location, time and way. The findings in line with LADHARI ET AL. (2011) and inconstant with FLAVIAN ET AL. (2004).

4.4.3.7. Financial aspect is positively influence customer satisfaction in the Jordanian banking sector

The results pointed out that the third factor of service quality dimensions is the financial aspect. The result has shown that there is a significant relationship between financial aspect and customer satisfaction. The finding means the customers in Jordanian banks exactly satisfied with the financial aspect connected with pricing, bank charges, and interest policy. That explains the variation is significant in overall satisfaction of customers. Pricing, bank charges, and interest policy are considered factors that have turned out to be rather insignificant determinants of customer satisfaction. This is in conformity with the previous findings that stated there is a positive relationship between the financial aspects and customer satisfaction (BAUMANNA ET AL., 2017; SHARMA, 2016; LAKSHMI ET AL. 2013, LAROCHE ET AL. 2004). To a certain extent, this can be attributed to the fact that the standardized regulations governed by the Central Bank of Jordan that are followed by these banks. Therefore, the researcher believes that customer's identification with these factors have a significant influence on their overall satisfaction. It is also found that a majority of the sample customers were, in general, satisfied with the overall service levels of their banks.

4.4.3.8. Employee competences is positively influence customer satisfaction in the Jordanian banking sector

Employee competences is in the first factor together with reliability, assurance, and access. This study tested the impact of employee competences on customer satisfaction and shows that employee competencies have a positive and significant impact on customer satisfaction. The results indicated that the employee competences occupied the first factor with reliability, assurance and access of service quality dimensions. This result indicates that customers in the Jordanian banking sector are satisfied with employee's competencies in their banks. Furthermore, this result shows that the Jordanian banking sector highly has invested in develop training and development efforts to develop a multi-skill approach to the understanding of different customers. Training programs help the employees to improve their skills and service culture program according to the organizational culture, or the ways the organization conducts its business, treats its employees, customers, and the wider community, specifically with regard to front-line officers. Programs focus on employee's interpersonal communication skills and customer care. This will help Jordanian banks to treat their customers in a professional and desired manner.

Thus, delivery of the promised service will be fulfilled, which in turn will result in greater customer retention and satisfaction in the Jordanian banks. These findings are in line with previous studies (SHARMA, 2016; HADDAD, 2017; AWAN ET AL., 2011).

5. CONCLUSIONS AND RECOMMENDATIONS

This chapter is divided into four sections, discussion, conclusions, and recommendations. In this section, we will be concerned about discussing the main results explored in the previous chapter in order to answer the questions of the research problem regarding the nature of the relationship, between the supplier integration, customer integration, internal integration, and internal control and its impact on financial performance. On the other hand, we explore the impact of the service quality dimensions, which are the tangibles, responsiveness, empathy, assurance, reliability, access, financial aspect, and employee competences on customer satisfaction. The most influential factors on financial performance and customer satisfaction are identified and measured to finalize the role of these dimensions in the Jordanian banking sector.

5.1. Conclusions

In this study, a theoretical framework was developed to explore the relationship between supply chain integration, and internal control and financial performance. On the other hand, the customer satisfaction in the Jordanian banking sector were also examined. The following conclusions can be drawn from these studies.

There are many ways to measure the performance of a firm; the most commonly used is financial performance. To receive information about the financial performance of the examined Jordanian banks six questions were built. As the result of literature review, the dimensions of supply chain integration were identified. The most commonly used dimensions of supply chain integration are customer integration, supplier integration, and internal integration. Questionnaires were constructed to measure the effect of these supply chain integrations dimensions on financial performance. Based on the previous studies, measuring customer integration, supplier integration, and internal integration, eight, eight and ten questions were constructed respectively.

The aims of supply chain strategies can be accomplished by applying an efficient control system. Therefore, adding a dimension of internal control to supply chain integration, the model can be improved. Supported by researches eight questions were developed to investigate the effects of internal control on financial performance.

Customer satisfaction can be examined from two point of views from the perspective of the service provider and from the viewpoint of the customer. To maintain a good quality service, it is important to know the attitude of the customer to develop a better-integrated system. Development of a tool to measure the satisfaction of customers is essential for bank services.

The SERVQUAL model is applied generally to evaluate customer satisfaction, which has five dimensions. Studying the literature, it was found that by adding three more dimensions to the

SERVQUAL model, we can have a better tool to assess customer satisfaction. Analyzing recent research results, adapting the dimensions of tangibles, responsiveness, empathy, assurance, reliability, access, financial aspect, and employee competences, the way of measuring customer satisfaction can be improved. For the evaluation of service quality dimensions 34 questions were formulated.

For the analysis of supply chain integration and customer satisfaction, the following methods are suggested by the literature, which were applied, Likert-scale, normality test (One-sample Kolmogorov-Smirnov test), reliability test to determine Cronbach's Alpha, correlation (Spearman rho) and exploratory factor analysis. Originally, there were four factors in the supply chain integration model customer integration, supplier integration, internal integration and internal control. Our analysis proved as subscales the four dimensions, which were mentioned in the literature but some items were eliminated and other were moved to another groups of items. The four subscales which were proved by our analysis are appropriate tools for managers to measure supply chain integration. As an outcome of the factor analysis from the original questionnaire, which had 34 questions, seven items were eliminated and finally the subscales consists of 27 items. As a result of the research it can be stated that supply chain integration subscales, customer integration, supplier integration, internal integration, and internal control effect positively the financial performance. The order importance of the subscales' effects on financial performance is internal integration, supplier integration, customer integration, and internal control. The most important factors of internal integration are shared ideas, interdepartmental meetings, making decisions together, cooperation in solving conflicts, allocating proper costs for customers, helping in tasks, working jointly, and being interactive. Supplier integration can be improved by ameliorating cooperation, planning, communication, ordering, schedule, IT connection, and process. There are many ways to develop customer integration such as building relationships beyond sales, using IT networks, evaluating relationship, planning together, evaluating satisfaction and predicting expectations. Finally, the factors of improving internal control are supply chain strategy, control of flow of cash, transparency, responsibility, and internal audits.
The bank has embedded internal controls into a computerized system.

Initially, the customer satisfaction had eight dimensions, namely tangibles, responsiveness, empathy, assurance, reliability, access, financial aspect, and employee competences. The analyses resulted in four subscales that can be applied as proper managerial measuring scales for customer satisfaction. The factor analyzes resulted in the elimination of 5 items from the questionnaire, that consisted of 36 items originally, so there were 31 items valid for analysis. According to the analysis, the order of importance of the subscales' effect on customer satisfaction is as follows. In the first subscale, there are assurance, reliability, access, and employee competences, while in

the second subscale there are responsiveness and empathy. The third subscale is financial aspect and the fourth subscale is tangibility. The new names of subscales to measure customer satisfaction are the first is professional features, the second is caring, the third is financial aspect, and the last is tangibility.

The professional features' subscale (reliability, assurance, access and employee competences) has a significant positive effect on customer satisfaction. Banks have to keep records accurately, make the promised service on time, and the staff is supposed to be able to help customers and deal with their problems. Assurance means that in Jordanian banking sector they have a knowledge, courtesy, and ability to inspire confidence in customers. The customers are looking for easy ways of receiving the service offered, more choices to receive the service, also, the facility to receive the chosen service by location, time and way. The importance of training employees to improve their skills within the organizational culture and increase the communication with customers to understand their need. The results show that the relationship between the caring subscale (responsiveness and empathy) and customer satisfaction is positive and significant. The responsiveness dimension is beneficial to banks in all cases to retain the customers via the employees' behavior, which should help the customer, respond their requests, and tell them when the services will be performed. Jordanian banking sector adapts to the customers to have branches in a convenient location, give care, have good operating hours, and understand their needs. The third subscale (financial aspect) has significant effect on customer satisfaction. The fourth subscale (tangibility) proved to have positive effects on customer satisfaction. Banks in Jordan focus on the physical appearance such as employee's neat appearance, modern equipment, and easy-to-use materials to make the customer satisfied.

