

Thesis of Doctoral (Ph.D.) Dissertation

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

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Table of Contents

1	RESEARCH BACKGROUND AND RATIONALE	4
2	STRUCTURE OF THE THESIS AND APPLIED METHODOLOGY	6
3	KEY RESEARCH QUESTIONS.....	8
4	RESULTS.....	10
5	CONCLUSION	21
6	MAIN CONCLUSIONS AND NOVEL FINDINGS OF THE DISSERTATION.....	25
7	RECOMMENDATIONS.....	27
8	REFERENCES.....	31
9	AUTHOR’S LIST OF PUBLICATION RELATED TO THE DISSERTATION.....	36

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1 Research background and rationale

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).

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.

The links between supply chain integration and financial performance have been widely investigated in the literature (e.g., Silvestro and Lustrato Paola, 2014; Vanpoucke et al, 2017), however, most existing research studies focus on investigating the effects of SCI 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).

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 is consist 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). Therefore, this study attempts to address this gap in the literature by investigating the effect of SCI

and internal control on the financial performance. Moreover, the customer satisfaction of service quality in Jordanian banks. Additionally, the effect of customer satisfaction on financial performance is investigated.

2 Structure of the thesis and applied methodology

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?” Each research question had been structured to explore the research objective.

The first part of chapter II demonstrates the technical literature about the supply chain management definitions, supply chain practices, the importance of supply chain integration, the relationship between supplier, customer and internal integration, and an overview of the internal control especially in Jordanian banking sector. Generally speaking, it includes reviews of the technical literature linked to the objective of the study such as the relationship between supply chain integration and internal control on financial performance in order to explore the components effects on each other. The consolidated data has reinforced the importance of supply chain integration and internal control on financial performance and their role of Jordanian banking sectors.

Then the literature review sheds light on service quality and customer satisfaction in the Jordanian banking system. The modified SERVQUAL model explains the essential dimensions of service quality; tangibility, responsiveness, empathy, reliability, assurance, access, financial aspect, and employee competencies. The conclusion was drawn that service quality is

the main objective of achieving a customer satisfaction in order to improve performance. In the thesis entirely 283 publication were discussed.

Chapter III includes the research approach and methodology. Research variables, research data source, research hypotheses, and theoretical framework are explored. This part illustrates and describes the methodology used and designs the structure of the dissertation. Moreover, data population and sampling, data collection, and questionnaire format selections are explained. Data were collected from the managers and customers of the Jordanian banking sector from December 2017 to February 2018. Two questionnaires were developed, first to survey the opinion of bank employees and second for the customers. The first questionnaire was constructed to measure the relationship between supply chain integration and internal control on financial performance while the second survey form was designed to assess the effect of service quality on customer satisfaction. The content and face validity is described by a reliability test. Then the development of hypotheses are explained and the primary data collection method is expressed.

Chapter IV in order to analyze the data and obtain results by using methodology, population, sample, tools used for data collection, and statistical methods, which is debated in the previous chapter. Analysis was run using the SPSS program. This study attempt to adopt the descriptive statistics and Exploratory Factor Analysis (EFA) and the findings has explained later in chapter 5.

Chapter V is about research findings and their evaluation. First, the supply chain integration and internal control effects on the financial performance are analyzed. The conclusion is that the supply chain integration and internal control influence financial performance positively.

Second, service quality dimensions are presented to see the level of effect on the customer satisfaction in the Jordanian banking sector. Eight initial dimensions were examined: tangibility, responsiveness, empathy, reliability, assurance, access, financial aspect, and employee competencies, with the conclusion that all the dimensions have strong and positive influence on customer satisfaction. As a result of the analysis, four factors were extracted which are professional features', caring, financial aspects and tangibility. The results show that the service quality dimensions positively influence customer satisfaction in the Jordanian banking sector.

Lastly, the results found that the Jordanian banking sector has concern for customer satisfaction and they have to take these dimensions into consideration.

