

Practices to Compete Supply Chain Performance of Organized Garment Retailing

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Abstract

The organized garment retailing (OGR) is a sunrise industry in India. This sector has attracted many international players and national big industrial houses. The intense competition has shifted to supply chain (SC) vs. SC for better organizational performance (OP). The players in this sector are using different strategies to cope with the competition. Hence, it is necessary to explore the supply chain practices (SCP) for better OP. In this paper, the twenty five SCP have been classified into five groups using factor analysis. These are; Technology Use (software use, electronic data interchange, electronic process control, e-communication, and radio frequency identification); SC Operations (communication speed, arm's length, strategic purchasing, supply chain process management, and teaming); Customer Attraction (customer order, product customization, customer relationship and management, supply chain flexibility, and quality management); Inventory Practices (inventory management, lean practices, demand management, logistics postponement, and outsourcing SC operations); Business Integration (SC integration, supplier involvement, information sharing, SC collaboration, and coordination). Also we have identified six items for OP (market performance, SC competencies, stakeholder satisfaction, innovation and learning, customer satisfaction and financial performance). Here we have tested the hypothesis using structural equation modeling. These are; H1a: The organized garment retailers understand to use business integration practices for better organizational performance. H2b: The organized garment retailers have adopted customer attraction practices for better organizational performance. H3c: The organized garment retailers were understood to use supply chain operations for better organizational performance H4d: The organized garment retailers don't use better inventory practices for better organizational performance H5e: The organized garment retailers don't have better use of technology for better organizational performance. The focus on these factors shall help organizations to diagnose, manage and improve SC and ultimately organizations shall perform better.

Keywords: Organized garment retailing, Supply chain performance; Organizational performance; Structural equation modeling; Factor analysis.

1. Introduction

Forrester (1961) advocated that value creation process extends beyond the barriers of organizations and involves integrated business processes among components of the SC i.e., manufacturers, suppliers, intermediates, and customers (Tan et al., 1998). Porter (1980) added that the linkage among the value chains of the firm, suppliers, and customers is needed for better organizational performance. Froehlich and Westbrook (2001) promulgated the idea that individual organization that comprises the SC must ultimately be managed as a single entity or one complete system. This requires coordination, collaboration, and integration among SC components.

Perfect competition in today's global markets and the heightened expectations of the customers compelled business enterprises to explore supply chain practices (SCP). The literature survey reveals that no study has been conducted on SCP for OGR in India. As, this sector has maximum growth rate and highest contribution to GDP of India but, it is observed that despite the best product offerings and ambience, many retail stores failed. Hence, it is important to study the SCP for better organizational performance (OP).

During the discussions with the OGR practitioners, it is discovered that better SCP are needed to be explored for better OP. Here, it is pertinent to mention that same product has different meaning to the different customers. Also, maintaining high inventory and offering products at low cost is a challenge for the OGR. Hence, we made an attempt here for the same.

In this paper, SCP and OP items have been identified based on strong literature support in consultation of practitioners and consultants in the field of OGR. In this paper, the items selected for understanding OGR supply chains are different than manufacturing sector. It is due to the reason that organized retailing is a different business as compared to manufacturing.

A questionnaire was developed and refined based on pre-pilot and pilot survey. Later on, large scale survey was done targeting the officials at top, middle, and lower levels engaged with OGR. The technique of factor analysis has been applied to classify the SCP. This classification shall help to better understand the SCP and manage them for better OP. The structural equation modeling (SEM) has been applied using AMOS 4.0 version to test and validate the hypothesis for SCP and OP.

2. Supply Chain Management Practices

SCP are the set of activities undertaken by an organization for efficient execution supply chain (Li *et al.*, 2006). The best SCP influence the whole SC, its parts or key processes. These are influenced by contextual factors such as type of industry, firm size, its position in the supply chain, type and length of supply chain (Li *et al.*, 2006). In this study the SCP are classified as shown in Table I below:

Table I: Classification of supply chain management practices

Supply Chain Practices/Researcher(s)
1. Software use: Chopra & Meindle (2004).
2. Electronic data interchange (EDI): Walker (1994); Lee <i>et al.</i> , (1997); Lee & Whang (1998); Hill & Scudder (2002); Sahin & Robinson (2002); Parter <i>et al.</i> , (2005).

