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Exploring Multidimensional View of Intellectual Capital and Business Ethics on Organizational Performance by Using Bootstrapping Method: Evidence from Pakistani Pharmaceutical Industry

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ABSTRACT

The objective of this research is to examine the effect of business ethics (BE) and intellectual capital (IC) on the organizational performance (OP). In order to run this study, a conceptual model was designed based on the literature review, and the employees of the knowledge-based organization in pharmaceutical sector were surveyed using a closed-ended questionnaire. Modern successful and thriving organizations are those that create IC and convert it into applicable methods to improve their activities and performance within the boundaries of BE. This research is exploratory and quantitative in nature: 400 responses were directly gathered from the employees of the pharmaceutical industry through five-scaled questionnaire. This research examined the direct and indirect effect of BE and IC on the OP. Structural equation modeling (SEM), descriptive statistics, correlation, multiple regression techniques were used to analyze the impact of IC and BE on the performance. Bootstrapping method is employed in order to test the mediating effect of variables. Two-step SEM was used to the models to regress the cause and effect relation. The findings depicted that there is a very significant effect on BE and IC in the performance of pharmaceutical organizations. General BE, ethics in finance, ethics in human resource management, and ethics in sales and marketing have direct and significant impact on the OP. Human capital, structural capital and relational capital have significant indirect (mediating) effect on the performance of the pharmaceutical industry. Finally, it has been concluded from the results of the research study that IC is the major contributor of the OP as a mediating variable with defined set of principles of BE in the pharmaceutical sector of Pakistan.

INTRODUCTION

Relevance and novelty of the research. The modern economy is changing rapidly; revolution in information technology is the major cause for this dynamic transformation of change in the world economy. Now, the knowledge-based economies are flourishing and dominating in the world (Shabaninejad et al., 2014; Vveinhardt, Andriukaitiene, 2015). In knowledge-based economies, two factors have much contribution, i.e., 1) knowledge and 2) intellectual capital (IC). These two factors are known as critically important factors for any organization, and they mark these factors as key resources or gaining competitive advantage in a cutthroat competitive era today (Nerdrum and Erikson, 2001; Ordóñez de Pablos, 2004a; Sueldo, Streimikiene, 2016). According to Finn and Torgeir (2008), it has been revealed that intellectual-based events are the main cause of any organization's success. Mehralian et al. (2012) designated the importance of knowledge as well and equated it with land, workforce, or financial capital, but affirmed it as the most imperative resource of any organization.

According to Feleaga et al. (2013), the concept of "intellectual capital" was introduced in the context of academic research conducted at the beginning of the 1990s on North American and Scandinavian companies (Dow Chemical, Canadian Imperial Bank of Commerce, and Skandia). Recently, very different definitions of IC can be found, but its essential characteristic is that IC is an intangible asset covering everything related to knowledge. In the case of organizations, often, the occurrence of IC does not only generate additional income but also promote introduction of unique, original, and innovative products or services into the market (Vveinhardt and Žilaitytė, 2014). In fact, the knowledge-based and learning organizations consider IC as value creating factor, which contributes immensely to the organization's future success (Nerdrum and Erikson, 2001; Ordóñez de Pablos, 2005). Several researches have demonstrated that knowledge serves as a catalyst for accumulative business performance with traditional resources such as land, money, labor, machinery, etc. (Tsang, 2009; Tsui et al., 2014; Draskovic, Bauk , Dzankic, 2016). Nowadays, the knowledge-based economies, the importance and efficiency of IC has become the vital element, and it plays even much greater role compared to the financial capital in order to enhance the profitability and performance of any organization (Bontis et al., 2000; Ordóñez de Pablos, 2004b; Mehralian et al., 2014). Researchers that are examining the IC note that knowledge has a direct influence on the cognitive skills of individuals and enables them to work more efficiently and productively (Schultz, 1959; Mincer, 1974; Vveinhardt and Žilaitytė, 2014). Moreover, the higher is the level of education that an individual has acquired, the more likely he or she is to develop individual business or achieve unique results in the organization (Shane, 2003).

The intellectual resources are recognized, gathered, used, and influenced to make value for the organizations (Sharabati et al., 2010). Intellectual resources included the unseen resources of organizations that can be benefited in terms of value to stakeholders (Ahmadi et al., 2011; Carrington and Tayles, 2011; Wahid et al., 2011). IC is an exceptional, priceless, and hard-to-copy asset of an organization. It generates in the organizations and comprises knowledge and skill, decision-making procedures and applications, and information systems (Ahmadi et al., 2012). All the abilities, knowledge, learning, practices, analytical capabilities and intelligence/intellect presented by a firm as a whole are included in the elements of IC (human capital (HC), structural capital (SC) and relational capital (RC)) (Chang and Lee, 2012; Wang, 2012). Since the rapid changes took place in technologies because of knowledge-based economies, human work, behavior, and lifestyle have changed dramatically as well as technological changes. Hence, in this situation, the ethical issues have arisen, and the issues in information technology and business ethics gained the central role and turned into the interdisciplinary subjects within the applied ethics phenomenon. Essentially, the information technology ethics offered answers to the questions, which are relevant to the individual's actions and responsibility when working in the area of information technology.

The fundamental objective of business ethics is to enhance the quality of ethics in business organizations as well as to improve the ethical quality of decision-making, which directly contributes to the organization's performance (OP) (Singer and Singer, 1997; Valentine and Barnett, 2007). Furthermore, IC and OP are the issues that need a holistic and broad attitude to the factors, such as human resource and ethics related to human resource (Bontis et al., 2011). According to Mehralian et al. (2013), the quality of OP can be enhanced many folds by applying the true spirit of ethical guideline of human resources and proper and justified utilization of IC. Numerous researches have focused ethical issues and their relations on the OP. Conclusions of these researches emphasized the importance of business ethics (BE) for the OP and well-being in long-term (Bartels et al., 1998; Weeks et al., 2004; Berrone et al., 2007).

Relevance and objective of the research. There is a dearth of literary evidences with regard to the relationship between IC, BE, and OP. More specifically, the Pakistani pharmaceutical industry is far behind; therefore, this empirical attempt is one of the pioneer studies that examines these variables. The purpose of this study is to explore the relationships among BE, IC, and OP in the pharmaceutical industry. The remainder of the research paper is organized as follows: Section 2 presents empirical review and, on the basis of that previous literature, theoretical framework of this research that has been evolved. Section 3 presents methodology and findings of the results, and section 4 presents discussion, conclusions, and recommendations.

2. EMPIRICAL AND THEORETICAL FRAMEWORKS

Intellectual capital. Since the beginning of the 1990s, the theory of IC and research focusing on the identification and quantification of its components have attracted more attention as only a part of the organization's resources is tangible, while another more determining part is intangible (Kövesi et al., 2012). According to Stewart (1997), IC is the capability of an individual employee of an organization that consists of knowledge, information, experience, skills and an intellectual asset, which helps to generate wealth and competitive advantage. Some researchers describe the concept of capital in different kinds of capitals for organizations, such as financial, physical and intellectual capitals. Financial capital is known to be the net equity of any organization, whereas the physical capital is the ability to provide products or services by providing the capability of an organization. IC is the most important capital of any organization that is relevant to knowledge and science capacity of the organization (Marr and Schiuma, 2001; Akhavan et al., 2013).

Authors have distinguish several key indicators, by which the company developing IC is recognized: targeted, personal competencies-oriented system of knowledge transfer and sharing (Milner, 2003); encouragement of mutual independence of members of the organization by increasing the explicitness of tasks, encouragement of strategic thinking of individuals in the context of their existing competences (Whitley, 2000); highlighted the process of development of an individual (Rubinstein and Firstenberg, 1999); the development of subjective perception of the role of each member of the organization in seeking common organizational goals (Krampen et al., 2011); encouragement of members of the organization to emphasize their personal abilities, pursue unique results in the context of organizational goals enabling all their competences (Fry and Talja, 2007).