According to the finding of the research, several recommendations are suggested such as measuring performance by using financial performance, develop the supply chain integration, set an efficient internal control system to achieve supply chain strategy. Furthermore, the customer satisfaction is an indicator to express the service performance, possibility to modify the SERVQUAL model according to the field study. Financial aspect has to recommend as a new dimension of customer satisfaction evaluation.

3 Key Research Questions

The following research questions are addressed:

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?

Based on the literature of these questions and the databases available for the research, the following hypotheses are tested.

Hypothesis 1: Firms External integration positively influences financial performance in Jordanian banks.

Hypothesis 1.1: Customer integration positively influences financial performance.

Hypothesis.2: Supplier integration positively influences financial performance.

Hypothesis 1 is answered in Chapter 5.

Answer 1: The external integration have a positive influence on financial performance of Jordanian banks.

Answer 1.1: The customer integration have a positive influences on financial performance of Jordanian banks.

Answer 1.2: The supplier integration have positive influences on financial performance of Jordanian banks.

Hypothesis 2: Internal integration positively influences financial performance in Jordanian banks.

Hypothesis 2 is answered in Chapter 5.

Answer 2: The internal integration have positive influences on financial performance of Jordanian banks.

Hypothesis 3: Internal control positively influences financial performance in Jordanian banks.

Hypothesis 3 is answered in Chapter 5.

Answer 3: The internal control have a positive influences on financial performance of Jordanian banks.

Hypothesis 4: Service quality tangibility, responsiveness, empathy assurance, reliability, access, financial aspects, and employee competences positively influences customer satisfaction in Jordanian banks control positively influences financial performance in Jordanian banks.

Hypothesis 4 is answered in Chapter 5.

Answer: The service quality dimensions have positive influences on customer satisfaction of Jordanian banks.

4 Results

4.1.1 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;).

4.1.2 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; Schoenberr and Swink, 2012).

4.1.3 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) found that supplier, integration was negatively related to certain aspects of financial performance, Yu et al. (2013) found a positive relationship between supplier integration and financial performance

4.1.4 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).

4.1.5 Internal control positively influences the 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 enhancing financial performance (Haddad, 2016).

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.

4.1.6 New model after rotation

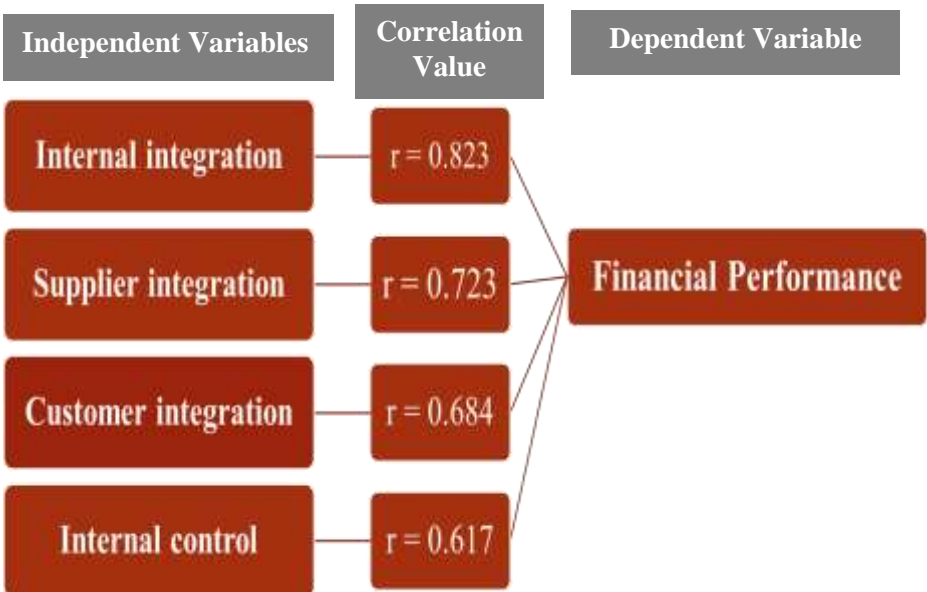


Figure 1 new subscale for SCI and internal control.

