

Supply-Chain Management Capabilities Practices in Industrial Organization in Republic of Yemen

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Abstract— Supply chain management play major role in performing manufacturing tasks inside and strength collaboration among suppliers and customers. In this paper, the main aims is to examine the level of Supply Chain Management Capabilities (SCMC) practicing in manufacturing in Yemen. To achieve this objective, geographical clustered sample was employed, Thirty nine manufacturing were surveyed in five governorates, top and middle managers were asked to answer the questionnaire. To measure the level of SCMC practice, descriptive and standard deviation employed. The findings show high level of SCMC practice in Yemen's manufacturing is high and supported with consistency in deviation scores.

Keywords— *Supply chain management Capabilities, Inbound Transportation, Material Warehousing, Inventory Control- Inbound, Production Support, Packaging, Finished Goods Warehousing, Inventory Control- Outputs, Outbound Transportation, Spanning Capabilities, Purchasing, Customer Order Processing, Strategy Development,, Manufacturing, Yemen, Field Study.*

1. Introduction

To ensure continuous competitiveness, organizations must acknowledge the importance of supply chain practices that not only enhance their own performances, but also it can create values through the way of making optimal customer satisfaction and helping to improve the overall performance of a business significantly [1].

Ref. [2] Justified that supply chain management (SCM) is a complex serving to be an important determinant of the success or failure of any manufacturing enterprise.

Organizations seek for competitive capabilities that make them exceed customers' expectations and improve both the market and financial performance [3]-[4]. Despite the significant role played by certain supply chain activities (e.g. transportation and warehousing) in cost containment, supply chain management (SCM) was an aspect long overlooked as a potential area for achieving sustainable competitive advantage [4]. Study's aim is to test the supply chain management capabilities-SCMC practices in manufacturing companies in Yemen empirically, as these manufacturing companies are seeking to secure the competitive position and organizational performance improvement.

However, there is a role shift of SCM from an emphasis on passive cost control, to a proactive role in shaping managers to having recognize that building effective supply chains opens doors of opportunities to generate sustainable competitive advantage [5]-[6]. The positive impact of SCM is evident through these qualities- product availability, efficient order to delivery cycle time, reasonable costs, and good customer service. The advantages are sustainable because success necessitates the merging of diverse and sometimes conflicting groups within the organization and between organizations towards achieving common goals.

Manufacturing in Yemen plays an important role in the Yemeni economy as indicated by the following facts: number of employees in the industry sector was (162,750) employees and export volume for the industry sector was (9.85%) of the total exporting volume in 2005 (Central Statistical Organization, 2005). Furthermore, it is regarded as one of the newest manufactures that is described by its vigorous weaknesses and propriety nothingness of the vertical and horizontal level, and it doesn't have forward and backward linkage like what is known in strong and effective manufacturing. It largely depends on imported intermediate and raw material in production. Also, it faces much external and internal strangulation and challenges which form constraints on its prosperity and development [7].

In addition to that, there is a key role of forward and backward interrelation in national economic in general and manufacturing sector in particular. Thus, it is necessary to adopt broad and extensive motive systems directed to motivating manufactures that are depending on local raw material, labour density, and forward and backward interrelation and integration with other national economic sectors [8]. This research will empirically test the supply chain management capabilities (SCMC) practices in manufacturing in the Republic of Yemen. In the following, it will present related literature, methodology, and findings followed by conclusions.

2. Literature Review

2.1 Supply Chain Management

Being a complex subject, the SCM is an important determinant of the success or failure of any manufacturing enterprise [2]. It evaluates the operational strategies that affect the various aspects and it looks into the flow of goods and services in the supply chain to boost the profitability [9]. The integration of key business processes from end user through original suppliers provides products, services, and information that add value to not only the customers but also to other stakeholders [10]. First used in the early 1980s [11], the term SCM refers to the alignment of firms that bring products or services to market [10] which include the transporters, warehouses, retailers, and customers themselves [12]. To remain effective in today's competitive environment, firms must expand their integrated behaviour to bring customers and

suppliers together [13], ensure superior supply chain management's impact on a firm's operational and financial performance [14], its capabilities serve as a source of competitive advantage and, also account for the durability of these advantages [15]. Companies have to practice SCMC for their advantages and future growth, even though obstacles are inevitable when it comes to executing the supply chain management within their context [7].