According to Bontis (2004), IC is volatile and indefinable, but when it is learned and capitalized, it accelerates the organization to compete in the working and competitive environment with full swing, power, and energy. According to Marr (2005), IC is a group of knowledge assets that provides the value addition in the aggressive competitive environment. Therefore, IC provides the added knowledge and power when competing with other organizations in an effective way. IC has a significant importance for organizations; hence, in this part of the study, different models of IC have been reviewed. According to White (2007), IC can be segregated into three units: 1) customer capital, 2) HC, and 3) SC. Kaufmann and Schneider (2004) categorize IC into three sections as well: 1) employee's competence, 2) internal structure, and 3) external structure. Chen et al. (2003) described four

categories of IC: 1) customer capital, 2) HC, 3) innovation capital, and 4) SC. However, researchers thought that these factors are not well-consolidated, unless all these elements are reinforced in a consistent and interrelated relationship. After thorough review of previous literature, there might be an agreement made on that IC can be divided in three-parts model: 1) HC, 2) SC, and 3) RC (Cabrita and Bontis, 2008; Martín-de-Castro et al., 2011; Mehralian et al., 2013). Therefore, in this research study, the same 3-D model has been incorporated in the IC. Explanations of these three dimensions are presented as follows.

Human capital is defined as the skills, knowledge, and experience pertaining to the individual employees of an organization that actually contributes to the overall well-being of an organization. HC is considered a valuable asset of any organization (Nerdrum and Erikson, 2001). According to Bontis (2001), HC can be described more specifically as a set of attributes that comprises experience, skills, knowledge, initiative, innovation, and capability to complete any chore of an organization. It is an important factor that any organization cannot own HC; employees cannot have definite possession of an organization, even though employees are known to be the assets and resources of a learning organization. The learning process is directly related to the acquisition of specific knowledge of business processes. In addition, systematic learning and good basics of knowledge increase the opportunities to link the available knowledge with potential opportunities (Cohen and Levinthal, 1990). The acquired education is one of the main factors, which acts as the engine of innovation activities, encourages the search for new opportunities in organizations and directly influences the improvement of the process of development of human resources in the organization (Shane and Venkataraman, 2000). This is an established fact that HC comprises employee skills, knowledge, experience, and other attributes, which help the organization to create revenue, organizational growth, and enhance organization's proficiency and efficiency in a contemporary competitive environment (Stewart, 1997; Youndt and Snell, 2004).

Structural capital could be described as any procedure, method, system, infrastructure, product and service delivery system that is belonging to an organization that can help and support the employees to perform their tasks and duties in learning organizations (Mehralian et al., 2013). It is an interesting fact that HC does not belong or is owned by an organization, but in contrast, everything belongs to the organizational patents, services systems, products, service documentations, knowledge centers, information technology and organizational learning capacities are the examples of SC of an organization, capital that is owned by the organization even when the employee departs the organization (Lopez, 2008). Actually, different laws of intellectual property rights and intellectual assets might guard the apparatuses of SC. Therefore, this is a constant and forever remained ability of an organization that can be possessed by an organization (Teece, 2000).

Customers are the second most important asset after the employees of any organization, thus, relational capital mainly belongs to the customers of the organization. Besides customers, vendors, suppliers, and scientific centers form significant part of the RC. According to Chen et al. (2003), customer capital is the most vital feature in the RC of any organization, because business activity is highly dependable on customer capital that generates the revenue and wealth of any organization. RC is partly involved in HC, because the relationship with customers, vendors, suppliers, and other stakeholders takes place with the current employees of an organization. Employees have distinguished interpersonal and knowledge-based hallmarks in their personalities, and those characteristics convert stakeholders into RC of the organization; hence, in this way, HC can be converted into RC (Choi, 2003; Mehralian et al., 2012). The relationship with customers and other stakeholders may be corporate image, customer loyalty and customer satisfaction, but all these relationships are managed by the employees. Thus, in this way, a portion of HC may transfer into RC (Roos et al., 1997).

Business ethics. The terminology of "business ethics" is used differently in various disciplines; however, it is considered mostly in applied ethics that is an alternative term for BE (Broni, 2010). Solomon (1991) examined and concluded that BE is a set of ethical principles to deal with ethical problems that arise in day-to-day business activities and make business environment conducive and acceptable for every stakeholder. BE is employed in every aspect of business manner (Baumhart,

1968; Singer, 1991; Ferell and Fraedrich, 1997), and it is pertinent to the behavior of specific employee and business organizations in entirety (Bernard, 1972; Donaldson, 1982). According to Preston (1997), applied ethics is filled with BE, which are dealt with in different aspects of business, like technical, legal, and medical aspects. BE are a set of principles that deals with core values of business (Jones et al., 2005). It is the conduct of an organization, how it reacts and deals in different situations appropriately (Badiou, 2001; Seglin, 2003). It is the fundamental philosophy of an organization how to deal with its customers and other stakeholders in a competitive environment (French, 1979; French, 1995). According to Collier and Esteban (2007) and Duska (1999), BE are the prohibitory actions of an organization in certain business conditions. In general, BE can be defined as a way of doing business in the world arena with a set code of conduct and core values (Velasquez, 1983; Kahneman et al., 1986; Maitland, 1994; Antoniou, 2008). Every business should be operated within the limits of defined ethical values of business (American Psychological Association, 1992, 1999, 2001).

BE is comprised of many ethical classification sub-fields, in which more prominent are general business ethics (GBE), ethics in finance (EF), ethics in human resource management (EHRM), ethics in sales and marketing (ESM), ethics in production, ethics of intellectual property and knowledge and skills, ethics in technology, international business ethics, etc. In this, four essential fields of BE, such as GBE, EHRM, EF, and ESM, have been considered because of their importance in the pharmaceutical sector (Ahmed and Saeed, 2012). However, other fields of BE are important as well, but these four are more relevant to the pharmaceutical industry in Pakistan.

General business ethics revolves around the general guidelines given by the code of conduct to operate any business. Moreover, it defines the basic principles and core values of an organization on how to deal with other organizations, customers, suppliers and other stakeholders in day-to-day matters (De George, 1987). Every company has an objective to maximize its wealth for shareholders; this is a fundamental purpose and existence of an organization (Heath, 2006). The maximization of profit is not illegal, but in this process, the organization should take care of the interests and the rights of other stakeholders as well (Marcoux, 2003). GBE is the most important component of any organization in the business world.

Ethics in finance. Finance is an essential part of social sciences that deals with inside and outside of the organization (Dobson, 1997). This discipline of social sciences as well deals and shares its values with sociology, economics, accounting, management and behavior sciences (Cetina and Preda, 2005). It is assumed that because of the technical nature, finance is free from ethical issues. EF is not given importance, because it is addressed as set rules and regulations. However, the issues in financing, debts, retained earnings, initial public offerings, dividend, equity, earning per share, and other related financial issues is really a matter of concern of business ethics (Boatright, 1999).

Ethics in human resource management. EHRM are very important; it deals with employee-employer relationship in any organization (Sennett, 1998). Human resource management addresses the issues regarding the rights and duties of an employee. It further discusses the wage per hour and other fringe benefits of an employee (Dessler, 2000; Pinnington and Lafferty, 2003; Walsh, 2007). Other important issues: gender discrimination, race, religion, and age discrimination, female harassment, job security, and conducive working environment are discussed in EHRM as well (Tawney, 1926; Einarsen and Hoel, 1999). The safety hazards, laws regarding employment, disability during the job, and health related matters are addressed in human resource ethics (Brodsky, 1976; Budd et al., 1996). Other phenomena, adding destruction in employees' relationships, such as social ostracism in the workplace (Zimmerman et al., 2016; Mok and Cremer, 2016; Wu et al., 2016; Gkorezis and Bellou, 2016), mobbing (Escartin et al., 2013; Mulder et al., 2014; Baran Aksakal et al., 2015; Figueiredo-Ferraz et al., 2015; Giorgo et al., 2016) should be noted. Human resource ethics has a special role in their elimination.

Ethics in sales and marketing is the most important issue in BE; it is the core subset of BE. It belongs to the set principles of marketing that addresses the action of marketers in different conditions

(Brenkert, 1999). Especially in the pharmaceutical industry, it has more importance when human lives are involved (Ahmed et al., 2016). Ethical issues in marketing and sales are still in early stages because it emerged in the late 1990s (Murphy, 2002). There are two dimensions of ESM: first belongs to its political philosophy (O'Neill, 1998), and the second deals with business transactions. ESM is important because it directly affects the customers and as well demonstrates the philosophy and core values of an organization (Murphy, 2002).

