

Ascertaining the Main Determinant of The Internal-External Integration Relationship And Measuring Their Impact on Firm's Financial Performance.

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Abstract: The main aim of this research was to ascertain the extent to which internal and external integration influence each other and the impact each of them has on the financial performance of firms. This research was in response to the ongoing debate surrounding the main determinant in the internal and external integration relationship. Moreover, the research was to bridge the gap of the impact of supply chain integration on financial performance which was inadequate in the supply chain integration literature. The research was conducted with food retailers in Turkey. 200 main food chains (retailers) in Turkey were selected, out of which only 116 of them responded accurately to the questionnaire used in collecting the data. SEM specifically Amos was used in analysing the validity of the metrics and performing the regression analysis. It was found that, internal integration is the strongest in the internal and external integration relationship. Internal integration influences external integration. Furthermore, both internal and external integration have a positive influence on firm financial performance. However, external integration had a stronger influence on financial performance than internal integration. This implies that a stronger internal integration would lead to stronger external integration and a stronger external integration would help firms achieve magnificent financial performance. Firms were therefore advised to establish a more collaborated internal departments and systems which would eventually lead to a better external integration. However, the financial performance metrics were few and future researchers can expand the metrics by including equally important metrics.

Keywords: Supply Chain Integration, External Integration, Internal integration, financial performance

Date of Submission: 25-11-2017

Date of acceptance: 02-12-2017

I. Introduction

To fully realize the benefits and effectiveness of supply chains, firms are closely coordinating their activities with their supply chain partners. Researchers have suggested firms can reduce the number of defects and provide quality goods and services if there is a close collaboration between firms and their customers and suppliers. This collaboration is termed as Supply Chain Integration. Chopra and Meindl (2010) stressed the supply chain does not only include suppliers and manufacturers but it made up of all the parties including retailers, distributors, customers, warehouses, transporters and all parties involved in transferring goods or services to the final consumers. Currently, the definition of supply chain management is gradually changing to include the concept of integration (Martin & Kağncioğlu, 2017). For instance, Larson and Rogers (1998) defined supply chain management as the coordination of activities, within and between vertically linked firms for the purpose of serving end customers at a profit. Stank, Crum & Arango (1999) and Zailani and Rajagopal (2005) all stressed the usefulness of integration by defining supply chain management as the network that includes vendors of raw materials, machines and plants to transform the materials into finished goods and distribution centres to transport those goods to the final consumers. Literally, integration can be explained as the degree with which separate parties work together in a collaborative manner to achieve an expected and agreed outcome (O'Leary-Kelly and Flores, 2002; Khan and Mentzer, 1996; Jayaram and Tan, 2010). Therefore, supply chain integration can simply be defined as the coordination of efforts and resources in the form of business processes that are closely linked both within and outside a company's boundaries (Romano, 2003).

Supply chain integration was projected to be implemented by firms in the future period in the 1970's (Stank et al., 2001). However, Stevens (1989) opined that for firms to fully realize the benefits of integration, it needs to fully integrate its internal systems and departments before the integration can be extended to include suppliers and customer or perhaps the other members of the supply chain. Currently, supply chain collaboration can be simply categorized into vendor managed inventory, where the supplier manages most of the stock for manufacturing firms or customer managed stock, where customers play effective role in ordering and managing their own stock/goods. Generally, the whole concept of integration is operationalized through the arc of

integration (Jayaram and Tan, 2010). To fully comprehend and administer the supply chain integration, it is highly essential to examine the dimensions of supply chain. Researchers have categorized the dimensions of integration into internal, customer and supplier integration (Flynn et al, 2010). However, the customer and supplier integration can be further be categorized into external integration. Throughout this work, supply chain integration is considered as internal and external integration. Internal integration involves the collaboration between departments or units in a firm working side by side to achieve the ultimate goal of satisfying customers. In other words, it involves the degree to which a firm can structure its organizational process in order to fulfil customer requirements (Kahn & Mentzer, 1996; Flynn et al., 2010). On the other hand, external integration involves forming strong alliances with customers and suppliers, developing strong partnerships, sharing of pertinent information to overcome market problems by developing good strategies (Zhao et al., 2011). This study classifies external integration as the degree to which a firm can partner with its key supply chain members (customers and suppliers) to structure their inter-organizational strategies, practices, procedures and behaviours into collaborative, synchronized and manageable processes to fulfil customer requirements (Flynn et al., 2010).