5.2. Recommendations

In light of the findings of this research, the following recommendations are proposed. Measuring the performance of a firm has been a central point in management recently.

1. There are different methods how to assess it, being one of the most common is to use financial performance. It is recommended that bank managers should consider building a system for controlling performance to determine the factors that influence the success of the business, and to take actions in the proper time.

2. One of the most important way recommended to the bank managers to improve business performance is to develop supply chain integration, to become a good partner of other SC members. The three most important areas of supply chain integration are internal integration, supplier integration, and customer integration, which recommended for measurement that is

justified by both the literature and by the author's research. To see how precisely the supply chain strategy is implemented, an efficient internal control is advisable to put into practice.

3. Customer satisfaction is considered as the core of a service performance. When the customer integration is examined, bank employees are asked about the satisfaction of the customers. However, it is also advisable to bank managers to have information from the other side, from the customers themselves.

4. For the measurement of service quality, the SERVQUAL model is suggested by many publications. Based on our research in which a modified SERVQUAL model was applied in the Jordanian banking sector it can be recommended to researchers that any model should be modified to the area where it is used.

5. For future usage, we recommend academics and professionals to introduce a new factor, financial aspect of the customer, to improve the measurement of customer satisfaction.

6. The usual factors to quantify the service quality cannot be used in every sector therefore, it is advisable to researchers to use it critically and amend it if it is necessary. With this amendment, the number of questions and factors may decrease, to obtain a proper model.

7. To measure how supply chain integration and internal control effects financial performance, based on the research on Jordanian banks, the following items can be suggested for the bank managers.

8. Items for internal integration are sharing ideas between departments, regular meetings, cooperative problem solving, allocation of cost between customer service and operations, effective help of accomplishing tasks, jointly achieved goals, and interactivity.

9. Supplier integration can be measured using the following items sharing plans, close communication with suppliers, improving the ordering system, sharing production schedules, using IT networks, and improvement of processes.

10. Assessing customer integration, these items can be recommended the deepness of the relationship, information network connection, working together in innovations, evaluating continuously customer satisfaction and monitoring customer expectations.

11. The items to estimate the effect of internal control are realization of supply chain strategy, controlling the cash flow, transparency of the supply chain, management extended responsibility, and internal auditing.

12. As a result of the research conducted in the Jordanian banking sector, we recommend for bank managers and researchers as well the followings to evaluate the relationship between service quality factors and customer satisfaction.

a) In the first factor, there are four components: assurance, reliability, access, and employee competencies. Assurance can be measured using the item of feeling safe during transactions.

Reliability elements are timely service of the services, accurate records, error-free transactions, ongoing problem solving and doing it right the first time. Ways of receiving services, choice of offers and processes in the facilities are the items of access. Employee competences can be assessed by elements of knowledge of organisational culture, meeting the needs of customers, and knowing the bank's product.

b) The second factor consists of two components: responsiveness and empathy. For measuring responsiveness, these elements can be applied: employee's willingness to help customers, giving precise service, and increasing customers' confidence. To determine the effect of empathy the following items are to be addressed: individual attention, positive attention to customers, understanding specific needs, convenient operating hours, and supporting the customer's best interest.

c) For the estimation of the third factor, which is financial aspects, these elements are recommended: competitiveness of interest rates on deposits, satisfactory loan rates, the ratio of savings of the bank, willingness to use more banking products and services.

d) The fourth factor is tangibility, which can be quantified by these elements: appearance, appealing visually, modernity of the equipment, and easy-to-use materials.

13. For further research, it can be suggested to examine the relationship between customer integration and customer satisfaction for a better understanding of both views of bank managers and the views of customers.

6. MAIN CONCLUSIONS AND NOVEL FINDINGS OF THE DISSERTATION

Examining the supply chain integration and internal control on the performance of Jordanian banks, as a most important result of our analysis, we found a proper measuring scale. A special scale was found, which could be used to measure these relationships. In an era where supply chain integration is considered a cornerstone to achieve a sustainable competitive advantage, it is imperative for organizations to realize how to develop such integration. Supply chain integrations can be seen as a way to develop and maintain a competitive advantage, and with respect to the role of intra-organizational relationship and interactions among individuals and groups are used to facilitate, enhance, and leverage this process with the aim to reach competitiveness.

The results reveal that supply chain integration including external supplier and customer integration and internal integration, has a significant and positive relation to financial performance. To have a supply chain integrated efficiently a control system should be developed and applied allowing the bank to react in an appropriate way to risks. Furthermore, the results proved that there is an intimate correlation between internal control and financial performance. It was testified that internal integration is an enabler for external integration. This means that banks in Jordan need to progress from good internal practices and processes to effective management of external processes. Moreover, the results indicated that the internal integration is strongly related to improving performance than supplier integration and customer integration.

The results of data analysis have shown that supply chain integration is applied to a good extent in the Jordanian banking sector. This indicates an acknowledgement of the importance of the role played by supply chain integration in the Jordanian banking sector to maximize financial performance, which leads ultimately to build competitive advantages. Thus, the Jordanian banks attempting to enhance their innovation capability should increase integration levels with their suppliers and customers also. Moreover, internal integration has different benefits, and it affects financial performance in Jordanian banking sector. That indicates that the Jordanian banking sectors have strong internal control systems can affect financial performance, Therefore, Jordanian banking sector must focus on internal control to create sound and sustainable financial performance.

Originally, service quality consists of eight dimensions, which were measured by using eight groups of questions to determine the customer satisfaction in the Jordanian banking sector. These groups of questions did not all appear as subscales as the result of the analysis. Four subscales were generated from the original eight dimensions. These factors are first, assurance, reliability, access, and employee competences, second, responsiveness and empathy, third, financial aspect and, finally, fourth tangibility.

This study presents opportunities for future studies in different sectors, because it was found that the impacts of the generally used SERVQUAL model factors were different in our model. Based on this statement we can conclude that different services have different characteristics and the measurement tools of service quality should be adopted to the actual type of service.

Nowadays, the Jordanian banks have to develop, attract and retain customer satisfaction. In fact, this study derives a unique contribution to the Jordanian banking sector and laid a foundation towards a SERVQUAL model by introducing the new dimensions: access, financial aspect, and employee competences. However, customers of banks in Jordan were found satisfied at the level of customer support of the service quality. In today's dynamic environment and increasingly competitive markets, banks should effectively manage all aspects of their supply chain integration and internal control to improve the financial performance. Furthermore, Jordanian banking sectors have to improve the service quality to satisfy its customers. By ignoring those factors, banks may fail to sustain their market shares and to meet customer needs.

It was testified that the service quality factors affected the customer satisfaction positively. This study made a unique contribution to the Jordanian banking sector and laid a foundation for a SERVQUAL model by introducing the new dimensions of access, financial aspect, and employee competences. However, it was demonstrated that customers of banks in Jordan were satisfied with the service quality. As an important outcome is that four new subscales were developed for the measurement of customer satisfaction by using the SERVQUAL modified service quality model in Jordanian banks, these subscales are professional features, caring, financial aspects and tangibility.

SUMMARY

My internal motivation behind this dissertation and the main reason to choose this topic is my recent job as an internal auditor at non-governmental organization called Caritas in Jordan, where my main task was to improve internal and external integration. Moreover, I wanted to link this dissertation to my master thesis topic, which was "The Information Technology Governance Control Level in Jordanian Banks Using: Control Objectives for Information and Related Technology (COBIT 5)" that emphasized on Jordanian banks procedures. Furthermore, the lack of research studies about the supply chain integration in services especially in the banks of Jordan. The main objective of this thesis is to investigate the impact of supply chain integration that consist of internal and external integration: (suppliers and customers) and internal control; on financial performance in the Jordanian banking sector. In addition to examine the relationship between the service quality (quality; tangibility, responsiveness, empathy, reliability, assurance, access, financial aspect, and employee competencies) dimensions and its' effect on the customer satisfaction. I used 303 publications in order to maintain better coverage of all aspects of the thesis. Quantitative and qualitative data has been used in order to develop the questionnaire after analyzing the literature review of the supply chain integration and internal control, and the service quality. Because of the commonly use of the Five Likert scale by several publications so I adopted this scale for concrete the questionnaire.