Organizational performance is the ultimate objective of any business entity; in the contemporary competitive environment, organizations thrive to achieve a completive and sustainable advantage to attain their tangible and intangible objectives (Mehralian et al., 2014). Financial objectives of an organization are the benchmarks for the OP, but it is something beyond that creates long-term sustainability and competitive advantage, which actually demonstrates the OP (Wu and Liu, 2010). Moreover, OP is adjudicated through non-financial criterions, including IC and corporate social responsibility as recommended by the American Institute of Certified Public Accounts in 1994 (Wu and Liu, 2010). Typical OP is based on return on investment, growth in profitability, revenue growth and financial growth (Parker, 2000). According to Harper et al. (1998), financial objectives are not the only criterion of performance, they added factor proportion, cost per unit, cost proportion, product mix, and input allocation. Kaplan and Norton (2004) provided five indices for the OP to form the basis to excel and compete with other organizations: 1) customers pools, 2) financial strength, 3) organizations internal process, 4) continuous learning, and 5) consistent growth. Hence, it is important to comprehend that financial intentions are not the only performance indicator of an organization; rather, other intangible assets are much more important than the financial goals.

Variables and Dimensions of Research. After systematic literature review, the following theoretical framework has been extracted. Subsequently, in this research, several variables, as independent/exogenous variables, mediating variables, and a dependent/endogenous variable have been used. Moreover, the broader segregation of these variables in the following dimensions is shown in Table 1.

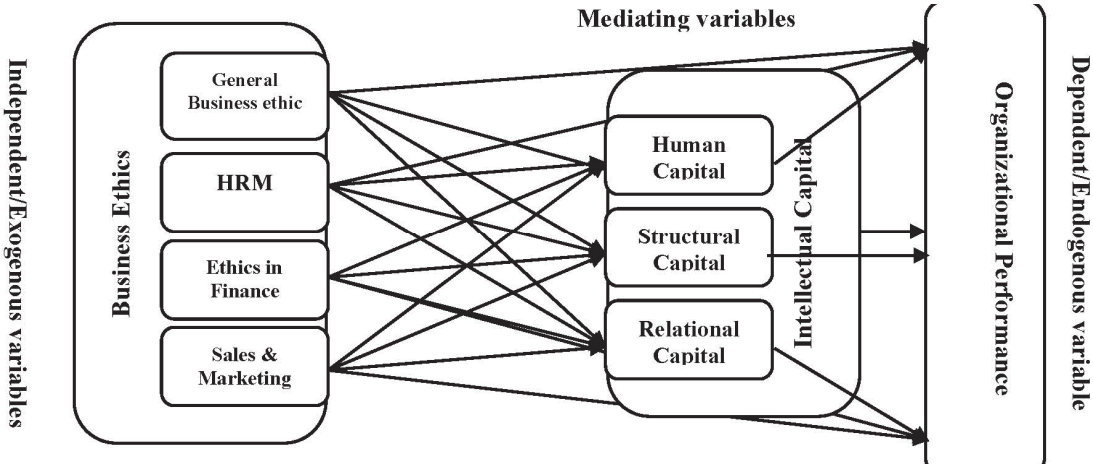
Table 1. Variables and dimensions

Independent Variables	*Dimensions/Parameters*
Business Ethics	General Business Ethics
	Human Resource Management Ethics
	Ethics in Finance
	Ethics in Sales and Marketing
Dependent Variable	**Dimensions/Parameters**
Organizational Performance	-
Mediating Variable	**Dimensions/Parameters**
Intellectual Capital	Human Capital
	Structural Capital
	Relational Capital

Source: Own results

The Research Model of the Study. Based on the above provided variables and their dimensions, the following theoretical recursive model has been developed and constructed for this study, which is shown in Figure 1.

Figure 1. Research model of the study



Source: Own results

Hypotheses of the Research. On the basis of literature review and empirical and theoretical framework, the following hypotheses have been developed:

Direct effect of variables

H_1: *BE have a significant impact on the OP.*
H_2: *GBE have a positive and significant impact on the OP.*
H_3: *EHRM have a significant impact on the OP.*
H_4: *EF have a positive and significant impact on the OP.*
H_5: *ESM have a significant impact on the OP.*
H_6: *IC has a significant impact on the OP.*

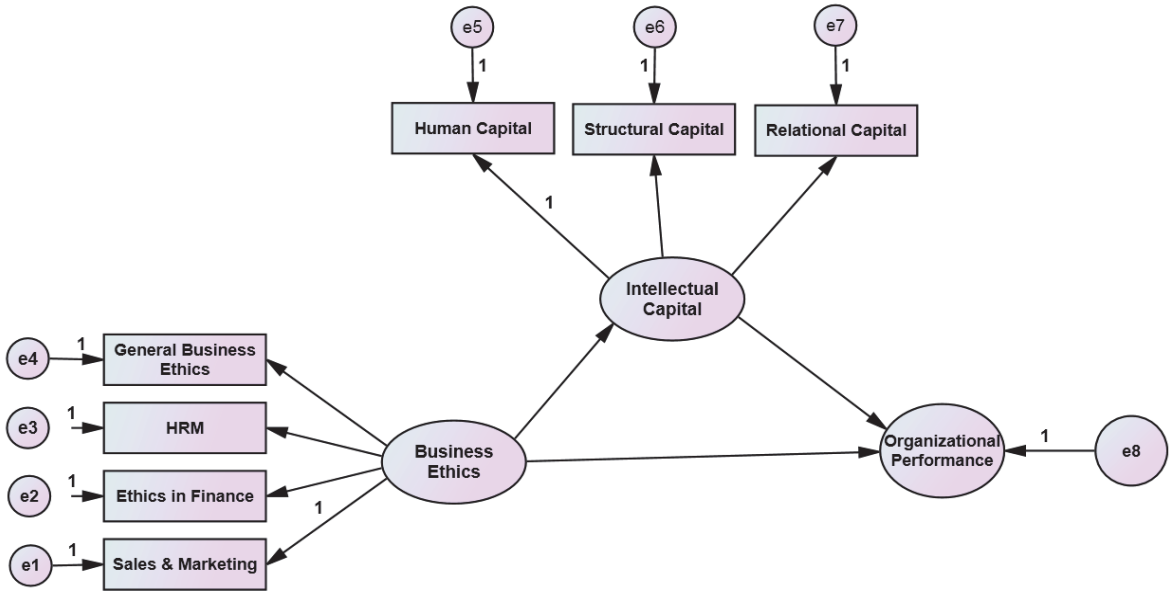
Indirect effect of variables

H_{6A}: *HC in the pharmaceutical industry mediates the relationship between GBE and OP.*
H_{6B}: *HC in the pharmaceutical industry mediates the relationship between EHRM and OP.*
H_{6C}: *HC in the pharmaceutical industry mediates the relationship between EF and OP.*
H_{6D}: *HC in the pharmaceutical industry mediates the relationship between ESM and OP.*
H_{7A}: *ST in the pharmaceutical industry mediates the relationship between GBE and OP.*
H_{7B}: *ST in the pharmaceutical industry mediates the relationship between EHRM and OP.*
H_{7C}: *ST in the pharmaceutical industry mediates the relationship between EF and OP.*
H_{7D}: *ST in the pharmaceutical industry mediates the relationship between ESM and OP.*
H_{8A}: *RC in the pharmaceutical industry mediates the relationship between GBE and OP.*
H_{8B}: *RC in the pharmaceutical industry mediates the relationship between EHRM and OP.*
H_{8C}: *RC in the pharmaceutical industry mediates the relationship between EF and OP.*
H_{8D}: *RC in the pharmaceutical industry mediates the relationship between ESM and OP.*

3. Empirical results and findings

Structural equation modeling (SEM) was employed to examine the mediating effects of IC (HC, SC, and RC) on the relationship of the exogenous variable with endogenous variable (OP). The tests of this research were conducted through a statistical software package called SPSS and Analysis of Moment Structures (AMOS). Based on the Figure 2, the four exogenous variables of this research are GBE, EHRM, EF, and ESM in Pakistani pharmaceutical industry. These variables form the causal relationship with endogenous variable, i.e., OP in pharmaceutical industry, but note that IC is a cause and effect variable (Wei et al., 2010).

Figure 2. Research model of the study



Source: Own results

Sample description. Four hundred and twenty respondents of the pharmaceutical industry were approached; there were first line and middle managers in sales and marketing department, personnel from the human resource management, finance, supply chain, procurement, information technology and manufacturing, and *Quality control* departments. After careful scrutiny of received responses, 400 respondents were selected out of 420; twenty respondents were either non-responsive or sent incomplete questionnaires. The response rate was 95.24%: it is well above the minimum acceptable sample size for SEM (Anderson and Gerbing, 1988).