Currently, the concept of integration of suppliers, customers and manufacturers has become easily studied paving way for it to be researched further (Marquez et al., 2004). The current concept of supply chain management is wholly based on integration (Pagell, 2004; Fabbe-Costes and Jahre, 2008). Supply chain integration has contributed immensely both to the strategic and operational performance of firms (Bechtel and Jayaram, 1997; Lambert et al., 1998; Frohlich and Westbrook, 2001; Zailani and Rajagopal, 2005; Fabbe-Costes and Jahre, 2008). The real significance of supply chain integration has been highlighted in decades ago. The importance was captured in various definitions of supply chain integration. Moreover, the whole concept of integration is being operationalized through a concept called arc of integration (Jayaram and Tan, 2010). The arc of integration from the suggests that it is quite easier to integrate internally than extending collaboration across the organizational boundaries. Firms could either integrate widely, thus, a wider arc or narrowly, thus, a narrow arc. Stevens (1989) suggested the basis for integration where the research suggested that firms who integrate can reduce and get rid of numerous impediments in the supply chain integration. The management of material flow can be viewed from three perspectives; strategic, tactical and operational.

Recently, firms who are capable of competing fervently and are strong in the market are those who have adopted the practice of integration (Ragatz et al., 1997; Frolich and Westbrook, 2001). The sole motive of integration is to establish and coordinate manufacturing and supply processes efficiently, effectively and uninterruptedly across the whole supply chain to the point where competitors cannot easily compete (Anderson and Katz, 1998; Lumus et al., 1998; Frolich and Westbrook, 2001). Firms have been able to successfully develop new products/services through integrating with their suppliers and customers. Integration reinforces mutual respect, technically influences and improves contractual terms, encourages smooth conflict settlement between firms and their supply chain partners, sharing of risks and rewards and encourages smooth flow of information between the parties (Anderson and Katz, 1998; Lumus et al., 1998; Frolich and Westbrook, 2001). The negative effects of the Bullwhip menace can be minimized through integration. Comprehensively, performance of firms has improved through integration, suggesting that integration can exert a positive influence on performance.

Essentially, these perspectives suggest that firms should integration internally before extending such relationship to its supply chain partners; customers and suppliers (Stevens, 1989). This reiterated the need for integration both within the organisation and outside the organisation. Communication and information sharing are necessary for a successful integration (Stank et al., 1999). Meaning, firms who are on the verge of integrating with their suppliers and customers needs to have a stronger communication channel and there must be a consistent sharing of information between parties. El-Ansary (1992) confirmed that firms seeking to integrate externally must consider communications, information exchange, partnering and performance monitoring as factors that can trigger effective integration. Additionally, power and relationship commitment increase the chances of establishing an efficient and effective relationship. Thus, power and relationship commitment have a high impact on customer integration (Zhao et al., 2008). Prajogo and Olhager (2012) also suggested that consistent information sharing, clear information technology and sharing and logistics integration are the only means of achieving integration in a supply chain relationship. Integration can be categorized into various dimensions; internal, customer and supplier (Prajogo and Olhager, 2012). However, the customer and supplier integration can be coined into external integration (Stank et al., 2001).

There has been a consistent increase in the number of research exploring the relationship between internal and external integration and their impact on firm performance. Even though, majority of the research on this issue have focused comprehensively on examining both internal and external integration on performance (Droge et al., 2004; Rosenzweig et al., 2003; Vickery et al., 2003), others have also investigated the impact of either internal or external integration on performance (Stock et al., 1998; Gimenez and Ventura, 2005). Studies have also focused on examining the impact of integration on firm level performance (Swink et al., 2007) and on new product development performance (Koufteros et al., 2005). However, this study does not essentially deviate from the previous studies as this study concentrates on revealing the impact of supply chain integration on firm performance, however, this study will concentrate on examining the relationship between integration and

financial performance which is lacking in previous studies and also reveal the type of integration which exerts a stronger influence on firm performance.

