

Towards a Sustainable Future: Exploring the Role of Integrated Management Systems in Enhancing Export Competitiveness and Domestic Sales in Textile Industry

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ABSTRACT

In today's globalized industrial landscape, marked by fierce competition and evolving consumer preferences, the imperative of ensuring product quality, environmental sustainability, and occupational health and safety has intensified for firms operating in both domestic and international markets. Integrated management systems transcend mere compliance serve as a strategic framework for firms to fortify their environmental sustainability credentials and mitigate reputational risks effectively. This study investigates the transformative potential of integrated management systems in stimulating export growth and domestic sales within Pakistan's industrial sector. Utilizing panel data analysis of 94 textile firms spanning listed on the Pakistan Stock Exchange from 2009 to 2022. This study employs the fixed effect model to empirically estimate the results. The findings underscore or unveil the significant role of integrated management systems in fostering export growth and improving environmental performance. The outcome of the study also suggests important policy implications that how integrated management systems can be potent policy avenue to achieve business success and broader societal and environmental objectives.

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INTRODUCTION

In today's interconnected global economy, the industrial sector of Pakistan is confronted with a myriad of challenges and opportunities. Amidst intensifying competition and evolving consumer preferences, the product quality, environmental quality, and occupational health and safety has risen to vital importance for firms determined both domestic and international markets. Now a days, industries have been focusing on product quality and firm profitability (Abbas, 2020). Hence, to achieve these objectives, firms solely focus on environmental management systems to achieve sustainability, and health & safety (Barón et al., 2020). IMS consists of 1) quality management (i.e. ISO 9001), 2) environmental management (i.e. ISO 14001), and for 3) health and safety (i.e. ISO 45001). Because it can provide a procedure to fulfill the sustainability and reduce risks (Domingues et al., 2015). IMS is provides the framework, in which firms can achieve sustainability and reduce risks. IMS also allows the firms to reduce environmental hazards which are directly linked with the production. Therefore, firms will continue their eco-friendly production. Thus, businesses increase competitiveness by adopting the IMS standards (Ikram et al., 2019).

IMS is an important strategy that helps organizations to gain competitive advantage by reflecting sustainability in their business goals. More importantly, the inclusion of ISO 45001 standards in IMS highlights its importance of ensuring a secure and healthy work environment for staff members. Notably, it helps the organizations to reduce the occupational risk through the implementation of proactive measures at the workplaces. This will not only preserve their most important resource, which is their human capital, but also promotes a positive working environment. According to Yanti et al. (2023), standard operating procedures have effectively reduced workplace accidents caused by environmental factors (31.1%) and human factors (51.6%). Not only this, the investments in occupational health and safety also provides tangible financial benefits to the organizations by increasing productivity. In addition to the above, the ability of IMS to advance innovation and continuous improvement in all aspects of organizational operations is a decisive selling point. IMS helps businesses identify inefficiencies, capitalize on opportunities, and adapt to market changes through data-driven decision-making and performance monitoring. (Bag et al., 2021). Organizations gain valuable insights into their organization performance by collecting and analyzing key performance indicators (KPIs) related to quality, environmental impact, and occupational health. Ultimately, it can help the firms to allocate it resource. Hence, IMS plays a significant role in production process to achieve sustainability and climate risk (Daharat et al., 2022; Sabahi & Parast, 2020).

The important feature of adopting IMS in firms, is its contribution to the achievement of SDGs (Fonseca et al., 2020). For example, IMS can also contribute to SDG 8 by providing safe workplace and health safety of employees. It can also contribute to the achievement of SDG 9 by improving innovation and operational efficiency. Lastly, it contributes to the achievement of SDG 12 by adopting sustainable production and reducing environmental degradation.

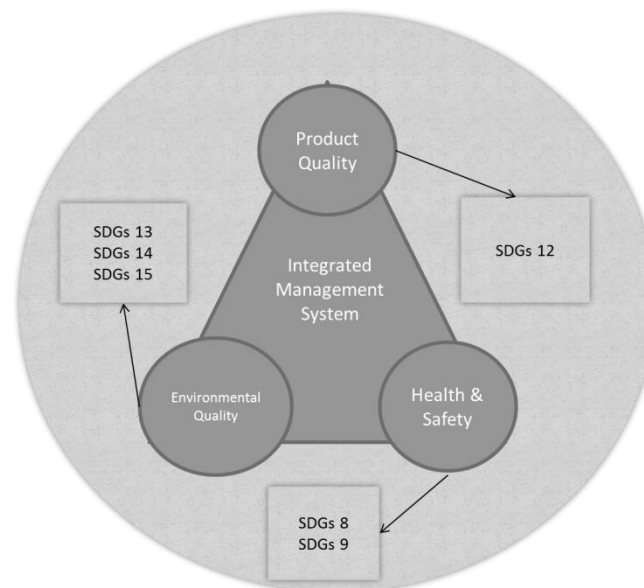


Figure 1: SDGs and IMS

Pakistan's economy plays a significant role because its manufacturing sector contributes 12.7% to the GDP. The manufacturing sector of Pakistan is third-largest employment sector of the country. It provides employment to 16.1% of the labor force (Abbas, 2020). However, it is also confronted with significant challenges. The environmental challenges, such as generating toxic pollutants and hazardous waste during the production process are the top on the list. These environmental challenges are ranking the Pakistan amongst the top 10 pollutant nations due to their insufficient commitment to the standard quality and environmental conservation (Hayat et al., 2020). Evidence indicates that only a few industries of Pakistan are adhered to the national environmental quality standards. Only a few companies possess certifications in Health and Safety Management Systems (H&SMS), Quality Management Systems (QMS), or Environmental Management Systems (EMS). The fact is that the Pakistan's exports to key markets such as China, the European Union, and the United States are hindered by issues related to standards and quality (Pacheco et al., 2022; Ronalter et al., 2023). However, the implementation of IMS provides an opportunity to the Pakistani Industries to enhance their competitiveness and boost their productivity.

