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Article

The Impact of Employee Development Practices on Human Capital and Social Capital: The Mediating Contribution of Knowledge Management

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Abstract: There is a shortage of research investigating the link between employee development practices and intellectual capital as mediated by knowledge management. The aim of the current research was to consider the influence of employee development practices on intellectual capital through knowledge management. Data were collected through an instrument distributed to a sample of 464 employees working at information and communications technology companies. The results indicate that employee development practices had significant effects on human capital, knowledge management, and social capital. The results reveal that knowledge management had a significant effect on human capital but not on social capital. Finally, the results show that knowledge management significantly mediated the impact of employee development practices on human capital. Additionally, implications for intellectual capital development, organizational strategy, and academic research are discussed.

Keywords: employee development practices; knowledge management; human capital; social capital; IT companies

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1. Introduction

Intellectual capital management has attracted the attention of both academics and practitioners for a variety of reasons. For example, managers need to deal with changes in a competitive and turbulent economic environment [1,2], and organizations are aware that intellectual capital, as an intangible asset, is a pivotal element with respect to profitability [3,4].

Intellectual capital has been studied in terms of its relationship with several constructs. As a dependent construct, intellectual capital has been investigated in combination with constructs such as strategic orientation [5,6], business operation mode, and social capital [7]. As an independent construct, intellectual capital has been examined in combination with constructs such as organizational innovativeness [8,9], business performance [10,11], and competitive advantage [12,13].

Other studies on intellectual capital were designed to explore issues such as enablers of intellectual capital management [14], consequences and antecedents of human capital [15], intellectual capital dimensions [16], intellectual capital reporting in annual statements [17], measurement of intellectual capital [18], and the importance of measuring human capital [19]. Scholars have conducted studies in a variety of contexts, such as service organizations [20], software companies [21], banks and financial institutions [22,23], information and communications technology institutions [24], universities [19,25], and healthcare [26–28].

One way to maintain human capital value is to manage HR practices in an effective manner. Intan-Soraya and Chew [29] concluded that the architecture of HR in an organization should support effective knowledge-related management practices, which in turn improves intellectual capital. The link between knowledge management, intellectual capital, and HRM practices has been examined in numerous studies, establishing an evidence base of relationships between these variables [1,2,26,29–34]. However, there is a shortage of research on employee development practices and intellectual capital as mediated by knowledge management in particular. Consequently, the aims of the current research were as follows: first, to consider the impact of employee development practices on both intellectual capital and knowledge management [35], and second, to consider the mediating role of knowledge management in the impact of employee development practices on intellectual capital. In the present study, we evaluated employee development practices using knowledge-based practices. Tehseen et al. [36] argued that research on knowledge-based human resource practices is still scant.

2. Hypothesis Development

2.1. Definition of Intellectual Capital (IC)

Definitions of intellectual capital (IC) in the literature indicate that the term is a multidimensional construct referring to knowledge, core techniques, experiences, intellectual properties, and customer relationships [26]. Galbraith coined the term "intellectual capital" in 1969 and defined it as the difference between the book value of an organization and its market value [37,38]. Maditinos et al. [39] reported numerous definitions of IC, among which several components stand out. These components include knowledge, experience, skills, organizational structure, organizational databases, relationships with suppliers, and relationships with customers. Li et al. [40] mentioned other examples of IC, such as employee education and training, research and development activities, organizational processes, and organizational reputation, as well as brands. A clear understanding of IC can be achieved by exploring its dimensions.

2.2. Intellectual Capital Dimensions

IC had been viewed through several lenses in the literature. Generally, it is conceptualized in terms of three dimensions: organizational capital, human capital, and relational capital [1,26,37,40–42]. In some studies, relational capital is referred to as structural capital, and organizational capital as social capital [39].

2.2.1. Human Capital (HC)

Human capital is regarded as a key organizational asset consisting of employee skills, knowledge, attitudes, and commitment [26,40]. The importance of human capital can be justified, since the construct is a key source of strategic renewal and innovation, as it is directly related to employee knowledge, skills, talent, and experiences [1]. Innovation is a process of creation, and if an organization has such capacity, it is considered innovative. The more innovations a company can generate and implement, the greater its ability to be creative [43]. A firm's intellectual capital can be divided into two types: intellectual assets (codified organizational knowledge) and human capital (tacit employee knowledge) [3]. Hsu and Fang [37] measured human capital using four items: employee empowerment, employee skills, effective training programs, and employee proactivity.

2.2.2. Social Capital (SC)

Social capital encompasses two types of relationships: external relationships with stakeholders and internal relationships among employees [26]. According to Çavuş and Gökçen [2], internal relationships can be split into two types, interpersonal and intergroup, whereas external relationships are interorganizational. Regarding characteristics of social and human capital, McCallum and O'Connell [44] indicated that social capital refers to relational competencies, such as self-management, trust, network coordination, and social

awareness. Hsu and Fang [37] measured social capital using four items: an organization's long-term relationships with good suppliers, its customers, its ability to grow in its market, and its strategic alliances.

2.2.3. Organizational Capital (OC)

Organizational or structural capital consists of structural elements within an organization, such as knowledge management, organizational innovativeness and efficiency, databases, and organizational routines [1,26]. Hsu and Fang [37] defined structural capital in terms of two dimensions: innovation capital (i.e., intellectual property) and process capital (e.g., business processes, plans, and information systems). A structural model is a construct comprising technological and organizational factors by which coordination and integration within an organization can occur [9,45]. In their study, Hsu and Fang [37] measured structural capital by seven items associated with innovation and process capital, including organizational investment in information technology, research, business development, research and development (R&D), and new market development.