There is no generally accepted definition for firm performance. Different research have attributed different metrics in measuring firm performance. The previous research measure of performance can be categorized into operational and business performance. However, research measuring business performance, which is, financial performance are few. Various elements of cost (transporting costs, warehousing costs, ordering costs, stock out, order cycle variance, on-time deliveries and unacceptable deliveries can be used in measuring have been used in measuring performance (Stank et al., 1999). Other research adopted other variables such as technology, delivery, product quality, technology, quick deliveries, flexibility and many more have been used in defining operational performance. However, in measuring financial performance, this research adopted variables such as Return On Assets (ROA), Return on Investment (ROI), cost savings, market share and other financial variables appropriate for the measure of firm financial performance.

In as much as, most of the previous research found a positive relationship integration and firm performance, a handful of the previous research made findings to the contrary. Scannell et al. (2000) found that supplier partnership has a significant relationship with firm performance, where firm performance was measured with product quality, technology, cost and delivery. A positive relationship was found to exist between internal integration and firm performance, however, external integration had a negative relationship with firm performance (Stank et al., 2001). Internal integration serves a moderating factor, regulating the relationship between external integration and firm performance (Germain and Iyer, 2006). Some researchers have identified a negative relationship between integration and financial performance (Germain and Iyer, 2006). Few research have failed to either prove this assertion or debunk it, thus, in total, research on the impact of supply chain integration financial performance are quite few (Afshan, 2013).

Little have been done to really prove the relationship between internal and external integration, nevertheless, a firm which has collaborated internal systems and departments are capable of forming a strong alliance with its customers or suppliers. Many research have identified a positive relationship between internal and external integration, however, many have also internal integration influencing external integration while less have proven the contrary. This work is expected to contribute to the literature surrounding the relationship between internal and external integration by mainly establishing the real relationship and determining the strength of either internal integration or external integration; that is, which of them influences the other in their relationship.

Therefore, the main purpose of this study is to explore the impact of supply chain integration on firm financial performance by mainly examining the relationship between internal and external integration, and examine the stronger type of integration. Secondly, the study will examine the impact on both integration on financial performance in the retail industry in Turkey. This research is expected to contribute immensely to literature by contributing to the studies on the impact of supply chain integration on firm financial performance which is lacking. The next section of this study would cover the various literature on supply chain integration and firm performance specifically business performance and then the subsequent section would cover the methodology used in this study. Eventually, the findings, conclusion and suggestions on future research would be presented.

1.1 hypothesis

From the literature reviewed above, this hypothesizes that;

- H₁: Internal integration influences external integration and its stronger in the relationship
- H₁₀: External integration influences internal integration and its stronger in the relationship
- H₂: Internal integration has a positive influence on firm financial performance
- H₃: External integration has a positive influence on firm financial performance.

II. Methodology

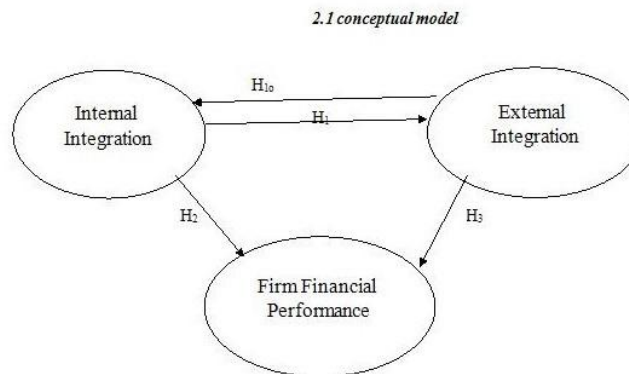


Figure 1.0The diagram above summarizes the hypotheses of the study.

2.2 Development of Measures

Since this research is purely quantitative, an instrument was designed to obtain data from the participants. The instrument was obtained from the questionnaire used by Stank et al (2001). To ascertain the true variables for the data collection, additional literatures were reviewed. Metrics for the variables of the study were then developed. That is, metrics for the internal, external and financial performance were obtained. However, the financial performance measures were obtained from Flynn et al. (2010) and other accounting literature for the acquisition of the true definition and the real metrics for measuring for financial performance of firms. The research used food retailers in Turkey.