From the above discussion, it becomes evident that adopting IMS is a strategic necessity for the industrial sector of Pakistan. This framework offers a complete plan to enhance local sale which eventually drives the export expansion and subsequently help the Pakistani industries to achieve the sustainable development. However, there is a lack of empirical research in the current literature that examines the role of Integrated Management Systems (IMS) in driving export growth and boosting domestic sales, especially within Pakistan's industrial sectors. Undoubtedly, IMS is poised to have a significant impact on the Pakistan's industrial sector and plays important role to enhance its competitiveness in the era of evolving market dynamics. Therefore, this study endeavored to explore the potential impact of IMS on Pakistan's industrial sector with a specific emphasize on its manufacturing industries. By doing this, our study will highlight the importance of IMS on the policy fronts.

The remaining structure of the paper is as follows: "section 2" discusses the theoretical background, and the relevant empirical studies "Section 3" outlines the data and methodology and formulates the empirical models. "Section 4" discusses the empirical results in detail. Lastly, "section 5" concludes the overall study along with some policy recommendations.

LITERATURE REVIEW

Theoretical Background

The present study lays its foundations on three fundamental theories to explain the underlying connection between IMS, business export growth and business sales growth. These theories are resource-based view (RBV) theory, institutional theory, and market-based view theory. (see figure 2)

RBV and dynamic capability theory highlights "*how internal resources and competencies contribute to both company performance and competitive advantage*". According to this framework, IMS is a

source of important resources for the businesses that help them to manage their quality, improve occupational health, and promote environmental sustainability. These resources also provide distinctive capabilities to the firms which not only help them to gain some financial advantage, but also help them to boost their sales performance and export growth (Beamish & Chakravarty, 2021; Mahmoud et al., 2020; Vézina et al., 2019). The institutional theory proposed that IMS help the organizations to address the concerns related to legitimacy and other external influences (Martínez et al., 2018). Undoubtedly, companies constantly remain under the institutional pressure of various stakeholders such as consumers, investors and regulatory agencies to express their commitment to quality, environmental sustainability, and occupational health and safety (Madrid-Guijarro & Duréndez, 2024; Nicolo' et al., 2024). The support of IMS can give relief by improving their legitimacy and reputation which eventually promotes their sales performance and export growth.

Last but not the least, the market-based view (MBV) theory provided a very interesting theoretical channel through which IMS might enhance competitive advantage and export performance (Keskin et al. 2021). The theory postulates that the business can gain competitive advantage and expand their export prospectus differentiating their goods and services in the global market through the integration of quality, environmental, and occupational health and safety management (Asseraf et al., 2019). Hence, the above theories are sufficient enough to propose a connection between IMS, sales performance and sales growth. However, as far as the author is concerned, this linkage is not empirically investigated, specifically in the context of manufacturing industries of Pakistan. Therefore, the present study attempts to empirically investigate this linkage.

