BUSINESS EXCELLENCE INITIATIVES AND PERFORMANCE OF PHARMACEUTICAL SECTOR OF PAKISTAN: MEDIATING ROLE OF BUSINESS PROCESS CAPABILITIES

Suleyman Degirmen¹, Wasim ul Rehman² and Sana Shaukat³

Abstract

Presently, business excellence initiatives (BEIs) is functioning like a substantial criteria to increase efficiency of businesses to remain competitive. In this concern, the purpose of this study involves inspecting the effect of BEIs on performance of pharmaceutical sector of Pakistan by way of utilizing the role of business process capability mediating mechanism. An intermediating framework is proposed and data is assembled via a modified instrument (questionnaire) from 514 top and middle level managers. CFA is utilized for estimating the postulated framework’s fitness. The estimates of CFA models depicts that the proposed framework is fit. The outcomes of path coefficient (standardized) validate the significant contribution of BEIs on performance of pharmaceutical sector. The outcomes of study show that each of the postulated hypothesis is significant statistically (p<0.001) and furthermore indicating that business process capability (mediatory variable) is also associated with excellence initiatives of business and performance predictors. Moreover, study’s outcomes depict that business process capability shows partial mediation in BE focused performance and significantly contributes in value formation. This study proposes valuable insights for practitioners as well as future researchers thus suggesting that managers need to build an effective BEIs system to make business processes more influential for boosting performance of pharmaceutical sector of Pakistan. Firms must dedicate all of its potential in recognition and execution of BEIs as well as in enhancement of business process capabilities to attain improved BE focused performance.

Keywords: Business Excellence Initiatives (BEIs), Process Capability (BPC), Firms’ Performance.

JEL Classification: M210, M140

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Introduction

For sustaining profit margins and competitiveness, firms must constantly improve its productivity (Samardzija & Fadic, 2009). Currently, business excellence initiatives (BEIs) is arising like substantial criteria to enhance consumer contentment and efficacy of businesses (Ittner & Larcker, 1998). The notion of BE is grounded on the beliefs and frameworks of total quality management (Adebanjo, 2001). BE utilizes philosophies and tools of TQM with intent to enhance performance outcomes (Drescher et al., 2011). BE initiatives are internationally proven instrument to enhance performance (Samardzija & Fadic, 2009). Researches show a number of models to inspect BE driven performance for instance Malcolm Baldrige model, European Foundation for Quality Management Model and Deming Prize Model (Vartiak & Jankalova, 2017). Furthermore, the business process capabilities are also observed as an influential way to maintain business performance outcomes (Eisenhardt & Martin, 2000).

Extant literature shows scarcity of research to examine excellence initiatives (BEIs) driven performance of pharmaceutical sector of Pakistan. It is one of hi-tech, growing and knowledge oriented manufacturing sector with $1.6 billion contribution in GDP of Pakistan. This sector is closely related with the health of human beings and must contain excellence in each respect. However, the concept of BE is relatively unknown in this sector. Emergence of excellence in business systems and processes of pharmaceutical sector enhance the firm’s productivity and operational excellence, resulting in manufacturing of quality medicines at competitive price for local as well as international markets thus helping to improve the performance outcomes and business process capability of this sector.

Business processes are widely recognized for improving organizational performance (Davenport, 2005; Harmon, 2010). Furthermore, BEIs contributes in enhancing performance outcomes by way of supporting growth of resources (Tena et al., 2001). Prior literature on resource based view (RBV) states that most of resources that enhance and sustain competitiveness are resources such as business process (Barney et al., 2001). However, no prior study explores the mediating intervention of BPC while observing BEIs driven performance to make the distinctive contribution is prevailing literature. So, this research yields new insights and attempts to bridge this gap and investigates that in what manner BPC functions as a competitive edge, through efficiently utilizing resources, resulting in enhance BEIs driven performance.

Therefore, the research’s intent is to analyze the role of BEIs via Malcolm Baldrige criteria of pharmaceutical sector through exploring the mediating role of BPC. Malcolm Baldrige criteria classifies BE in six categories i.e., leadership, strategic planning, customer focus, process management, human resource management and knowledge management (NIST, 2008).