<p>3. Electronic product code (EPC): Lampel & Mintzberg (1996); Pagh & Cooper (1998); Van Hoek (1998b); GCI (2005).</p>
<p>4.e-communication: Walton & Gupta (1999); Graham & Hardaker (2000); Chang (2002); Kraemer & Dedrick (2002); Simatupang <i>et al.</i>, (2002); Ghiassi & Spera (2003); Chopra & Meindle (2004); Steger-Jensen & Svensson (2004); Muffato & Payaro (2004); Teich <i>et al.</i>, (2004).</p>
<p>5. Radio frequency identification (RFID): Ollivier (1995); Pearce (1996); Lee & Whang (1998); Vergin & Barr (1999); Walker <i>et al.</i>, (1999); Smaros & Holmström (2000); Parter <i>et al.</i>, (2005).</p>
<p>6. Communication speed: Chow <i>et al.</i>, (2008).</p>
<p>7. Arms-length: Holmström (1997); Zairi (1998).</p>
<p>8. Strategic purchasing: Carter & Narasimhan (1996a).</p>
<p>9. Supply chain process management: Lockamy & McCormack (2004).</p>
<p>10. Teaming: Lockamy & McCormack (2004).</p>
<p>11.Customer Order commitment: Arif <i>et al.</i>, (2009).</p>
<p>12.Product Customization: Lampel & Mintzberg (1996); Pagh & Cooper (1998); Van Hoek (1998).</p>
<p>13. Customer relationship and management: Ittner & Larcker (1998); Van & Persoon (2001); Farris <i>et al.</i>, (2002); Chopra & Meindle (2004); Ferry <i>et al.</i>, (2007); Jile <i>et al.</i>, (2007); Li <i>et al.</i>, (2007).</p>
<p>14. Supply Chain flexibility: Van & Persoon (2001).</p>
<p>15. Quality management: Holmström (1997); Zairi (1998); Van & Persoon (2001).</p>
<p>16. Inventory management: Mckenney & Clark (1995), Pearce (1996); Fisher (1997), Holmström (1997); Zairi (1998); Lee & Whang (1998); Beamon (1999); Vergin & Barr (1999); Walker <i>et al.</i>, (1999); Suri (1999); Li & O'Brien (2001), Udomleartprasert & Jungthirapanich (2003); Wong <i>et al.</i>, (2004); Christopher <i>et al.</i>, (2004); Arif <i>et al.</i>, (2009).</p>
<p>17. Lean practices: Holmström (1997); Zairi (1998); Van & Persoon (2001); Ferry <i>et al.</i>, (2007); Jile <i>et al.</i>, (2007).</p>

<p>18. Demand management: Kurt Salmon Associates (1993); Lee <i>et al.</i>, (1997); Holmström (1997); Zairi (1998); Karkkainen <i>et al.</i>, (2003); El-Beheiry <i>et al.</i>, (2004).</p>
<p>19. Logistic postponement: Lampel & Mintzberg (1996); Pagh & Cooper (1998); Van Hoek (1998b).</p>
<p>20. Outsourcing SC operations: Klass <i>et al.</i>, (2001); Elmuti (2001); Langfield-Smith & Smith (2003); Aron & Singh (2005); McIvor (2007).</p>
<p>21. Supply Chain integration: Bowersox (1989); Stevens (1989); Tan <i>et al.</i>, (1998a); Kumar (1996); Lee <i>et al.</i>, (1997); Wood (1997); Frohlich & Westbrook (2001); Vickery <i>et al.</i>, (2003); Golicic <i>et al.</i>, (2003a); Lockamy & McCormack (2004); Lin (2006); Jiqin <i>et al.</i>, (2007); Chow <i>et al.</i>, (2008).</p>
<p>22. Supplier involvement: Kumar (1996); Ittner & Larcker (1997); Golicic <i>et al.</i>, (2003a); Udomleartprasert & Jungthirapanich (2003); Chopra & Meindl (2004); Chen & Paulraj (2004); Ferry <i>et al.</i>, (2007); Jile <i>et al.</i>, (2007); Li <i>et al.</i>, (2007); Chow <i>et al.</i>, (2008).</p>
<p>23. Information sharing: Gaonkar & Viswanadham (2001); Shore (2001); Liu & Kumar (2003); Laux <i>et al.</i>, (2004); Sahin & Robinson (2005); Ferry <i>et al.</i>, (2007); Jile <i>et al.</i>, (2007); Li <i>et al.</i>, (2007); Chow <i>et al.</i>, (2008).</p>
<p>24. Supply chain collaboration: Mckenney & Clark (1995); Kumar (1996); Pearce (1996); Lee & Whang (1998); Vergin & Barr (1999); Walker <i>et al.</i>, (1999); Anderson & Lee (1999); Bowersox <i>et al.</i>, (2000a); Golicic <i>et al.</i>, (2003); Lockamy & McCormack (2004); Chen <i>et al.</i>, (2007); Arif <i>et al.</i>, (2009).</p>
<p>25. Supply chain coordination: Walker (1994); Lee <i>et al.</i>, (1997); Lee & Whang (1998); Sahin & Robinson (2002).</p>

Product quality is one of the most important metric to retain customers. The customers always expect better quality at lower prices. Lin *et al.* (2005) and Jile *et al.* (2007) revealed product quality as an important metric for SC performance measurement. The product quality is also associated with the *process quality*. The use of efficient processing technologies shall help to mitigate wastage and ultimately the product quality shall be better. The use of statistical process control, root cause analysis of poor quality, improvement in process capability, staff training and development of facilities shall help to improve process quality. Luning *et al.* (2002) revealed process quality as an important metric for better SCP.

