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# THE EFFECT OF MANAGEMENT PRACTICES ON FIRM PERFORMANCE USING MANAGEMENT PRACTICE INDEX IN PAKISTAN

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**Abstract**
*This study examines the effect of management practices on firm performance in Pakistan by constructing a comprehensive Management Practice Index (MPI). Using firm-level data from Pakistani enterprises, the research investigates how variations in managerial practices improve sales growth. Employing econometric techniques of OLS, the study finds that better management practices are strongly and positively associated with firm performance. The findings provide important implications for policymakers, business leaders, and researchers by highlighting management quality as a critical yet often overlooked determinant of firm performance in developing economies like Pakistan.*



## INTRODUCTION

The performance of firms is one of the main issues in finance, economics, and management as it has a direct impact on economic growth, the creation of employment and firm competitiveness. Although the conventional body of knowledge on firm performance has been focusing on the accumulation of capital (Tran & Vo, 2020), the quality of labor (Davidescu et al., 2020; Yousaf, 2023), and the adoption of technology (Huang et al., 2025), the recent studies have shown that management practices are a crucial for firm performance (Inkinen, 2016; Panya & Petchsawang, 2025; Zahra et al., 2025). The difference in the management of firms can be used to explain the significant differences in productivity and performance even when firms in the same industry and country are being considered.

The term management practices relates to the strategies, procedures and measures that formal organizations adopt in planning, executing and controlling the employment of resources to achieve set objectives (Nedelko & Potočan, 2016). For instance, a firm addressing the production issues may do it in a reactive manner in which it addresses the specific problems and incorporating a continuous improvement process. Likewise, firms can monitor the organization's performance using a framework involving several aspects of performance (Inkinen, 2016; Pavlov et al., 2017). Leadership styles, corporate culture, and decision-making processes within firms further shape the way

management practices are adopted and executed (Gibbons & Henderson, 2012). Also important is the matter of ownership, to the extent that the role of ownership structure could be considered a fundamental concept of the transitional economy theory. Sole proprietorship may have different management practices than the partnership, where publicly listed firms require higher degree of management practice (Fauzi & Locke, 2012). The management practice also depends on the organizational culture and leadership style. Management practices are also influenced by human capital, namely, the stock of human capital embodied in managerial and employee skills and competence. With increased investment in training and capacity enhancement, the management practices enhances among the firms (Bloom et al., 2019). Recent empirical studies have started to utilize firm-level microeconomic data like the World Enterprise Survey (WES) to investigate the effect of management on performance of the firms in different regions (Hyland et al., 2019). Despite the growing body of literature on management practices and firm performance (Bloom et al., 2009, 2012; Hannagan & Bennett, 2007), there remain several gaps that induce further exploration. The current study fill this gap up to some extent by exploring the impact of management practice on firm performance using a novel approach of management practice index.

## 2 Review of Literature

In an increasingly competitive global economy, firm performance remains a critical determinant of organizational success and sustainability. The factors that drive firm performance are multifaceted and vary across industries and regions. Among these factors, management practices play a significant role. Effective management practices are widely recognized as key drivers of organizational efficiency, productivity, and overall performance. Due to emergence of new technology, firms have been experiencing pressure concerning fluctuations in markets, supply chain integration, and shifts in consumers' demand. Therefore there is a strong Likelihood that firms that have been able to adopt sound management practices will be in a better position to overcome these challenges (Gadenne et al., 2012). The current literature on entrepreneurial shows that effective problem solving technique results in improve product quality and enhance operational efficiency (Nemlioglu & Mallick, 2017). Scientific literature has provided a strong evidence that better management improve firm performance (Bloom et al., 2009, 2012; Bloom & Van Reenen, 2007, 2010; Nemlioglu & Mallick, 2017). There is a rich body of literature suggested the positive relationship between greater quality management practices and superior firm performance. Bloom & Van Reenen (2007) present pioneering cross-country evidence that structured managerial practices leads to better productivity. They also show that firms with formal managerial practices achieve higher operational and financial performance. Firms with continuous improvement in their management strategies can gain more profit with improved productivity which in turn increase its exports in the international market (Hannagan & Bennett, 2007; Pavlov et al., 2017). In emerging markets, empirical research shows that a higher intensity of management leads to an increase in productivity, particularly among larger firms (Hyland, Francis, & Rodriguez Meza, 2019). Sectoral and firm-level studies further demonstrate the effectiveness of management practices for firm performance.

## 3. Methodology and Data

The current study utilized the World Enterprise Survey data of Pakistan for the year 2023. It is the most recent available wave of WES.

### 3.1 Management Practice Index (MPI)

The current study computes the management practice index using the following indicators taken from World Enterprise Survey provided by the World Bank. This index is constructed using Principal Component Analysis.

- Monitoring Practices
- Target Setting
- Incentives and Performance based Management

- Organizational Structure and Decision Making

The MPI is a standardized measure, which can be compared across firms and countries. The MPI reveal that the higher the index scores, the better the firm performance.

### 3.2 Measurement of Firm Performance

Firm performance is measured through average sales growth during the last 3 fiscal year. We have taken the log of this variable for monotonic transformation. Firm performance is taken as dependent variable in this study and the core independent variable is management practice index.