Table 2. Sample description

Demographics	*Items*	*No. of Respondents*	*Percentage*
Gender	Male	235	58.75
	Female	165	41.25
Marital Status	Single	185	46.25
	Married	195	48.75
	Divorced	20	5.00
Age	From 18 to 30 years	152	38.00
	From 30 to 40 years	138	34.50
	From 40 to 50 years	98	24.50
	From 50 to 60 years	12	3.00
Qualification	High School	65	16.25
	Graduation	182	45.50
	Post-Graduation	87	21.75
	Professional degree	66	16.50
Experience	From 1 to 5 years	129	32.25
	From 5 to 10 years	138	34.50
	From 10 to 15 years	73	18.25
	From 15 to 20 years	40	10.00
	More than 20 years	20	5.00
Income	From 10 to 30 (PKRx000)	139	34.75
	From 30 to 50 (PKRx000)	98	24.50
	From 50 to 70 (PKRx000)	77	19.25
	From 70 to 90 (PKRx000)	61	15.25
	More than 90 (PKRx000)	25	6.25

Source: Own results

Table 2 provides the results of demographics of respondents: in terms of gender, 235 (58.75%) were male and 165 (41.25%) were female, and their age ranged from 18 to 60 years (M = 26.98, SD = 2.35). In terms of marital status, 185 (46.25%) were single, and 195 (48.75%) were married, and 20 (5%) were divorced. In terms of experience, 129 (32.25%) had 1-5 years, 138 (34.50%) had 5-10 years, 73 (18.25%) had 10-15 years, 40 (10%) respondents had 15-20 years, and 20 (5%) had more than 20 years of experience. In relation to qualification, 65 (16.25%) had education up to high school (HSC), 182 (45.50%) had a graduation degree, 87 (21.75%) had a post-graduation, and the rest 66 (16.50%) had a professional degree. As far as their income bracket is concerned, 139 (34.75%) were in 10-30K, 98 (24.50%) were in 30-50K, 77 (19.25%) were in 50-70K, 61 (15.25%) were in 70-90K, and the rest 25 (6.25%) were in the bracket of more than 90K.

Table 3. Factor loading and reliability of initial constructs

Construct	*Operational Variable (Item in the Questionnaire)*	*Factor Loading*	*Cronbach's Alpha*	*Composite Reliability*	*AVE*
Business ethics	Business ethics have a significant impact on the organizational performance	0.802	0.821	0.812	0.721
	General business ethics have a significant impact on the organizational performance	0.835			
	Ethics in human resource management have a significant impact on the organizational performance	0.799			
	Ethics in finance have a significant impact on the organizational performance	0.811			
	Ethics in sales and marketing have a significant impact on the organizational performance	0.838			
Intellectual capital	Intellectual capital has a significant impact on the organizational performance	0.785	0.798	0.795	0.699
Human capital and business ethics	Human capital in the pharmaceutical industry mediates the relationship between GBE and OP	0.817	0.811	0.785	0.711
	Human capital in the pharmaceutical industry mediates the relationship between ethics in HRM and OP	0.778			
	Human capital in the pharmaceutical industry mediates the relationship between ethics in finance and OP	0.815			
	Human capital in the pharmaceutical industry mediates the relationship between ethics in S and M and OP	0.881			
Structural capital and business ethics	Structural capital in the pharmaceutical industry mediates the relationship between GBE and OP	0.765	0.802	0.751	0.679
	Structural capital in the pharmaceutical industry mediates the relationship between ethics in HRM and OP	0.800			
	Structural capital in the pharmaceutical industry mediates the relationship between ethics in finance and OP	0.799			
	Structural capital in the pharmaceutical industry mediates the relationship between S and M and OP	0.872			
Relational capital and business ethics	Relational capital in the pharmaceutical industry mediates the relationship between GBE and OP	0.766	0.846	0.789	0.713
	Relational capital in the pharmaceutical industry mediates the relationship between ethics in HRM and OP	0.892			
	Relational capital in the pharmaceutical industry mediates the relationship between ethics in finance and OP	0.814			
	Relational capital in the pharmaceutical industry mediates the relationship between S and M and OP	0.876			

Source: Own results

Notes. AVE = average variance extracted; GBE = general business ethics; HRM = human resource management; OP = organizational performance; S and M = sales and marketing.

Validities and reliabilities of the constructs. Hsieh and Hiang (2004) and Shammout (2007) described the limits of convergent validity and stated that all the loading factors should be greater than 0.40, and the goodness of fit indices should be within the suggested limits as well. The results of this study reveal that all the indicator variables are > 0.40; therefore, it fulfills the required

criterion. The criteria for resultant reliabilities in combination should be very good (α ≥0.90), good (α ≥ 0.80), and acceptable (α ≥ 0.70.), which is described by Cronbach (1951) and Leech et al. (2005), and in this study, almost all the Cronbach's reliabilities and composite reliabilities are α ≥ 0.75. The average variance extracted (AVE) should be greater than 0.5 (Leech et al., 2005). The results from Table 3 show that the square root of AVE of each construct is larger than the construct's correlations with other constructs, which indicates good convergent and discriminant validity as well.

Descriptive statistics of initial constructs. There should be a pattern of normality of data, which is the prerequisite for employing SEM and multiple regression analysis. In this study, the normality of data for all 400 respondents was tested as well as the results of skewness and kurtosis within the recommended limits of ± 1.5 and standardized Z-score within the recommended limits of ± 3.5 (Huang et al., 2004). The results shown in Table 4 represent the results of standard deviation and variance, which further validate the normality pattern of the data (Byrne, 2001; Hair et al., 2010).

Discriminant validity. The results in Table 4 show that the factor loadings of all the variables are greater than 0.40; therefore, it fulfills the requirement of convergent validity (Hsieh and Hiang, 2004; Shammout, 2007). For the requirement of discriminant validity, the correlation of each pair should be less than 0.85 (Kline et al., 2000; Shammout, 2007).

Table 4. Descriptive statistics of initial constructs

Construct	*Operational Variable (Item in the Questionnaire)*	*Mean*	*St. Dev.*	*Skewness*	*Kurtosis*	*Variance*
Business ethics	Business ethics have a significant impact on the organizational performance	3.78	0.77	-0.44	0.62	0.592
	General business ethics have a significant impact on the organizational performance	3.55	0.81	-0.51	0.72	0.656
	Ethics in human resource management have a significant impact on the organizational performance	3.98	0.87	-0.49	0.59	0.757
	Ethics in finance have a significant impact on the organizational performance	3.77	0.88	-0.59	0.52	0.774
	Ethics in sales and marketing have a significant impact on the organizational performance	3.56	0.84	-0.71	0.53	0.706
Intellectual capital	Intellectual capital has a significant impact on the organizational performance	3.66	0.91	-0.61	0.71	0.829
Human capital and business ethics	Human capital in the pharmaceutical industry mediates the relationship between GBE and OP	3.71	0.88	-0.56	0.75	0.774
	Human capital in the pharmaceutical industry mediates the relationship between ethics in HRM and OP	3.98	0.93	-0.49	0.68	0.865
	Human capital in the pharmaceutical industry mediates the relationship between ethics in finance and OP	3.56	0.95	-0.59	0.77	0.903
	Human capital in the pharmaceutical industry mediates the relationship between ethics in S and M and OP	3.57	0.91	-0.76	0.39	0.828
Structural capital and business ethics	Structural capital in the pharmaceutical industry mediates the relationship between GBE and OP	3.58	0.89	-0.66	0.63	0.792
	Structural capital in the pharmaceutical industry mediates the relationship between ethics in HRM and OP	3.88	0.83	-0.71	0.55	0.689
	Structural capital in the pharmaceutical industry mediates the relationship between ethics in finance and OP	3.98	0.92	-0.56	0.43	0.846
	Structural capital in the pharmaceutical industry mediates the relationship between S and M and OP	3.39	0.78	-0.66	0.38	0.608
Relational capital and business ethics	Relational capital in the pharmaceutical industry mediates the relationship between GBE and OP	3.89	0.85	-0.81	0.37	0.723
	Relational capital in the pharmaceutical industry mediates the relationship between ethics in HRM and OP	3.99	0.96	-0.55	0.58	0.922
	Relational capital in the pharmaceutical industry mediates the relationship between ethics in finance and OP	3.54	0.87	-0.49	0.57	0.757
	Relational capital in the pharmaceutical industry mediates the relationship between ethics in SM and OP	3.44	0.71	-0.53	0.44	0.504

Source: Own results

Notes. GBE = general business ethics; HRM = human resource management; OP = organizational performance; SM = sales and marketing.