Customer response time is the time taken to handle customer queries. The customers visit retail stores to collect the products for their requirements. They shall ask questions regarding product variety, quality, availability and prices. A prompt response shall help to attract and retain customers. Hence, it is also an important metric for measuring SCP (Nuthall, 2003; Morgan, 2004; and Gunewan *et al.*, 2008).

Many times the products shipped shall be of inferior quality. The customers may return them even after purchase. The efforts should be made to adjust the returns immediately otherwise

the long flow of products in the SC shall waste time and resources. Viswanadham (1999) and Morgan (2004) also added that *return adjustment* significantly affects SCP.

Product personality is also one of the important indicators of better SCP. It can be judged by focusing on colour, size, appearance and design of the fabric. These factors shall not only help to attract customers but also to retain them. Gunasekaran et al. (2004) and Aramyan (2006) also revealed product personality as an important indicator to evaluate SCP.

Customers visit garment retail stores to get their requirements satisfied. *Transaction satisfaction* helps to convert visits into a purchase. Neely et al. (1995), Beamon (1999) and Viswanadham (1999) revealed transaction satisfaction as a means to attract and retain customers. Gunawan et al. (2008) revealed it as an important SCP indicator. The customer satisfaction-pre-transaction, transaction and post-transaction shall help to develop customer loyalty.

The garment products are very delicate in nature and mishandling shall adversely affect the quality of the garments. The movements in the value added process should be in a position to maintain product quality. Otherwise, the damaged products shall waste time and resources. Hence, *spoilage adjustment* plays an important role in better SCP. So, efforts should be made to immediately identify spoilage and adjust it to prevent further delay and the products (Harrison and New, 2002; Morgan, 2004).

The inventory cost involves major cost component of retail supply chains. Tan (2002) and Harrison and New (2002) focused on inventory cost as an important indicator of SCP. The management of inventory is also one of the important indicators in measuring SCP. Inventory ordering, receiving and inspecting needs great efforts. Shifting these responsibilities to the suppliers helps to save time and resource. Nowadays organized retailers are using automated inventory management system with the help of advanced software and internet. Hence, *vendor managed* (VMI) has significantly reduced major inventory overheads. As and when inventory falls below certain levels automated orders are placed with the suppliers at the negotiated rates. Hence, VMI is also an important indicator for measuring SCP (Lambert & Terrance, 2001).

Lead time is the time between placement of an order and receipt of the goods. Many times the customers ask for products not available in the garment retail outlet. Also, these products may not be listed for VMI. In such situations and also when demand fluctuates suddenly, the lead time plays a very important role. It is a critical success factor in SCM. Also, uncertainty in different stages of procurement, packaging, distribution, and forecasting amplifies lead time. Novac and Thomas (2004) identified lead time as an important indicator for measuring SCP.

The efforts of procuring best inventory in the stock is useless until the products are displayed in the racks to attract customers. These efforts can be vitalized by using efficient *fill rate*-which is the rate at which products are transferred to the rack for sale. Many researchers focused on fill rate as an important SC indicator (Harrison and New, 2002; Kleijnen and Smiths, 2003).

Distribution cost is the second major cost component of the OGR business. It is an important component of SC where cost shall be minimized by selecting suitable modes of transportation compatible with urgency and capacity. Sahin et al. (2000) and Krajewski and Ritzman (2002) also revealed it as one of the important SC indicators.

Operational flexibility refers to the firm's ability to rapidly design and implement new products/services for the customers. The operational flexibility adjusts the demand fluctuations without excessive costs, time and organizational disruptions. Shepherd and Gunter (2006) identified it as an important SC indicator.

Volume flexibility is making a variable quantity of products available at any location and time. Here, capacity of transportation shall play an important role. Flexible modes of transportation and large volume flexibility can make any quantum available at the demand point. Jile et al. (2007) and Zheng and Li (2008) identified it as an important KPI in measuring SCP.

The delivery flexibility measure is more concerned with the location of the destination. Many times the customers expect home delivery. Hence, to satisfy customers delivery flexibility has become an important indicator for measuring SCP (Jile et al. 2007; Zheng & Li, 2008).

Return on investment (ROI) is also one of the important indicators that shall be calculated over a period of time. It gives the overall business outcome for which the retailers look for good results. Nuthall (2003) and Morgan (2004) revealed ROI as one of the important indicators for measuring SCP.

Sales profit is the gain over the quantum of goods sold. It shall be calculated when goods are sold to the satisfaction of customers. Nuthall (2003) identified it as an important SCP indicator. Here, it is pertinent to mention that not only the sale but also the sales profit, helps to evaluate OGR business success.

Stakeholders are the investors, customers, employees, regulators and suppliers who play an active role in the business. The wants and needs of stakeholders should be satisfied for the business success. Neely et al. (2002) considered *stakeholder value* as the focal point of the performance measurement process. The collaboration among stakeholders plays an important role in business growth.

Innovations is the design, invention, development and/or implementation of new/modified ideas for business growth. The emergence of OGR has made it necessary not only to train employees for attitude and skill development but also to develop technology for performance enhancement. Shepherd and Gunter (2006) identified innovation as a valuable SCP indicator. It focuses on growth by making innovative efforts through people, systems and organizational procedures.