### 3.4 Econometric Model

The baseline empirical model is specified as:

Firm Performance = f(Management Practice Index, Firm Size, Firm Age, Export, Innovation)

$$FP = \alpha_0 + \alpha_1 MPI + \alpha_2 FIRSZ + \alpha_3 FIRAG + \alpha_4 EXPT + \alpha_5 INOV + e_i$$

Where
FP = Firm Performance
MPI = Management Performance Index
FIRSZ = Firm Size
FIRAG = Firm Age
EXPT = Exports
INOV = Innovation

## 4. Results and Discussion

**Table 1: Descriptive Statistics of Key Variables**

| Variable | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|
| **Firm Performance** | 0.42 | 0.73 | −1.85 | 2.41 |
| **Management Practice Index (MPI)** | 0.00 | 1.00 | −2.76 | 2.93 |
| Firm Size | 3.01 | 0.52 | 1.90 | 4.38 |
| Firm Age | 10.24 | 3.98 | 2.00 | 25.00 |
| Export | 0.30 | 0.46 | 0 | 1 |
| Innovation | 0.40 | 0.49 | 0 | 1 |



Table 1 provides the description of key variables. The Management practice Index was built by using PCA and it has mean and unit standard deviation of zero. There is a significant level of variation in firm performance which implies that the level of productivity at Pakistani firms is heterogeneous. About 30 percent of the firms are exporters, 40 percent demonstrate product or process innovation, which indicates structural limitations toward export activity and product innovation.

**Table 2: Effect of Management Practices on Firm Performance**

| Variable | Coefficient | Std. Error | t-value | p-value |
|---|---|---|---|---|
| **MPI** | **0.443** | 0.030 | 14.53 | 0.000 |
| Firm Size | 0.117 | 0.063 | 1.87 | 0.062 |
| Firm Age | **−0.046** | 0.008 | −6.13 | 0.000 |
| Export | **0.149** | 0.066 | 2.25 | 0.025 |
| Innovation | **0.283** | 0.061 | 4.61 | 0.000 |
| Constant | 0.136 | 0.208 | 0.65 | 0.514 |
| Observations | | 300 | | |

| Variable | Coefficient | Std. Error | t-value | p-value |
|---|---|---|---|---|
| R-squared | | 0.500 | | |
| Adjusted $R^2$ | | 0.491 | | |
| F-statistic | | 58.71 | | |
| Prob > F | | 0.000 | | |

**4. Results and Discussion**

The results of the OLS estimation that investigates the impact of management practices on the performance of firms in Pakistan are reported in Table 2. The findings indicate that the Management Practice Index (MPI) has a strong and statistically significant relationship with the firm performance. In particular, the coefficient of MPI is 0.443 and significant at the 1 percent level ($p < 0.01$), which means that the increase in management practices also has a significant positive effect on the performance of firms. This means that an increase of one standard deviation in the quality of management is linked to a rise in firm performance by about 44 percent other things remaining constant. This gives strong empirical evidence to the hypothesis that the existence of clear targets, and performance-based rewards are significant productivity and growth-oriented management practices in the developing economies such as Pakistan. The firm size has a positive coefficient (0.117) and is insignificant marginally at the 10 percent ($p = 0.062$) level, indicating that large firms are more likely to perform well than small firms. This outcome indicates the availability of economies of scale, easy access to financial resources and the ability to embrace formal management systems in larger firms. The relatively low significance, however, means that the size of firms alone does not ensure good performance unless it is complemented by good management practices. Firm age has a negative and statistically significant. Its coefficient is -0.046 ($p < 0.01$), which means that older firms perform worse than younger firms. This conclusion is due to the use of outdated technologies and old managerial practices. Within the Pakistani context, the older firms tend to be less malleable and slow to embrace the modern day management practices, which restricts their reaction to the competitive forces. The presence of export participation has a positive impact on firm performance with coefficient of 0.149 that is significant at 5 percent level ($p = 0.025$). This finding corroborates the learning-by-exporting hypothesis, which states that companies involved in international markets can enjoy the exposure to international competition, improved quality of standards, and advanced practices in management. Innovation is also a key aspect in improving the performance of firms. The innovation coefficient is 0.283 and is statistically significant at the 1 percent level which means that companies that introduce new products or processes perform much higher than those companies that do not innovate. The discovery indicates that management practices are complementary to innovation and that well-managed firms have more advantage of transforming activities of innovation into concrete performance benefits. This finding is important since Pakistan currently has a relatively low degree of innovation and therefore, there is a need to enhance managerial skills in order to enhance innovation-based growth.

**5. Conclusion and Policy Implications**

The research has strong evidence that management practices are a key factor that determines the performance of firms in Pakistan. The findings of a PCA-based Management Practice Index indicate that performance of firms with better management systems is considerably higher compared to those that are poorly managed despite size of firms, age, exporting and innovation. The involvement in exports and innovation also improves performance, and older

companies are generally behind because of organizational inertia. These results suggest that enhancing managerial performance is one of the most effective and comparatively inexpensive policy instruments that can be used to enhance the productivity of firms. Management training, professionalization, and organizational upgrading should therefore be incorporated by the policymakers in the SME development, innovation and export promotion policies.

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