The results in Table 5 show that each pair of variables has a correlation that is less than 0.85; therefore, the data satisfies the prerequisite of discriminant validity as well.

Table 5. Discriminant validity

	IC_T	*BE_T*	*GBE_T*	EHRM *_T*	*EF_T*	*ESM_T*	*HC_T*	*SC_T*	*RC_T*
IC	1.00								
BE	0.58	1.00							
GBE	0.56	0.52	1.00						
EHRM	0.60	0.55	0.55	1.00					
EF	0.59	0.58	0.64	0.62	1.00				
ESM	0.54	0.61	0.63	0.53	0.72	1.00			
HC	0.60	0.62	0.59	0.55	0.58	0.64	1.00		
SC	0.61	0.55	0.52	0.64	0.60	0.58	0.52	1.00	
RC	0.53	0.52	0.65	0.62	0.57	0.70	0.58	0.63	1.00

Source: Own results
** Correlation is significant at 0.01 level (i-tailed)
Notes. BE = business ethics; EF = ethics in finance; EHRM = ethics in human resource management; ESM = ethics in sales and marketing; GBE = general business ethics; HC = human capital; IC = intellectual capital; RC = relational capital; SC = structural capital;

Fit measures. There are more than twenty (20) fit indices with no consent, which would account for the evaluation of the hypothesized model (Meyers et al., 2006). All these measures are classified into four categories (Arbuckle and Wothke, 1999; Byrne, 2001; Meyers et al., 2006). The undertaken study has considered three indices of absolute fit, three relative fit indices, three non-centrality-base indices, and three parsimonious fit indices. The detailed criteria are mentioned in Table 6 for all the four indices that are used in this research study.

Table 6. Fit Indices reported in this study

Construct			Absolute Fit Indices			Relative Fit Indices			Noncentrality-Based Indices			Parsimonious Fit Indices		
	χ2	Df	χ2/df	Probability	GFI	NFI	IFI	TLI	CFI	RMSEA	RNI	PCFI	PNFI	PGFI
Criteria	**Low**	N/A	**< 5.0**	**< 0.05**	**> 0.95**	**> 0.90**	**> 0.95**	**> 0.95**	**> 0.95**	**< 0.05**	**> 0.95**	**> 0.75**	**> 0.75**	**> 0.75**

Source: Own results
Notes. CFI = comparative fit index; df = degree of freedom; GFI = goodness of fit index; IFI = incremental fixed index; NFI = normed fixed index; PCFI = parsimony-adjusted fit index; PGFI = parsimony-adjusted goodness of fit; PNFI = parsimony-adjusted normed fit index; RMSEA = root mean square error of approximation; RNI = relative noncentrality index; TLI = Tucker-Lewis index; χ2 = chi square; χ2/df = relative chi square.

Confirmatory factor analysis. In confirmatory factor analysis, all the items and indicators are tested based on the previous theory, which is known as the measuring theory (Hair et al., 2010). The summary of results for the entire seven constructs or indicators are shown in Table 7.

Table 7. Confirmatory factor analysis

Construct	Absolute Fit Indices					Relative Fit Indices			Noncentrality-Based Indices			Parsimonious Fit Indices		
	χ2	Df	χ2/df	Probability	GFI	NFI	IFI	TLI	CFI	RMSEA	RNI	PCFI	PNFI	PGFI
Intellectual capital	4.028	1	4.024	0.027	0.968	0.930	0.971	0.952	0.960	0.033	0.961	0.760	0.821	0.788
Business ethics	5.023	2	2.413	0.038	0.962	0.911	0.962	0.961	0.957	0.016	0.952	0.813	0.782	0.810
Gen. bus. ethics	4.978	2	2.587	0.026	0.972	0.902	0.995	0.964	0.991	0.044	0.968	0.798	0.766	0.892
Ethics in HRM	5.982	2	2.781	0.039	0.967	0.912	0.958	0.993	0.992	0.048	0.962	0.902	0.865	0.759
Ethics in finance	6.750	2	3.385	0.055	0.779	0.882	0.917	0.789	0.901	0.065	0.859	0.711	0.622	0.712
Ethics in SM	4.011	1	4.201	0.047	0.952	0.960	0.968	0.967	0.967	0.059	0.982	0.752	0.751	0.762
Human capital	6.211	2	3.135	0.039	0.971	0.927	0.960	0.968	0.988	0.021	0.975	0.876	0.788	0.951
Struct. capital	4.979	2	2.479	0.032	0.968	0.923	0.970	0.972	0.991	0.038	0.952	0.820	0.801	0.975
Relation. capital	4.216	2	2.407	0.051	0.955	0.922	0.982	0.956	0.986	0.028	0.958	0.822	0.760	0.812
Criteria	**Low**	N/A	**< 5.0**	**< 0.05**	**> 0.95**	**> 0.90**	**> 0.95**	**> 0.95**	**> 0.95**	**< 0.05**	**> 0.95**	**> 0.75**	**> 0.75**	**> 0.75**

Source: Own results

Notes. CFI = comparative fit index; df = degree of freedom; GFI = goodness of fit index; HRM = human resource management; IFI = incremental fixed index; NFI = normed fixed index; PCFI = parsimony-adjusted fit index; PGFI = parsimony-adjusted goodness of fit; PNFI = parsimony-adjusted normed fit index; RMSEA = root mean square error of approximation; RNI = relative noncentrality index; SM = sales and marketing; TLI = Tucker-Lewis index; χ2 = chi square; χ2/df = relative chi square.

Absolute fit index shows GFI > 0.95 for all the constructs, except for EF. Relative fit index shows NFI > 0.90 for all the constructs, except for EF; IFI > 0.95 for all the constructs, except for EF, and TLI > 0.95 for all the constructs, except for EF. Similarly, noncentrality-based indices show that CFI > 0.95 for the entire construct, except for the EF. RMSEA fit index indicates sampling error. Hooper et al. (2008) determined that RMSEA ≤ 0.05 value reveals approximately close model fitness, and the values between 0.05 and 0.10 indicate a rational error of approximation, RMSEA < 0.05 for all the constructs, except for EF and RC, and RNI > 0.95 for all the constructs, except for EF.

Finally, in parsimonious fit indices, PCFI > 0.75 for all the constructs, except for EF, PNFI > 0.75 for entire constructs, except for EF, and PGFI > 0.75 for all the constructs, except for EF, which indicates good model fitness according to Hooper et al. (2008). Chi-square (χ2) value is the fundamental statistics for the basics fit index SEM. Normed χ2 extracted from the chi-square divided by the degree of freedom, according to Hooper et al. (2008), established that values of the normed χ2 of 2.0, 3.0, or even up to 0.5 have been measured as reasonably fit. Therefore, in this research, the calculated values of the normed χ2 for all the constructs show reasonable model fitness.

Model fitness. The evaluation of model fitness is one of the most important steps of SEM. The model of research represented the 0.870 value of R-Square, which shows that 87% of dependent variable (OP) has been significantly affected ($p < 0.01$) by the independent variables (BE, GBE, EHRM, EF, ESM and IC) due to HC, SC and RC (mediators) dimensions. However, the remaining 13% were other factors.

4. Hypotheses testing and results

Effects of predictors on the dependent variable. Table 8 shows the results of hypotheses, which are relevant to the relationship of independent variables with the dependent variable. H_1 is accepted: BE have significant impact on the overall OP in the pharmaceutical industry of Pakistan because $p < 0.01$ and $\beta = 0.383$; H_2 is accepted as well, since GBE have a positive and significant impact on the OP because $p < 0.01$ and $\beta = 0.365$. H_3: EHRM have a significant impact on the overall OP because $p < 0.01$ and $\beta = 0.344$; H_4 is further accepted, since EF have a significant impact ($p < 0.01$ and $\beta = 0.288$) on the OP. Hypothesis H_5 is accepted as well because ESM have a significant impact on the OP ($p < 0.01$ and $\beta = 0.399$). Last hypothesis H_6 is rejected because $p > 0.001$ and $\beta = 0.029$; hence, IC does not have a direct and significant impact on the overall OP in the pharmaceutical industry.

