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The Impacts of Information Sharing on the Supply Chain Performances

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Abstract

The objective of this study is to investigate impacts of information sharing practices (i.e. information quality sharing and information intensity sharing) on the supply chain performances (SCPs) (i.e. SCP quality, SCP cost, SCP flexibility and SCP customer satisfaction). For this study the researchers were collected data through a questionnaire that responded by 452 respondents in the eight selected Ethiopian companies. The particular respondents for this study were employees of the companies that have link with supply chain practices of the company, major suppliers and distributors of the companies. The anticipated relationships between information sharing practices and the supply chain performances in the theoretical framework specified were investigated through nine hypotheses. The hypotheses developed and tested were four hypotheses that related information quality sharing with every four constructs of the SCPs; and four hypotheses that were related information intensity with the the four constructs of the SCPs. Finally, the last hypothesis was developed and tested the relationship between the overall information sharing practices and overall SCPs constructs. The hypotheses were tested by linear regression, ANOVA and Pearson correlation. The results of the study show that the information quality is significantly related to all SCPs constructs; whereas information intensity only significantly related to SCPs quality. However, the combined effect of the overall information sharing practices to the overall SCPs was significantly related. This study concludes that the higher levels of information sharing in the supply chain practices the higher supply chain performances.

Keywords: Supply chain performances, information quality, information intensity.

1. INTRODUCTION

The 1980's strong global competition forced higher level organizations to charge low price, and to supply higher quality products. This has led to the development and adoption of the supply chain concept from the view point of quality revolution, materials management and integrated logistics, industrial markets and networks (Chen & Paulraj, 2004). The SCM has no unique definitions nevertheless the concept of all the ways it defined is nearly the same. Among the alternative definitions specified the Council of Supply Chain Management Professionals, (2015) defined SCM as management of all activities from supplying materials to receiving, conversion of basic input to outputs, and every actions related to logistics.

The supply chains are increasingly becoming dependent on information sharing that supported by technologies and automation that have newly appeared and are influencing companies' supply chains model (Kache and Seuring, 2017). Organizations benefited from information technology by reducing transaction and processing costs, enhancing productivity, reducing inventory cost via JIT, increasing integration via ERP, immediate response to the market via agility, and increasing customer satisfaction and organization profit. Generally, information sharing can significantly increase firms' supply chain performance (Cui et al. 2015). Nevertheless, the potential of information sharing within the supply chain practices is highly dependent on the availability of information technology facility and infrastructure (Ross 2016).

As Langen et al. (2007) described regardless of the number studies that had been made in developed countries, the studies neglected important issue as the effects of information sharing on the supply chain management that need to be investigated on the supply chain performance. Besides this fact, there is a vast disparity in technology, facility, environment of the business, and level of industry development between developing and developed country that limit the results of prior studies made in a different developed country not to be totally applicable to developing countries; it needs covering heterogeneous company environment and boss attitude (Kwak, 2016).

The study made in this area in the developing counties, including Ethiopia is so scarce and untouched area that needs vast investigations to be made to investigate the supply chain practices. A study made in Ethiopia show that besides the pressure of globalization, the SCP in Ethiopian has been highly influenced by poor logistics sector that results inefficiency, delays, and unreliability of the supply chain practices (Debela, 2013). Debela further added that the country, Ethiopia, incurs a penalty of 2% production cost due to poor information integration in the supply chain management. Further, the study made by Fasika (2014) in Ethiopia concluded that poor understanding and perception about the importance of integration with supply chain partners, more usage of telephone, mobile, letters, and faxes than the internet to manage information flow along the supply chain partners hindered supply chain integration in Ethiopian manufacturing sectors. Therefore, taking the mentioned scenarios of the situations into consideration, this study focused on the impacts of information sharing practices on SCP, specifically investigated the effect of information quality, and information intensity on the SCP quality, cost, flexibility and customer satisfaction of some selected companies of Ethiopia.

This paper is structured as follows: the second part presents the theoretical and empirical research; section three presents the research methodology, and the forth chapter presents analysis of results and discussions. Finally, section five presents the conclusions of the study.