Numerous studies explored the relation of BEIs with performance outcomes (Jacob et al., 2004; Curkovic et al., 2000). BE affirmatively impact financial performance and results in enhanced...
sales, revenues and resources (Hendricks & Singal, 1997). BEIs offer significant benefits to firms (Escrig et al., 2001). Firms that employ techniques of BE are more likely to achieve excellence and attain success (Mann, 2008). BE serves as a development and managerial instrument for improving performance outcomes by coping with long-term goals in competitive setting (Adebanjo et al., 2011).


**Literature Review**

**Business Excellence Initiatives (BEI)**

Leadership (LS)

Leadership is an ability to encourage and inspire persons (Burns, 1978). Leaders control all the operations of a firm and are viewed as leaders instead of managers (Pradhan & Pradhan, 2015). Extant researches suggest that leadership significantly influence performance outcomes (Felfe & Schyns, 2004; Agle et al., 2006) and business processes of a firm (Bandara et al., 2007; Becker & Glascoff, 2014). Efficient leaders recognize target market as well as insistently enhance business processes to content consumer (Johnson, 1992) and offer enhanced output and revenues (Jackson, 1999). Effective leaders know the importance of process capability for sustaining and enhancing performance (Law & Ngai, 2007) and advance by efficient management of business processes (Rosemann et al., 2006). Reforming of business process encompasses leadership competences (Hall et al., 1994). The leaders enable workforces and firms for adapting changes and to do well (Soebbing et al., 2015). Accordingly, this research recommends the following hypotheses:

\[ H_1: \] There is an association between LS and firms’ performance.

\[ H_2: \] There is an association between LS and BPCs.

Strategic Planning (SP)

Strategic planning regulates mission, objectives and plans that manage the attainment and allotment of resources to accomplish firm’s goals (Pearce et al., 1987). Numerous researches inspect the affiliation of strategic planning and performance of firms (Bask et al., 2010; Gibson & Cassar, 2005) and business processes (Lyles et al., 1993). Strategic planning prior reforming of business processes, redesign processes in accordance with the objectives (King, 1994). This leads to better performance
(Short & Venkatraman, 1992). A study proposes utilizing strategic planning depict enhanced financial performance (Wood & LaForge 1979). Prasad (1999) asserted that current strategies, rehearses and systems are needed to be reviewed before reforming significant business processes. Business processes are stated by means of aims and strategies to achieve main objectives of a firm (Nurcan et al., 2005). Strategic planning encompasses of redesigning of business processes to accomplish targeted performance outcomes (Harrington, 1991) and suggest the following hypotheses:

H₃: There is an association between SP and firms’ performance.
H₄: There is an association between SP and BPCs.

**Customer Focus Initiatives (CFIs)**

Customer focus involves adapting and implementing such tactics that lead to consumer contentment (Armstrong, 1999). Prior researches point out that customer focus initiatives influence profitability (Reichheld & Teal, 1996; Zhang & Pan, 2009) and business processes of a firm (Chan, 2005; Trkman, 2010). Business process focused on firms’ enhanced capacity of processes by centering customer’s desires (Willaert et al., 2007). Since high consumer contentment results in enhanced performance outcomes (Williams & Naumann, 2011). Customer focus initiatives function as process capability for building and maintaining relations with consumers for accomplishing enhanced organizational performance (Lambert, 2009; Morgan et al., 2009). For improving performance outcomes it is necessary to provide enhanced value to consumer. Reformation and integration of fundamental business processes are crucial for attaining this purpose (Chan, 2005). Therefore, this study recommends the following hypotheses:

H₅: There is an association between CFIs and firms’ performance.
H₆: There is an association between CFIs and BPCs.