Table 8. The effect of human capital variables as predictors on the organizational performance

Hypothesis	*Predictors*	*Estimates*	*Probability*	*Decisions*
H_1	Business ethics	0.383***	0.000***	**Accepted**
H_2	General business ethics	0.365***	0.000***	**Accepted**
H_3	Ethics in human resource management	0.344***	0.000***	**Accepted**
H_4	Ethics in finance	0.288***	0.000***	**Accepted**
H_5	Ethics in sales and marketing	0.399***	0.000***	**Accepted**
H_6	Intellectual capital	0.067	0.029	**Rejected**

Source: Own results

*** Denotes that tests are significant at $\alpha = 0.01$ ($p < 0.01$)

Bootstrapping method to test the significance of mediation effects. In order to test the effect of mediation of different dimensions of IC, the bootstrapping method is employed in this research study. In order to run the bootstrapping method, 1000 bootstrap samples were drawn by the replacement from the available data set. In bootstrapping method, indirect, direct, and total effect of mediating variables were evaluated through the output submenu for 95% CI. The results are calculated at 95%, and the authors of this research are searching for zero lies in between the lower and upper boundary of the confidence interval. Essentially, the authors of this research are asking whether it is possible (with 95% confidence) that the TRUE indirect effect would be ZERO (basically, no mediation). If zero does NOT occur between the lower and upper limits; then, it is established that the indirect effect of the mediator is meaningful and significant (MacKinnon et al., 2002). Ninety-five percent CI coverage is calculated as the proportion of 95% CIs, which cover the population value. Since previous literature has documented the superior performance of bias corrected confidence interval (BCCI) over the other CIs in testing mediation with and without missing data (MacKinnon et al., 2004).

Mediation effect of the human capital. The results of HC as the mediating variable in relationship between the exogenous variables (GBE, EHRM, EF, and ESM) and endogenous variable (OP) are demonstrated in Table 10. As the value of indirect effect of HC is significant (β = 0.255) with GBE in relationship with the OP, and it has been confirmed from the lower and upper limit of BCCI that the value of indirect effect (β = 0.255) exists between the limits of BCCI (from 0.112 to 0.392). It has been observed as well that zero does not exist between the upper and lower limit of BCCI that further validated the indirect effect. The resultant probability ($p < 0.05$) substantiated that the indirect effect is significant. Thus, it has been concluded that HC is a potent mediator between the GBE and OP, and the hypothesis H_{6A} has been accepted, but at the same time, it is observed that the direct effect is not significant. While the results of direct effect have been observed, it is clearly indicated that zero value existed between the lower and upper boundary limits of direct effect (-0.170 to 0.167).

Table 10 further demonstrated the results of HC as a mediating variable in relationship with EHRM and OP. It has been confirmed by the results that there is a significant indirect effect with value β = 0.268, which existed between the limits of BCCI (from 0.139 to 0.438). It has been observed as well that zero does not exist between the upper and lower limit of BCCI that further validated the indirect effect. The resultant probability ($p < 0.05$) substantiated as well that the indirect effect is significant. Thus, it has been concluded that HC is a strong mediator between EHRM and OP, and the hypothesis H_{6B} has been accepted, but at the same time, it has been observed that the direct effect is not significant. While the results of direct effect have been observed, it is clearly indicated that zero value existed between the lower and upper boundary limits of direct effect (-0.221 to 0.126).

The results from Table 10 further proved that HC has not been established as a mediating variable in relationship with EF and OP. The results confirmed that there is an insignificant indirect effect with value β = 0.512, which does not exist between the limits of BCCI (from 0.220 to 0.499). It has been observed as well that zero does exist between the upper and lower limit of BCCI that further nullified the indirect effect. The resultant probability ($p > 0.05$) has abolished that the indirect effect is significant. Thus, it has been concluded that HC does not have any mediating effect between EF and OP, and the hypothesis H_{6C} has been rejected.

Finally, Table 9 demonstrated the results of HC as a mediating variable in relationship with ESM and OP. It has been confirmed by the results that there is a significant indirect effect with value β = 0.298, which existed between the limits of BCCI (from 0.199 to 0.348). It has been observed as well that zero does not exist between the upper and lower limit of BCCI that further validated the indirect effect. The resultant probability ($p < 0.05$) substantiated that the indirect effect is significant. Thus, it has been concluded that HC is a robust mediator between ESM and OP, and the hypothesis H_{6D} has been accepted, but at the same time, it has been observed that the direct effect is not significant. While the results of direct effect have been observed, it is clearly indicated

that zero value existed between the lower and upper boundary limits of direct effect (-0.112 to 0.198).

To sum up, the acceptance of hypotheses H_{6A}, $H_{6B,}$ and H_{7D} show that the relationship of GBE, EHRM, and ESM with OP in the pharmaceutical industry is only significant through HC mediation. It has been concluded that there is no mediating effect of HC on the relationship of EF on the OP.

Table 9. The effect of human capital variables as predictors of organizational performance

Hypothesis	Predictors	Estimates	BCCI	
			Lower	Upper
H_{6A}	Total indirect effect of GBE	0.255***	0.112	0.392
	Total direct effect of GBE	0.029	-0.170	0.167
	Total effect of GBE	0.284	0.137	0.359
H_{6B}	Total indirect effect of EHRM	0.268***	0.139	0.438
	Total direct effect of EHRM	-0.063	-0.221	0.126
	Total effect of EHRM	0.205	0.088	0.335
H_{6C}	Total indirect effect of EF	0.512	0.220	0.499
	Total direct effect of EF	0.122	-0.189	0.213
	Total effect of EF	0.634	0.390	0.621
H_{6D}	Total indirect effect of ESM	0.298***	0.199	0.348
	Total direct effect of ESM	-0.075	-0.112	0.198
	Total effect of ESM	0.223	0.099	0.298

Source: Own results

*** Denotes that tests are significant at a = 0.01 ($p < 0.01$ and $p < 0.05$)
Notes. EF = ethics in finance; EHRM = ethics in human resource management ESM = ethics in sales and marketing; GBE = general business ethics.

Mediation effect of structural capital. The results of SC as a mediating variable in relationship between the exogenous variables (GBE, EHRM, EF, and ESM) and endogenous variable (OP) are demonstrated in Table 10. The value of indirect effect for SC is significant (β = 0.295) with GBE in relationship with the OP, and it has been confirmed from the lower and upper limit of BCCI that the value of indirect effect (β = 0.295) existed between the limits of BCCI (from 0.132 to 0.354). It has been observed that zero does not exist between the upper and lower limit of BCCI that further validated the indirect effect. The resultant probability ($p < 0.05$) substantiated as well that the indirect effect is significant. Thus, it has been concluded that SC is a potent mediator between GBE and OP, and the hypothesis H_{7A} has been accepted, but at the same time, it has been observed that the direct effect is not significant. While the results of direct effect have been observed, it is clearly indicated that zero value existed between the lower and upper boundary limits of direct effect (-0.110 to 0.172).

Table 11 again demonstrated the results of SC as a mediating variable in relationship with EHRM and OP. It has been confirmed by the results that there is a significant indirect effect with value β = 0.273, which existed between the limits of BCCI (from 0.182 to 0.348). It is observed that zero does not exist between the upper and lower limit of BCCI that further validated the indirect effect. The resultant probability ($p < 0.05$) substantiated that the indirect effect is significant. Thus, it has been concluded that SC is a strong mediator between EHRM and OP, and the hypothesis H_{7B} has been accepted, but at the same time, it has been observed that the direct effect is not significant. While the results of direct effect have been observed, it is clearly indicated that zero value existed between the lower and upper boundary limits of direct effect (-0.191 to 0.183).

Table 10 further demonstrated the results of SC as a mediating variable in relationship with EF and OP. It has been confirmed by the results that there is a significant indirect effect with value

β = 0.277, which existed between the limits of BCCI (from 0.124 to 0.345). It has been observed as well that zero does not exist between the upper and lower limit of BCCI that further validated the indirect effect. The resultant probability ($p < 0.05$) substantiated that the indirect effect is significant. Thus, it has been concluded that SC is a strong mediator between EF and OP, and the hypothesis H_{7C} has been accepted, but at the same time, it has been observed that the direct effect is not significant. While the results of direct effect have been observed, it is clearly indicated that zero value existed between the lower and upper boundary limits of direct effect (-0.052 to 0.143).

Finally, Table 10 demonstrated the results of SC as a mediating variable in relationship with ESM and OP. It has been confirmed by the results that there is a significant indirect effect with value β = 0.228, which existed between the limits of BCCI (from 0.138 to 0.344). It has been observed as well that zero does not exist between the upper and lower limit of BCCI that further validated the indirect effect. The resultant probability ($p < 0.05$) substantiated as well that the indirect effect is significant. Thus, it has been concluded that SC is a robust mediator between ESM and OP, and the hypothesis H_{7D} has been accepted, but at the same time, it has been observed that the direct effect is not significant. While the results of direct effect have been observed, it is clearly indicated that zero value existed between the lower and upper boundary limits of direct effect (-0.041 to 0.145).