2. LITERATURE REVIEW

In today's real world there is no closed system organization that totally acts and competes alone because every organization has certain relation with suppliers, distributors and consumers and firms can no longer survive doing alone (Van Heck & Vervest, 2007). Therefore, the best ways to respond to the situations of the business environment is ensuring of efficient supply chain management to fight and to be competent. Besides the aforementioned facts, supply chain management has now become a critical strategy in improving their profitability and to be competitive in their operation (Li et al., 2006). Hence, supply chain management has been accepted as a key fact that has attracted widespread interest among academicians and managers.

2.1 Supply Chain Practices (SCPs)

SCPs are all activities to be performed by partners in the supply chain distribution channels in order to increase the efficiency and effectiveness of all supply chain partners. For instance, Suhonget al., (2006) defined SCM as a set of actions to carry out in organization to encourage successful SCM. There are various dimensions for supply chain management practices that are why academicians and researchers in this field considered SCM practices from different spot of view. For instance, Li et al. (2005) considered the practices of supply chain as strategic supplier partnership, information sharing, customer relationship, and internal lean activities as the dimensions of supply chain practices.

2.1.1 Information Sharing Practices

In this information age the success of a business heavily depends on ability to share and utilize information within an internal and external environment. Particularly in the supply chain practices information sharing is very important since the accomplishment of the whole chain depends on the efficiency of every units of supply chain process. Landeros et al. (1989) reflected information sharing as building blocks that describe a strong supply chain relationship. An information sharing is ability of customers and suppliers to share up-to-date information (Zelbstet al., 2010); and information sharing is also the sharing of important and proprietary related information to the supply chain partners (Li et al., 2005).

Information Quality

The concept of information quality is a multidimensional, which has been studied by a lot of scholars. As Naumann & Rolker, (2000) identified believability, reputation, completeness, objectivity, reliability, accuracy, timeliness, security, and availability as information quality dimensions. Quality refers to fitness for a particular purpose. Petersen et al. (2005) found the direct impact of information quality on collaborative planning.

Information Intensity

As Fawcett et al., (2009), described information intensity is the subject of information to be shared in the supply chain practice is information relating inventory, forecasted demand or product quality. Chopra and Meindl (2004) classified information that flow along a supply chain relating to manufacturers, suppliers, retailers, and customers' information and Huang et al. (2003) categorized information flows among supply chain partners' information relating to planning, resource, inventory, product, process, and order.

Also, the other term that interchangeably used to level of information sharing is information intensity. Both terms equally used to measure the concepts of information. As Cai et al. (2010) defined information intensity is the extent to which firms share different kind of information with their partners.

2.2 Supply Chain Performance Measurement

There are various indicators for supply chain performance to be used in performance measurement; however the key performance indicators are those that highly related to supply chain effectiveness and efficiency as pointed by (Folan and Browne, 2005). The common supply chain performance indicators that identified by many scholars include, product availability, responsiveness, quality, total supply chain costs, delivery reliability, inventory level, delivery reliability, responsiveness (Van der Vorst, 2000); profit, delivery promptness, lead-time performance, and waste elimination (Petterson, 2009).

By tradition, more companies highly focused on the quantitative aspects for performance measurement and evaluation (Yeniyurt, 2003). However, to overcome its drawback both qualitative and quantitative system in the modern performance measurement advisable (Chow and Van der Stede, 2006). Generally, the ability of the metrics to estimate the desired object of a system due to the variability of the nature of the performance is the greatest issues.