**Process Management Initiatives (PMIs)**

Process management encompasses of planning, advancing and regulating processes (Juran & Godfrey, 1999). Extant literature show that process management initiatives enhance firm’s performance (Kumar & Movahedi, 2008; Kohlbacher & Reijers, 2013) and business processes (Benner & Tushman, 2003). PMIs make organizational processes more stable for accomplishing enhanced performance outcomes (Palmer, 2007). PMIs accelerate constant business innovation processes, leading to enhancement of profits (Garvin, 1995). Currently, BPCs are viewed as utmost resources of firms since they offer momentous projections for improving market share, decision-making and firm’s performance (Seethamraju, 2012). PMIs boost business processes resulting in increased revenues, ultimately improving performance (Harry & Schroeder, 2000) and recommends the following hypotheses:

H₇: There is an association between PMIs and firms’ performance.
H₈: There is an association between PMIs and BPCs.
Human Resource Initiatives (HRIs)

HRIs are management of firm’s utmost valued resource, the employees, who assist in accomplishment of firm’s aims and goals (Armstrong, 2006). Extant literature depicts that HRIs influence firms’ performance (Huselid & Becker, 1996; McMahan et al., 1994) and business processes of a firm (Plevel et al., 1994; Conklin, 2005). Effective regulation of human resources in functioning of business processes can stimulate the outcomes of BPCs, resulting in accomplishment of greater efficacy from resources leading to enhanced performance (Arias et al., 2018). Firm realizes rapid profits from enhanced BPCs by means of saving incurred cost (Davenport & Short, 1990). HRIs are strategically substantial for enhancing business processes value (Brush & Rush, 2005). HRIs considerably boost workforces in accomplishment of comprehensive knowledge associated with firm’s business processes and implementing planned techniques to enhance performance outcomes (Thatcher, 2006) and recommends the following hypotheses:

$H_9$: There is an association between HRIs and firms’ performance.
$H_{10}$: There exist a relationship between HRIs and BPCs.

Knowledge Management (KM)

KM comprises set of procedures and techniques that regulate creation, distribution and utilization of knowledge to enhance functioning of businesses (Davenport & Prusak, 1998). Extant literature proposes an affirmative link of knowledge management with performance (Zack et al., 2009; Norton & Kaplan, 2004) and business process capability (Chen & Wu, 2014; Prieto & Easterby-Smith, 2008). Knowledge management is a fundamental tactic for reforming processes (Wu, 2002), for creating novel process capabilities (Hu & Wu, 2012) and requires to be integrated into business processes, policies and organization configuration (Gold et al., 2001) if firms desire to enhance performance. Knowledge management initiatives are directly associated with intermediating variables: BPC and organizational learning. These intermediating variables in response emit an affirmative association with performance (Wu & Chen, 2014). Therefore, this research recommends the following hypotheses:

$H_{11}$: There is an association between KM and firms’ performance.
$H_{12}$: There is an association between KM and BPCs.

Business Process Capabilities (BPCs)

The approach employed by firms in designing and bring of BPCs as a driver of firms’ performance (Harmon, 2010). Firms encompassing strong and mature processes are more likely to sustain performance and accomplish competitive edge (Helfat, et al., 2007). Resources can act as a competitive edge if they are effectively employed by means of business processes (Fathy & Hooley, 2002; Day, 1994). Business score card (BSC) recommends that capacity of business process can
momentously influence firm’s performance (Kaplan & Norton, 2001). Firm’s processes are directly associated with performance (Rai et al., 2006). BPCs support a firm in attaining competence in a remarkable way. This also accelerates firm’s market value (Wu & Chen, 2014). Accordingly, this research proposes the following hypothesis:

\( H_{13} \): There is an association between BPCs and firms’ performance.

Research Methodology

Data Collection

An instrument (questionnaire) and convenient sampling are utilized to accumulate data from top and middle level managers employed in pharmaceutical sector. For gathering data, 600 questionnaires were disseminated. 514 questionnaires are deliberated for analysis and other questionnaires are excluded because of choosing alike responses or being incomplete. This depicts 85.6% response rate which is rational for this study.