In the year 2018, the questionnaires were distributed on all types of Jordanian banks, which consisted of commercial banks, Islamic banks, and foreign banks on the following departments, which are internal control, product development, procurement, compliance, risk management and operations. A number of 249 respondents were collected from Jordanian banks out of 309 in total. Regarding the Jordanian banks' customers feedback a questionnaire was distributed and data was collected back in December 2017 until February 2018. We collected 850 questionnaires 825 of them were valid to analysis while the rest were rejected due to competency. In focus groups of managers, data was collected and analysed from forty-one bank managers who were filled and reviewed the questionnaire results and discussed problematic questions about their opinions on supply chain integration and internal control in Jordanian banks. While fifty-three questionnaires were collected and analyzed from the customers giving their feedback about the results.

Demographic data analysis regarding the bank manages and customers was discussed. Normality test has been conducted for the independent and dependent variables. Exploratory factor analysis was done to clarify the validity and reliability of instrument design for independent variables calculating communalities, total variance explained, component matrix, and pattern matrix by using Promax rotation.

After running the analysis of the supply chain integration and internal control, effects on the financial performance were analyzed. Seven questions have been eliminated in order to obtain a fit model. The result revealed that the supply chain dimensions have positively influenced the financial performance. Moreover, the ranks of dimensions are internal integration, supplier integration, customer integration and finally the internal control.

According to the analysis of the service quality questionnaire related to customer satisfaction, eight initial dimensions were examined: tangibility, responsiveness, empathy, reliability, assurance, access, financial aspect, and employee competencies. Five items have been removed in order to prevent the cross loading and to move those items from a group to another. The result showed that all the dimensions have strong and positive influence on customer satisfaction. As a result of the analysis, four factors were extracted which were professional features, caring, financial aspect and tangibility. The results showed that the service quality dimensions positively influenced customer satisfaction in the Jordanian banking sector. Finally, the results found out that the Jordanian banking sector have concerns for customer satisfaction and they have to consider these dimensions.

According to the findings of the research, several recommendations were suggested such as using financial performance for performance measurement, development of supply chain integration, and setting an efficient internal control system to achieve supply chain strategy. According to the field study, the customer satisfaction is an indicator to express the service performance, and it is advisable to modify the SERVQUAL model for a better measurement of customer satisfaction. Financial aspect has to be recommended as a new dimension of evaluating customer satisfaction.

In order to measure the relationships among supply chain integration and internal control on the financial performance in the Jordanian banking sector, the study introduces a proper scale. Eight dimensions of service quality were measured to define the customer satisfaction. While four factors were extracted which were professional features, caring, financial aspects, and tangibility.

In conclusion, we found that there is a significant relationship between supply chain integration and internal control on the financial performance, so finally we recommend the Jordanian banks to pay more attention about customer integration, supplier integration and internal integration to make a competitive advantage for the banks and an added value for the shareholders. Furthermore, we suggested for the banks to adopt the SERVQUAL modal in order to fill the gap for the perceptions of the Jordanian customers' banks because the customers represent the capital for the banks.

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ACKNOWLEDGMENTS

Appendix 1: Jordanian Banks

#	Name of the Bank	Established in	Website
1	Arab Bank	1930	www.arabbank.com.jo
2	Jordan Ahli Bank	1956	www.ahli.com
3	Cairo Amman Bank	1960	www.cab.jo
4	Bank of Jordan	1960	www.bankofjordan.com
5	The Housing Bank for Trade & Finance	1974	www.hbtf.com
6	Jordan Kuwait Bank	1977	www.jordan-kuwait-bank.com
7	Arab Jordan Investment Bank	1978	www.ajib.com
8	Jordan Commercial Bank	1978	www.jgbank.com.jo
9	Jordan Islamic Bank	1978	www.jordanislamicbank.com
10	Invest bank	1989	www.jifbank.com
11	Arab Banking (Corporation) Jordan	1989	www.arabbanking.com.jo
12	Bank Al-Etihad	1991	www.unionbankjo.com
13	Societe General _ Jordan	1993	www.sgbj.com.jo
14	Capital Bank	1996	www.capitalbank.jo
15	International Islamic Arab Bank	1997	www.iiabank.com.jo
16	Safwa Islamic Bank	2009	www.jdib.jo

Non-Jordanian Banks

#	Name of the Bank	Licensed in	Website
1	Egyptian Arab Land Bank	1951	www.aqaribank.jo
2	Rafidain Bank	1957	www.rafidain-bank.org
3	Citi Bank	1974	www.citibank.com/jordan
4	Standard Chartered	2002	www.standardchartered.com
5	Bank Audi	2004	www.audi.com.lb
6	National Bank of Kuwait	2004	www.nbk.com
7	BLOM Bank	2004	www.blom.com.lb
8	National Bank of Abu Dhabi	2009	www.nbad.com
9	Al Rajhi Bank	2011	www.alrajhibank.com.jo

Appendix 2: Questionnaire From Bankers Perspective

Independent variable

Customer integration
1. The bank pursues customer relationships and involvement that go beyond sales transact
2. The level of bank linkage with our major customer through information networks.
3. The bank periodically evaluates the importance of our relationship with our customers.
4. Planning, forecasting and innovation are collaboratively done in bank.
5. We strive to be highly responsive to our customers' needs.
6. We frequently measure and evaluate customer satisfaction.
7. The bank frequently determines future customer expectations.
8. The bank made a follow-up with customers for feedback.

Supplier integration
1. The bank maintains cooperative relationships with our suppliers.
2. The bank shares our services plans with our suppliers.
3. The bank maintains close communication with suppliers about quality considerations and design changes.

4. The bank establishes quick ordering systems with our major suppliers.
5. Our major supplier shares their services schedule with the bank.
6. The level of information exchange in the bank with our major supplier through information network.
7. The bank helps major supplier to improve their process to better meet bank needs.
8. The bank strives to establish long-term relationships with suppliers.

Internal integration
1. The bank integrate data among internal functions.
2. The real time and communication integration are instilled among all the internal function of the bank departments.
3. The bank departments share ideas, information and/ or resources.
4. The utilization of periodic interdepartmental meetings in the bank among internal function.
5. The bank departments take the project`s technical and operative decisions together.
6. The functions of the bank cooperate to solve conflicts between them, when they arise.
7. Bank performance metrics promote rational trade-offs among customer service and operational costs.
8. The bank departments help each other to accomplish their tasks in the most effective way.
9. The bank departments try to achieve goals jointly.
10. All departments in the company is working interactively with each other.

Internal control
1. The bank utilizes acquired or documented knowledge in supply chain strategy planning, service services within customer needs, managing customer orders, logistics, and invoicing and development of supply chain.
2. The bank has an impact on the flow of cash along the supply chain.
3. The information system integration and transparency help the collaboration between the bank and supply chain partners.
4. Senior management set expectations for business operations and internal controls.
5. Management level has the responsibility for defining policies, processes and procedures for governance, risk management and compliance.
6. The internal auditors provide assurance to the board about the management's performance and duties.
7. Responsibilities are divided among staff members (so that no single employee has the authority to execute two or more conflicting sensitive transactions) thereby maintaining appropriate segregation of duties.
8. The bank has embedded internal controls into a computerized system.

Dependent variable
Financial performance
1. Over the past 3 years, the bank financial performance has exceeded the competitors'.
2. The past 3 years have been more profitable than our competitors'.
3. Over the past 3 years, the bank sales growth has exceeded the competitors'.
4. The bank and supply chain partners pool financial and non-financial resources.
5. Return on assets has been substantially increased by SC integration.
6. Sales rate for primary customers has been markedly improved by SC integration.