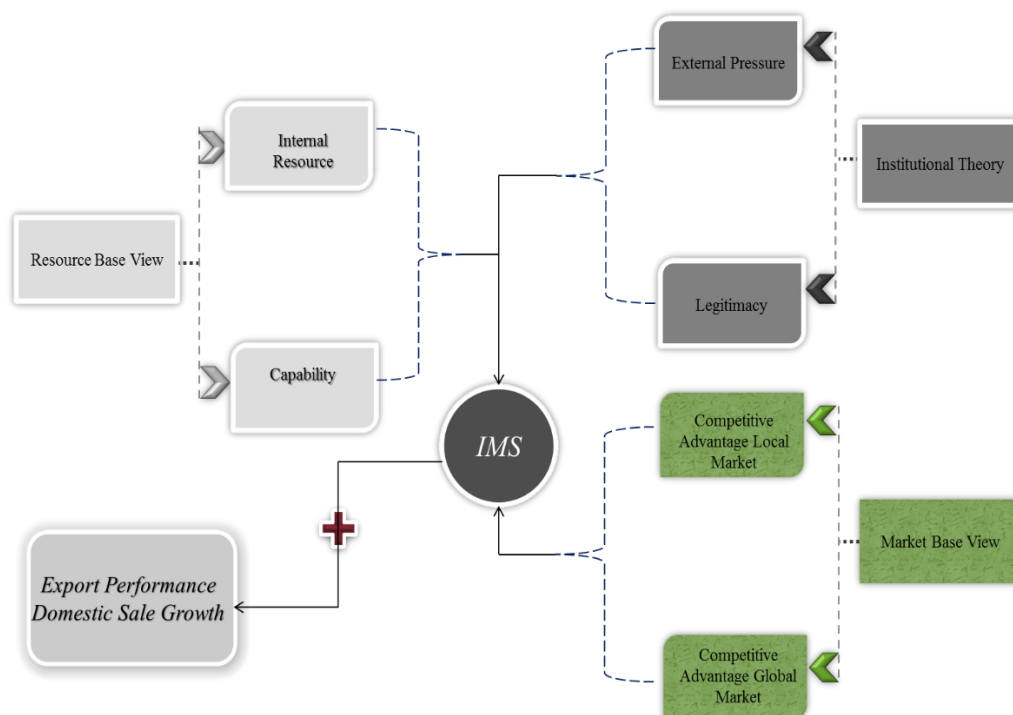


Figure 2: Theoretical Framework

Empirical Literature

The effect of IMS Adoption on the Export Performance of Firms

The applied body of literature is not very rich with the empirical studies on the relationship between IMS and firm's export performance. However, there exist some seminal studies that signify the importance of IMS in fostering the export growth. For instance, Nadae et al. (2019) conducted their study on the possible advantages of IMS and discussed the importance of IMS in promoting export growth. Pacheco et al. (2022) also showed that IMS provides access of important resources to businesses and organizations. This helps the firm to increase their productivity and sales growth. Their study also found a positive connection between IMS and export growth. The results reveals that high export growth in those firms is observed in those firms using IMS standards. Ikram et al. (2019) also found the similar findings in his research. The results explained showed that IMS is not only favorable for export growth, but they also help the organizations to boost their productivity, sales growth and eventually their financial success. Moueed & Hunjra (2020) explain that the adoption of IMS can enhance a company's reputation, and, this eventually increases the ability of the firms to increase profitability. These findings recognize the importance of IMS and its role in promoting sales growth. Bokhari et al. (2022) also discussed the important role of IMS in promoting export performance.

Furthermore, researchers have also investigated the importance of management standards on organizations and stakeholders, such as, suppliers, customers and regulatory bodies (Alfredo & Nurcahyo, 2018). It has been explained that management standards play an important role in demands and expectations of the consumers. Hence, this dedication enhances the relations with stakeholders, ultimately, this enhances confidence among the customers and export performance (He et al., 2015; Mirza & Khan, 2023). On the same token, Abdul-Rashid et al. (2017) observed a positive relationship between the adoption of management standards and customer confidence. This will affect export performance positively. Similarly, Ispas et al. (2023) also highlight the same interpretation in study. The study showed that if a firm adopts to the IMS standards, it improves their relations with the supplier (Kazi Humayra Shams et al., 2023). This in turn increased the supply chain effectiveness and promoted the sales and export performance. Their study clearly shows that IMS is advantageous for business and organizations. This is so because it provides a competitive edge to the businesses via the combination of quality management, environmental management, and occupational health and safety (Marinello & Dinicolò, 2019). This integration enables companies to differentiate their products and services in the global market that confers them with a competitive advantage as well as increasing their export potential. For instance, Wang & Liu (2023) found that there was a positive correlation between adoption of IMS and market share of firms implying that adoption of IMS can enhance export performance. The results also indicated that an integrated system had implications for a company's financial performance which means it has impacts on sales or export performance too.

The effect of IMS Adoption on the Domestic Sale of Firms

The literature in the domain of IMS adoption is not very rich and presents a conflicting and contradictory picture. Some researchers argue that these systems are beneficial for the profitability of firms only and only if they implemented properly (Hochstein et al., 2021; Ohiomah et al., 2019). However, on the other hand, most of the researchers have talked about their advantageous role. The literature is enriched with studies which signify that IMS helps to increase revenue and profitability. Researchers have also shown that the widespread adoption of IMS can result in better sales earnings and export growth. However, the undeniable fact is that the product quality standard plays the most important role. For example, Czödörövá & Gnap (2023) examined how product quality management influenced transportation companies and noted that such approaches greatly increased the profitability of assets and sales.

Research has also shown the positive and favorable effects of product quality and health safety management systems on the profitability of firms. According to Pacheco et al. (2022), who conducted their research on the EU, showed that product quality are so important to develop the export business and increase selling. Yadav & Kumar Yadav (2021) discussed the role of product quality and environmental standards showed its heightened importance in fostering the export growth. Marinello & Dinicolò (2019) emphasized the importance of ISO certification on the organizational efficiency on the three fronts, such as environmental excellence, and health and safety and quality enhancements. Ullah et al. (2023) have reported that ISO certifications have a positive impact on sales growth and can act as a moderating influence against corruption. Their study further showed that ISO certified firms achieve more excellence on their business fronts as compared to non-ISO certified firms. .

Hypothesis Development and conceptual framework

Synthesizing the above disclosure, which signified the importance of IMS in national and international market by impacting the sales performance and export growth, we postulate the following hypotheses:

Hypothesis 1: “The IMS significantly contributes to the export growth of the manufacturing industry”.

Hypothesis 2: “The IMS significantly contributes to the domestic sale growth of the manufacturing industry”.

DATA AND METHODOLOGY

Data Sources

This study employed panel data of 94 textile companies listed on the Pakistan stock exchange (PSX) for fourteen years, i.e., from 2009 to 2022, to examine the impact of IMS on the export growth and domestic sale development of manufacturing enterprises. It should be noted that we will only choose businesses that have been operating consistently throughout the time period in question. The State Bank of Pakistan and the companies' annual reports are the sources of the data. In addition, the annual reports include details about the companies' size, age, productivity, profitability, capital intensity, debt-to-equity ratio, research and development, and operating city. The International Organization for Standardization (ISO) provides the firms' IMS adoption status statistics. Consequently, the following is how export growth is formulated:

$$EG = \frac{\text{Export for } i\text{th Firm at } (t) - \text{Export for } i\text{th firm at } (t - 1)}{\text{Export Sale for } i\text{th firm at } (t - 1)}$$

Where, EG denotes export growth, export for period (t) represents the current year growth and export for period (t – 1) represent the previous year export, and (t) denotes time. Similarly, the formulation of domestic sale growth is stated as follows:

$$DSG = \frac{\text{DS for } i\text{th Firm at } (t) - \text{DS for } i\text{th firm at } (t - 1)}{\text{DS for } i\text{th firm at } (t - 1)}$$

Where, DSG denotes domestic sale growth, DS denotes the domestic sale for period (t) and DS for period (t – 1) represent the previous year domestic sale, and (t) denotes time. To mitigate potential biases in our results, we incorporated firm productivity, firm profitability, size, age, debt equity ratio and R&D as control variables in our study.