Instrumentation

Extant literature is explored for adapting the measurement items. BEIs are evaluated through employing Malcolm Baldrige criteria, acknowledged as well as modified from (Ahire et al., 1995; Choi & Eboch, 1997) and others. BEIs encompasses six dimensions i.e., LS, SP, CFIIs, PMIs, HRIs and KM. For every BE dimension there are five items. BPCs are measured through study of Wade and Hulland (2004) and Banker et al. (2006). It involves three dimensions i.e., outside-in, inside-out and spanning capability. Each of these three dimension contains four items. Performance is estimated through employing two dimensions i.e., operational excellence and financial achievement. These dimensions are adapted from (Bowersox et al., 2000; Rai et al., 2006; Inman et al., 2011; Wu & Chen 2014) and others. Four items are employed for each of these dimensions. Few modifications are made in questionnaire to make it in accord with research context. Questionnaire is created on five point Likert scale (1 specifies strongly disagree and 5 denotes strongly agree).

Finding of the Study

Measurement Model

For evaluation of measurement model, CFA is utilized in this research by way of structural equation model (SEM). For broadening model examination, Fornell and Larcker (1981) typology is used for examining the convergent and discriminant validity. Initially, convergent validity is evaluated by factor loading (\( \lambda \)) values. Computed value of factor loading requires to be larger than 0.60 to show significance. AVE is estimated for every measurement item required to be above 0.50 (Fornell & Larcker, 1981) and value of (C-\( \alpha \)) should be in the range of 0.6 to 0.8 (Shavelson & Cronbach, 2004).
Table 1 presents loadings items ($\lambda$), means, standard deviation, AVE and coefficient of (C-$\alpha$) of model’s measurement items.

**Table 1**

*Results of Factor Loading and Internal Reliability*

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Measurement Items</th>
<th>Loading Values</th>
<th>Mean</th>
<th>SD</th>
<th>Cronbach alpha’s (C-$\alpha$)</th>
<th>Average Variance Extracted (AVE)</th>
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<td>0.76</td>
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<td>HRIs</td>
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<td>0.58323</td>
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<td>Item1</td>
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<td>Item2</td>
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<td>Item5</td>
<td>0.73</td>
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</tbody>
</table>

(Table continued...)

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*PAKISTAN BUSINESS REVIEW*
This study utilizes research of Fornell and Lacker (1981) for computing discriminant validity which must be greater than squared correlation (Wang et al., 2014). Table 2 presents the correlation values among the constructs.

Table 2
Correlation and Discriminant Validity

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
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<th>11</th>
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<td>Leadership</td>
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<td></td>
<td></td>
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<tr>
<td>Strategic Planning</td>
<td>0.64**</td>
<td>0.86</td>
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<tr>
<td>Customers Focus</td>
<td>0.63**</td>
<td>0.59**</td>
<td>0.87</td>
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<tr>
<td>Process Management</td>
<td>0.59**</td>
<td>0.59**</td>
<td>0.56**</td>
<td>0.86</td>
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<tr>
<td>Human Resource Management</td>
<td>0.64**</td>
<td>0.63**</td>
<td>0.61**</td>
<td>0.65**</td>
<td>0.86</td>
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<tr>
<td>Knowledge Management</td>
<td>0.62**</td>
<td>0.63**</td>
<td>0.55**</td>
<td>0.62**</td>
<td>0.67**</td>
<td>0.86</td>
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<td>Operational Excellence</td>
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<td>0.58**</td>
<td>0.67**</td>
<td>0.61**</td>
<td>0.61**</td>
<td>0.89</td>
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</tr>
<tr>
<td>Financial Achievement</td>
<td>0.42**</td>
<td>0.43**</td>
<td>0.38**</td>
<td>0.46**</td>
<td>0.42**</td>
<td>0.47**</td>
<td>0.49**</td>
<td>0.89</td>
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(Table continued...)
Outside-in Capability 0.49" 0.61" 0.54" 0.62" 0.56" 0.59" 0.66" 0.55" 0.90
Inside-in Capability 0.47" 0.56" 0.56" 0.62" 0.52" 0.49" 0.64" 0.48" 0.67" 0.89
Spanning Capability 0.47" 0.51" 0.55" 0.56" 0.50" 0.54" 0.58" 0.53" 0.62" 0.63" 0.90

This study computes fitness of model by utilizing absolute fit measures, incremental fit measures and parsimonious fit measures. Table 3 depicts fitness measures of CFA models as well as suggests threshold for every score, proposing that each score meets adequacy criteria, confirming fitness of model and suitability for inspecting the proposed hypotheses.