Shipping errors are the errors associated with delivery of products/services to the SC nodes. Many times short lead time, manual processing of outbound products and dispatch bottlenecks shall add to costly shipping errors, delivery related disputes, claims, and charge back. These errors should be eliminated immediately otherwise customer dissatisfaction shall not only loose sale but also tarnish company image. Many researchers (Harrison and New, 2002; Morgan, 2004; and Gunawan et al., 2008) identified it as an important SCP indicator.

3. Organizational Performance

Organizational performance (OP) refers to how well an organization achieves its market oriented goals as well as its financial goals (Yamin *et al.*, 1999). We have identified the six factors based on strong literature support in consultation of practitioners and consultants in the field of OGR supply chain management, for better organizational performance. The literature support is shown in the Table II below:

Table II: Classification of organizational performance items

Organizational Performance Factor/Researcher (S)
1. Market Performance: Fitzgerald <i>et al.</i> , (1991); Anderson <i>et al.</i> , (1994); Kaplan & Norton (1996); Carter & Narsimhan (1996b); Nuthall (2003); Wisner (2003), Bowersox <i>et</i>

<i>al.</i> , (2000a); Green & Inman (2005); Schramm-Klein & Morschett (2006); Green <i>et al.</i> , (2006); Li <i>et al.</i> , (2007).
2. Supply Chain Competencies: Stewart (1995); Swaminathan <i>et al.</i> , (1998); Chow <i>et al.</i> , (2008); Crook <i>et al.</i> , (2008).
3. Stakeholder Satisfaction: Kaplan & Norton (1996); Neely <i>et al.</i> , (2002).
4. Innovation and Learning: Kaplan & Norton (1996); Crook <i>et al.</i> , (2008).
5. Satisfied Customers: Anderson <i>et al.</i> , (1994); Kaplan & Norton (1996); Parker (2000); Nuthall (2003); Crook <i>et al.</i> , (2008).
6. Financial Performance: Fitzgerald <i>et al.</i> , (1991); Anderson <i>et al.</i> , (1994); Kaplan & Norton (1996); Carter & Narsimhan (1996b); Nuthall (2003); Wisner (2003), Bowersox <i>et al.</i> , (2000a); Green & Inman (2005); Schramm-Klein & Morschett (2006); Green <i>et al.</i> , (2006); Li <i>et al.</i> , (2007).

Market performance is one of the most important factors for OP. The organizations having good market share shall leave behind the competitors (Anderson, 1994, Carter and Narasimhan, 1996b, Green and Inman, 2005, and Vivek and Ravindran, 2009). Also, in the today's competitive world, the competition is not among the organizations but among the supply chains. Hence, *supply chain competency* shall save more resources and ultimately OP shall be better (Chopra and Meindl 2004, Kenneth *et al.* 2008). Stakeholders are the main persons to develop the financial base of the organization. If they are satisfied, they shall remain members otherwise they shall depart. Neely *et al.* (2002) considered *stakeholder satisfaction* as the focal point of the OP measurement process. The history has witnessed many organizations out of the business due to their failure in innovation and learning. Katou and Budhwar (2010) also revealed *innovation and learning* as an important construct for OP.

Customer satisfaction is also one of the most important construct as satisfied customers may become loyal to the organization and revisit for purchase shall be assured (Katou and Budhwar, 2010). The ultimate objective of all the organizations is better *financial performance*. Many researchers also, revealed financial performance as an important aspect for better OP (Fitzgerald *et al.* 1991, Green and Inman, 2005, Vivek and Ravindran, 2009).

4. Gap Analysis

The studies quoted above are applicable to the manufacturing and service industries other than organized garment retailing. Also, most of the studies have been conducted abroad. Organized garment retailing is a new industrial sector in India with maximum growth rate. Despite all many store outlets failed. Hence, it is the necessity to focus on it to find a solution for the same. In this paper an attempt has been made to provide insights for the organized garment retailing practitioners by developing a model to develop supply chain performance.

5. Research Hypothesis

The proposed research hypothesis are shown in Fig.I. These are explained as follows:

The government of India has allowed 51% foreign direct investment (FDI) in multi-brand and 100% FDI in single brand. It has led to competition at the international level. The national

organized garment retailers have collaborated with the national and international players for business growth: hence it leads to:

H1: The organized garment retailers understand to use business intergtion practices for better organizational performance.

The organized garmen retailers have displayed their products in the malls, departmental stores and supermarkets in large numbers. They are have developed then strategies to attract and retain customers. Hence, it leads to:

H2: The organized garment retailers have adopted customer attraction practices for better organizational performance.

The organized garment retail arena has cut throat competition. This competition has shifted to SC vs. SC. They are doing their best to cut costs for better organizational performance. Hence, it leads to:

H3: The organized garment retailers have understaning to use supply chain operations for better organizational performance.

The organized garment retail is very tough business. It is due to the fact that same product have different meaning to different customers. Hence, the orhanized garment retailers need to maintain high inventory with wider variety. Also, the seasonal fluctuation demands more variety of garments. This confusion needs more understanding of the customer needs and financial base. Hence, it leads to:

H4: The organized garment retailers don't used better inventory practices for better organizational performance.