The questionnaire was divided into main four parts. The first part of the questionnaire contained questions about the demographical features of the respondents. Essentially, firms were asked to respond to four distinctive questions. Firms were asked to respond to a Yes or No question if they have a supply chain manager. Firms were asked to choose from a list of annual income list level provided. Moreover, respondents were asked to state their positions and retail firm category of the firm.

The second part of the questionnaire measured the internal integration of the firm. Eight (8) metrics were selected to represent internal integration of the firm. Table 1.1 below clearly illustrates the eight (8) metrics used in measuring the internal integration practices of the firms. Firms were asked to measure their internal integration activities on a five-point Likert scale where 1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strong agree.

The third section of the questionnaire measured external integration. Firms were asked to respond to nine (9) items representing external integration activities that the firms were likely to practice. The items are clearly listed in Table 3.1 below. Similarly, firms were asked to measure their internal integration activities on a five-point Likert scale where 1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strong agree.

Finally, the fourth part of the survey instrument contained items measuring the financial performance. The performance contained only financial performance measuring metrics. Firms were asked to rate their performance with respect to the performance of competitors. In measuring financial performance, Return on Assets, Return on Investment, market share and cost reduction were selected. At this section, firm performance used a slightly different scale where 1=worse than competitors, 2=slightly worse than competitors, 3=neutral, 4=slightly better than competitors and 5=much better

Table 1.1 Items in a questionnaire

<p>Internal Integration</p> <p>INT IG 1 My firm maintains an integrated database and access method to facilitate information sharing.</p> <p>INT IG 2 My firm effectively shares operational information between departments.</p> <p>INT IG 3 My firm has adequate ability to share both standardized and customized information internally.</p> <p>INT IG 4 My firm provides objective feedback to employees regarding integrated on business and logistics performance</p> <p>INT IG 5 My firm's compensation, incentive and reward systems encourage integration.</p> <p>INT IG 6 My firm extensively utilizes cross-functional work teams for managing day-to- day operations.</p> <p>INT IG 7 My firm clearly defines specific roles and responsibilities jointly with our supply chain partners.</p> <p>INT IG 8 My firm has clearly defined a legal framework to guide involvement in supply chain collaboration</p> <p>External Integration</p> <p>EXT IG 1 My firm is willing to share strategic information with selected suppliers and/or customers.</p> <p>EXT IG 2 My firm has developed performance measures that extend across supply chain relationships.</p>

<p>EXT IG 3 My firm experiences improved performance by integrating operations with supply chain partners.</p> <p>EXT IG 4 My firm has increased operational flexibility through supply chain collaboration</p> <p>EXT IG 5 My firm benchmarks best practices/processes and shares results with suppliers.</p> <p>EXT IG 6 My firm has supply chain arrangements with suppliers and customers that operate under principles of shared rewards and risks.</p> <p>EXT IG 7 My firm shares technical resources with key suppliers to facilitate operations</p> <p>EXT IG 8 My firm actively pursues and shares a common set of expectations with supply chain partners.</p> <p>EXT IG 9 My firm is willing to enter long-term agreements with suppliers.</p> <p>Firm's Financial Performance</p> <p>PERF 1 (ROA) The ratio of income before interest expense divided by average total assets.</p> <p>PERF 2 The ability to achieve the lowest total cost of through efficient operations, technology and/or scale economies.</p> <p>PERF 3 A profitability measure that evaluates the performance of a business by dividing net profit by net worth.</p> <p>PERF 4 The firm's portion of total sales in relation to the market it operates within</p>
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Table 1.1 Questionnaire Items

2.2.1 data collection technique

The research was conducted in Turkey, hence, it was apparently necessary for the questionnaire to be translated to a language that would be easily comprehended by the respondents. Therefore, linguistics experts who were researchers were employed to translate the questionnaire to Turkish language, as the original version was in English. The Turkish version was again translated back into English by another linguistic expert and the English version was checked on sentence by sentence basis. This was necessary to check the discrepancy level. Since a number of questions were added to the original questionnaire, it was worthwhile to test the instrument before its administration to respondents. A pilot study with 30 retailers was conducted before the original retailers were contacted with the questionnaires. Turkish version was completely devoid of mistakes and ambiguities, it was administered to respondents.