Table 3

Models Fitness (CFA) Results

<table>
<thead>
<tr>
<th>Fit Index</th>
<th>Scores¹</th>
<th>Scores²</th>
<th>Scores³</th>
<th>Scores⁴</th>
<th>Scores⁵</th>
<th>Scores⁶</th>
<th>Recommended values</th>
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<td>Absolute Fit Measures</td>
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<tr>
<td>CMIN /DF</td>
<td>2.363</td>
<td>2.343</td>
<td>2.135</td>
<td>2.220</td>
<td>2.417</td>
<td>2.368</td>
<td>≤ 2⁺ ; ≤ 5⁻</td>
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<td>GFI</td>
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<td>0.913</td>
<td>0.924</td>
<td>0.921</td>
<td>0.915</td>
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<td>RMSEA</td>
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<td>0.051</td>
<td>0.047</td>
<td>0.049</td>
<td>0.053</td>
<td>0.052</td>
<td>&lt; 0.08⁺ ; &lt; 0.10⁻</td>
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<td>Incremental Fit Measures</td>
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<td>0.903</td>
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</tr>
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<td>0.891</td>
<td>0.903</td>
<td>0.899</td>
<td>0.892</td>
<td>0.890</td>
<td>≥ 0.90⁺ ; ≥ 0.80⁻</td>
</tr>
<tr>
<td>CFI</td>
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<td>0.942</td>
<td>0.953</td>
<td>0.950</td>
<td>0.940</td>
<td>0.942</td>
<td>≥ 0.90</td>
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<tr>
<td>Parsimonious Fit Measures</td>
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<td>PGFI</td>
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<td>0.776</td>
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</tbody>
</table>

Notes: Acceptance Criterion: ¹acceptable; ²marginal
¹ Represents fitness scores of CFA for LP-driven performance
² Represents fitness scores of CFA for SP-driven performance
³ Represents fitness scores of CFA for CFIs-driven performance
⁴ Represents fitness scores of CFA for PMIs-driven performance
⁵ Represents fitness scores of CFA for HRIs-driven performance
⁶ Represents fitness scores of CFA for KM-driven performance

Table 4 depicts structural model’s outcomes by means of standardized path coefficients. H₁ proposes an affirmative relation of leadership with firms’ performance which is (β=0.759) at (p<0.001), therefore validating H₁. Similarly, hypotheses H₂, H₃, H₄, H₅, H₆, H₇, H₈, H₉, H₁₀, H₁₁, H₁₂ and H₁₃ also depict affirmative relation of leadership with business process capability (β = 0.647), strategic
planning with firm performance ($\beta = 0.822$), SP with BPCs ($\beta = 0.781$), CFIs with firms’ performance ($\beta = 0.723$), CFIs with BPCs ($\beta = 0.735$), PMIs with firms’ performance ($\beta = 0.872$), PMIs with BPCs ($\beta = 0.828$), HRIs with firm performance ($\beta = 0.788$), HRIs with BPCs ($\beta = 0.798$), KM with firms’ performance ($\beta = 0.803$), KM with BPCs ($\beta = 0.766$) and BPCs with firms’ performance ($\beta = 0.944$) which are significance at ($p < 0.001$).