2.2 Supply Chain Management Capabilities

For competitiveness, organizations must acknowledge the importance of supply chain practices that not only better their own performances, but also create values by optimizing customer satisfaction and helping to improve the overall performance of a business in a significant way [1]. The concept of capabilities and building distinctive capabilities or competencies were established by [16]. Capabilities and organizational processes were very much related because it is the capability that enables the activities in a business process to be done [17].

Thus, the capability and its strategic importance lies in their demonstrable contribution to sustainable competitive advantages [15]. Supply chain capabilities refer to the ability of an organization to recognise, use, and merge both internal and external resources information to help smooth along the entire supply chain activities [18].

Similarly, Day [17] mentioned that every company planning to be a "market-driven organization" must sustain certain distinctive capabilities regardless of the industry in which it competes, and classified supply chain management capabilities into three categories, adopted by [19]. These three classifications are: *First* Outside-in processes capabilities; denoting the group of capabilities that enables the company to rival with one another by forecasting and acting on changes in markets through the development of very strong relationships with suppliers, channel members, and customers. *Second*, Inside-out processes capabilities refer to those internal capabilities that allow the firm to manifest the opportunities in the environment. Alternatively, they facilitate the company acting on information in a manner that adds value to customers and assures the

organization viability in the long run. *Third*, Spanning processes capabilities have to do with the processes that lend support to the anticipated needs of patrons, fulfilled by the business. They do so primarily through the integration of the outside-in and inside-out capabilities [20]-[21]-[22].

2.2.1 Outside-in Capabilities (OIC)

Businesses today often have tangible assets, but not having the underlying capabilities required them to be successful [22]. The purpose of outside-in capabilities is defined by Day [17] as linking the organization with its environment. They are vital, to allow the business to be anticipatory and responsive to fulfil customers' needs with regard to the quality, product features, and delivery arrangements. Although physical distribution and logistics spanning activities have outside-in elements, the SCM/logistics processes commonly regarded as physical supply fit best in Day's outside-in classification. SCM/logistics processes taking place before or during the production process as potential distinctive outside-in capabilities are: Inbound transportation, material warehousing, inventory control (inputs), and production support [19].

(a) *Inbound Transportation*

It is the management of the movement of goods from the points-of-origin (the suppliers) to the manufacturer via truck, air, rail, water, pipeline, or any of the combined methods. It is one of the most critical, yet overlooked component of the supply chain and it has always been regarded as a marginal activity across the supply chains [23]. A little research has been done including transport operations as the supply chain's strategic factor [23]. Inbound transportation may vary in terms of the in-transit time, delivery frequency, reliability, cost, damage and/or lost freight. The quality of incoming transportation service can also leave an impact on a manufacturer's inventory levels, the frequency of stock outs and shutdowns, and the utilization of material handling equipment and labor [24].

(b) *Material Warehousing*

In lending support to the manufacturing operations, warehouses play their role as an inbound consolidation and holding point for raw materials and component parts. The industrial companies would be using thousands of parts and items, thus

logistic operations have a critical role to play, to fulfil the demands of parts and items needed to prepare daily schedules to fit the changing production plans [25]. Key materials warehousing activities include; receiving, data entry, put away, picking, and assembly. Any malfunction in this process can give negative consequences for operations, outbound logistics, and the whole supply chain [19].

(c) *Inventory Control- Inbound*

Inventory is spread all across the supply chain and includes everything from raw material to work in process to finished goods carried out by the manufacturers, distributors, and retailers in a supply chain [12]. Additionally, controlling the inventory management is a crucial function in the industrial companies due to various reasons [26]. The inventory management will require a proper control system because it is one of the largest company assets [27]. Inventory control must be in sync with purchasing, warehousing, manufacturing, finance, and other areas to keep the integrity of the inventory while reducing the overall expense. This coordination is vital to ensure sensible decisions concerning purchase lot sizes, delivery timings, and stock levels, which will then boost the on-time production, efficient shipping of finished goods, and furthermore, improve customer satisfaction [19].