Appendix 3: Questionnaire From Customer Perspective

Tangibility
1. The Employees in my bank have a neat appearance of professionally dressed.
2. The physical facilities of my main bank are more visually appealing compared to other banks.
3. Materials associated with the banks office (Pamphlets, brochures) are visually appealing at the banks office.
4. My bank has modern-looking equipment's (computers, fast ICT facilities, etc.).
5. Materials associated with service (withdrawal forms, a/c opening forms etc.) are easy to use and are readily available in my bank.

Responsiveness
1. My bank responds to my requests more promptly compared to other banks.
2. The employees of my main bank are more willing to help me compared to other banks.
3. The bank staff tells customers exactly when the services will be performed.
4. Employees will instill confidence in customers.

Empathy
1. My bank gives me individual attention.
2. Employees who deal with customers in a caring fashion.
3. Your bank's employees understand your specific needs.
4. The bank has operating hours convenient to all their customers.
5. Having the customer's best interests at heart.

Assurance
1. I always feel safe in my transactions with my bank (account maintenance, cash transfer, cash, withdrawal and deposit, ATM PIN code, etc.).
2. The bank staff has sufficient knowledge to answer the questions of the customers.
3. Clients can trust employees of their Bank.
4. Bank employees are polite.

Reliability
1. If Bank has promised to do something by a certain time, it will do.
2. Bank keeps its records accurately.
3. My bank has an error free electronic transaction system.
4. Whenever I experience problem, Jordanian banks staffs handle it in constant manner.

Access
1. Ways to receive the service offered.
2. Choice of how to receive the service offered.
3. Facility to receive the chosen service, when, where and how.

Financial aspect
1. The interest rate offered by the bank on various Deposits are competitive enough.
2. The rate of interest charged on the Loans are satisfactory.
3. When I save up some money, I would deposit it to my bank.
4. If interested in mortgage loan I would use my own bank.
5. I am considering that I would also use further products and services from my current bank.

6. The existing laws and financial regulations of Jordanian banks are more capable of keeping risky banking activities in check compared to other countries.

Employee competence
1. Bank employees have the necessary knowledge to serve customers promptly.
2. Banks employees know what customers' needs are and how the banks's product can satisfy them.
3. The bank's employees know very well the bank's product.

Customer Satisfaction
1. My selection to use this service provider was good.
2. Bank has met my expectations.
3. Customer Satisfaction affect future financial performance.
4. I have no complain against this bank.

Appendix 4: Analysis Tables

Table 10: Demographic Characteristics of the Respondents of Jordanian Banks

Variable	Options	Frequency	Percentage (%)
Gender	Male	132	53.01
	Female	117	46.99
Total		**249**	**100**
Age	18-24 years	22	8.84
	25-29 years	47	18.88
	30-34 years	69	27.71
	35-39 years	49	19.68
	40-44 years	22	8.84
	45-49 years	14	5.62
	Above 50 years	26	10.44
Total		**249**	**100**
Academic level	Higher secondary school	9	3.61
	Certificate Diploma	30	12.05
	Bachelor degree	160	64.26
	Master degree	41	16.47
	Ph.D. degree	8	3.21
	Professional	1	0.40
Total		**249**	**100**
Experience	Less than I year	5	2.01
	1-4 years	21	8.43
	5-9 years	80	32.13
	10-15 years	81	32.53
	More than 15 years	62	24.90
Total		**249**	**100**
Job position	Top management	37	14.86
	Middle management	44	17.67
	Supervisory level	69	27.71
	Non-managerial level	99	39.76
Total		**249**	**100**

Source: Created by the Author

Table 11: One-Sample Kolomgrov-Smirnov Test

Null Hypothesis	Test	Sig.	Decision
The distribution of TotalFin normal with mean 3.849 and standard deviation 0.815	One-sample Kolomgrov-Smirnov Test	0.000[1]	Rejected the null hypothesis

Asymptotic significances are displayed. The significance level is .05
[1]Lilliefors Corrected
Source: Created by the Author

Table 12: Reliability for Financial Performance

Variable	Original number of items	Cronbach's Alpha
Financial performance	**6**	**0.887**

Source: Created by the Author

Table 13: Item-Total Statistics

Items	Scale means if item deleted	Scale variance if item deleted	Corrected item-total correlation	Cronbach's alpha if item deleted
FIN1	19.21	17.426	0.709	0.866
FIN2	19.27	16.447	0.825	0.848
FIN3	19.45	16.321	0.807	0.850
FIN4	19.06	17.731	0.593	0.884
FIN5	19.27	16.101	0.714	0.866
FIN6	19.20	17.946	0.580	0.886

Source: Created by the Author

Table 14: Communalities

Component	Initial	Extraction	Component	Initial	Extraction
CI1	1.000	0.560	II2	1.000	0.768
CI2	1.000	0.763	II3	1.000	0.769
CI3	1.000	0.621	II4	1.000	0.666
CI4	1.000	0.643	II5	1.000	0.724
CI5	1.000	0.642	II6	1.000	0.653
CI6	1.000	0.716	II7	1.000	0.610
CI7	1.000	0.727	II8	1.000	0.764
CI8	1.000	0.742	II9	1.000	0.794
SI1	1.000	0.721	II10	1.000	0.777
SI2	1.000	0.711	IC1	1.000	0.734
SI3	1.000	0.764	IC2	1.000	0.700
SI4	1.000	0.695	IC3	1.000	0.683
SI5	1.000	0.584	IC4	1.000	0.571
SI6	1.000	0.691	IC5	1.000	0.711
SI7	1.000	0.479	IC6	1.000	0.684

| SI8 | 1.000 | 0.721 | IC7 | 1.000 | 0.541 |
| II1 | 1.000 | 0.677 | IC8 | 1.000 | 0.678 |

Extraction Method: Principal Component Analysis

Source: Created by the Author

Table 15: Total Variance Explained

Component	Initial eigenvalues			Extraction sums of squared loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	17.441	51.297	51.297	17.441	51.297	51.297
2	2.115	6.219	57.516	2.115	6.219	57.516
3	1.541	4.532	62.048	1.541	4.532	62.048
4	1.175	3.457	65.506	1.175	3.457	65.506
5	1.016	2.988	68.494	1.016	2.988	68.494
6	0.856	2.519	71.012			
7	0.735	2.162	73.174			
8	0.722	2.122	75.296			
9	0.677	1.992	77.288			
10	0.614	1.807	79.095			
11	0.559	1.644	80.739			
12	0.523	1.537	82.276			
13	0.514	1.511	83.787			
14	0.471	1.384	85.171			
15	0.434	1.277	86.449			
16	0.429	1.263	87.712			
17	0.391	1.151	88.863			
18	0.372	1.095	89.958			
19	0.340	1.001	90.959			
20	0.308	0.907	91.866			
21	0.287	0.845	92.710			
22	0.273	0.803	93.513			
23	0.263	0.773	94.287			
24	0.233	0.687	94.973			
25	0.231	0.679	95.652			
26	0.218	0.642	96.295			
27	0.204	0.600	96.894			
28	0.195	0.573	97.467			
29	0.187	0.550	98.018			
30	0.173	0.509	98.527			
31	0.141	0.414	98.940			
32	0.135	0.396	99.336			
33	0.119	0.349	99.685			
34	0.107	0.315	100.000			