Source: Created by author

4.2 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).

4.2.1 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). According to Othman (2003), the tangibles are the external appearances. The results imply 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) and

inconsistent with one study (Albarq, 2013) that found opposite relationship between tangibles and customer satisfaction.

4.2.2 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., 1988; Selvakumar, 2015; Rishi and Deepak, 2017).

4.2.3 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

(Selvakumar, 2015; Rishi and Deepak, 2017; Navaratnaseelan and Elangkumaran, 2014).

4.2.4 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 imply 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. (1988) found the reliability is ability to perform the customer-required services. These findings are consistent with previous studies (Rishi and Deepak, 2017; Selvakumar, 2015).

4.2.5 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).

4.2.6 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 Iadhari et al. (2011) and inconsistent with Flavian et al. (2004).

4.2.7 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 (Baumann et al., 2017; Sharma, 2016). 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.

4.2.8 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).

4.2.9 New model after rotation

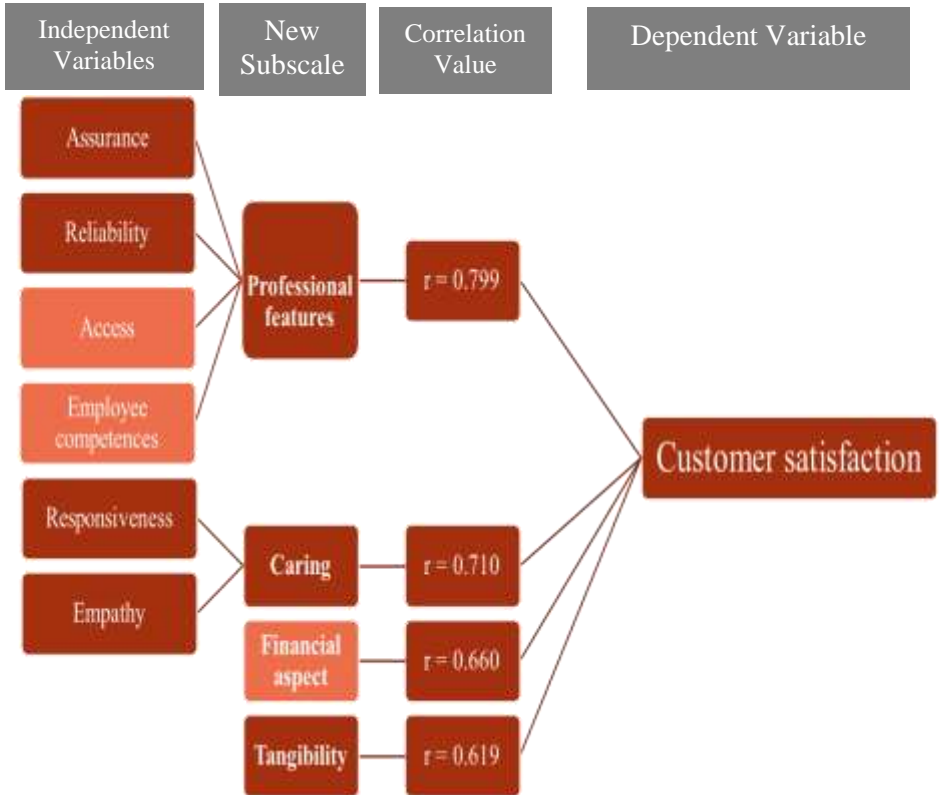


Figure 2 New service quality model

Source: Created by author

5 Conclusion

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 Kolomgrov-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 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 has to be able to help customers and deal with their problems. Assurance means that in the 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 be willing to help the customer, respond to their requests, and tell them when the services will be performed. The 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 a 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.

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 more strongly related to improving performance than supplier integration and customer integration.

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.

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.

7 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 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 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 that any model should be modified to the area where it is used.

5. For future usage, we recommend 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 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.
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 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.

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