(d) *Production Support*

It serves to delineate the conveying of components/materials to production [19]. [20] Concluded that the lead time elapsed from the receipt of customer's order until the delivery of finished goods to the customer should be confirmed and taken seriously to identify the re-ordering point and safety stock levels in the anticipation of stock out in the warehouse owing to the long lead time. For that, company's capacity to exploit external possibilities relies on the ability of its outside-in capabilities to serve its inside-out capabilities [17]. Alternatively, the more skill the company possesses regarding its OIC, the more proficient it should be, IOC-wise.

2.2.2 Inside-Out Capabilities (IOC)

An organisation has the main aim of satisfying its customers, as a satisfied customer may be likely to repurchase and refer additional business to the firm [28]. Customers are satisfied if they receive the products and they ask for together with good delivery service [29]-[30]. Building a reputation consequently promotes long-term prosperity by creating a base of loyal customers who will account for a high proportion of sales and profit growth through time [4]. Based on Day [17]-[19] suggested that the processes performed to transform the raw materials and the component parts into the finished product are called inside-out capabilities construct that consists of packaging, finished goods warehousing, among others.

(a) *Packaging*

Industrial companies consider packaging as a way to draw customers' attention to new and existing brands [31]. Packaging is the first SCM/logistics inside-out process to occur. It is one area where there are a great amount of opportunities to reduce costs and at the same time improves customer service through the technological applications [10]. When the conversion process is complete, the finished output must be packaged and labelled to prevent damage and to smooth along the efficiency during stages of storing, material handling, and transporting the product. Packaging also serves the marketing function through a few approaches, namely promotion, provision of product information, and the convenient allowance for the products to be used by customers [19].

(b) *Finished Goods Warehousing*

Products that have been packaged are kept at the production facility, in a warehouse, and then throughout a distribution network if they are not sent to customers straightaway. Warehousing plays an important role to the modern supply chain's success or failure [32].

(c) *Inventory Control- Outputs*

Inventory serves to be one of the most expensive and important assets of a lot of manufacturing companies [21]. Excellent inventory management regarding finished goods is perhaps a good justification for a firm's success. Finished goods are normally more valuable and therefore consume a lot of storage space and capital. Although, it is not the same across firms, finished goods inventory

investment may represent half of the company's asset base [19]. In addition, it is often the case that customers are asking for the product line variety and are often not happy when the delivery has to be postponed. This renders the correct placement and control of specific items vital to guarantee customer satisfaction [33]. Additionally, it is clear that one of the primary benefits of SCM systems is inventory (level and cost) reductions that have a link with inbound and operations and outbound processes [34].

(d) *Outbound Transportation*

It sustains the flow of finished goods from the plant, through the distribution network, and often concluding with customer delivery- the last stage of the process. Its effectiveness is reliant on choices made concerning the method of shipment, the specific carrier(s) used, the route, and compliance with local, state, federal, and international regulations. In order to reduce the operating cost of a supply chain firm must also reduce the cost of production facilities and that of transportation components [35]. Even though it accounts for a significant share of a product's cost and is very important to customer satisfaction, transportation is often 'leaking' in SCM [36]. It is found out that the outbound transportation is one key to providing value to customers. A lot of firms can now confirm that success also has to do with responding to unmet customers' needs with unique products and delivery systems [37]-[38].

2.2.3 *Spanning Capabilities (SC)*

Day (1994) states that spanning capabilities ensure that the organization's processes emphasise the act of providing superior value to external or internal customers. The spanning capability sheds light on the development of the information dissemination capabilities within the supply chain as a very important factor to gather and exchange the different data in the supply chain for developing its strategy [39]. These capabilities give the horizontal connections that ensure the resources available in the supply chain. Purchasing, customer order processing, and strategy development are categorized by Day [17] as being included in the spanning processes. Information dissemination has been acknowledged as a crucial component of SCM as logisticians pay attention towards providing superior service to both internal and

external clients [40]. The dissemination of information across an organization's supply-chain which is thought to be very timely, helps it to respond in a positive way to opportunities uncovered in the environment. Information dissemination will be regarded here as a fourth SCM/logistics spanning process.