Table I: Variable's description

Variable	Notation	Measurement
Export Growth	EG	Net export growth of firms
Domestic Sale Growth	DSG	Net domestic sale growth of firms
Integrated Management System	IMS	Dummy variable 1 for using IMS and 0 for otherwise
Firm profitability	ROE	Return on Equity
Firm Productivity	FP	Production to Input Ratio
Firm Size	FS	Total number of employees in the firm
Capital Intensity	CI	Average Assets to Revenue ratio
Financial Leverage	FL	Debt to Equity ratio
Research & Development	R&D	Number of Patent hold by firms

Model Specifications

The following equations broadly explain the structure of our empirical models, which will be estimated, using IMS on EG and DSG in order to achieve the proposed study objective.

$$EG = F(IMS, FP, ROE, FS, FA, CI, FL, R\&D) \quad (1)$$

$$DSG = F(IMS, FP, ROE, FS, FA, CI, FL, R\&D) \quad (2)$$

Referring to the above equations; EG is export growth, DSG is domestic sale growth, IMS is integrated management system, FP is firm productivity, ROE is firm profitability, FS is firm size, FA is firm age, CI is capital intensity, FL is financial leverage, R&D is research and development.

Econometric techniques

We followed the methodological flowchart, in order to empirically estimate our results. The details are presented in the succeeding section.

Panel Heterogeneity Test

Panel heterogeneity is the term used to characterize the situation where individual entities within a panel dataset exhibit different attributes, leading to differences in the way independent and dependent variables are related among these entities (Wooldridge, 2019). The problem of heterogeneity is most common in longitudinal panel data sets, where observations are gathered over time for several firms. The detection of heterogeneity is of utmost importance to choose the suitable econometric technique because its presence can distort the outcomes. In the current study we employ Tilde (with delta) and Adjusted Tilde (with delta) to test the issue of heterogeneity (Hasan ul Moin & Qureshi, 2023).

Cross sectional dependency Test

The issue of cross-sectional dependency is another significant concern in the panel data which may lead to biased outcomes as the traditional econometric techniques are not robust against this issue. In this study, we use the Pesaran, (2004) to diagnose CSD. Both tests detect this issue under the null hypothesis of "cross-sectional independence," (Ahmed et al., 2022; Syed et al., 2024).

The generalized form of CD test is presented in equation 1.

$$CD = \sqrt{\frac{2T}{N(N-1)}} \sum_{i=1}^{N-1} \sum_{j=i+1}^N \hat{\delta}_{i,j} \quad (3)$$

In the given equation, $\hat{\delta}$ is estimated coefficient of correlation, N is denoted as number of cross-sections and T denotes the time period.

Hausman test, Random and Fixed Effect Model

Since REF and FEM are robust to problems like heterogeneity, autocorrelation, and heteroscedasticity, researchers often prefer random and fixed effect models as crucial instruments for estimating empirical correlations among variables in panel data sets (Naqvi et al., 2023). While variations in "error variances" are considered in a random effect model, changing "intercepts" are assumed in a fixed-effect model across groups or time periods. While selecting amongst these models can be difficult, the Hausman test makes the task easier (Rida Ahmed et al., 2023).. This test compares individual effects to other pertinent predictors in order to evaluate the adequacy of the random or fixed-effect model. The test's null hypothesis states that "random effects are consistent and efficient compared to fixed effects estimators" by equating random and fixed effects. It is suggested that the fixed effect model is more appropriate if this null hypothesis is rejected (Hausman, 1978)

The equations of the FEM, REM and Hausman test are given below:

$$Z_{it} = (\delta + \epsilon_i) + X_{it}'\eta + \epsilon_{it} \quad (4)$$

$$Z_{it} = \delta + X_{it}'\eta + (\xi_i + \epsilon_{it}) \quad (5)$$

$$LM = (\eta_{LSDV} - \eta_{RandomL}) W^{-1}(\eta_{LSDV} - \eta_{RandomL}) \sim \chi^2(k) \quad (6)$$

RESULT AND DISCUSSION

Detection of Multicollinearity

Detecting multicollinearity is crucial for obtaining unbiased estimates in regression analysis. In the present study, we took the support from the correlation matrix, with the results documented in table 2. The table shows that the coefficient of correlation between two regressors does not exceed 0.85, which indicates that the issue of multicollinearity is not a concerning issue. However, the most important aspect of the results is that the coefficient of correlation between IMS and EG (0.663) and IMS and DSG (0.738) is higher in magnitude as compared to others, which unveiled the favorable influence of IMS on EG and DSG. However, we will take support from the regression estimates in the succeeding sections to further buttress this claim.

Table II: Correlation Matrix

	EG	DSG	IMS	FP	ROE	FS	FA	CI	FL	R&D
EG	1									
DSG	0.827	1								
IMS	0.663	0.738	1							
FP	0.526	0.474	0.376	1						
ROE	0.452	0.356	0.403	0.376	1					
FS	0.372	0.275	0.386	0.343	0.421	1				
FA	0.473	0.247	0.484	0.473	0.402	0.376	1			
CI	0.523	0.385	0.536	0.345	0.387	0.264	0.378	1		
FL	0.248	0.274	0.274	0.534	0.376	0.274	0.245	0.327	1	
R&D	0.344	0.376	0.536	0.365	0.575	0.185	0.347	0.245	0.275	1

Where: EG is export growth, DSG is domestic sale growth, IMS is integrated management system, FP is firm productivity, ROE is firm profitability, FS is firm size, FA is firm age, CI is capital intensity, FL is financial leverage, R&D is research and development.