Extraction Method: Principal Component Analysis
Source: Created by the Author

Table 16: Component Matrix

Items	1	2	3	4	5
II2	0.847	-0.204	-0.046	0.087	0.009
II8	0.830	-0.087	-0.224	-0.128	-0.031
SI3	0.819	-0.171	0.149	0.201	-0.037
SI8	0.809	-0.137	-0.097	0.183	0.070
SI1	0.808	-0.117	0.101	-0.036	-0.207
II1	0.804	-0.164	-0.022	0.002	-0.050
II10	0.791	0.000	-0.223	-0.194	0.251
SI6	0.790	-0.103	0.163	0.159	-0.071
IC8	0.784	-0.009	-0.241	-0.053	0.055
SI2	0.780	-0.032	0.176	0.125	-0.235
CI6	0.777	0.073	0.252	-0.168	-0.128
II9	0.776	-0.021	-0.298	-0.263	0.183
II5	0.766	-0.208	-0.301	0.048	-0.024
CI7	0.765	0.102	0.120	-0.222	-0.261
SI4	0.761	-0.122	0.199	0.231	-0.087
CI5	0.749	-0.050	0.219	-0.096	0.147
II4	0.734	-0.117	-0.197	-0.118	-0.246
IC1	0.733	0.066	-0.261	-0.234	0.263
II3	0.714	-0.392	0.132	0.240	0.175
CI4	0.698	-0.036	0.276	-0.215	0.181
II7	0.696	-0.104	-0.311	-0.060	-0.118
CI8	0.677	0.034	0.088	-0.204	-0.483
IC6	0.676	0.438	0.037	0.184	0.016
IC5	0.666	0.479	-0.014	0.096	0.170
CI3	0.664	0.157	0.256	-0.238	0.183
SI5	0.646	-0.173	0.179	0.322	0.029
IC4	0.623	0.307	-0.195	0.134	0.181
CI2	0.622	0.163	0.396	-0.425	0.108
II6	0.615	-0.072	-0.468	0.019	-0.223
CI1	0.607	-0.282	0.301	0.020	0.145
IC7	0.604	0.331	0.100	0.225	0.071
SI7	0.580	-0.163	-0.102	0.246	0.213
IC3	0.455	0.672	-0.001	0.097	-0.121
IC2	0.460	0.659	-0.082	0.206	-0.073

Extraction Method: Principal Component Analysis

[a] 5 components extracted

Source: Created by the Author

Table 17: KMO and Bartlett's test

Kaiser-Meyer-Olkin measure of sampling adequacy.		0.955
Bartlett's test of Sphericity	Approx. chi-square	6903.245
	df	561
	Sig.	0.,000

Source: Created by the Author

Table 18: Total Variance Explained

Component	Initial eigenvalues			Extraction sums of squared loadings			Rotation sums of squared loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	total
1	17.441	51.297	51.297	17.441	51.297	51.297	14.657
2	2.115	6.219	57.516	2.115	6.219	57.516	14.500
3	1.541	4.532	62.048	1.541	4.532	62.048	12.845
4	1.175	3.457	65.506	1.175	3.457	65.506	9.205
5	1.016	2.988	68.494				
....							
34	0.107	0.315	100.000				

Extraction Method: Principal Component Analysis

[a.] When components are correlated sums of squared loadings cannot be added to obtain a total variance. Source:

Source: Created by the Author

Table 19: Pattern Matrix[a]

Items	Component			
	1	2	3	4
II6	0.916	0.010	-0.308	0.051
II9	0.876	-0.202	0.224	-0.040
II7	0.775	0.067	-0.059	-0.027
IC1	0.767	-0.223	0.229	0.064
II5	0.757	0.306	-0.176	-0.071
II8	0.735	0.078	0.136	-0.032
II10	0.731	-0.080	0.220	0.020
IC8	0.678	0.084	0.035	0.091
II4	0.661	0.093	0.121	-0.077
II3	0.061	0.930	-0.053	-0.200
SI5	-0.138	0.877	-0.085	0.076
SI4	-0.085	0.784	0.077	0.097
SI3	0.039	0.772	0.073	0.037
SI6	0.010	0.671	0.139	0.084
CI1	-0.131	0.649	0.352	-0.231
SI2	-0.011	0.582	0.200	0.140

SI7	0.277	0.572	-0.265	0.052
SI8	0.388	0.565	-0.126	0.079
II2	0.399	0.544	0.030	-0.049
II1	0.384	0.411	0.148	-0.060
SI1	0.218	0.411	0.313	-0.037
CI2	-0.137	-0.149	10.038	0.005
CI3	-0.022	0.010	0.701	0.120
CI4	0.003	0.203	0.667	-0.076
CI6	0.011	0.197	0.629	0.085
CI7	0.218	0.021	0.575	0.092
CI8	0.238	0.039	0.491	0.016
CI5	0.041	0.342	0.487	-0.012
IC2	0.001	-0.103	-0.089	0.921
IC3	-0.060	-0.196	0.112	0.868
IC6	-0.014	0.187	0.059	0.688
IC5	0.094	0.014	0.120	0.685
IC7	-0.125	0.327	0.033	0.578
IC4	0.362	0.052	-0.127	0.521

Rotation Method: Promax with Kaiser Normalization.a

a. Rotation converged in 7 iterations

Extraction Method: Principal Component Analysis.

Source: Created by the Author

Table 20: KMO and Bartlett's Test

Kaiser-Meyer-Olkin measure of sampling adequacy.		0.947
Bartlett's Test of Sphericity	Approx. chi-square	5018.562
	df	351
	Sig.	0.000

Source: Created by the Author

Table 21: Communalities

Items	Initial	Extraction	Items	Initial	Extraction
CI1	1.000	0.566	II5	1.000	0.729
CI2	1.000	0.789	II6	1.000	0.634
CI3	1.000	0.623	II7	1.000	0.613
CI4	1.000	0.613	II8	1.000	0.765
CI6	1.000	0.678	II9	1.000	0.782
CI7	1.000	0.620	II10	1.000	0.740
SI2	1.000	0.681	IC1	1.000	0.695
SI3	1.000	0.756	IC2	1.000	0.709
SI4	1.000	0.707	IC3	1.000	0.717
SI5	1.000	0.592	IC5	1.000	0.664
SI6	1.000	0.699	IC6	1.000	0.682
SI7	1.000	0.420	IC7	1.000	0.533

| II3 | 1.000 | 0.720 | IC8 | 1.000 | 0.679 |
| II4 | 1.000 | 0.597 | - | - | - |

Extraction Method: Principal Component Analysis
Source: Created by the Author

Table 22: Total Variance Explained

Component	Initial eigenvalues			Extraction sums of squared loadings			Rotation sums of squared loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	13.463	49.861	49.861	13.463	49.861	49.861	11.251
2	1.958	7.250	57.112	1.958	7.250	57.112	10.719
3	1.466	5.431	62.543	1.466	5.431	62.543	7.297
4	1.116	4.135	66.678	1.116	4.135	66.678	9.443
5	0.859	3.180	69.858				
……………..							
27	0.122	0.451	100.000				

Extraction Method: Principal Component Analysis

a.   When components are correlated, sums of squared loadings cannot be added to obtain a total variance
Source: Created by the Author

Table 23: Pattern Matrix[a]

Items	Component			
	1	2	3	4
II6	0.911	0.059	0.084	-0.389
II9	0.857	-0.182	-0.060	0.256
II7	0.770	0.128	-0.014	-0.118
II5	0.768	0.308	-0.073	-0.188
IC1	0.755	-0.224	0.046	0.278
II8	0.736	0.095	-0.015	0.112
II10	0.721	-0.072	-0.022	0.278
IC8	0.677	0.081	0.090	0.053
II4	0.646	0.158	-0.036	0.041
II3	0.119	0.839	-0.240	0.027
SI5	-0.067	0.839	0.063	-0.093
SI4	-0.018	0.784	0.099	0.028
SI3	0.104	0.733	0.045	0.055
SI6	0.044	0.686	0.056	0.128
SI2	0.046	0.634	0.167	0.089
CI1	-0.086	0.628	-0.263	0.382
SI7	0.302	0.517	0.001	-0.179
IC2	0.015	-0.105	0.923	-0.096

IC3	-0.030	-0.167	0.913	0.027
IC6	0.024	0.179	0.668	0.066
IC5	0.109	0.003	0.623	0.189
IC7	-0.067	0.334	0.563	-0.007
CI2	-0.152	-0.076	0.000	10.020
CI3	-0.020	0.043	0.098	0.718
CI4	0.046	0.220	-0.090	0.639
CI6	0.033	0.258	0.106	0.543
CI7	0.213	0.127	0.126	0.452

Extraction Method: Principal Component Analysis

Rotation Method: Promax with Kaiser Normalization, a. Rotation converged in 6 iterations