Stratified sampling technique was used in selecting the required number of respondents. Retailing in Turkey can be categorized into supermarkets, hypermarkets, discount stores and small traditional shops and wholesalers. However, retailers with number of employees and capital level meeting or exceeding certain amount were selected for the study. Furthermore, only retailers which could be classified into the categories provide above, were selected for the study. The list of the retailers was obtained from the Istanbul Chamber of Commerce. 200 retailers who met the criteria provided were selected and the questionnaire distributed to each of the respondent. Some of the respondents were easily accessible, therefore, the questionnaires were distributed to them by the researcher. However, since majority of the respondents were based in Istanbul, the questionnaire was designed on google forms and sent to the various targeted respondents after they were contacted for their email addresses.

Only 116 of the respondents responded fully to the questions asked in the questionnaire. This represents 0.58 or 58% response rate. Similarly, other researchers have used smaller response rate in making analysis Groves and Valsamakis worked with a response rate of 15%, Stank, Daugherty and Autry also worked with a response rate of 20.2%, Stank, Keller and Daugherty also worked with a response of 11.5% and Gimenez and Ventura worked with a response rate of 32.3% (Gimenez and Ventura, 2005; Osei and Kağrıncıoğlu, 2017).

96 of the retailers responded Yes when asked if supply chain managers are available in their firm and 19 of the firms responded No. 14 General Managers, 2 general directors, 3 financial directors, 17 accountants, 7 sales directors, 25 branch managers, 27 cashiers, 3 information systems managers, 11 supply chain managers and 6 shop assistants responded to the questionnaire. Out of the retailing firms, 49 supermarkets, 11 hypermarkets, 38 mini markets and 5 firms refused to state the type of firm. The availability of supply chain managers and other equally highly ranked managers responding to the questionnaire makes it valid for further analysis to be made.

2.3 Validity and Reliability Tests

Principal components and confirmatory factor analyses were performed to test the true validity and the unidimensional characteristics of the variables or metrics used in measuring each of the variable in the study (Stank et al., 2001; Osei and Kağrıncıoğlu, 2017). Furthermore, the variables were tested with Cronbach Alpha to ascertain their internal consistency and the closeness of items in a group. It is mostly used, when a multiple Likert questions are used in collecting data (Cronbach, 1951; Jayram and Tan, 2010). The analyses revealed a positive, valid and reliable values of the variables. Table 1.2 below summarizes the values obtained from the principal component scores, confirmatory factor analyses and the Cronbach Alpha. Statistically, principal component scores that meet or exceeds 0.60 are normally considered as viable for analyses. On the other hand,

Cronbach Alpha values which meet or exceeds .60 are considered reliable for analysis (Jayaram and Tan, 2010). This same statistical rule applies to the factor scores obtained from the confirmatory factor analysis.

Table 1.2 Principal component, confirmatory factory analysis and Cronbach Alpha

Items	Pc Scores	Factor Scores	Item-To-Total Correlation	Alpha If Item Is Deleted	Cronbach Alpha For Scale
Internal Integration					.844
Int Ig 1	.751	.430	.569	.829	
Int Ig 2	.771	.522	.721	.812	
Int Ig 3	.744	.661	.639	.813	
Int Ig 4	.771	.281	.427	.838	
Int Ig 5	.742	.732	.550	.829	
Int Ig 6	.367	.328	.371	.848	
Int Ig 7	.696	.701	.632	.819	
Int Ig 8	.714	.784	.686	.812	
External Integration					.837
Ext Ig 1	.656	.484	.336	.843	
Ext Ig 2	.698	.578	.573	.818	
Ext Ig 3	.741	.837	.523	.817	
Ext Ig 4	.566	.399	.529	.822	
Ext Ig 5	.811	.378	.675	.822	
Ext Ig 6	.725	.633	.633	.804	
Ext Ig 7	.710	.623	.638	.810	
Ext Ig 8	.704	.726	.432	.835	
Ext Ig 9	.808	.389	.612	.897	
Firm Financial Performance					.649
Perf 1	.752	.262	.493	.533	
Perf 2	.684	.344	.421	.589	
Perf 3	.651	1.155	.413	.592	
Perf 4	.747	.688	.406	.602	

From the figures above, the principal component scores, factor scores and the Cronbach alpha values meet or exceed the statistically accepted values. However, only few of them did not meet the criteria, but generally the values indicate a valid metrics and hence, analysis can be made.