Panel Heterogeneity Tests

Having established the absence of multicollinearity in our data, we preceded with panel heterogeneity tests. Two commonly used tests, namely Tilde (with delta) and Adjusted Tilde (with delta), were employed to assess the homogeneity or heterogeneity of our panel dataset. The results are presented in Table 3. Significant test statistics from both Tilde and Adjusted Tilde tests indicate the presence of heterogeneity within our panel dataset.

Table III: Panel Heterogeneity

Variables	Tilde (with delta)	Adjusted Tilde (with delta)
EG	7.378***	9.395***
DSG	8.783***	5.395***
IMS	7.274***	7.484***
FP	9.373***	9.284***
ROE	6.389***	8.037***
FS	7.293***	7.785***
FA	8.383***	4.984**
CI	9.037***	6.237***
FL	7.737***	9.347***
R&D	6.397***	8.384***

Note: where: EG is export growth, DSG is domestic sale growth, IMS is integrated management system, FP is firm productivity, ROE is firm profitability, FS is firm size, FA is firm age, CI is capital intensity, FL is financial leverage, R&D is research and development; ** and *** shows the significance of results at 5% and 1%, respectively.

Test of Cross-Sectional Dependency (CSD)

We used two well-known tests-the Breusch-Pagan LM and Pesaran CD tests the problem of CSD. The findings are shown in Table 4. The significance of the test statistics of Pesaran CD and Breusch-Pagan LM exhibit the presence of CSD, which implies that the outcomes within the panel entities are not independently drawn, rather influence the outcomes of one another.

Table IV: Cross Sectional Dependency

Variables	Breusch Pagan LM	Pesaran CD
EG	26.238***	24.837***
DSG	19.207***	19.384***
IMS	17.387***	18.736***
FP	10.384***	18.820***
ROE	18.489***	19.384***
FS	13.946***	27.835***
FA	11.037***	29.384***
CI	9.936***	11.378***
FL	10.476***	17.238***
R&D	11.947***	18.294***

*Note: where: EG is export growth, DSG is domestic sale growth, IMS is integrated management system, FP is firm productivity, ROE is firm profitability, FS is firm size, FA is firm age, CI is capital intensity, FL is financial leverage, R&D is research and development; ** and *** shows the significance of results at 5% and 1%, respectively.*

Fixed Effect Regression Estimation

We estimated the empirical data using regression analysis, which was the last step in our investigation. We run two models (Model 1 and Model 2) to assess the effect of IMS on export performance and growth. Given the fundamental characteristic of our data, we choose both fixed effect and random effect models. The Hausman test was applied to find which model is best suited for our case. The results are shown in Panel B of Table 5. It is evident from the noteworthy Chi-square test value that the fixed effect model produces more effective outcomes. As a result, as shown in Panel A of Table 5, we used the fixed effect model to interpret our results. By taking into consideration unobserved time-invariant variability among individuals, our method improves the precision and consistency of our estimations.

Table V: Fixed Effect Regression Model

Panel A				
Fixed Effect Model				
Variables	Model 1 = EG		Model 2 = DSG	
	Coeff	P-value	Coeff	P-value
IMS	1.947***	0.000	1.893***	0.000
FP	1.464***	0.000	1.373***	0.002
ROE	1.376**	0.038	1.538**	0.037
FS	1.659***	0.000	1.472***	0.000
FA	1.375**	0.026	1.364***	0.000
CI	1.286***	0.000	1.436**	0.027
FL	1.384***	0.000	1.036***	0.000
R&D	1.849***	0.000	1.674***	0.000
R-square	0.736		0.723	
Adjusted R-square	0.725		0.716	
Panel B				
Hausman Test				
Chi-Square	17.389***		16.026***	
P-Value	0.000		0.000	
Decision	“Fixed Effect Model”		“Fixed Effect Model”	

*Note: where: EG is export growth, DSG is domestic sale growth, IMS is integrated management system, FP is firm productivity, ROE is firm profitability, FS is firm size, FA is firm age, CI is capital intensity, FL is financial leverage, R&D is research and development; ** and *** shows the significance of results at 5% and 1%, respectively.*

Our findings demonstrate that the IMS coefficient in Models 1 (1.947; $p < 0.01$) and 2 (1.893; $p < 0.01$) is statistically significant. According to Ullah et al. (2023), there is a clear and positive correlation between the deployment of IMS and export growth as well as export performance. It is important to note that IMS uses a variety of platforms to support the promotion of EG and DSG (Vashishth et al., 2021). First and foremost, implementing an IMS improves operational efficacy and efficiency, which in turn improves product quality and environmental sustainability. These are crucial elements that boost competitiveness in global marketplaces. As a result, businesses are able to grow their exports due to their capacity to meet the sustainability and quality expectations of international customers (Marinello & Dinicolò, 2019). IMS also makes the risks management easier and international laws more effective. Hence, it lowers operational risks and increases access to the markets for exporters (Hayat et al., 2020). In this way, the adoption of ISO standards enhances the international credibility of a company which attracts more clients and subsequently enlarges the potential export market. Additionally, as evidenced by the positive coefficients for research and development (Hochstein et al., 2021), the adoption of IMS fosters innovation and continual improvement. Innovation-guided strategy helps the organizations to create new goods by using advanced technology to satisfy the needs of new customers. This, in turn, increases exports and competitiveness. Consequently, the research's findings are alleged with the postulated relationship between the relevant variables under study in the study.