Table 4

<table>
<thead>
<tr>
<th>Proposition</th>
<th>Estimates</th>
<th>P-value</th>
<th>SE</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>$H_1$ L→FP</td>
<td>&lt;0.001</td>
<td>0.085</td>
<td>0.759*</td>
<td>Significant</td>
</tr>
<tr>
<td>$H_2$ L→BPC</td>
<td>&lt;0.001</td>
<td>0.075</td>
<td>0.647*</td>
<td>Significant</td>
</tr>
<tr>
<td>$H_3$ SP→FP</td>
<td>&lt;0.001</td>
<td>0.072</td>
<td>0.822*</td>
<td>Significant</td>
</tr>
<tr>
<td>$H_4$ SP→BPC</td>
<td>&lt;0.001</td>
<td>0.063</td>
<td>0.781*</td>
<td>Significant</td>
</tr>
<tr>
<td>$H_5$ CF→FP</td>
<td>&lt;0.001</td>
<td>0.067</td>
<td>0.723*</td>
<td>Significant</td>
</tr>
<tr>
<td>$H_6$ CF→BPC</td>
<td>&lt;0.001</td>
<td>0.062</td>
<td>0.735*</td>
<td>Significant</td>
</tr>
<tr>
<td>$H_7$ PM→FP</td>
<td>&lt;0.001</td>
<td>0.076</td>
<td>0.872*</td>
<td>Significant</td>
</tr>
<tr>
<td>$H_8$ PM→BPC</td>
<td>&lt;0.001</td>
<td>0.071</td>
<td>0.828*</td>
<td>Significant</td>
</tr>
<tr>
<td>$H_9$ HRM→FP</td>
<td>&lt;0.001</td>
<td>0.077</td>
<td>0.788*</td>
<td>Significant</td>
</tr>
<tr>
<td>$H_{10}$ HRM→BPC</td>
<td>&lt;0.001</td>
<td>0.085</td>
<td>0.798*</td>
<td>Significant</td>
</tr>
<tr>
<td>$H_{11}$ KM→FP</td>
<td>&lt;0.001</td>
<td>0.106</td>
<td>0.803*</td>
<td>Significant</td>
</tr>
<tr>
<td>$H_{12}$ KM→BPC</td>
<td>&lt;0.001</td>
<td>0.060</td>
<td>0.766*</td>
<td>Significant</td>
</tr>
<tr>
<td>$H_{13}$ BPC→FP</td>
<td>&lt;0.001</td>
<td>0.077</td>
<td>0.944*</td>
<td>Significant</td>
</tr>
</tbody>
</table>

Note: * significant at the 0.001 level (2-tailed).

Mediation Analysis

For performing mediation analysis, bootstrapping is done in Amos 18. Primarily, independent variable’s direct impact on dependent variable is inspected. Then, the indirect effect by means of intermediating measure is explored. Table 5 illustrates the outcomes of direct effects of independent variables (LS, SP, CFIs, PMIs, HRIs and KM) on dependent variable (firms’ performance), all outcomes are significant ($p < 0.05$). Moreover, the outcomes of direct effect while examining the indirect effect using mediating variable BPC are reduced but still remain significant ($p < 0.05$). Thus, depicting that BPC show partial mediation in impacting the link amid BE initiatives (LS, SP, CFIs, PMIs, HRIs and KM) and firms’ performance.
Table 5

**Direct Effect**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Direct Effect</th>
<th>Indirect Effect</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>L → BPC → FP</td>
<td>0.256**</td>
<td>0.505**</td>
<td>Partial Mediation</td>
</tr>
<tr>
<td>SP → BPC → FP</td>
<td>0.178**</td>
<td>0.598**</td>
<td>Partial Mediation</td>
</tr>
<tr>
<td>CF → BPC → FP</td>
<td>0.149**</td>
<td>0.613**</td>
<td>Partial Mediation</td>
</tr>
<tr>
<td>PM → BPC → FP</td>
<td>0.303**</td>
<td>0.572**</td>
<td>Partial Mediation</td>
</tr>
<tr>
<td>HRM → BPC → FP</td>
<td>0.221**</td>
<td>0.577**</td>
<td>Partial Mediation</td>
</tr>
<tr>
<td>KM → BPC → FP</td>
<td>0.286**</td>
<td>0.555**</td>
<td>Partial Mediation</td>
</tr>
</tbody>
</table>

Note: ** significant at the 0.05 level (2-tailed).

Table 6 depicts scale fitness measures and threshold values, with mediating variable (PBCs), proposing that all scores meet adequacy criteria and are fit for analysis of projected mediating model as revealed above.