The infrastructure availability like internet, parking, roads etc. are not at par with the developed countries. The internet facilities shall help customers to select and order products of their own choice. Also, the softwares shall help to coordinate business. During the discussion with organized garment retailers it is found that they lag behind in such facilities. Hence, it leads to:

H5: The organized garment retailers don't have better use of technology for better organizational performance.

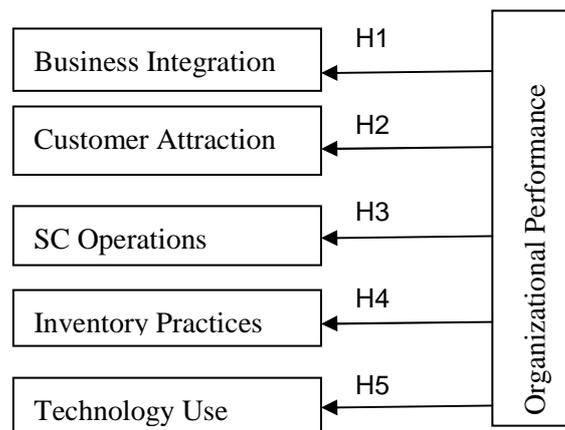


Fig.1: Research hypothesis

6. Database and Methodology

A survey questionnaire has been designed based on a strong literature survey in consultation with both the practitioners and consultants working on OGR. A 31-item Likert scale (25 items for SCP, 6 items from OP) was used to rate the importance/use of the items discussed in the literature survey. The items so developed were rated on a five point Likert scale.

The pre-pilot survey helped us to get insights to improve the questionnaire. Later, a pilot survey was done and questionnaire was improved based on the insights from professionals engaged in SC activities of OGR. Finally, the full scale survey was conducted in north India i.e., Chandigarh, New-Delhi, Gurgaon and the principal cities of state Punjab.

A total of 600 questionnaires were mailed by randomly selecting respondents from OGR websites, telephone directory 2011 and PROWESS data base maintained by CMIE. The questionnaires sent were followed and finally 398 questionnaires were received from respondents operating in the banking sector (CEO/President /VP/GM=25; Sr.Managers/MIS coordinators etc.=100; Managers(Store/purchase/SC), Supervisors etc. =273) yielding a response rate of 63.3%. The questionnaire responses were digitized using SPSS software and scale reliability was done.

The items were refined and purified to obtain the reliable scale. For this purpose corrected item-to-total correlation and Cronbach's alpha statistics were used. Item and reliability analysis was performed to retain and delete scale items for the purpose of developing a reliable scale. Corrected item-to-total correlations and Cronbach's alpha statistics were employed to conduct this type of analysis; to know the extent to which any one item is correlated with the remaining items in a set of items under consideration.

This analysis found Cronbach's alpha to be 0.8790 and item-to-total correlation range from 0.5917 to 0.5004 (Table IV) and inter-item correlation is greater than 0.3. Here, it is pertinent to mention that Alpha value greater than 0.6 and item-to-total correlation greater than 0.5 and inter-item correlation greater than 0.3 is good enough for conducting research in social sciences (Hair et al. 2009).

6.1 Factor Analysis for Supply Chain Practices

The mean for twenty five items loaded on the five point Likert scale is 92.2714. If all the items have been loaded at five the total comes out to be 125. Hence, the construct mean 92.2714 out of 125 indicates that 73.81% of the constructs are explained (Table III). The communality is shown in Table III. It ranges from 0.970 to 0.686. The corrected item-to-total correlation is shown in Table IV. It ranges from 0.5917 to 0.5004. The correlation for SCP is shown in Table V. The inter-item correlation is more than 0.5. The values for Kaiser-Meyer-Olkin (KMO), measure of Sampling Adequacy=0.794, and Bartlett's Test of Sphericity has Chi-square=16675.258, df=300, sig.=0.000. Here, it is pertinent to mention that mean for the scale should explain more than 50% of the construct, communality should be more than 0.5, inter-item correlation should be more than 0.5, item-to-total correlation should be more than 0.3, KMO should be more than 0.7 and significance level of Bartlett's test should be more than 0.05. Hence, all the requirements for conducting factor analysis were met. The factor analysis was performed using Principal Component Analysis Varimax rotated with Kaiser Normalization. The factor analysis results are shown in Table VI.