Source: Created by the Author

Table 24: Reliability of the Variables (Cronbach's Alpha)

Variables	Original number of items	Items after deletion	Cronbach's Alpha
Internal integration (II)	10	8	0.934
Supplier integration (SI)	8	6	0.910
Customer integration (CI)	8	6	0.872
Internal control (IC)	8	7	0.858
Total/ overall Cronbach's	34	27	0.848

Source: Created by the Author

Table 25: Normality Test

No.	Null hypothesis	Test	Sig.	Decision
1	The distribution of TotalFin normal with mean 3.849 and standard deviation 0.815	One-sample Kolomgrov-Smirnov Test	0.200[1]	Rejected the null hypothesis
2	The distribution of REGR factor score 1 for analysis 1 is normal with mean 0.000 and standard deviation 1.000.	One-sample Kolomgrov-Smirnov Test	0.200[1]	Rejected the null hypothesis
3	The distribution of REGR factor score 2 for analysis 1 is normal with mean 0.000 and standard deviation 1.000.	One-sample Kolomgrov-Smirnov Test	0.200[1]	Rejected the null hypothesis
4	The distribution of REGR factor score 3 for analysis 1 is normal with mean 0.00000 and standard deviation 1.000.	One-sample Kolomgrov-Smirnov Test	0.200[1]	Retain the null hypothesis
5	The distribution of REGR factor score 4 for analysis 1 is normal with mean 0.00000 and standard deviation 1.000.	One-sample Kolomgrov-Smirnov Test	0.200[1]	Rejected the null hypothesis

Asymptotic significances are displayed. The significance level is .05
[1]Lilliefors Corrected

Source: Created by the Author

Table 26: Correlations

			Financial performance	Internal integration	Supplier integration	Internal control	Customer integration
Spearman's rho	Financial performance	Correlation coefficient	**1.000**	0.823**	0.723**	0.617**	0.684**
		Sig. (2-tailed)		0.000	0.000	0.000	0.000
		N		249	249	249	249
	Internal integration	Correlation coefficient	0.823**	**1.000**	0.691**	0.539**	0.606**
		Sig. (2-tailed)	0.000		0.000	0.000	0.000
		N	249		249	249	249
	Supplier integration	Correlation coefficient	0.723**	0.691**	**1.000**	0.514**	0.602**
		Sig. (2-tailed)	0.000	0.000		0.000	0.000
		N	249	249		249	249
	Internal control	Correlation coefficient	0.617**	0.539**	0.514**	**1.000**	0.540**
		Sig. (2-tailed)	0.000	0.000	0.000		0.000
		N	249	249	249		249
	Customer integration	Correlation coefficient	0.684**	0.606**	0.602**	0.540**	**1.000**
		Sig. (2-tailed)	0.000	0.000	0.000	0.000	
		N	249	249	249	249	

**. Correlation is significant at the 0.01 level (2-tailed)
Source: Created by the Author

Table 27: Sampling Distribution by Demographic Information

Variable	Options	Frequency	Percentage (%)
Gender	Male	412	49.90
	Female	413	50.10
Total		**825**	**100**
Age	18-24 years	115	13.93
	25-29 years	156	18.94
	30-34 years	200	24.24
	35-39 years	135	16.36
	40-44 years	79	9.57
	45-49 years	44	5.33
	Above 50 years	96	11.63
Total		**825**	**100**
Academic Level	Higher Secondary School	53	6.42
	Certificate Diploma	89	10.78
	Bachelor Degree	515	62.42
	Master Degree	125	15.15
	PhD Degree	33	4.00
	Professional Certification	10	1.20
Total		**825**	**100**
The Relationship duration with the bank	1-5 Years	295	35.75
	6-10 Years	191	23.21
	11-15 Years	151	18.30
	16-20 Years	76	9.21

	Above 20 Years	112	13.57
	Total	**825**	**100**
What Type of Banks you deal with	Foreign Banks	46	5.57
	Jordanian Banks	779	94.42
	Total	**825**	**100**
What do you prefer	Commercial Banks	742	89.93
	Islamic Banks	83	10.06
	Total	**825**	**100**
You are a client for	Ahli Bank	158	19.15
	Amman Cairo Bank	42	5.09
	Arab Bank	156	18.90
	Arab Banking Corporation - ABC	20	2.42
	Audi Bank	15	1.81
	Bank of Jordan	39	4.72
	Blom Bank	5	0.60
	Capital Bank	3	0.36
	Egyptian Arab Land Bank	5	0.60
	Housing and Trade bank	173	20.96
	Jordan Commercial Bank	20	2.42
	Jordan Investment Bank	10	1.21
	Jordan Kuwait bank	37	4.48
	National Bank Abu Dabi	3	0.36
	National Kuwait Bank	8	0.96
	Rafidain Bank	3	0.36
	Societe Generale de Banque -	4	0.48
	Standard Chartered	6	0.72
	Union Bank	118	14.30
	Total	**825**	**100**
Type of your Account	Current Account	537	65.09
	Deposit Account	45	5.45
	Saving Account	243	29.45
	Total	**825**	**100**
Type of Product and Services	Bank loans for individuals	110	13.33
	Corporate Banking	29	3.51
	Electronic services	91	11.03
	Investment account	12	1.45
	Service of bank accounts or	497	60.24
	Others	86	10.42
	Total	**825**	**100**
Currency of your Account	Jordanian Diners (JOD)	795	96.36
	Dollar (USD) $	21	2.54
	European Currency (EUR) €	9	1.09
	Total	**825**	**100**
Type of connection used to carry out banking transactions	In-person branch experience	364	44.12
	ATM	296	35.87
	Online experience	133	16.12
	Telephone Experience	32	3.87
	Total	**825**	**100**
	Quality of Service	294	35.63
	ATM's allocations	104	12.60

Why you choose this bank	Location	167	20.24
	Technology used	61	7.39
	Trust	121	14.66
	Type of the bank	78	9.45
Total		**825**	**100**
Location of the bank	Ajloun	16	1.93
	Amman	561	68.00
	Aqaba	2	0.24
	Irbed	102	12.36
	Jarash	7	0.84
	Karak	16	1.93
	Ma'an	7	0.84
	Madaba	29	3.51
	Mafraq	25	30.03
	Salt	29	3.51
	Tafilah	3	0.36
	Zarqa	28	3.39
Total		**825**	**100**
Your Job, career or profession	Academician	42	5.09
	Student	71	8.60
	Businessman	49	5.93
	Government Employee	64	7.75
	Private Employee	418	50.56
	Professional	30	3.63
	Retired	52	6.30
	Others	99	12.00
Total		**825**	**100**

Table 28: Normality Test

No.	Null hypothesis	Test	Sig.	Decision
1	The distribution of TotalCs4 is normal with mean 3.90121 and standard deviation 0.917	One-sample Kolomgrov-Smirnov test	0.000[1]	Rejected the null hypothesis

Asymptotic significances are displayed. The significance level is .05
[1]Lilliefors Corrected
Source: Created by the Author

Table 29: Reliability for Customer Satisfaction

Variable	Original number of items	Cronbach's alpha
Customer satisfaction	4	0.876

Source: Created by the Author

Table 30: Item-Total Statistics

	Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Cronbach's alpha if item deleted
CS1	11.72	7.787	0.823	0.809

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CS2	11.84	7.601	0.823	0.807
CS3	11.51	8.898	0.578	0.898
CS4	11.74	7.265	0.735	0.845

CS n: number of customer satisfaction items

Source: Created by the Author

Table 31: Communalities

Items	Initial	Extraction
CS1	1.000	0.835
CS2	1.000	0.836
CS3	1.000	0.539
CS4	1.000	0.737

Extraction Method: Principal component analysis

Source: Created by the Author

Table 32: Total Variance Explained

	Initial eigenvalues			Extraction sums of squared loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.947	73.684	73.684	2.947	73.684	73.684
2	0.570	14.241	87.926			
3	0.308	7.705	95.631			
4	0.175	4.369	100.000			