2.3 Information Sharing Practices and Supply Chain Performance

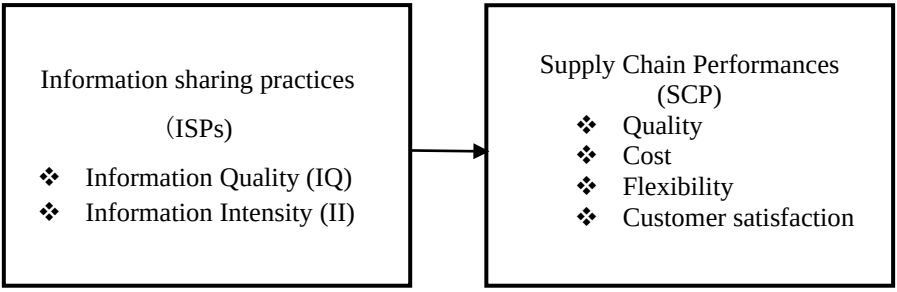
It is unquestionable that information sharing can significantly increase supply chain performance of firms (Cui et al. 2015). Information sharing plays a fundamental role in supply chain coordination, where coordination improved by accurate, relevant, and timely information sharing (Kumar et al., 2016). Information sharing allow a firm to use advantage of earlier entry to the market than competitors by helping the firms to get right information regarding the real demand of the consumers and responding to the market by early designing and developing the product that meet the needs of the consumers (Lee, and Whang, 2004).

Generally, an increase in information sharing among supply chain partners 'results cost reduction and efficiency improvement (Yeoh, 2017). Similarly, information sharing leads to an overall cost reduction and inventory reduction Zhao (2002); information sharing can increase the operational synergy between supply chain partners (Narasimhan & Nair, 2005), and information sharing also

results minimum delay and distortion that results better customer satisfaction (Suhong, et al., 2009).

2.4 Conceptual Framework and Hypotheses Development

Figure 1 presents frame work of the impacts of information sharing practices on supply chain performance. The framework proposed two dimensions of information sharing practices, i.e information quality and information intensity on the SCPs (SCP quality, SCP cost, SCP flexibility and SCP customer satisfaction). The conceptual frame work is given as Figure 1.



In order to answer the research objectives nine research hypotheses were developed in this study. The hypotheses developed based on the analysis of the theoretical and empirical review on the information sharing practices and supply chain performances. The alternative hypotheses developed were given as follows:

1. Information sharing practices and Supply chain performance (SCP) quality
   a. Alternative hypothesis (H_{a1}): Information quality has significant effects on the SCP quality
   b. Alternative hypothesis (H_{a2}): Information intensity has significant effects on the SCP quality
2. Information sharing practices and Supply chain performance cost
   a. Alternative hypothesis (Ha3): Information quality has significant effects on the SCP cost.
   b. Alternative hypothesis (Ha4): Information intensity has significant effects on the SCP cost
3. Information sharing practices and Supply chain performance flexibility
   a. Alternative hypothesis (H_{a5}): Information quality has significant effects on the SCP flexibility
   b. Alternative hypothesis (H_{a6}): Information intensity has significant effects on the SCP flexibility
4. Information sharing practices and Supply chain performance customer satisfaction
   a. Alternative hypothesis (H_{a7}): Information quality has significant effects on the SCP customer satisfaction

   b. Alternative hypothesis (H_{a8}): Information intensity has significant effects on the SCP customer satisfaction
5. Overall information sharing practices and overall supply chain performances
   a. Alternative hypothesis (H_{a9}): Information sharing practices has significant effects on the SCPs

3. RESEARCH METHODOLOGY

3.1 Source of Data and Data Collection Techniques

This study is totally based on the primary data that has been collected by survey method from the sample size. The used survey were structured questionnaires adapted from prior designed and confirmed to be for the specified measurement of the constructs. All the surveys measured using a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). The questionnaire used for measuring the constructs of information sharing practices, specifically the measurement items for information quality and information intensity were adopted from the questionnaires developed by (Li and Lin, 2006) and the survey used for the supply chain performance adopted from (Huo et al., 2015).

To measure the effects of information quality and information intensity on firm's performance ten items totally used, where each of the two constructs used five items. Accordingly, for measurement of the SCPs twenty items under the four dimensions of supply chain performance, namely four items under the SCP quality, five items under each of the SCP cost & SCP responsiveness; and six items under SCP customer satisfaction. Totally, thirty items of Likert scales used under the six constructs.

3.2 Sample Size and Sampling Techniques

The sample size used for this study is totally 452 respondents purposively selected based on their experience, and knowledge on the supply chain practices and their actual exposure to the practices as a result of their regular activities. Generally, the researchers purposively selected the total sample respondents' used from the eight mentioned companies. Specifically, the respondents included were the higher level executives, mid level executives and expertise's in the production and marketing section, logistics & supplies managers and professionals from the section, major distributors, and suppliers of the companies that have more knowledge, and experience in the supply chain practices of their companies to collect relevant and reliable data.