Table III: Communality for supply chain practices

SN	Item	Initial	Extraction
A	RFID	1.0	.921
B	EDI	1.0	.970
C	EPC	1.0	.952
D	Soft Use	1.0	.961

E	E-Comm	1.0	.932
F	SC Collaboration	1.0	.816
G	SC Integration	1.0	.918
H	Coordination	1.0	.686
I	Information Sharing	1.0	.831
J	Supplier involvement	1.0	.858
K	Teaming	1.0	.895
L	Comm Speed	1.0	.957
M	SCP Mgnt	1.0	.923
N	Strategic Pur	1.0	.918
O	Arms Length	1.0	.944
P	Quality Management	1.0	.889
Q	SC Flexibility	1.0	.894
R	Customer Order Commitment	1.0	.941
S	Product Customization	1.0	.926
T	Customer Relationship and Mgnt	1.0	.898
U	Logistics Postponement	1.0	.780
V	Inventory Management	1.0	.899
W	Outsourcing SC operations	1.0	.764
X	Demand Management	1.0	.853
Y	Lean practices	1.0	.897

Table IV: Scale statistics; mean, standard deviation and corrected item-to-total correlation for supply chain practices

SN	Items	Mean	SD	Corrected Item-Total Correlation
A	RFID	3.3392	1.1392	.5544
B	EDI	3.3543	1.1167	.5917
C	EPC	3.3467	1.1202	.5708
D	Soft Use	3.3794	1.1038	.5453
E	E-Comm	3.4121	1.1137	.5450
F	SC Collaboration	3.9397	.9014	.5582
G	SC Integration	3.9296	.8577	.5849
H	Coordination	3.8116	1.049	.5126
I	Information Sharing	3.9749	.8776	.5756
J	Supplier involvement	4.0050	.8338	.5195
K	Teaming	3.1030	1.005	.5580
L	Comm Speed	3.1332	.9705	.5643
M	SCP Mgnt	3.1181	.9751	.5331
N	Strategic Pur	3.1608	.9958	.5020
O	Arms Length	3.1759	.9857	.5232
P	Quality Management	4.0930	.9000	.5035
Q	SC Flexibility	4.1005	.8547	.5004
R	Customer Order Commitment	4.1206	.8250	.5018
S	Product Customization	4.1407	.8126	.5064

lean practices				.927	
Demand Management				.906	
Logistics Postponement				.871	
Outsourcing SC operations				.840	
SC Integration					.940
Supplier involvement					.908
Information Sharing					.890
SC Collaboration					.879
Coordination					.819
Eigen values	7.78	5.81	3.39	2.72	2.52
Percentage variance	31.1	23.2	13.5	10.8	10.0
Commulative percentage variance	31.1	54.3	67.8	78.6	88.6
Scale reliability	.985	.979	.974	.949	.939

Kaiser-Meyer-Olkin Measure of Sampling Adequacy=0.794, Bartlett's Test of Sphericity (Chi-square=16675.258, df=300, sig.=0.000)

6.1.1 Technology Use

This factor covers five items; software use, electronic data interchange (EDI), electronic process control (EPC), e-communication (E-comm) and radio frequency identification (RFID). All the factor loadings are different and range from 0.9856 to 0.929. It covers Eigen values of 7.78 and percentage variance of 31.1. The scale reliability for this factor is 0.985. This construct is in consonance with many studies (Parter, et al., 2005; Chopra and Meindle, 2004, Hill and Scudder, 2002).

6.1.2. SC Operations

This factor covers five practices; communication speed, arm's length, strategic purchasing, supply chain process management, and teaming. All the factor loadings are different and range from 0.943 to 0.904. It covers Eigen values of 5.81 and percentage variance of 23.2. The scale reliability for this factor is 0.979. This construct is also in consonance with many studies (Chow et al., 2008 Locamy III and McCormack, 2004, Zairi, 1998).

6.1.3. Customer Attration

This factor covers five practices; customer order, product customization, customer relationship and management, supply chain flexibility, and quality management. All the factor loadings are different and range from 0.948 to 0.918. It covers Eigen values of 3.39 and percentage variance of 13.5. The scale reliability for this factor is 0.974. This construct is also in consonance with many studies (Arif et al., 2009, Jile et al., 2007; Van and Persoon 2001).

6.1.4. Inventory Practices

This factor covers five practices; inventory management, lean practices, demand management, logistics postponement, and outsourcing SC operations. All the factor loadings are different and range from 0.930 to 0.840. It covers Eigen values of 2.72 and percentage variance of 10.8. The scale reliability for this factor is 0.949. This construct is also in consonance with many studies (Arif et al., 2009; Christopher et al., 2005; Wong et al., (2004); Udomleartprasert and Jungthirapanich, 2003; Li and O'Brien, 2001).

6.1.5. Business Integration

This factor covers five practices; SC integration, supplier involvement, information sharing, SC collaboration, and coordination. All the factor loadings are different and range from 0.940 to 0.819. It covers Eigen values of 2.52 and percentage variance of 10.06. The scale reliability for this factor is 0.939. This construct is also in consonance with many studies (Chow et al., 2008; Jile et al., 2007; Jiqin et al., 2007; Lin, 2006).

6.2 Result Discussion for Structural Model for Supply Chain Practices and Organizational Performance

The model shown in Fig. II has; Chi-square = 296.026, Degrees of freedom = 430, Probability level = 0.000 Fit measures are RMR=0.031, NFI=0.851, RFI=0.871, IFI=0.901, TLI=0.902, and CFI=0.900. Here, it is pertinent to mention that level of significance and RMR should be less than 0.05 and fitmeasures should be above 0.8 for good model validity. Here, all the requirements are met hence, model is valid. The total effects are shown in Table V.