(a) *Purchasing*

The tasks of the purchasing departments are to buy the raw materials, purchased parts, machinery, supplies, and all other goods and services that are of use in the production systems. Purchasing has a very serious impact on a firm; also it is not just about "buying things" [29]-[41]. Purchasing and supply management (PSM) stands to deliver several crucial functions for the effective and efficient operations in the manufacturing companies [42]. The procurement function has a positive influence on the efficiency of supply chain cycle time, supply lead time, level of delivering supplies with free defect rate, and many other processes [43]. Procurement has been designated as a critical activity by academics [44] and top manufacturers [45]. From a spanning angle, purchasing gives the "nuts and bolts" – materials, machinery, supplies, and outside services – the organization requires to act on the information about what customers need [19]. This function ascertains how much to buy, the supplier(s) selected, the level of quality delivered, the price paid, and the location, also the manner of how the goods will be presented. Purchasing personnel are the direct link with the external suppliers [46]. and they are also the integrators where there is an extensive interface with other areas of the firm, including warehousing, inventory management, inbound traffic, and outbound transportation [47]. How well purchasing performs, concerning these areas has major ramifications concerning the supply chain's overall ability to fulfil the needs of the clients also its performance.

(b) *Customer Order Processing*

Order processing involves directing the activities that happen from the time the firm receives an order until the order is received by the customer and payment is secured. The council of supply chain defines the fulfillment of the customers' orders as a percentage of meeting the received orders based on keeping complete and accurate documents as well as delivering them intact and

safely [48]. When a firm administers each order it receives, at the same time it also manages customer service [49]. The effectiveness of the order fulfillment process is most obvious at the point of final interaction (product delivery) to the customer (Schary, 1992).

(c) *Strategy Development*

The functional managers who have different viewpoints in the strategy process can motivate the diversity in vision, consistency and congruence between actual and perceived environmental uncertainty, and the dissemination of new ideas; will result in better business performance [50]. The development of the strategic supply chain management has provoked a lot of arguments in the past, where it is not merely a function that lends support to the business strategy but it is integral to a business strategy [51].

(d) *Information Dissemination*

The information sharing proves to be the essential dimension when it comes to organising the supply chain activities and deciding upon how the critical information is being shared among the supply chain members namely the customer, the product, and the market [52]. Information gathered by SCM can offer the means for cross functional teams to respond resourcefully to the environment around them [53]. Modern information systems work based on the material flows and logisticians can collect, act on, and disseminate information revolving around customer needs across the supply chain [46]. In other words, logisticians are in a very special position to adopt information technology to improve customer service and marketing performance [5]. Information serves two purposes in the supply chain and they are organising daily activities and forecasting and planning [54].

3. Methodology

It used a quantitative approach to test and empirically descriptive the SCMC practices within Industrial organizations of the republic of Yemen (listed in the Ministry of the Manufacturing and Trading) constituted the population of this study. A sample is taken on a geographical cluster from five governorates in Yemen to represent this population, with considering each organization must be in business for at least 5 years, must be classified as a large organization (25 employees and more) [7]-

[55]. Due to important of this sector toward Yemeni economy as it represent 9.85% of the total exporting volume and employed 162750 [55]. Then the researcher adopted instrument 5-point Likert Scale that measure SCMC from [19], and validated and presented to group of expertise doctors in Yarmouk University to ensure that questionnaire includes study dimensions, and its items match with objectives of the study. Total of (48) questionnaires were distributed to the study sample and collected back. Out of the (48) questionnaires, only (39) of them were suitable for statistical analysis. The reliability of an instrument indicates the stability and consistency with which it measures the concept. The most popular test of reliability is Cronbach's alpha which measures the internal consistency of an instrument. The questionnaire was exposed to this test, and Table 1. Demonstrates the results found. The results show that, Alpha value for all study constructs was more than (60%) which represent satisfactory value to analyse the results depending on the current instrument measure [54].