3.3 Data Analysis

All the data collected and screened were analyzed using IBM SPSS Version 23 analyzed by NAOVA, linear regression and correlation analysis. However, before starting the analysis of collected data, the researchers checked all the preconditions for further analysis.

For convergence validity of the data the Cronbach alpha's value was above the minimum acceptable value of 0.70 (Fornell and Larcker, 1981). Similarly, for reliability of the constructs Cronbach's α exceeding 0.70 showing internal uniformity of instruments (Nunnally, 1978). In this study, the reliability coefficient (i.e. Cronbach's α) of each constructs calculated after removing those items with low reliability from further analysis using item correlation matrices by identifying and dropping items that did not highly add to the sub construct Cronbach's α. The features in SPSS "α if item deleted" statistic used to decide if the item considerably contributed to α.

4. RESULT AND DISCUSSIONS

The significance of the relationship for the hypotheses developed that given on Figure 1 were analysed and tested by ANOVA, linear regression and Pearson correlation. The summary results of all the hypotheses were given in Table 4 and the proposed hypothesis were investigated as follows:

4.1 Relationship between information sharing practices and SCPs quality

The results of the two dimensions of information quality and information intensity with the SCPs quality was given in Table 1, where the proportion of variance explained by the regression model was 97.0 percent (R^2= 0. 97); and the ANOVA statics of F(2, 449) = 734.238 is p(.000) < .05, which implies that the information quality and information intensity constructs of the ISPs dimension statistically significant in predicting the SCPs quality (i.e., the regression model is a good fit of the data).

Additionally, Table 2 shows the standardized regression coefficients of information quality and information intensity over SCPs quality. From the Table 2, the standardized regression coefficients of information quality and information intensity were 0.985 and 0.003 respectively over the SCPs quality; and the p-value of information quality and information intensity were p(.000) <0.05 and p(.694) > 0.05 respectively. The result shows positive and significant relationship between information quality and SCPs quality, whereas insignificant relationship between information intensity and SCPs quality of the Ethiopian industries under the investigation. This implies that information intensity in the supply chain practices no more add value in explaining the SCPs quality.

Finally, the results shown in Table 3 suggests that the Pearson correlation coefficient between information quality and SCPs quality (H_{1a}) is 0.985, while a correlation has a probability (p) value of 0.000. Similarly, a correlation coefficient of 0.137 between information intensity and the SCPs quality at 2-tailed test significance level is 0.003. Therefore, the results show a strong positive association which is statistically significant at 5% level of significance between information quality and SCPs quality; and information intensity weakly correlated to the SCPs quality but statistically significant at a 5% level of significance level.

Thus, from the above analysis for information quality and information intensity with SCP quality, the H_{a1} was accepted at $p < 0.05$ level, suggesting that

there is a statically significant relationship between information quality and SCPs quality in the selected Ethiopian companies. Similarly, for H_{a2} between information intensity and SCP quality also show that H_{a2} was also accepted at $p < 0.05$ level, signifying statistically significant relationship between information intensity and SCPs quality.

Table 1 ANOVA & R^2 results for IQ and II over SCPs constructs

Model		Sum of Sq.	Df	Mean Sq.	F	Sig.	R^2
Quality	Regression	166.563	2	83.28	7340.24	.000*	.970
	Residual	5.094	449	.011			
	Total	171.657	451				
Cost	Regression	130.193	2	65.09	442.62	.000*	.663
	Residual	66.036	449	.147			
	Total	196.229	451				
Flexibility	Regression	145.913	2	72.95	781.63	.000*	.777
	Residual	41.909	449	.093			
	Total	187.823	451				
Satisfaction	Regression	132.367	2	66.18	558.91	.000*	.713
	Residual	53.168	449	.118			
	Total	185.535	451				
Overall SCP	Residual	69.559	450	.373	75.27	000*	29.90
	Total	99.220	451				

a. Dependent Variable: SCPs (Quality, Cost, Flexibility & Customer satisfaction)
b. Predictors: Information sharing practice(Information Quality & Information Intensity)
*c. * Significant at 5% level (2-tailed)*

4.2 Relationship between information sharing practices and SCPs cost

Table 1 also shows the relationship between the two constructs of ISPs on the SCPs cost. The regression output of the model summary for information quality and information intensity with the SCPs cost illustrates that the proportion of variance included in the model was 66.3 percent (R^2= 0. 663); and the ANOVA statics of F (2, 449) = 442.616 is p (.000) < .05, which implies that the information quality and information intensity were statistically significant in predicting the SCPs cost of the companies under the study.