The items on the organizational performance load from -0.41 to 1.0. This construct has market performance (0.58), SC competencies (1.0), stakeholder satisfaction (0.86), innovation and learning (0.66), financial performance (-0.41), and customer satisfaction (-0.19). All the loadings are different and significant. It indicates that the OGR have good understanding of this construct. The loading of SC competencies (1.0) indicates that OGR in India understand the role of SC for business growth. The stakeholder satisfaction (0.86) shows that OGR understand that stakeholders are the persons investing for the business and if they are satisfied shall be part of the business otherwise they shall depart. The innovation and learning (0.66) loading indicates that OGR understand the role of innovation and learning for business. The history has revealed many organizations out of business due to failure to innovate and learn. The loading of market performance (0.58) indicates the understanding to maximize market share. The loading of financial performance (-0.41), and customer satisfaction (-0.19) shows that OGR in India understand them for business growth.

Table VII: Total effect of supply chain practice factors on organizational performance

Effect Estimates							
Effect		Organizational Performance	SC operations	Business Integration	Customer attraction	Technology use	Inventory practices
Total Effect	SC Operations	-0.052	0.00	0.00	0.00	0.00	0.00
	Business Integration	1.000	0.00	0.00	0.00	0.00	0.00
	Customer Attraction	0.400	0.00	0.00	0.00	0.00	0.00
	Technology Use	0.026	0.00	0.00	0.00	0.00	0.00
	Inventory Practices	-0.022	0.00	0.00	0.00	0.00	0.00
Direct Effect	SC Operations	-0.052	0.00	0.00	0.00	0.00	0.00
	Business Integration	1.000	0.00	0.00	0.00	0.00	0.00
	Customer Attraction	0.400	0.00	0.00	0.00	0.00	0.00
	Technology Use	0.026	0.00	0.00	0.00	0.00	0.00
	Inventory Practices	-0.022	0.00	0.00	0.00	0.00	0.00
Indirect Effect	SC Operations	0.000	0.00	0.00	0.00	0.00	0.00
	Business Integration	0.000	0.00	0.00	0.00	0.00	0.00
	Customer Attraction	0.000	0.00	0.00	0.00	0.00	0.00

	Technology Use	0.000	0.00	0.00	0.00	0.00	0.00
	Inventory Practices	0.000	0.00	0.00	0.00	0.00	0.00
Chi-square = 296.026, Degrees of freedom = 430, Probability level = 0.000 Fit measures (RMR=0.031, NFI=0.851, RFI=0.871, IFI=0.901, TLI=0.902, CFI=0.900)							
Remarks: Hypotheses H1, H2, H3, H4, and H5 are validated.							