Table 6

**Scale Level Fitness Measures for Model with Mediator (Business Process Capability)**

<table>
<thead>
<tr>
<th>Fit Index</th>
<th>Scores¹</th>
<th>Scores²</th>
<th>Scores³</th>
<th>Scores⁴</th>
<th>Scores⁵</th>
<th>Scores⁶</th>
<th>Recommended value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute Fit Measures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CMIN /DF</td>
<td>2.324</td>
<td>2.444</td>
<td>2.445</td>
<td>2.526</td>
<td>2.398</td>
<td>2.471</td>
<td>≤ 2⁰; ≤ 5ᵇ</td>
</tr>
<tr>
<td>GFI</td>
<td>0.913</td>
<td>0.907</td>
<td>0.910</td>
<td>0.907</td>
<td>0.915</td>
<td>0.907</td>
<td>≥ 0.90⁰; ≥ 0.80ᵇ</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0.051</td>
<td>0.053</td>
<td>0.053</td>
<td>0.055</td>
<td>0.052</td>
<td>0.054</td>
<td>&lt; 0.08⁰; &lt; 0.10ᵇ</td>
</tr>
<tr>
<td>Incremental Fit Measures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NFI</td>
<td>0.905</td>
<td>0.901</td>
<td>0.902</td>
<td>0.900</td>
<td>0.904</td>
<td>0.900</td>
<td>≥ 0.90⁰</td>
</tr>
<tr>
<td>AGFI</td>
<td>0.889</td>
<td>0.881</td>
<td>0.886</td>
<td>0.881</td>
<td>0.891</td>
<td>0.882</td>
<td>≥ 0.90⁰; ≥ 0.80ᵇ</td>
</tr>
<tr>
<td>CFI</td>
<td>0.943</td>
<td>0.939</td>
<td>0.939</td>
<td>0.937</td>
<td>0.941</td>
<td>0.937</td>
<td>≥ 0.90⁰</td>
</tr>
<tr>
<td>Parsimonious Fit Measures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PGFI</td>
<td>0.714</td>
<td>0.709</td>
<td>0.717</td>
<td>0.714</td>
<td>0.715</td>
<td>0.712</td>
<td>≥0.50</td>
</tr>
<tr>
<td>PNFI</td>
<td>0.766</td>
<td>0.763</td>
<td>0.770</td>
<td>0.768</td>
<td>0.765</td>
<td>0.765</td>
<td>≥0.50</td>
</tr>
</tbody>
</table>

Notes: Acceptance Criterion: ⁰acceptable; ᵇmarginal

¹ Represents fitness scores of CFA for LS-driven performance
² Represents fitness scores of CFA for SP-driven performance
³ Represents fitness scores of CFA for CFIs-driven performance
⁴ Represents fitness scores of CFA for PMIs-driven performance
⁵ Represents fitness scores of CFA for HRIs-driven performance
⁶ Represents fitness scores of CFA for KM-driven performance
Discussions of the Study

The study intents to illustrate the impact of BEIs on pharmaceutical sector of Pakistan using BPCs as mediator. This study reveals following outcomes: Primarily, BEIs affirmatively effect performance of firms. While, the intermediating variable BPC srepresents a positive link with performance. Moreover, BPC depicts partial mediation in effecting relation of BEIs and firms’ performance.

This study’s outcomes propose that leadership impact performance (Agle et al., 2006; Felfe & Schyns, 2004) and BPCs, which confirm extant researches (Bandara et al., 2007; Becker & Glascoff, 2014). Moreover, the outcomes of study also suggest partial mediation of BPC in leadership-driven performance. This verifies the study of Hall et al. (1994), proposing the leadership assist in developing such process capabilities that lead to superior performance outcomes.

The outcomes of this study reveal that SP influences performance (Lyles et al., 1993; Pearce et al., 1987) and BPCs, which validate extant literature (Short &Venkatraman, 1992; King, 1994). Moreover, the outcomes of study also propose partial mediation of BPCs in strategic planning driven performance. This validates the findings of Harrington (1991), proposing that SP encompasses of redesigning of process capabilities leading to achievement of targeted performance.