Additionally, from Table 2, the standardized regression coefficients of information quality and information intensity were 0.818 and 0.001 respectively over the SCPs cost; and the p-value of information quality and information intensity were p (.000) <0.05 and p (.570) > 0.05 respectively. This implies that information quality significantly predicts the SCPs cost of the companies under the study; however, information intensity insignificant to predict the SCPs cost of the selected companies of Ethiopia.

Finally, the Pearson correlation coefficient given in Table 3 show that information quality positively and significantly correlated to SCPs cost at Pearson correlation coefficient for H_{a3} is 0.792 at a probability (p) value of 0.000 for two-tailed test. Similarly, Pearson correlation coefficient of information intensity and

SCP cost for H_{a4} = 0.081 at a probability value of .087 for two-tailed test. Thus, the H_{a3} was accepted at $p < 0.05$ level, suggesting that there is a statically significant effect of information quality in the selected Ethiopian companies for the investigation on the SCP cost of the company's supply chain.

However, the H_{a4} was rejected at $p < 0.05$ level, signifying that there is no a statically significant effect of information intensity on the SCP cost of the company's supply chain for the selected Ethiopian companies. Therefore, the results show a strong positive association which is statistically significant between information quality and SCPs cost, and but insignificant positive association between information intensity and SCPs cost of the selected Ethiopian companies.

4.3 Relationship between information sharing practices and SCPs flexibility

To test the association between information sharing practices and SCPs flexibility H_{a5} and H_{a6} formulated. H_{a5} formulated to test the relationship between information quality and SCP flexibility, whereas H_{a6} formulated to test the link between information intensity and SCP flexibility. The relationship investigated between the two constructs of ISPs, i.e. information quality & information intensity and the SCPs flexibility investigated by ANOVA, regression and Pearson correlation coefficient. From Table 1 the proportion of variance explains 77.7 percent (R^2= 0. 777) of the variance in the SCPs flexibility; the F-value of (2, 449) = 781.631. This show that information quality and information intensity used in the model significantly predicts the variability of the SCPs flexibility in the selected companies of Ethiopia under the investigations when considered together.

Table 2 Regression coefficients of IQ & II over SCPs construct

Model		**Unstandar. Coef.**		**Standard. Coef.**	**T**	**Sig.**
		B	**Std Error**	**Beta**		
Quality	(Constant)	.667	.033		20.204	.000
	IQ	.839	.007	.985	119.98	.000 *
	II	.003	.007	.003	.394	.694
Cost	(Constant)	1.262	.119		10.614	.000
	IQ	.745	.025	.818	29.607	.000 *
	II	-.182	.026	-.192	-6.946	.000 *
Flexibility	(Constant)	1.155	.095		12.192	.000
	IQ	.793	.020	.890	39.538	.000 *
	II	-.117	.021	-.125	-5.575	.000 *
Customer satisfaction	(Constant)	1.108	.107		10.382	.000
	IQ	.755	.023	.852	33.427	.000 *
	II	-.122	.024	-.132	-5.192	.000 *
Overall SCPs	(Constant)	1.90	.122		14.78	000
	Overall ISPs	.48	.035	.379	13.85	*.000**

* Significant at the 0.05 level (2-tailed)

In addition, the results shown in Table 2 show that the standardized regression coefficients for information quality over the SCPs flexibility is (B = 0.890, t-value = 39.538 & sig. = 000); and regression coefficient for information intensity over

SCP flexibility is (B = .125, t-value = -5.575 & sig. = 000). This implies that information quality and information intensity used in the model significantly predicted the SCPs flexibility, and both information quality and information intensity were positively related to the SCPs flexibility; however, information quality more predict SCPs flexibility than information intensity.