Table 1. Reliability Coefficient of the SCMC Questionnaire

N	Construct	Code	No. Item	Alpha
	Outside in Capabilities	OIC		
1	Inbound Transportation	IT	4	0.72
2	Material Warehousing	MW	4	0.76
3	Inventory Control – inbound	ICI	6	0.75
4	Production Support	PS	5	0.85
	Overall		19	0.91
	Inside-Out Capabilities	IOC		
5	Packaging	PK	7	0.83
6	Finished Goods Warehousing	FGW	4	0.81
7	Inventory Control – outbound	ICO	5	0.64
8	Outbound Transportation	OT	4	0.74
	Overall		20	0.88
	Spanning Capabilities	SC		
9	Purchasing	PR	6	0.87
10	Customer Order Processing	COP	4	0.89
11	Strategy Development	SD	5	0.86
12	Information Dissemination	ID	5	0.92
	Overall		20	0.94

4. Discussion

Managers are the source of information regarding supply chain management capabilities adopting and practicing in 39 manufacturing. Table 2. Shows that all of the respondents are males, (48.7%) of them their ages are between 30 and less than 40 Years, (56.4%) of surveyed sample have bachelor degrees, and (38.46%) have experience in current manufacturing from 7 to 10 years, and (33.33%) of them have overall experience in the range from 10 to 20 years.

Table 2. Distribution of Managers According to Demographic Characteristics

Variable	Item	F	%
Gender	Male	39	100%
	Female	0	0%
	Total	39	100%
Age	Less than 30 Year	9	23.1%
	30 –less than 40 Years	19	48.7%
	40 – less than 50 Years	5	12.8%
	More than 50 Years	6	15.4%
	Total	39	100%
Level of education	Secondary School or Less	9	23.1%
	Diploma	3	7.7%
	Bachelor	22	56.4%
	Master	5	12.8%
	Doctoral	0	0
	Total	39	100%
Experience in Current Organization	Less than 3 Years	1	2.56%
	From 3 to less than 7 years	12	30.77%
	From 7 to 10 Years	15	38.46%
	More than 10 Years	11	28.21%
	Total	39	100.00%
Overall experience	Less than 10 Years	19	48.72%
	From 10 to 20 Years	13	33.33%
	More than 20 Years	7	17.95%
	Total	39	100.00%

The demographic characteristics of surveyed organizations are displayed, Table 3. Demonstrates the distribution of the surveyed organizations according to some organizational-related features. In terms of organization age, 17.95% of organizations have had less than 7 years' experience, 38.46% of organizations have had ages from 7 to 15 years, and 43.59% of them have had ages more than 15 years' experience. The scores of the surveyed organizations reflected the experiences of these organizations in the industrial sector. Also, the size of these organizations, 28.21% of organizations have less than 50

employees. 38.46% have from 50 to 150 employees. 25.64% have more than 150 and less than 500 employees, and 25.64% have more than 500 employees.

Table 3. Distribution of Organizations According Organizations' Characteristics

	Item	F	%
Organization Age	Less than 7 Years	7	17.95
	From 7 to 15 Years	15	38.46
	More than 15 Years	17	43.59
	Total	39	100%
Size	Less than 50 workers	11	28.21
	From 50 to 150 workers	15	38.46
	Above 150 and less than 500 workers	10	25.64
	More than 500 workers	3	7.69
	Total	39	100%

Question Number One:

To what extent the industrial organizations in the Republic of Yemen are practicing, and have the necessary capabilities to supply chain capabilities (OIC, IOC, and SC)?

For more clarity for level of SCMC adopting and practicing, range (1- 2.49) indicate weak degrees, (2.5- 3.49) indicate moderate degrees, (3.5 and more) indicate high degrees. To answer this question, the managers are asked to evaluate their adopting and practicing. Also, the means and standard deviations for these items of each supply chain management capability (OIC, IOC, and SC) will be displayed.