CONCLUSION AND POLICY IMPLICATION

Conclusion

This paper discussed the importance of IMS in fostering the local sales and export growth with a specific focus on the manufacturing industry of Pakistan. To achieve this objective, the study targeted 96 manufacturing industries and collected their data over the time span of 14 years. The outcome of the study shows the positive impact of IMS on export growth as well as export performance. IMS empowers companies with an opportunity to elevate their environmental sustainability position and reduce reputational concerns that go beyond simple regulatory compliance. IMS primarily advocates the continuous upgrading of product quality, employee skills, resource utilization, and waste minimization to create competition. In addition, it provides environmentally friendly production processes, educates personnel skills, and creates a positive institutional image.

The study demonstrates the different channels through which IMS can promote exporters' performance and encourage export expansion. First, introducing an IMS increases the operation efficiency and effectiveness to achieve better product quality and environmental sustainability. These elements are vital issues which help stand above competition in global marketplaces. Consequently, this leads to the growth of exports because businesses are capable of meeting the sustainability and quality requirements of international buyers. IMS also facilitates the conformity to the international rules and the portfolio management of risk that in turn reduces the operational risks and improves exporters' access to markets. Furthermore, the positive coefficients of research and development (R&D) demonstrate that the IMS implementation necessitates innovation and ongoing improvement. Innovation-driven strategy enables firms to generate novel products, processes and technological advancements that match with the customer needs. This helps them to achieve better export performance and competitiveness. The significance of IMS in export performance and growth emphasizes its crucial role in securing longer-term competitiveness advantages in the international market. Thus, the findings suggest that IMS could be a major game changer to achieve broader socio-economic and environmental goals.

Policy Recommendation

Based on this study, we propose the following policy recommendations. First, our study reveals the importance of IMS adoption, and identifies the long-run benefits in domestic and, as well as global market. Therefore, policymakers and administration should provide a training program to industries about its benefits and practical guidance. By adopting IMS, firms can accelerate growth, profitability, sale and export. Second, there needs to be a platform where firms can share ideas, exchange eco-friendly technology and promote sustainable production. In this regard, government and trade development authorities play a vital role for providing such platforms for export-oriented firms to share ideas, exchange technologies and collaborating with each other. By facilitating the firms, they can use IMS and hence, it is helpful for the eco-system. Third, this research also suggests

that, how IMS guidelines should be provided to the industries. These challenges help the firms to compete in the international market by providing effect supply chain, product quality and health safety. Hence, it is a core responsibility of the government management, should provide these guidelines to grow exports. Lastly, adoption and implementation of IMS is an expensive procedure and firms try to avoid it because it reduces profit. However, government should provide the incentives and, also, impose penalties for the implementation of IMS. Since the adoption of IMS is not a business strategy. It is a global choice to provide a sustainable production, eco-friendly product, reduce carbon emission and workers safety. By doing so, we can achieve objectives, sustainability, and export-oriented economy.

Future Research Avenues

This study investigates the role of IMS in enhancing export competitiveness and domestic sale in textile industry. Conversely, this study can be extended for other economies. Similarly, researcher can also prolong the study by considering the other industries e.g. sugar or cement industries.

***Note:** (This research article is derived from the doctoral thesis titled “Towards a Sustainable Future: Exploring the Role of Integrated Management Systems in Enhancing Export Competitiveness and Domestic Sales in Textile Industry,” authored by Waqar Ali Ather Bukhari and supervised by Dr. Naveed Hayat).*

REFERENCES

- Abbas, J. (2020). Impact of total quality management on corporate sustainability through the mediating effect of knowledge management. *Journal of Cleaner Production*, 244, 118806. <https://doi.org/10.1016/J.JCLEPRO.2019.118806>
- Abdul-Rashid, S. H., Sakundarini, N., Raja Ghazilla, R. A., & Thursamy, R. (2017). The impact of sustainable manufacturing practices on sustainability performance: Empirical evidence from Malaysia. *International Journal of Operations and Production Management*, 37(2), 182–204. <https://doi.org/10.1108/IJOPM-04-2015-0223/FULL/XML>
- Ahmed, F., Kousar, S., Pervaiz, A., & Shabbir, A. (2022). Do institutional quality and financial development affect sustainable economic growth? Evidence from South Asian countries. *Borsa Istanbul Review*, 22(1), 189–196. <https://doi.org/10.1016/j.bir.2021.03.005>
- Alfredo, E. I., & Nurcahyo, R. (2018). The impact of ISO 9001, ISO 14001, and OHSAS 18001 certification on manufacturing industry operational performance. *Proceedings of the International Conference on Industrial Engineering and Operations Management*, 2018-March, 1862–1866.
- Asseraf, Y., Lages, L. F., & Shoham, A. (2019). Assessing the drivers and impact of international marketing agility. *International Marketing Review*, 36(2), 289–315. <https://doi.org/10.1108/IMR-12-2017-0267/FULL/PDF>
- Bag, S., Gupta, S., Kumar, A., & Sivarajah, U. (2021). An integrated artificial intelligence framework for knowledge creation and B2B marketing rational decision making for improving firm performance. *Industrial Marketing Management*, 92, 178–189. <https://doi.org/10.1016/J.INDMARMAN.2020.12.001>
- Barón, A., de Castro, R., & Giménez, G. (2020). Circular Economy Practices among Industrial EMAS-Registered SMEs in Spain. *Sustainability* 2020, Vol. 12, Page 9011, 12(21), 9011. <https://doi.org/10.3390/SU12219011>
- Beamish, P. W., & Chakravarty, D. (2021). Using the Resource-Based View in Multinational Enterprise Research. *Journal of Management*, 47(7), 1861–1877. https://doi.org/10.1177/0149206321995575/ASSET/IMAGES/LARGE/10.1177_0149206321995575-FIG3.JPEG
- Bokhari, S. A. A., Manzoor, S., Bokhari, S. A. A., & Manzoor, S. (2022). Impact of Information Security Management System on Firm Financial Performance: Perspective of Corporate Reputation and Branding. *American Journal of Industrial and Business Management*, 12(5), 934–954. <https://doi.org/10.4236/AJIBM.2022.125048>
- Czödörová, R., & Gnap, J. (2023). Investigation of the Effectiveness of the Introduction of the Quality Management System According to the ISO 9001 Standard in Transport Companies: Slovakia Case Study. *Sustainability (Switzerland)*, 15(3), 2401. <https://doi.org/10.3390/SU15032401/S1>
- Daharat, A. N. M., Sued, M. K., & Gheisari, A. (2022). The Impact of Integrated Management System on the Organizational Excellence and Organizational Innovation. *Education Research International*, 2022. <https://doi.org/10.1155/2022/2284603>