Similarly, Table 3 show the Pearson coefficient for H_{a5} is .873, whereas the correlation has a probability value of .000 for two-tailed test. Therefore, a positive and strong statistically significant correlation obtained for H_{a5}. Therefore, H_{a5} that related information quality with SCPs flexibility was accepted at 0.05 levels, suggesting that there is a statically considerable effect of information quality in the supply chain practices by the selected Ethiopian companies on their SCP flexibility.

Also, Table 3 show the Pearson coefficient (r) for H_{a6} is 0.004, while the correlation has a probability (p) value of 0.925 for two-tailed test. Thus, a strong positive and statistically significant correlation was found for H_{a6}. Therefore, H_{a6} that related information intensity with SCP flexibility was rejected at 0.05 levels, suggesting that there is no statically significant effect of information intensity in the supply chain practices by the selected Ethiopian companies on their SCP flexibility.

4.4 Relationship between information sharing practices and SCPs customer satisfaction

For the relationship of information sharing practices with SCPs customer satisfaction the two hypotheses developed as H_{a7} & H_{a8} the results shown in Table 1 for the relationship between the constructs of ISPs dimension over the SCPs customer satisfaction explains 71.3 percent (R^2= 0.713) of the variance in the SCPs customer satisfaction; and the F-value was 558.910 for p (.000) < .05; this imply that information quality and information intensity jointly significantly predicted the variability in the SCPs customer satisfaction for the selected companies.

Furthermore, the results of the regression coefficient in Table 2 for an information quality with SCPs customer satisfaction is β_1 = .852 for p (.000) < .05; and the regression coefficient for an information intensity with SCPs customer satisfaction is β_2 = .364 for p (.004) < .05. The outcome illustrates that information quality and information intensity constructs has positive and significantly related to the SCPs customer satisfaction.

Table 3 for the Pearson coefficient (r) for H_{a7} is 0.834 at 2-tailed significance of p (0.000) < 0.05. Thus, a positive and strong statistically significant correlation for H_{a7} was found. Hence, H_{a7} that related information quality with SCPs customer satisfaction was accepted at 0.05 levels, suggesting that there is a statically significant effect of information quality in the supply chain practices on their SCP customer satisfaction.

In addition, Table 3 for Pearson. coefficient (r) for H_{a8} is 0.16, while the correlation has a p-value of 0.072 for two-tailed test. Thus, a weak positive but

statistically insignificant correlation was found for H_{a8}. Therefore, H_{a8} that related information intensity with SCPS customer was rejected at 0.05 levels, telling that there is no statistically. significant effect of information intensity in the supply chain practices by the selected Ethiopian companies on their SCP customer satisfaction.

Table 3 Correlations among the constructs of ISPs and SCPs

		IQ	II	QU	C0	FX	CS
Information quality (IQ)	Pearson Cor.	1					
	Sig. (2-tailed)						
Information intensity (II)	Pearson Cor.	.14**	1				
	Sig. (2-tailed)	.004					
Quality (QU)	Pearson Cor.	.98**	.14**	1			
	Sig. (2-tailed)	.00	.003				
Cost (CO)	Pearson Cor.	.79**	.08	.77**	1		
	Sig. (2-tailed)	.00	.087	.00			
Flexibility (FX)	Pearson Cor.	.87**	-.004	.86**	1		
	Sig. (2-tailed)	.00	.93	.00			
Customer satisfaction (CS)	Pearson Cor.	.83**	-.02	.82**	.86**	.87**	1
	Sig. (2-tailed)	.00	.73	.00	.00	.00	

Note: Correlation coefficient between overall ISPs & Overall SCPs = .562, sig. 0.000**

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

4.5 Relationship between the overall ISPs and overall SCPs

At the end, besides the analysis for the two constructs of the ISPs with every constructs of the SCPs dimensions, for the general insight of the relationship between ISPs and the SCPs an overall analysis with the composite constructs of ISP and SCP was conducted. Table 1 for the composite constructs of ISPs with SCPs show that the total proportion of variance explained by the regression model used was 29.90% ($R^2 = 0.299$); F-statistics is 75.27 for p (.000) < 0.05. This implies the existence of a significant relationship between information sharing practices and SCPs when considered together.