4.1 Outside-In Capabilities

Organizations, especially in the industrial sector, need to have a strong system connecting them with the outside (supplier). And to deal seamlessly for transaction of the raw materials, warehousing system, inventory system, and production support which represent the elements of OIC. Depending on mean scores presented in table 4. These capabilities are imperative for organizations to survive in strong competitive environment.

Managers are asked to evaluate their practicing for inbound transportation, material warehousing, inventory (inbound), and production support in terms of items listed in table 4. As this table shows, companies have scored higher than 3.50 (indicates high degrees of adopting and practicing) in all of the inbound transportation items. Also, the standard

deviations of items are between (0.73 - 0.92) which support the homogeneity of surveyed sample's opinions. Material warehousing items means scores are 4.31, such a result indicates the importance of the warehousing function for all industrial organizations. That supported by consistency in surveyed sample which concluded from standard deviation scores (0.73, 0.73, 0.74, and 0.73) respectively, for items from 5 to 8. In Inventory Control (inbound) results indicate that mean scores of items (9, 10) are (4.51, 4.21), respectively. They reflect high level of obtaining and practicing for inventory control by surveyed sample managers. The items numbers (11, 12), which are concerned with the overall quality and accuracy of inventory records for incoming material, have mean scores 4.23 and 4.36 respectively Also, items (13, 14) got mean scores, 3.85 and 4.21 respectively.

Additionally, the overall mean score is 4.23 which reflect high level of practicing for inventory control capability by the surveyed sample. That is supported by the consistency of their opinions as concluded from standard deviation scores, (0.64, 0.66, 0.67, 0.74, and 0.73) for items from 9 to 14 respectively. Finally, Table 4. Shows that the production support means scores are (4.36, 4.38, 4.46, 4.38, and 4.44) for items from 15 to 19 respectively. These reflect the high level of practicing for meeting schedule regarding the transfer of materials to production, moving materials to the correct production location. Delivering materials in a form conducive to smooth handling by manufacturing/ assembly, and responding expediently to special requests. That reflects the overall quality of production support enhanced by homogeneity of surveyed managers' opinion. That is presented in the standard deviation scores 0.71, 0.59, 0.64, 0.71, and 0.68 respectively, for items from 15 to 19 respectively.

Table 4. Means and Standard Deviations of Outside-In Capabilities (OIC) Items, (n=39)

OIC	Item No	M	St. Dev.	Over all M	Over all St. Dev.	Level of Practicing
Inbound Transportation-IT	IT1	3.90	0.88	3.96	0.62	High
	IT2	3.87	0.92			
	IT3	4.18	0.76			
	IT4	3.90	0.82			
Material warehousing-MW	MW5	4.31	0.73	4.31	0.56	High
	MW6	4.31	0.73			
	MW7	4.33	0.74			
	MW8	4.31	0.73			
Inventory	ICI9	4.51	0.64	4.23	0.50	High

control (inbound) ICI	ICI10	4.21	0.66	4.40	0.54	High
	ICI11	4.23	0.67			
	ICI12	4.36	0.74			
	ICI13	3.85	1.01			
	ICI14	4.21	0.73			
Production Support- PS	PS15	4.36	0.71	4.40	0.54	High
	PS16	4.38	0.59			
	PS17	4.46	0.64			
	PS18	4.38	0.71			
	PS19	4.44	0.68			
Total				4.20	0.48	High

4.2 Inside-Out Capabilities (IOC)

The internal capabilities are enable the firm to exploit opportunities in the environment. In other words, they facilitate the company acting on information in a manner that brings value to customers and assures the organization viability in the long run. These capabilities are packaging, finished goods warehousing, inventory control (outbound), and outbound transportation.