To sum up, the acceptance of hypotheses H_{7A}, H_{7B}, H_{7C}, and H_{7D} show that the relationship of GBE, EHRM, ethics in finance and ESM with OP in the pharmaceutical industry is only significant through SC.

Table 10. The effect of structural capital variables as predictors of organizational performance

Hypothesis	Predictors	Estimates	BCCI	
			Lower	Upper
H_{7A}	Total indirect effect of GBE	0.295***	0.132	0.354
	Total direct effect of GBE	0.116	-0.110	0.172
	Total effect of GBE	0.411	0.235	0.512
H_{7B}	Total indirect effect of EHRM	0.273***	0.182	0.348
	Total direct effect of EHRM	-0.071	-0.191	0.183
	Total effect of EHRM	0.202	0.155	0.321
H_{7C}	Total indirect effect of EF	0.277***	0.124	0.345
	Total direct effect of EF	0.131	-0.052	0.143
	Total effect of EF	0.408	0.298	0.492
H_{7D}	Total indirect effect of ESM	0.228***	0.138	0.344
	Total direct effect of ESM	0.092	-0.041	0.145
	Total effect of ESM	0.320	0.299	0.412

Source: Own results

*** Denotes that tests are significant at a = 0.01 ($p < 0.01$ and $p < 0.05$)
Notes. EF = ethics in finance; EHRM = ethics in human resource management ESM = ethics in sales and marketing; GBE = general business ethics.

Mediation effect of relational capital. The results of RC as a mediating variable in relationship between the exogenous variables (GBE, EHRM, EF, and ESM) and endogenous variable (OP) are demonstrated in Table 11. The value of the indirect effect of RC is significant (β = 0.219) with GBE in relationship with the OP, and it has been confirmed from the lower and upper limit of BCCI that the value of indirect effect (β = 0.219) existed between the limits of BCCI (from 0.122 to 0.294). It is observed that zero does not exist between the upper and lower limit of BCCI that further validated the indirect effect. The resultant probability ($p < 0.05$) substantiated that the indirect effect is significant. Thus, it is concluded that the RC is a potent mediator between GBE and OP, and the hypothesis H_{8A} has been accepted; but at the same time, it is observed that the direct ef-

fect is not significant. While the results of direct effect have been observed, it is clearly indicated that zero value existed between the lower and upper boundary limits of direct effect (-0.122 to 0.185).

Table 11 demonstrated the results of RC as a mediating variable in relationship with EHRM and OP. It has been confirmed by the results that there is a significant indirect effect with value β = 0.271, which existed between the limits of BCCI (from 0.161 to 0.362). It is observed that zero does not exist between the upper and lower limit of BCCI that further validated the indirect effect. The resultant probability ($p < 0.05$) substantiated that the indirect effect is significant. Thus, it is concluded that the RC is a strong mediator between EHRM and OP, and the hypothesis H_{8B} has been accepted, but at the same time, it is observed that the direct effect is not significant. While the results of direct effect have been observed, it is clearly indicated that zero value existed between the lower and upper boundary limits of direct effect (-0.112 to 0.101).

Table 11 further demonstrated the results of RC as a mediating variable in relationship with EF and OP. It is confirmed by the results that there is a significant indirect effect with value β = 0.298, which existed between the limits of BCCI (from 0.133 to 0.344). It is observed as well that zero does not exist between the upper and lower limit of BCCI that further validated the indirect effect. The resultant probability ($p < 0.05$) substantiated that the indirect effect is significant. Thus, it is concluded that RC is a strong mediator between EF and OP, and the hypothesis H_{8C} has been accepted, but at the same time, it has been observed that the direct effect is not significant. While the results of direct effect have been observed, it is clearly indicated that zero value existed between the lower and upper boundary limits of direct effect (-0.110 to 0.211).

Finally, Table 11 demonstrated the results of RC as a mediating variable in relationship ESM and OP. It has been confirmed by the results that there is a significant indirect effect with value β = 0.311, which existed between the limits of BCCI (from 0.177 to 0.366). It has been observed as well that zero does not exist between the upper and lower limit of BCCI that further validated the indirect effect. The resultant probability ($p < 0.05$) substantiated that the indirect effect is significant. Thus, it is concluded that the RC is a robust mediator between ESM and OP, and the hypothesis H_{8D} has been accepted, but at the same time, it is observed that the direct effect is not significant. While the results of direct effect have been observed, it is clearly indicated that zero value existed between the lower and upper boundary limits of direct effect (-0.189 to 0.145).

Table 11. The effect of relational capital variables as predictors of organizational performance

Hypothesis	Predictors	Estimates	BCCI	
			Lower	Upper
H_{8A}	Total indirect effect of GBE	0.219***	0.122	0.294
	Total direct effect of GBE	0.117	-0.122	0.185
	Total effect of GBE	0.336	0.128	0.389
H_{8B}	Total indirect effect of EHRM	0.271***	0.161	0.362
	Total direct effect of EHRM	-0.061	-0.112	0.101
	Total effect of EHRM	0.210	0.127	0.250
H_{8C}	Total indirect effect of EF	0.298***	0.133	0.344
	Total direct effect of EF	0.144	-0.110	0.211
	Total effect of EF	0.442	0.239	0.512
H_{8D}	Total indirect effect of ESM	0.311***	0.177	0.366
	Total direct effect of ESM	-0.102	-0.189	0.145
	Total effect of ESM	0.209	0.179	0.298

Source: Own results

*** Denotes that tests are significant at a = 0.01 ($p < 0.01$ and $p < 0.05$)
Notes. EF = ethics in finance; EHRM = ethics in human resource management ESM = ethics in sales and marketing; GBE = general business ethics.

To sum up, the acceptance of hypotheses H_{8A}, $H_{8B,}$ $H_{8C,}$ and H_{8D} show that the relationship of GBE, EHRM, EF and ESM with OP in the pharmaceutical industry is only significant through the RC mediation.

Summary of the hypothesized relationship. Table 12 shows the relationship between independent and dependent variables. The results showed that BE, GBE, EHRM, EF, and ESM have a significant and direct impact on the OP in the pharmaceutical sector of Pakistan. It is further analyzed with the results; IC does not have any significant and direct impact on the OP in the pharmaceutical industry. Therefore, it is concluded that the hypotheses H_1, H_2, H_3, H_4, and H_5 are accepted, and hypothesis H_6 is rejected.

Table 12. Summary of the hypothesized relationship b/w predictors and dependent variable

Hypothesis	Relationship		Effect	Decisions
H_1	BE † ⟹	OP	***Significant	Accepted
H_2	GBE † ⟹	OP	***Significant	Accepted
H_3	EHRM † ⟹	OP	***Significant	Accepted
H_4	EF † ⟹	OP	***Significant	Accepted
H_5	ESM † ⟹	OP	***Significant	Accepted
H_6	IC † ⟹	OP	Insignificant	Rejected

Source: Own results

*** Denotes that tests are significant at a = 0.01 (p < 0.01)
Note: † = predictor or exogenous variable; OP = organizational performance = endogenous or dependent variable; GBE = general business ethics; EHRM = ethics in human resource management; EF = ethics in finance; ESM = ethics in sales and marketing; IC = intellectual capital;
direct effect = ⟹

Table 13 shows the impact of mediating variables, i.e., HC, SC and RC in relationship between the exogenous and endogenous variables. The results showed that only HC and EF do not have any mediating impact in relationship with OF; therefore, hypotheses H6C has been rejected; otherwise, all other hypotheses H_{6A}, H_{6B}, H_{6D}, H_{7A}, H_{7B}, H_{7C}, H_{7D}, H_{8A}, H_{8B}, H_{8C}, and H_{8D} have been accepted. Therefore, it is concluded that all the mediating variables support the indirect relationship of exogenous variables with endogenous variable, i.e., the OP in Pakistani, the pharmaceutical industry, except for HC, which is discussed in H_{6C}.