2.4 model fit indices

Usually, Chi square test (χ^2) is the most widely used in testing how model fit perfectly with the data. The Chi square test is usually reported with the degree of freedom and significance value (p-value). Nonetheless, due to the numerous setbacks associated with the chi square, AMOS provides series of important indices to adequately test the hypothesis and the model fit. In testing the model fit, Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Goodness of Fit Index (GFI), PCLOSE and Standardized Root Mean Residual (SRMR).

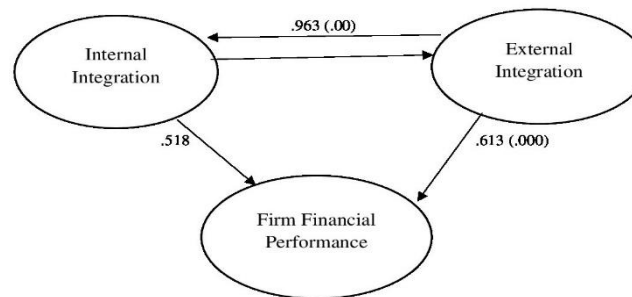
Table 1.3

X ²	Df	P Value	Gfi	Cfi	Rmr	Rmse	Nnfi	P Close	Ifi	Tli
722.1	317	.000	.664	.658	.097	.0052	.607	.000	.667	.568

Statistically, RMSEA value of 0.05 or less is considered to indicate a good fit of the model. Apparently, the RMSEA value of .0052 indicates a good fit of the model. Hu and Bentler (1999) recommended that CFI and TLI value of .95 or higher is considered to indicate a perfect model fit, even though, the CFI and TLI are not higher, they are considered valid for analysis. GFI, IFI and NNFI on the other hand, should be approximately .95 or 1 but values more than .50 are considered valid for analysis.

2.5 regression analyses

Figure 1.1 Regression Analyses



Internal integration has a positive and significant relationship with external integration. With a regression value of .963, H_1 and H_{10} are strongly supported. Internal integration has a positive and significant relationship with firm financial performance, hence, with a regression value of .518, H_2 is strongly supported. Similarly, external integration has a positive and significant relationship with firm performance. Regression value of .613 indicates that H_3 is supported. In summary, all the hypotheses of this research were supported from the analyses.

III. Results And Conclusion

The main objective of this research was to examine if supply chain integration has either a positive or negative relationship with firm's financial performance. It can be confirmed that most firms in Turkey practice sound supply chain integration, even though, majority of the respondents were not supply chain managers, it can firmly be deduced that the response of the questionnaire was delegated to the lower managers.

Internal integration has a positive relationship with external integration. For firms to achieve positive and a strong relationship with their supply chain partners, firms should be able maintain an integrated database and access method to facilitate information sharing; effectively share and maintain operational information between the internal departments; provide systems to facilitate the effective flow of standardized and customized information internally; provide immediate feedback to employees on business and logistics performance; establish better compensation and effective rewards; establish cross-functional work teams for managing day-to-day operations and clearly define a legal framework to guide involvement in supply chain collaboration. When these systems are put in place internally, it provides a formidable structure for firms to provide systems to share strategic information with selected suppliers and/or customers, develop performance measures that extend across supply chain relationships, increase operational flexibility, provide the necessary best practices/processes and shares results with suppliers, provide a unified process to facilitate and operate under principle of shared rewards and risks, stimulate operations to share technical resources with key suppliers and customers and pursue a common set of expectations with supply chain partners. This finding debunks some of the previous assertions made by the previous researchers. Few of the research confirmed a negative relationship between internal and external integration. However, the focus of this research was to determine whether internal integration is a prerequisite to external integration. Apparently, this research affirms that for a firm to establish a stronger relationship with external partners, proper internal channels, processes and procedures should be put in place to enable an easy relationship formation with their supply chain partners.