Table 5. Displays means and standard deviations for each packaging capability items of surveyed organizations to measure the level of adopting and practicing. Mean scores are 4.26, 4.41, 4.28, 4.28, 4.18, 3.92 and 4.18 for items from 20 to 26 respectively. That reflects high level of adopting and practicing for this function, supported by consistency in surveyed sample's opinions. That is observed in standard deviations scores 0.82, 0.82, 0.94, 0.92, 0.88, 0.96, and 0.82 for items from 20 to 26 respectively. Table 5. Shows the finish goods warehousing mean scores for items from 27 to 30 (4.33, 4.18, 4.26, and 4.26) respectively. They reflect high degree of adopting and practicing by surveyed sample. This result is supported by consistency in respondents' opinions that concluded from convergence in the standard deviations scores (0.74, 0.79, 0.75, and 0.72) for above items respectively. Table 5. Shows inventory control (outbound) practicing in surveyed sample, are 4.56, 4.33, 3.67, and 4.10 for items from 31 to 34, respectively. As result, they show high level of practicing for inventory control function concerned outputs of organizations. Supported by consistency in their opinions, that is discovered in standard deviations scores are (0.60, 0.81, 0.90, and 0.72) for items from 31 to 34 respectively. But item (35) reflects inconsistency in respondents' opinions showed in its standard deviation score 1.07. Finally, outbound transportation function. Table 5. Shows high mean scores 4.1, 4.23, 4.15, and 4.33, respectively, for items from 36 to 39. That means the organizations are considering this capability as an important function for managing and transporting outputs, comes with the nature of work

for these organizations. This result is supported by the consistency in their opinions concluded from closeness in standard deviation scores are 0.91, 0.81, 0.67, and 0.58 for item from 36 to 39, respectively.

Table 5. Means and Standard Deviations of Inside-Out Capabilities (IOC) Items, (n=39)

IOC	Item No	M	St. Dev.	Over all M	Over all St. Dev.	Level of Practicing
Packaging	P20	4.26	0.82	4.22	0.72	High
	P21	4.41	0.82			
	P22	4.28	0.94			
	P23	4.28	0.92			
	P24	4.18	0.88			
	P25	3.92	0.96			
Finished goods warehousing	FGW27	4.33	0.74	4.26	0.61	High
	FGW28	4.18	0.79			
	FGW29	4.26	0.75			
	FGW30	4.26	0.72			
Inventory Control (outbound)	IC31	4.56	0.60	4.04	0.54	High
	IC32	4.33	0.81			
	IC33	3.67	0.90			
	IC34	4.10	0.72			
	IC35	3.51	1.07			
Outbound transportation	OT36	4.18	0.91	4.22	0.52	High
	OT37	4.23	0.81			
	OT38	4.15	0.67			
	OT39	4.33	0.58			
Total				4.21	0.54	High

4.3 Spanning Capabilities

Spanning processes are including purchasing, customer order processing, strategy development, and information dissemination capability. For purchasing capability. Table 6. Shows high mean scores (4.31, 4.31, 3.79, 4.10, 4.03, and 4.46) for items from 40 to 45, respectively. Those reflect high level of adopting and practice. That is supported by the consistency in individuals' opinion of surveyed sample. Concluded from the closeness in standard deviations scores (0.92, 0.83, 0.77, 0.72, 0.81, and 0.76) for items from 40 to 45 respectively. Customer order Processing, Table (5-13) shows high mean scores are 4.23, 4.08, 4.33, and 4.23 for items from 46 to 49 respectively.

Those clarify high level of adopting and practicing in surveyed organizations. Those clarify high level of adopting and practicing in surveyed organizations. But the surveyed managers' opinions are inconsistent for items 46 and 48. That is observed in their standard deviations scores 1.06, 1.01 respectively.

Furthermore, Strategic Development Capability. Table 6. Shows mean scores (3.82, 3.77, 3.85, and 4.05) for items from 50 to 54, respectively. That reflects high level of adopting and practicing for this capability in surveyed organizations. Supported by consistency in opinions of surveyed managers, that concluded from standard deviations scores are 0.88, 0.78, 0.78, and 0.94 for items from 50 to 54, respectively. But, the mean score is 3.46, for item 52, is reflected median level of involvement for logisticians in strategic decisions that affect company growth. Supported by consistency in the surveyed managers' opinions, that concluded from standard deviation score 0.85 for same item. Finally, Information dissemination, Table 6. Shows high mean score for this capability items. Item 55 asks if the information is used to manage logistics activity is readily available. Its mean score is (4.00). It reflects the importance of information system in any organization, especially in manufacturing field. The consistency in all respondents' opinions concluded from standard deviations scores (0.89, 0.87, 0.95, 0.98, and 0.99) for items 55 to 59, respectively.