Extraction method: principal component analysis

Source: Created by the Author

Table 33: Total Variance Explained

Items	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	19.233	53.424	53.424	19.233	53.424	53.424
2	1.957	5.435	58.859	1.957	5.435	58.859
3	1.290	3.583	62.442	1.290	3.583	62.442
4	1.030	2.862	65.305	1.030	2.862	65.305
……………						
36	0.150	0.416	100.000			

Extraction method: principal component analysis

Source: Created by the Author

Table 34: Component Matrix[a]

	Component				Items	Component			
Items	1	2	3	4		1	2	3	4
Tan1	0.582	-0.287	0.225	0.242	Assur3	0.821	-0.182	-0.078	-0.078
Tan2	0.665	0.096	0.376	0.255	Assur4	0.730	-0.345	0.052	0.093
Tan3	0.613	0.138	0.399	0.201	Rel1	0.788	-0.068	-0.134	-0.109
Tan4	0.701	-0.121	0.321	0.343	Rel2	0.776	-0.163	-0.215	0.090
Tan5	0.714	-0.136	0.236	0.191	Rel3	0.639	-0.114	-0.321	0.078
Res1	0.762	0.003	0.231	-0.086	Rel4	0.681	-0.050	-0.300	-0.016
Res2	0.793	-0.018	0.165	-0.162	Rel5	0.826	-0.080	-0.176	-0.077

Res3	0.709	0.008	0.128	-0.274	Acc1	0.807	-0.117	-0.216	0.093
Res4	0.797	-0.056	0.165	-0.281	Acc2	0.807	-0.067	-0.169	0.105
Emp1	0.767	0.062	0.192	-0.336	Acc3	0.766	-0.022	-0.194	0.135
Emp2	0.820	-0.126	0.131	-0.200	Fin1	0.552	0.613	-0.077	-0.012
Emp3	0.786	-0.004	0.082	-0.339	Fin2	0.525	0.643	-0.022	-0.016
Emp4	0.659	-0.034	0.138	-0.155	Fin3	0.635	0.343	-0.078	0.189
Emp5	0.799	0.005	0.135	-0.151	Fin4	0.670	0.508	-0.022	0.075
Emp6	0.608	-0.211	0.019	0.162	Fin5	0.717	0.406	-0.009	0.125
Assur1	0.774	-0.218	-0.072	0.122	Fin6	0.621	0.341	-0.063	0.091
Assur2	0.819	-0.117	-0.093	-0.100	Ecom1	0.821	-0.039	-0.216	0.018
Ecom2	0.802	0.026	-0.212	-0.017	Ecom3	0.785	-0.106	-0.154	0.092

Extraction method: principal component analysis

a. 4 components extracted

Source: Created by the Author

Table 35: Total Variance Explained

Component	Initial eigenvalues			Extraction sums of squared loadings			Rotation sums of squared loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	total
1	19.233	53.424	53.424	19.233	53.424	53.424	17.077
2	1.957	5.435	58.859	1.957	5.435	58.859	16.136
3	1.290	3.583	62.442	1.290	3.583	62.442	10.386
4	1.030	2.862	65.305	1.030	2.862	65.305	13.144
…………..							
36	0.150	0.416	100.000				

Extraction method: principal component analysis

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance

Source: Created by the Author

Table 36: Pattern Matrix[a]

Items	Component				Items	Component			
	1	2	3	4		1	2	3	4
Rel3	0.867	-0.124	0.032	-0.102	Res4	0.049	0.817	-0.031	0.035
Rel2	0.814	-0.021	-0.017	0.054	Res3	0.025	0.746	0.039	-0.026
Acc1	0.803	-0.022	0.045	0.052	Emp2	0.188	0.681	-0.087	0.104
Rel4	0.776	0.045	0.090	-0.185	Res2	0.077	0.624	0.044	0.149
Ecom1	0.731	0.093	0.123	-0.041	Emp5	0.113	0.587	0.080	0.127
Acc3	0.713	-0.097	0.161	0.090	Emp4	0.064	0.555	0.008	0.108
Acc2	0.709	-0.013	0.101	0.101	Res1	-0.014	0.538	0.074	0.286
Ecom3	0.696	0.015	0.046	0.108	Fin2	-0.117	0.108	0.864	-0.084
Ecom2	0.661	0.137	0.189	-0.092	Fin1	-0.004	0.077	0.841	-0.125
Rel5	0.658	0.275	0.044	-0.089	Fin4	0.073	0.027	0.747	0.067

Assur1	0.654	0.031	-0.096	0.245	Fin5	0.160	-0.016	0.642	0.164
Assur3	0.576	0.353	-0.095	0.031	Fin3	0.287	-0.184	0.579	0.159
Rel1	0.560	0.340	0.038	-0.090	Fin6	0.217	-0.023	0.547	0.070
Assur2	0.548	0.370	-0.019	-0.022	Tan4	0.090	-0.081	0.010	0.841
Assur4	0.518	0.163	-0.282	0.361	Tan2	-0.176	0.060	0.237	0.750
Emp6	0.458	-0.024	-0.118	0.347	Tan3	-0.284	0.140	0.262	0.698
Emp1	-0.098	0.899	0.088	-0.027	Tan1	0.228	-0.008	-0.223	0.652
Emp3	0.108	0.842	0.026	-0.124	Tan5	0.161	0.105	-0.032	0.602

Extraction method: principal component analysis.

Rotation method: promax with Kaiser Normalization.a
a. Rotation converged in 6 iterations.
Source: Created by the Author

Table 37: KMO and Bartlett's Test

Kaiser-Meyer-Olkin measure of sampling adequacy.		0.972
Bartlett's Test of Sphericity	Approx. chi-square	20240.645
	df	465
	Sig.	0.000

Source: Created by the Author

Table 38: Communalities

Items	Initial	Extraction	Items	Initial	Extraction
Tan1	1.000	0.517	Rel3	1.000	0.556
Tan2	1.000	0.689	Rel4	1.000	0.565
Tan3	1.000	0.635	Rel5	1.000	0.733
Tan4	1.000	0.727	Acc1	1.000	0.735
Tan5	1.000	0.612	Acc2	1.000	0.708
Res2	1.000	0.664	Acc3	1.000	0.656
Res3	1.000	0.574	Fin1	1.000	0.695
Res4	1.000	0.741	Fin2	1.000	0.698
Emp1	1.000	0.752	Fin3	1.000	0.567
Emp2	1.000	0.759	Fin4	1.000	0.721
Emp3	1.000	0.760	Fin5	1.000	0.700
Emp4	1.000	0.514	Fin6	1.000	0.519
Emp5	1.000	0.688	Ecom1	1.000	0.723
Assur1	1.000	0.634	Ecom2	1.000	0.686
Rel1	1.000	0.662	Ecom3	1.000	0.654
Rel2	1.000	0.682	-	-	-

Extraction method: principal component analysis

Source: Created by the Author

Table 39: Total Variance Explained

Items	Total	% of Variance	Cumulative %	Total	% of variance	Cumulative %	Total
1	16.488	53.188	53.188	16.488	53.188	53.188	14.614
2	1.788	5.769	58.956	1.788	5.769	58.956	13.668
3	1.241	4.003	62.959	1.241	4.003	62.959	9.854
4	1.007	3.249	66.208	1.007	3.249	66.208	11.354
……….							
31	0.153	0.493	100.000				

Extraction method: principal component analysis
a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance
Source: Created by the Author

Table 40: Pattern Matrix[a]