Internal integration has a positive and strong relationship with firm financial performance. This implies that, if firms maintain an integrated database and access method to facilitate information sharing; effectively share operational information between departments; provide adequate ability to share both standardized and customized information internally; provide objective feedback to employees regarding integrated on business and logistics performance; provide compensation, incentive and reward systems to encourage integration; extensively utilize cross-functional work teams for managing day-to-day operations, clearly defines specific roles and responsibilities jointly with our supply chain partners; clearly defines a legal framework to guide involvement in supply chain collaboration, the financial performance of firms would improve. Specifically, profit, total sales, net income would greatly increase. Moreover, the firm would achieve lower cost through collaborating effectively with their customers and suppliers. It could be concluded that, internally, firms should establish systems to would aid in the effective and efficient integration of all the departments, and ensure consistent flow and sharing of information between departments and individuals in the firm.

Furthermore, the research established a positive and strong relationship between external integration and firm financial performance. Impliedly, if firms are willing to share strategic information with selected suppliers

and customers; develop performance measures that extend across supply chain relationships; integrating operations with supply chain partners; benchmarks best practices/processes and shares results with suppliers; operate supply chain arrangements with suppliers and customers that operate under principles of shared rewards and risks; share technical resources with key suppliers to facilitate operations; pursue and share a common set of expectation with supply chain partners and are willing to enter into long-term agreements with suppliers, there is likely to be a surge in the financial performance of firms. Effective customer and supplier collaboration would positively influence the profitability and income levels of firms, help reduce cost and improve total sales of firms. Consequently, firms should encourage collaboration with their customers and suppliers as this would positively influence the overall financial position of the firms. However, it was found that internal integration is a prerequisite to effective external integration. Firms can only extend and maintain a positive relationship with customers and suppliers if the internal activities of the firm are closely linked and integrated. In a nutshell, internal integration influences external integration, and both positively have a positive effect on financial performance.

The main aim of this research was to explore the type of integration (internal and external) which is stronger in the internal and external integration relationship and determine which of them greatly impacts firm's financial performance. Interestingly, it was found that internal integration is the main determinant of the strength of external integration. Meaning, if firms are able to manage, strategize and collaborate all the systems and departments internally, integration with their supply chain members especially customers and suppliers becomes smooth and easy. The findings indicated that, internal integration paves a smooth way and atmosphere for effective and efficient external integration. However, the results of the regression analyses indicate that external integration rather greatly influences the financial performance of firm and not internal integration. It could be said that, firms with a better internal integration system are able to establish positive and better relationships with their supply chain partners and this external integration have a positive influence on firm's financial performance. Consequently, better internal integration exerts a positive influence on external integration which in turn influences the financial performance of firms. It can be concluded that, if firms are able to collaborate effectively both internally and externally, financial performance are likely to be positively affected. Firms should be able to effectively collaborate their external systems, which can lead to better integration with customers and suppliers. Consequently, both internal and external relationships of firms will apparently increase the chances of firms experiencing increased better financial performance.

The main objective of this research was ascertaining the main determinant of the internal and external integration relationship and determining each of the integration has on firm financial performance. Even though, the findings of this research would help in making conclusion about the relationship between internal and external integration, it encountered certain limitations. The metrics used in measuring financial performance were not adequate as other equally important metrics could have been adopted in the measurement. Moreover, only certain class of retailers were selected for the research, due to this, the findings of this research can not be generalized to the whole category of retailers in Turkey. Majority of the respondents were low level managers who were had no knowledge about supply chain management or more specifically, the internal and external integration activities of the firm.

Future researchers can concentrate on the other category of retailers which were no captured in this research and compare the results with this research. A research on the impact of supply chain integration on firm performance at the service industry as this is a gap in the literature. Future researchers can expand the metrics of the financial performance and determine if the impact on the new metrics would be positively or negatively affected by integration.

Acknowledgement

I would like to express my profound and sincere gratitude to God. My gratitude goes to my family (Augustine Duah, Ophelia Asante, Michael Osei, Alvin Asamoah, Yaw Osei Duah, Carrian Ansa and Bryan Ansa) for their support and unending love. My sincere appreciation goes to Prof. Dr. Celal Hakan Kağrıoğlu, my thesis supervisor, who contributed his quota in the development of this paper. Finally, I would like to thank the retailers in Turkey, for their massive support and providing honest answers to the questions in the questionnaire.

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Martin Boakye Osei "Ascertaining the Main Determinant of The Internal-External Integration Relationship And Measuring Their Impact on Firm's Financial Performance." *IOSR Journal of Business and Management (IOSR-JBM)* 19.12 (2017): 43-51.