- Domingues, J. P. T., Sampaio, P., & Arezes, P. M. (2015). Analysis of integrated management systems from various perspectives. *Total Quality Management & Business Excellence*, 26(11–12), 1311–1334. <https://doi.org/10.1080/14783363.2014.931064>
- Fonseca, L. M., Domingues, J. P., & Dima, A. M. (2020). Mapping the Sustainable Development Goals Relationships. *Sustainability* 2020, Vol. 12, Page 3359, 12(8), 3359. <https://doi.org/10.3390/SU12083359>
- Hasan ul Moin, & Qureshi, N. A. (2023). The Impact of Human Resource Accounting on Profitability: A Study of Listed Textile Firms on PSX. *International Journal of Management Research and Emerging Sciences*, 13(4), 68–84. <https://doi.org/10.56536/d21pgz45>
- Hausman, J. A. (1978). Specification Tests in Econometrics EC ON ME R C A VOLUME 46 NOVEMBER, 1978 NUMBER 6 SPECIFICATION TESTS IN ECONOMETRICS. *Econometrica*, 46(6), 1251–1271. <http://www.jstor.org/stable/1913827> <http://www.jstor.org/> <http://www.jstor.org/action/showPublisher?publisherCode=econosoc> <http://www.jstor.org/>
- Hayat, N., Hussain, A., & Lohano, H. D. (2020). Eco-labeling and sustainability: A case of textile industry in Pakistan. *Journal of Cleaner Production*, 252, 119807. <https://doi.org/10.1016/J.JCLEPRO.2019.119807>
- He, W., Liu, C., Lu, J., & Cao, J. (2015). Impacts of ISO 14001 adoption on firm performance: Evidence from China. *China Economic Review*, 32, 43–56. <https://doi.org/10.1016/J.CHIECO.2014.11.008>
- Hochstein, B., Chaker, N. N., Rangarajan, D., Nagel, D., & Hartmann, N. N. (2021). Proactive Value Co-Creation via Structural Ambidexterity: Customer Success Management and the Modularization of Frontline Roles. *Journal of Service Research*, 24(4), 601–621. https://doi.org/10.1177/1094670521997565/ASSET/IMAGES/10.1177_1094670521997565-IMG1.PNG
- Ikram, M., Zhou, P., Shah, S. A. A., & Liu, G. Q. (2019). Do environmental management systems help improve corporate sustainable development? Evidence from manufacturing companies in Pakistan. *Journal of Cleaner Production*, 226, 628–641. <https://doi.org/10.1016/J.JCLEPRO.2019.03.265>
- Ispas, L., Mironeasa, C., & Silvestri, A. (2023). Risk-Based Approach in the Implementation of Integrated Management Systems: A Systematic Literature Review. *Sustainability* 2023, Vol. 15, Page 10251, 15(13), 10251. <https://doi.org/10.3390/SU151310251>
- Kazi Humayra Shams, Subrata Talapatra, Fardeen Islam, & Ahsanul Abedin. (2023). Identification of benefits from Integrated Management Systems (IMS) to achieve Sustainability: A Systematic Literature Review. *World Journal of Advanced Research and Reviews*, 20(2), 514–529. <https://doi.org/10.30574/wjarr.2023.20.2.2243>
- Madrid-Guijarro, A., & Duréndez, A. (2024). Sustainable development barriers and pressures in SMEs: The mediating effect of management commitment to environmental practices. *Business Strategy and the Environment*, 33(2), 949–967. <https://doi.org/10.1002/BSE.3537>
- Mahmoud, M. A., Adams, M., Abubakari, A., Commey, N. O., & Kastner, A. N. A. (2020). Social