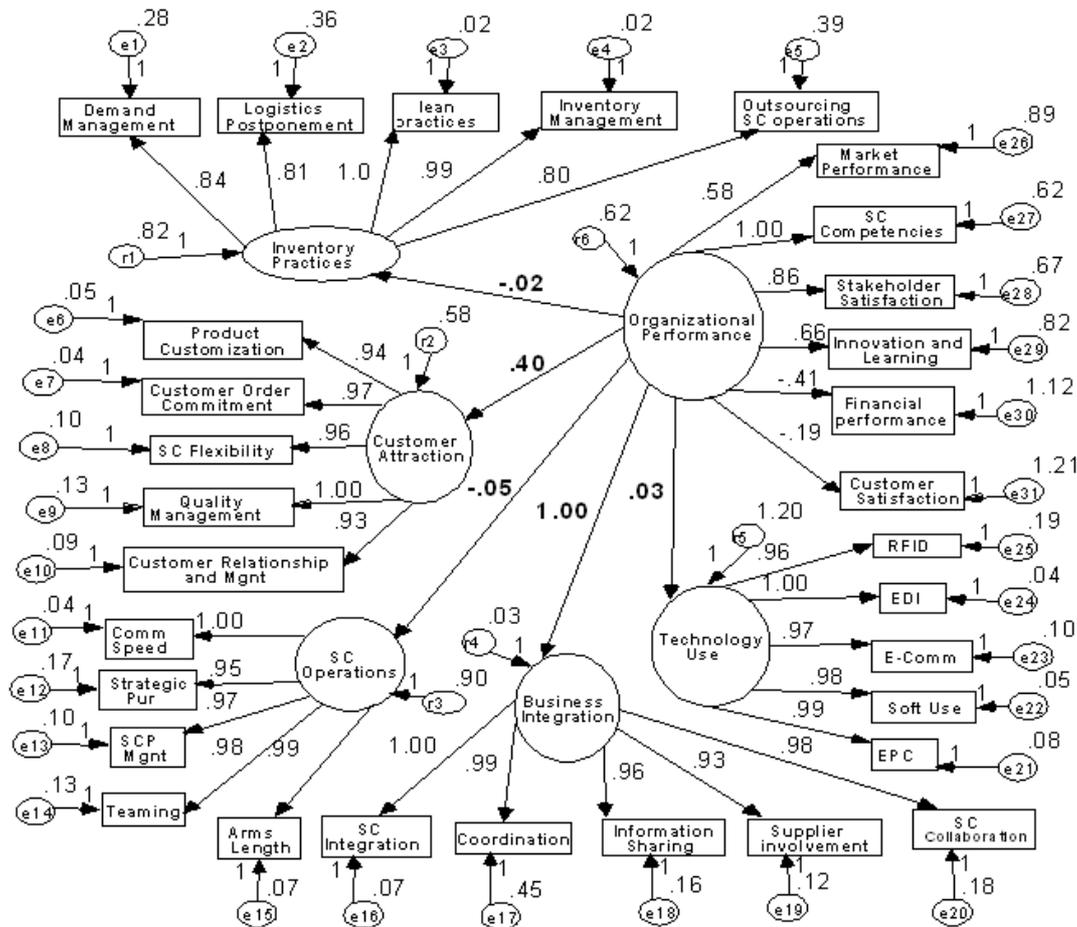


Fig. II: Structural relationship among supply chain practices and organizational performance

The business integration has the loading of SC integration (1.0), coordination (0.99), information sharing (0.96), supplier involvement (0.93), and SC collaboration (.98). All the loadings are significant and different. The business integration has the maximum loading. It shows that OGR in India has good understanding of business integration strategies. They also share information, involve suppliers, coordinate and collaborate business process. The total effect of business integration on organizational performance is 1.0. It shows that OGR in India have good understanding of match between these two constructs. Hence, the hypothesis **H1:** The organized garment retailers understand to use business integration practices for better organizational performance, is proved.

The customer attraction has loadings; product customization (0.94), customer order commitment (0.97), SC flexibility (0.96), quality management (1.0), and customer relationship and management (0.93). All the loadings are different and significant. All the significant loadings indicate that OGR in India have good knowledge of strategies to attract,

satisfy and retain customers. The total effect of customer attraction on organizational performance is 0.40. It indicates that OGR in India strategically match these two constructs. Hence, the hypothesis **H2**: The organized garment retailers have adopted customer attraction practices for better organizational performance, is satisfied.

The SC operations construct have loadings in the range of 1.0 to 0.95. They are communication speed (1.0), arm's length (0.99), strategic purchasing (0.95), SCP management (0.98), and teaming (0.98). All the loadings are significant and different. The results show that OGR in India strategically purchase and manage SC processes. They manage supply chains at arm's length by teaming and fast communication. The total effect (Table..) of SC operations on organizational performance is -0.52. It shows that the Indian OGR understand SC operations for better organizational performance. Hence, the hypothesis **H3**: The organized garment retailers have understanding to use supply chain operations for better organizational performance, is proved.

The loadings for inventory practices are demand management (0.84), logistics postponement (0.81), lean practices (1.0), inventory management (0.98), and outsourcing SC operations (0.80). All loadings are significant and different. However, the total effect of inventory practices on organizational performance is 0.022. This low loading shows the mismatch between inventory practices and organizational performance. Hence, the hypothesis **H4**: The organized garment retailers don't used better inventory practices for better organizational performance, is proved.

The technology use practices have the loadings as; RFID (0.96), EDI (1.0), e-communication (0.97), software use (0.98), and EPC (0.99). All the loadings are significant and different. However, the total effect of technology use on organizational performance is 0.026. This very low value shows the mismatch between technology use and organizational performance. Hence, the hypothesis, **H5**: The organized garment retailers don't have better use of technology for better organizational performance, is proved.

7. Conclusion, Recommendation and Limitation

The total effect estimate are shown in Table D1. The total effect is maximum for business integration (1.0) on organizational performance. It shows that the organized garment retailers in India have knowledge to adopt strategies for better organizational performance. Also, the total effect of customer attraction (4.0) on organizational performance shows that Indian organized garment retailers have good understanding of strategies for customer attraction. The low value of total effect for technology use (0.026) and inventory practices (-0.022) shows the lack of understanding to adopt and use strategies for better organizational performance. It is due to the fact that technology investment cost is very high also, the seasonal fluctuation and changing customer preference forces the organized garment retailers to maintain high inventory levels.

This research shows that the organized garment retailers in India need to invest in better technology to make online purchasing more popular. Also, they need to know the financial base and shape of the customers for better inventory management. The focus on these aspects shall help to solve inventory, transportation, and information sharing problems. Also, there is a need to analyse supply chain on one side and customers, organized and unorganized retailers on the other side. Also, for better demand forecasting the sales data analysis with respect to day and time should be recorded for better prediction. More insights are also needed for comparative analysis of organized and traditional garment retailers.

However, despite the statistical sophistication of structural equation modeling this research has some limitations. Here, we can't contact good lot of top level officials. It was due to their highly busy schedule. Also, the procedure to contact the practitioners is complicated and confidential. If we were allowed, more comparative analysis was possible for different firms. Importantly this is not an attempt to test and validate the results but to provide insights for organized garment retailers for the betterment of this sector.

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