Items	Component 1	2	3	4	Items	Component 1	2	3	4
Rel3	0.916	-0.129	-0.022	-0.103	Emp4	-0.022	0.675	0.016	0.068
Acc1	0.828	-0.012	-0.013	0.065	Res3	0.088	0.658	0.008	0.035
Rel2	0.812	0.034	-0.051	0.024	Emp5	0.092	0.618	0.080	0.115
Rel4	0.798	0.048	0.047	-0.172	Res2	0.143	0.547	0.022	0.178
Acc3	0.731	-0.088	0.090	0.123	Fin2	-0.155	0.089	0.900	-0.069
Ecom1	0.725	0.109	0.094	-0.031	Fin1	-0.040	0.065	0.874	-0.117
Acc2	0.723	0.004	0.040	0.123	Fin4	0.064	0.007	0.771	0.061
Rel5	0.692	0.252	0.007	-0.068	Fin5	0.160	-0.026	0.662	0.136
Ecom3	0.683	0.036	0.019	0.117	Fin3	0.296	-0.178	0.584	0.120
Ecom2	0.654	0.144	0.169	-0.078	Fin6	0.176	0.028	0.557	0.039
Assur1	0.618	0.096	-0.102	0.209	Tan4	0.131	-0.072	-0.058	0.838
Rel1	0.611	0.301	0.005	-0.074	Tan2	-0.136	0.012	0.164	0.818
Emp1	-0.102	0.899	0.098	-0.025	Tan3	-0.279	0.094	0.207	0.788
Emp3	0.071	0.877	0.040	-0.127	Tan1	0.212	0.071	-0.271	0.627
Res4	0.074	0.784	-0.047	0.064	Tan5	0.195	0.110	-0.072	0.588
Emp2	0.137	0.745	-0.079	0.087	-	-	-	-	-

Extraction method: principal component analysis
Rotation method: promax with Kaiser Normalization.a

a. Rotation converged in 6 iterations
Source: Created by the Author

Table 41: Structure Matrix

Items	Component 1	2	3	4
Acc1	0.856	0.659	0.503	0.624
Ecom1	0.843	0.699	0.571	0.597
Rel5	0.842	0.739	0.531	0.591
Acc2	0.835	0.667	0.534	0.648
Rel2	0.825	0.642	0.461	0.584
Ecom2	0.810	0.692	0.600	0.564

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Ecom3	0.803	0.651	0.505	0.626
Acc3	0.802	0.611	0.534	0.617
Rel1	0.793	0.720	0.507	0.561
Assur1	0.776	0.653	0.430	0.650
Rel4	0.743	0.568	0.456	0.439
Rel3	0.733	0.488	0.387	0.432
Emp3	0.678	0.867	0.540	0.550
Emp2	0.721	0.862	0.494	0.656
Emp1	0.627	0.862	0.564	0.578
Res4	0.692	0.858	0.501	0.635
Emp5	0.692	0.816	0.565	0.649
Res2	0.698	0.793	0.528	0.668
Res3	0.621	0.754	0.473	0.556
Emp4	0.552	0.715	0.444	0.529
Fin4	0.566	0.559	0.844	0.515
Fin1	0.444	0.477	0.828	0.360
Fin2	0.396	0.462	0.825	0.358
Fin5	0.625	0.587	0.812	0.577
Fin3	0.588	0.482	0.715	0.509
Fin6	0.553	0.523	0.698	0.473
Tan4	0.623	0.574	0.417	0.848
Tan2	0.538	0.573	0.522	0.819
Tan3	0.462	0.550	0.513	0.769
Tan5	0.644	0.623	0.418	0.761
Tan1	0.542	0.506	0.227	0.681

Extraction method: principal component analysis.
Rotation Method: Promax with Kaiser Normalization.
Source: Created by the Author

Table 42: Component Correlation Matrix

1	1.000	0.766	0.590	0.694
2	0.766	1.000	0.600	0.693
3	0.590	0.600	1.000	0.526
4	0.694	0.693	0.526	1.000

Extraction method: principal component analysis.

Rotation method: promax with Kaiser Normalization.
Source: Created by the Author

Table 43: Reliability of the Variables (Cronbach's Alpha)

Variables	Original number of items	Items after deletion	Cronbach's alpha
Assurance, reliability, access and employee competences	15	9	0.951
Responsiveness, empathy	10	8	0.931
Financial aspect	6	5	0.886

			0.843
Tangibility	5	5	0.843
Total/ overall Cronbach's	36	31	0.969

Source: Created by the Author

Table 44: Reliability Statistics

Cronbach's Alpha	N of Items
0,969	31

Source: Created by the Author

Table 45: Item-Total Statistics

	Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Cronbach's alpha if item deleted
Tan1	111.72	561.230	0.541	0.969
Tan2	112.29	554.573	0.653	0.968
Tan3	112.44	555.599	0.600	0.968
Tan4	111.93	555.036	0.673	0.968
Tan5	111.94	553.285	0.681	0.968
Res2	112.11	549.698	0.768	0.968
Res3	112.36	548.490	0.686	0.968
Res4	112.18	547.235	0.774	0.967
Emp1	112.37	545.143	0.749	0.968
Emp2	112.03	549.150	0.790	0.967
Emp3	112.31	547.224	0.762	0.968
Emp4	112.15	556.330	0.632	0.968
Emp5	112.23	545.367	0.777	0.967
Assur1	111.77	552.982	0.732	0.968
Rel1	112.23	547.572	0.762	0.968
Rel2	111.90	552.139	0.746	0.968
Rel3	112.21	552.320	0.610	0.968
Rel4	112.30	554.309	0.657	0.968
Rel5	112.12	547.593	0.801	0.967
Acc1	112.10	552.642	0.779	0.968
Acc2	112.13	552.131	0.785	0.967
Acc3	112.12	553.586	0.745	0.968
Fin1	112.76	555.555	0.565	0.969
Fin2	112.96	556.392	0.537	0.969
Fin3	112.34	547.476	0.631	0.968
Fin4	112.58	545.176	0.677	0.968
Fin5	112.43	545.835	0.718	0.968
Fin6	112.41	555.101	0.619	0.968
Ecom1	112.12	549.712	0.796	0.967
Ecom2	112.12	551.592	0.781	0.967
Ecom3	112.03	551.972	0.754	0.968

Source: Created by the Author

Table 46: Normality of the New Subscales of Service Quality Dimensions

No.	Null hypothesis	Test	Sig.	Cronbach's Alpha
1	The distribution of REGR factor score 1 for analysis 2 is normal with mean 0.000 and standard deviation 1.000	One-sample Kolomgrov-Smirnov test	0.000[1]	Rejected the null hypothesis
2	The distribution of REGR factor score 2 for analysis 2 is normal with mean 0.000 and standard deviation 1.000.	One-sample Kolomgrov-Smirnov test	0.000[1]	Rejected the null hypothesis
3	The distribution of REGR factor score 3 for analysis 2 is normal with mean 0.000 and standard deviation 1.000.	One-sample Kolomgrov-Smirnov test	0.057[1]	Retain the null hypothesis
4	The distribution of REGR factor score 4 for analysis 2 is normal with mean 0.000 and standard deviation 1.000.	One-sample Kolomgrov-Smirnov test	0.000[1]	Rejected the null hypothesis

Asymptotic significances are displayed. The significance level is .05.
[1]Lilliefors Corrected
Source: Created by the Author

Table 47: Correlations

Variables			Customer satisfaction	Assurance, reliability, access and employee competences	Responsiveness. empathy	Financial aspect	Tangibility
Spearman's rho	Customer satisfaction	Correlation coefficient	1.000	0.799**	0.710**	0.660**	0.619**
		Sig. (2-tailed)	.	0.000	0.000	0.000	0.000
	Assurance, reliability, access and employee competences	Correlation coefficient	0.799**	1.000	0.752**	0.606**	0.634**
		Sig. (2-tailed)	0.000	.	0.000	0.000	0.000
	Responsiveness. empathy	Correlation coefficient	0.710**	0.752**	1.000	0.606**	0.654**
		Sig. (2-tailed)	0.000	0.000	.	0.000	0.000
	Financial aspect	Correlation coefficient	0.660**	0.606**	0.606**	1.000	0.541**
		Sig. (2-tailed)	0.000	0.000	0.000	.	0.000
	Tangibility	Correlation coefficient	0.619**	0.634**	0.654**	0.541**	1.000
		Sig. (2-tailed)	0.000	0.000	0.000	0.000	.

**. Correlation is significant at the 0.01 level (2-tailed).
Source: Created by the Author