Also, the standardized regression coefficient from Table 2 for ISPs over the SCPs was $\beta = 0.379$ for p (.000) < 0.05. This implies that the ISPs positive and significantly predict the SCPs of the selected companies of Ethiopia. Finally, the result of the Pearson coefficient (r) for Ha_9 given on Table 3 between the composite information sharing practices and composite SCPs is 0.562. This result implies a moderate and positive correlation between information sharing practices and SCPs when considered together. The result show that a better information sharing practices leads to better firms' SCPs. To sum up, the significant correlations coefficient, and standardized regression coefficient coupled with the significant p-value of F-statistics of ANOVA show that ISPs has significantly related to the SCPs. Consequently, H_{a9} that related the composite information sharing practices with SCPs is accepted at 0.05 levels, suggesting that there is

statically significant effect of information sharing practices on SCP of the companies.

Table 4 Summary of the hypotheses by regression and Pearson correlation coefficients

Hypotheses	Relationship	Regression (β)	Pearson cor. Coef. (r)	p-value of r	Accept/Reject Ha
Ha_1	IQ & SCP quality	.985	.985	.000 *	Accept
Ha_2	II & SCP quality	.003	.137	.003 *	Accept
Ha_3	IQ & SCP cost	.818	.792	.000 *	Accept
Ha_4	II & SCP cost	.192	.081	.087	Reject
Ha_5	IQ & SCP flexibility	.890	.873	.000 *	Accept
Ha_6	II & SCP flexibility	-.004	.004	.925	Reject
Ha_7	IQ & SCP customer satisfaction	.834	.834	.000 *	Accept
Ha_8	II & SCP customer satisfaction	-.016	.16	.072	Reject
Ha_9	Overall ISPs & SCPs	.562	.865	.000 *	Accept

* Correlation is significant at 0.05 level (2-tailed)

CONCLUSIONS

This research represents an important empirical effort to investigate the supply chain practices of some selected companies of Ethiopian industries. The study specifically focused on the causal relationships of information sharing practices with supply chain performances of the companies. To study tested the proposed theoretical framework by linear regression, and Pearson correlation. The outputs of this study add its own part to the body of knowledge of the supply chain management field. This study also provides important facts to the body of the literature on the subject of the impact of the information sharing practices on different dimensions of supply chain performance. The results show that higher level of overall information sharing in supply chain practices directly improve the overall supply chain performances. Also, information quality is positive and significant in predicting all SCPs constructs used; but information intensity less predicts and insignificant to the supply chain performances constructs of the companies relative to information quality.

The positive and significant results for the association among information sharing practices and supply chain performances of the Ethiopian companies under this investigation are in line with prior results of that stated sharing quality information internally within different sections of organizations and externally with supply chain partners increased firms' productivity and efficiency Mourtzis (2011); information sharing directs to greater supply chain integration that enhances dependability of the supply chain performances and quick delivery (Lotfi et al., 2013); and formation sharing leads to customer satisfaction (Li et al., 2006). Similarly, the result also in line with the findings of Yeoh, (2017) that clarified that information sharing between supply chain partners' results cost reduction;

Zhao (2002) also pointed out the positive effects of information sharing in the supply chain practices on overall cost reduction, and the results of Suhong, et al., (2009) that stated information sharing results minimum delay and customer satisfaction.

The insignificancy of information intensity to SCPs might be for different reasons. Among the possibility, the resistance of the firm to share information relating to core business knowledge due to the assumption of losing competitive advantage; lower tendency of the partners to translate information to practical action to be beneficiary from information intensity due to low conceptual ability to analyze the environment and predict the future.

At the end, the result of this research can be practical to other similar countries of alike capability and conditions. Also, it might help policy makers to devise better policies, for example policy relating to cost of telephone, internet and information technologies facility for better information sharing practices by the supply chain partners to enhance the overall economic benefits of the nation to be achieved from successful supply chain practices.

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