Table 6. Means and Standard Deviations of Spanning Capability (SC) Items, (n=39)

SC	Item No	M	St. Dev.	Overall M	Overall St. Dev.	Level of Practicing
Purchasing	P40	4.31	0.92	4.17	0.64	High
	P41	4.31	0.83			
	P42	3.79	0.77			
	P43	4.10	0.72			
	P44	4.03	0.81			
Customer order Processing	COP46	4.23	1.06	4.22	0.83	High
	COP47	4.08	0.81			
	COP48	4.33	1.01			
	COP49	4.23	0.81			
Strategic Development	SD50	3.82	0.88	3.79	0.68	High
	SD51	3.77	0.78			
	SD52	3.46	0.85			
	SD53	3.85	0.78			
	SD54	4.05	0.94			
Information Dissemination	ID55	4.00	0.89	3.86	0.83	High
	ID56	3.77	0.87			

n	ID57	3.87	0.95			
	ID58	3.79	0.98			
	ID59	3.85	0.99			
Total				4.01	0.63	High

5. Conclusion

Conclusions from Characteristics Demographic description of study sample. All managers in YIOs were males as percentage (100%), and there weren't any female. Majority of managers age are positioned in these ranges (less than 30 year, and from 30-less than 40 years), the managers' age that were less than 30 years took the percent (% 23.1), and 48.7% for managers whom their age were from 30-less than 40 years. Most of managers have bachelor degrees; they form 56.4% from the sample. Most of managers have experience in current organization ranges from 7 to 10 years, which are representing 38.46% from the sample. Most of managers have less than 10 years of overall experience represented 48.72% of the sample.

Conclusions from characteristics of study population; About 43.59% of studying sample individuals work with organizations have age more than 15 years, and 38.46% of them work with organizations have age ranges from 7 to 15 years. Also, 38.46% of surveyed sample individuals' work with organizations that have employees ranged from 50 to 150 workers, and 25.64% of them work with organizations have employees ranged from above 150 and less than 500 workers. Most of surveyed sample individuals work with foodstuffs and beverages organizations which are represent 17.95% of sample, 10.26% of them work with medicine organizations, and 10.26% work with carton and packaging organizations.

The level of the adopting and practicing is high for all SCMCs, In Outside-In Capabilities (OIC), the mean score is 4.20, Inside-out capabilities (IOC), the mean score is 4.21, and the Spanning Capabilities have mean score (4.01). As the study indicate the level of the practicing for SCMCs mean score is 4.12 with standard deviation score (0.19), which reflect the consistency in surveyed sample opinion regarding this level of practicing.

Recommendation; Based on findings of this study, the researcher suggests YIOs managers are encouraged to adopt and make more practice of SCM in their organizations. Particularly when it proves its merits and contribution to the business performance. YIOs managers are advised to create a department assigns to manage SCM related elements and decisions of as a base for reaching

and achieving SC collaboration. YIOs managers must terminate the obstacles hinder SCM practicing through providing sophisticated information system for information sharing among supply chain members, enhancing the cooperation among supply chain members, motivating suppliers and customers to have participate in the supply chain and adapting new techniques in managing inventories throughout the entire supply chain. YIOs managers are encouraged to attend training programs in the field of supply chain management. This will enable them to understand the practice of SCM and how to apply it in their organizations. YIOs which are seeking for SC must focus on the three interrelated capabilities of SCM as an enabler for gaining a competitive advantage. YIOs managers are encouraged to cooperate with local Yemeni universities in terms of suggesting courses that can positively influence fresh graduates' contribution and knowledge.

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