- media resources and export performance: the role of trust and commitment. *International Marketing Review*, 37(2), 273–297. <https://doi.org/10.1108/IMR-02-2019-0084/FULL/PDF>
- Marinello, V., & Dinicolò, G. L. M. (2019). Integrated management systems between evolutionary routes and management process. *Corporate Ownership and Control*, 16(2), 60–66. <https://doi.org/10.22495/COCV16I2ART6>
- Martínez, N. O., Carabel, T. C., & Del Castillo Feito, C. (2018). Legitimacy and reputation of organizations: Their relationship with management systems and financial performance. *Organizational Legitimacy: Challenges and Opportunities for Businesses and Institutions*, 141–157. https://doi.org/10.1007/978-3-319-75990-6_9/COVER
- Mirza, M. B., & Khan, N. (2023). *Performance analysis of ISO Management System Standards certification Consulting Firms of Pakistan*. June. <https://doi.org/10.6092/issn.2281-4485/16905>
- Moueed, A., & Hunjra, A. I. (2020). *Use anger to guide your stock market decision-making : results from Pakistan*. <https://doi.org/10.1080/23322039.2020.1733279>
- Nadae, J. de, Carvalho, M. M., & Vieira, D. R. (2019). Exploring the influence of environmental and social standards in integrated management systems on economic performance of firms. *Journal of Manufacturing Technology Management*, 30(5), 840–861. <https://doi.org/10.1108/JMTM-06-2018-0190/FULL/PDF>
- Naqvi, B., Rizvi, S. K. A., Mirza, N., & Umar, M. (2023). Financial market development: A potentiating policy choice for the green transition in G7 economies. *International Review of Financial Analysis*, 102577. <https://doi.org/10.1016/J.IRFA.2023.102577>
- Nicolo', G., Zampone, G., De Iorio, S., & Sannino, G. (2024). Does SDG disclosure reflect corporate underlying sustainability performance? Evidence from UN Global Compact participants. *Journal of International Financial Management & Accounting*, 35(1), 214–260.
- Ohiomah, A., Andreev, P., Benyoucef, M., & Hood, D. (2019). The role of lead management systems in inside sales performance. *Journal of Business Research*, 102, 163–177. <https://doi.org/10.1016/J.JBUSRES.2019.05.018>
- Pacheco, L., Lobo, C., & Maldonado, I. (2022). Do ISO Certifications Enhance Internationalization? The Case of Portuguese Industrial SMEs. *Sustainability 2022, Vol. 14, Page 1335*, 14(3), 1335. <https://doi.org/10.3390/SU14031335>
- Pesaran, M. H. (2004). *General diagnostic tests for cross section dependence in panels*. University of Cambridge, Faculty of Economics, Cambridge Working Papers in Economics No. 0435. 1229, 41.
- Rida Ahmed, Muhammad Rahies Khan, & Mutasim Billa Tufail. (2023). Accelerating Firm's Operational Performance through GSCM Practices and Lean Management: A Case of the Textile Sector of Karachi. *International Journal of Management Research and Emerging Sciences*, 13(4), 33–53. <https://doi.org/10.56536/hp6bgq39>
- Ronalter, L. M., Poltronieri, C. F., & Gerolamo, M. C. (2023). ISO management system standards in the light of corporate sustainability: a bibliometric analysis. *TQM Journal*, 35(9), 256–298. <https://doi.org/10.1108/TQM-09-2022-0279/FULL/PDF>

- Sabahi, S., & Parast, M. M. (2020). Firm innovation and supply chain resilience: a dynamic capability perspective. *International Journal of Logistics Research and Applications*, 23(3), 254–269. <https://doi.org/10.1080/13675567.2019.1683522>
- Syed, Q. R., Durani, F., Kisswani, K. M., Alola, A. A., Siddiqui, A., & Anwar, A. (2024). Testing natural resource curse hypothesis amidst geopolitical risk: Global evidence using novel Fourier augmented ARDL approach. *Resources Policy*, 88, 104317. <https://doi.org/10.1016/J.RESOURPOL.2023.104317>
- Ullah, B., Wei, Z., & Zhu, Y. (2023). Can a signal mitigate a dilemma? Quality management standards, corruption, and business ethics. *International Review of Economics & Finance*, 86, 701–716. <https://doi.org/10.1016/J.IREF.2023.03.042>
- Vashishth, A., Chakraborty, A., Gouda, S. K., & Gajanand, M. S. (2021). Integrated management systems maturity: Drivers and benefits in Indian SMEs. *Journal of Cleaner Production*, 293, 126243. <https://doi.org/10.1016/J.JCLEPRO.2021.126243>
- Vézina, M., Ben Selma, M., & Malo, M. C. (2019). Exploring the social innovation process in a large market based social enterprise: A dynamic capabilities approach. *Management Decision*, 57(6), 1399–1414. <https://doi.org/10.1108/MD-01-2017-0090/FULL/PDF>
- Wang, J., & Liu, F. (2023). Examining the link between integrated management systems and firm performance: do the integration strategies matter? *International Journal of Operations and Production Management*, 43(2), 332–372. <https://doi.org/10.1108/IJOPM-04-2022-0277/FULL/PDF>
- Wooldridge, J. M. (2019). Correlated random effects models with unbalanced panels. *Journal of Econometrics*, 211(1), 137–150. <https://doi.org/10.1016/J.JECONOM.2018.12.010>
- Yadav, P., & Kumar Yadav, S. (2021). Natural Resources Management Towards Sustainability: An Economic Outlook. *Advances in Sustainable Development and Management of Environmental and Natural Resources*, Vol2:377-Vol2:412. <https://doi.org/10.1201/9781003187455-24>
- Yanti, R., Qurtubi, & Sugarindra, M. (2023). Mitigation Strategy of Work Accident Risks Using ANP Method. *2023 International Conference on Cyber Management and Engineering, CyMaEn 2023*, 307–312. <https://doi.org/10.1109/CYMAEN57228.2023.10050919>