The outcomes of this study suggest affirmative link of CFIs with performance (Reichheld & Teal, 1996; Zhang & Pan, 2009) and BPCs, which validate extant researches (Chan, 2005; Trkman, 2010). Moreover, the outcomes of this research propose partial mediation of BPC in CFIs driven performance. This validates the study of Harrington (1991), proposing that SP encompasses of redesigning of process capabilities leading to achievement of targeted performance.

The outcomes of this study recommend affirmative link of PMIs with performance (Kumar & Movahedi, 2008; Kohlbacher & Reijers, 2013) and BPCs, which validate prior researches (Harry & Schroeder, 2000; Benner & Tushman, 2003). Moreover, the outcomes of this study propose partial mediation of BPCs driven performance. This verifies the study of Harry and Schroeder (2000), proposing that process management accelerates business processes, resulting in superior revenues and performance.

The outcomes of this study suggest affirmative link of HRIs with performance (McMahan et al., 1994; Huselid & Becker, 1996) and BPCs, which verify existing researches (Plevel et al., 1994; Brush & Rush, 2005). Moreover, the outcomes of this study suggest partial mediation of business process capability in human resource driven performance. This validates the research of Thatcher (2006), proposing that HRIs substantially assist in enhancing performance outcomes by improving business processes.
The outcomes of this study advocates affirmative link of KM with performance (Hu & Wu, 2012; Zack et al., 2009) and business process capabilities, which verify the existent researches (Wu, 2002; Wu & Chen, 2014). Moreover, the outcomes of this study propose partial mediation of BPC in knowledge driven performance. This validates the findings of Hu and Wu (2012), proposing that KM employs business processes for accomplishing superior performance outcomes.

This study proposes a positive role of BPCs for constructing an influential impact of BEIs (LS, SP, CFIs, PMIs, HRIs and KM) on firm’s performance, as suggested by extant researches (Hendricks & Singal, 1997).

**Conclusion**

This study aims at to investigate the impact of business excellence initiatives on firms’ performance using a mediating mechanism of business process capabilities in pharmaceutical sector of Pakistan. This study proposes positive link of BEIs with firms’ performance and moreover reveals that the mediating variable (BPCs) exert partial mediation on the relation amid of BEIs and performance of firms’ in pharmaceutical sector of Pakistan. The outcomes also reveal that BEIs and BPCs show direct association with performance of firms. Furthermore, the broad intent of this research is to build a framework for creating BE-driven performance. The intermediary framework is formed due to the subsequent causes: Mainly, to validate the function of BEIs in enhancement of performance outcomes grounded on RBV. Moreover, for exploring the role of intermediary measures in BE driven performance grounded on RBV. These two aforesaid purposes are focused and verified in this study. The study motivates practitioners to identify BEIs as well as to incorporate mediatory measures and then execute them with reasonable anticipations. Furthermore, a firm encompasses many resources; therefore it should commit all of its powers in developing BPCs to establish BEIs driven performance.

**Limitations and Future Research Implications**

This study depicts some limitations and calls for future researchers. Initially, this research utilizes cross-sectional design of research that restrict to draw inferences from projected relations. This issue can be resolved by employing experimental or longitudinal research designs. Next, relation amid BEIs, BPCs and performance might be more significant in the selected sector, in comparison to other sectors. Relation must be investigated in other sectors such as chemical sector, banking sector, engineering sector and others as well. Thirdly, this research explores impact of BEIs on financial dimension of performance only. Non-financial measures of performance for instance customer intimacy and product leadership might be considered in prospect researches. Finally, the proposed framework is grounded on prior literature that is investigated in East Asia and Europe. Nevertheless, the outcomes of this study are exclusively based in Pakistan’s context. The study outcomes may contrast in other countries due to environmental, technical or structural differences. Therefore, prospect researchers must incorporate these factors in their researches as these are substantial for
BEIs driven performance and must to considered prior employing BE initiatives.

References


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from https://doi.org/10.1108/14637150510630828


Appendix

Figure: CFA Path Diagram