Table 13. Summary of the hypothesized relationship of mediations

Hypothesis	Relationship	Indirect Effect	Decisions
H_{6A}	GBE † →→→ HC→→→ OP	***Significant	Accepted
H_{6B}	EHRM † →→→ HC →→→ OP	***Significant	Accepted
H_{6C}	EF † →→→ HC →→→ OP	Insignificant	Rejected
H_{6D}	ESM † →→→ HC →→→ OP	***Significant	Accepted
H_{7A}	GBE † →→→ SC →→→OP	***Significant	Accepted
H_{7B}	EHRM † →→→SC→→→OP	***Significant	Accepted
H_{7C}	EF † →→→SC→→→OP	***Significant	Accepted
H_{7D}	ESM † →→→SC→→→OP	***Significant	Accepted
H_{8A}	GBE † →→→RC→→→OP	***Significant	Accepted
H_{8B}	EHRM † →→→RC→→→OP	***Significant	Accepted
H_{8C}	EF † →→→RC→→→OP	***Significant	Accepted
H_{8D}	ESM † →→→ RC →→→ OP	***Significant	Accepted

Source: Own results

*** Denotes that tests are significant at a = 0.01 (p < 0.01)
Note: † = predictor or exogenous variable; OP = organizational performance = endogenous or dependent variable; HC = human capital; SC = structural capital; RC = relational capital; GBE = general business ethics; EHRM = ethics in human resource management; EF = ethics in finance; ESM = ethics in sales and marketing; indirect effect →→→ (mediation) =

5. Conclusions and recommendations

Conclusions. The results of this research established that BE (EHRM. GBE, EF, and ESM) has a direct and significant impact on the OP in the Pakistani pharmaceutical sector. Therefore, the pharmaceutical industry should follow the ethical guidelines in roder to get phenomenal growth. In contrast, IC does not have direct and significant role in the OP. Though, there is a positive correlation that has been discovered when the multidimensional IC model (HC, SC, and RC) was studied, and this 3-D model was incorporated and evaluated as a mediator with exogenous variables (GBE, EHRM, EF, and ESM) in relationship with endogenous variable (OP). The results of the research established that HC is the strongest mediator between BE and OP. Hence, it was confirmed that HC is the most important asset of the organization, especially in case of Pakistani pharmaceutical industry. The results demonstrated as well that SC has a significant impact as a mediating variable amongst the exogenous and endogenous variable. It is further proven that processes, documentations, procedures, delivery systems, IT and communication, and product and services played an important role in OP. RC has a significant impact as a mediator between BE and OP as well. Hence, it is concluded that the relationship with customers, consumers, vendors, suppliers, and other stakeholders play a significant role in the OP, especially in the case of pharmaceutical industry customers are considered an asset of any organization.

Recommendations. Based on the results of this research, it is evident that IC and dimensions of BE are the ultimate basis for the progress and future growth of the Pakistani pharmaceutical industry. Therefore, the following recommendations have been made for the pharmaceutical industry and other stakeholders:

- Pharmaceutical industry should invest a substantial amount of money in human resource departments to promote continuous and periodic training and skills programs.
- They should establish separate departments for medical technical training and skilled-based training.
- Human resource departments of pharmaceutical companies should evolve job rotation and job enrichment programs in order to promote knowledge management and secession planning.
- Pharmaceutical industry should further invest in delivery systems, supply chain management, information technology, current good manufacturing practice, quality control, quality assurance, etc.
- Pharmaceutical industry should adhere and further improve the programs of customer relationship management for internal and external customers.
- Business ethics are the key of success; therefore, the pharmaceutical industry should set the highest standards of ESM, EHRM, EF , and other GBE within and outside the organizations.

6. Discussion

The results of this study showed that all the indicator variables are > 0.40; therefore, it fulfills the required criterion (Hsieh and Hiang, 2004; Shammout, 2007). The AVE should be greater than 0.50 (Leech et al., 2005). In this study, the normality of data for all 400 respondents was tested and the results of skewness and kurtosis are within the recommended limits of ± 1.5 and the standardized Z-score within the recommended limits of ± 3.5 (Huang et al., 2004). The results of standard deviation and variance further validated the normality pattern of the data (Byrne, 2001; Hair et al., 2010). The results of factor loadings for all the variables are greater than 0.40; therefore, it met the requirement of convergent validity (Hsieh and Hiang, 2004; Shammout, 2007). In confirmatory factor analysis, all the items and indicators are tested based on the previous theory, which is known as the measuring theory (Hair et al., 2010). The results of absolute fit index, relative fit index, centrality-based fit index, and the parsimonious fit index showed that all the indicators are fit, except for EF (Hooper et al., 2008).

BE and GBE have significant impact on the overall OP in the pharmaceutical industry. These results are consistent with the previous researches that concluded as well that the fundamental objective of BE is to enhance the quality of ethics in business organizations and improve the ethical quality of decision-making, which directly contribute to the organization's performance. All these findings are consistent with the results of the previous studies (Singer and Singer, 1997; David and Fahey, 2000; Ståhle and Hong, 2002; Gainey and Klaas, 2003; Horwitz et al., 2003; McEvily et al., 2003; Pöyhönen and Smedlund, 2004; Ferguson-Amores et al., 2005; Lin, 2007; Valentine and Barnett, 2007; Pirson and Malhotra, 2008; Isaac et al., 2009, 2010). The results of this study show as well that EHRM and EF have a significant impact on the overall OP. The findings lend empirical support to the theoretical observations and corroborate the idea of scholars in the field (David et al., 2000; McDermott and O'Dell, 2001; Janz and Prasarnphanich, 2003; Young et al., 2003; Leidner et al., 2010; Nazari et al., 2009). Moreover, ESM have a significant impact on the OP. IC does not have a direct and significant impact on the overall OP in the pharmaceutical industry. These results are consistent with the previous studies where emphasis on the IC and OP are the issues that need a holistic and broad attitude to the factors such as human resource and ethics related to the human resource. The quality of the OP can be enhanced many fold by applying the true spirit of ethical guideline of human resources, proper and justified utilization of intellectual capital (Bontis et al., 2011; Mehralian et al., 2012).

Numerous researches have focused the ethical issues and their relations with the OP. Conclusions of all these researches have emphasized the importance of BE of OP and the well-being in the long-term (Bartels et al., 1998; Weeks et al., 2004; Berrone et al., 2007). Knowledge and IC factors are known as critically important factors for any organization and mark these factors as key resources or gaining competitive advantage in a contemporary aggressive competitive era (Nerdrum and Erikson, 2001; Ordóñez de Pablos, 2004a). According to Finn and Torgeir (2008), the intellectual-based events are the main cause of an organization's success. Mehralian et al. (2012) designated the importance of knowledge and equated it with land, workforce, or financial capital, but affirmed it as the most imperative resource of an organization. In fact, the knowledge-based and learning organizations consider IC as the value creating factor, which contributes immensely to the organization's future success (Nerdrum and Erikson, 2001; Ordóñez de Pablos, 2005). The results of this study are very much in lined with the previous researches that have revealed that in contemporary knowledge-based economies, the importance and efficiency of IC has become the vital element, and it plays even a much more significant role as compared to the financial capital in order to enhance the profitability and performance of any organization (Bontis et al., 2000; Ordóñez de Pablos, 2004b; Mehralian et al., 2014).

The results of this research confirmed that all the elements (HC, SC, and RC) of IC are significantly contributing in creating the value, increasing efficiencies, effectiveness, achieving success and growth of the organizations. These results are consistent with the previous researches (Bontis et al., 2000; Firer and Williams, 2003; Wang and Chang, 2005; Peng et al., 2007; Kamaluddin and Rahman, 2009; Díez et al., 2010). This research demonstrated that all the abilities, knowledge, learning, practices, analytical capabilities, and intelligence/intellect presented by a firm as a whole included in the elements of IC (HC, SC, and RC) are in line with the previous researches (Yang and Lin, 2009; Sharabati et al., 2010). In general, the findings are consistent with the existing literature regarding the role which the foregoing three IC components play in augmenting OP (Edvinsson and Malone, 1997; Bontis, 1998; Bontis et al., 2000; Bontis, 2004a, 2004b; Chen et al., 2005; do Rosário Cabrita and Vaz, 2005; Wang and Chang, 2005; Clarke et al., 2011). The results confirmed that the investment in HC, SC, and RC could potentially bring OP improvement in Pakistani pharmaceutical industry. Some recent IC scholars (Nazari et al., 2009; Huang et al., 2010) do not even separate the components of IC and use an aggregate IC concept owing to the strong intercorrelation among the IC components. Future research might seek to clarify the basis of the inconsistent result by considering the aggregated score of IC to affect the performance.

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