2.3. Definition of Knowledge Management (KM)

Defining knowledge management is challenging because it has multiple perspectives, including underlying assumptions, strategy or purpose, activities, and enablers. Two fundamental aspects influence the view of knowledge management: (a) the resource-based view (RBV) of the firm, which refers to how knowledge contributes to technological change and organizational knowledge, and (b) humanistic management theory, which refers to several important themes: (1) shared experiences, group dynamics, social capital, and social network analysis; (2) organizational culture and learning; and (3) psychological contracts and cognitive knowledge. Table 1 provides the definition of KM according to two views [46].

Table 1. Definition of knowledge management.

Characteristics of KM	Product View	Process View
Focus	Capturing and storing knowledge	Human contact and relationships
Strategy	Exploitation of reusable knowledge, linking people through technology	Building social capital/networks, facilitating discussion
Human resources	Recruitment focused on reusing knowledge, passive training (courses) rewards for using and contributing	Recruitment creativity, on-the-job training (learning by doing), rewards for group work
Information technology	Heavy investment in IT retrieval tools	Heavy investment in IT retrieval tools
IT	Focusing on multiplatform storage and retrieval, Internet, intranet, and file servers	Focusing on virtual workspaces and encouraging interaction (e.g., groupware)
Search	Search engine tools and artificial intelligence	
Workflow and document management software		Helpful if people can use them to share experiences
Communities of practice		Growing interest in virtual CoP (e.g., online collaboration).

Knowledge derives from information, and information derives from data. If information is to become knowledge, people must do much of the work. KM derives from a lack of good information about where the knowledge is in an organization and the difficulty in getting it and making use of it [47]. Knowledge is found at the individual, group, and organizational level and can be tacit or explicit [48]. Explicit knowledge is knowledge that is recorded in documents, computer software, or the procedures and operations of an organization. Consequently, KM is defined as a process that is aimed at transforming tacit knowledge into explicit knowledge [49].

2.4. Knowledge Management Dimensions

There are three categories of knowledge: social, human, and structural. Human knowledge is related to people's skills and experiences, while social knowledge refers to interpersonal relationships [48]. Structural knowledge is embedded in the processes, systems, and routines of an organization. All three can be achieved through the four KM practices: knowledge conversion, sharing, dissemination, and internalization. Knowledge sharing is

a process by which experiences are shared, while knowledge conversion is a process by which tacit knowledge is transformed into explicit knowledge, which is then disseminated to others. Finally, new knowledge is integrated with previous experience [49]. Numerous dimensions or practices of KM have been cited in the literature, such as knowledge creation [50,51], knowledge assessment [52], knowledge acquisition [53,54], and knowledge storage [49,55]. Other knowledge dimensions include retrieval [49], dissemination [49], sharing [56–58], utilization [33], application [50,59–61], and documentation [51].

According to the theory of interfirm collaboration, knowledge creation is a spontaneous result of interactions and collaborations among networks of individuals, working groups, and organizations, within which members with a range of expertise, backgrounds, and resources discover novel opportunities to gain a competitive advantage or adapt to existing conditions [62].

2.5. Definition of Employee Developmental Practices (EDPs)

Human resource practices have been categorized into three major dimensions: skill-enhancing, opportunity-enhancing, and motivation-enhancing [63]. Skill-enhancing HR practices include employee recruitment, selection, and training; motivation-enhancing practices encompass performance feedback and employee incentives; and opportunity- or empowerment-enhancing practices involve information sharing and employee participation in decision-making [32,58]. Researchers have indicated that employee development practices are those related to training, delegation, participation in decision-making, and career management. Therefore, employee development practices can be defined as activities geared toward providing employees with knowledge and improving their skills and motivation to work through training, empowerment, and participation [64].

2.6. Employee Developmental Practices (EDPs)

Researchers have identified four dimensions of employee development practices: training, delegation of responsibility, career management, and participation in decision-making. Reference has also been made to the moderating influence of employee development practices of market orientation on organizational and employee performance [64]. Other researchers have used three dimensions of employee development practices: employee training, informal coaching, and empowerment [65]. Other dimensions of EDP found in the literature include job rotation [66], on-the-job training, and tuition reimbursement [67]. Researchers have also divided the approaches to employee development into four types: assessment, formal education, interpersonal relationships, and job experience [68].

2.7. Impact of EDP on HC

The correlation between employee training and human capital is well established in the literature. Skill-enhancing HR practices (e.g., employee development and training) have been found to have a significant influence on human capital [63]. Yang and Lin [26] pointed out that the relationship between HR practices (training and development, recruitment and selection, performance appraisal, compensation, and health and safety) and organizational performance was mediated by intellectual capital. Specifically, their results showed that training and development predict only human capital. It is important to invest in human capital, which can be achieved through employee training and development. So, human capital investment can be measured by training investment, employee development rate, and training cost [1]. Employee training and development is one practice by which human capital management is effectively achieved [2]. Based on the above-mentioned studies, hypothesis 1 was formulated:

Hypothesis 1 (H1). *A high degree of EDP results in a high degree of human capital.*

2.8. Impact of EDP on SC

Few studies have examined the impact of employee development practices such as employee empowerment, training, and participation in decision-making on social capital as a component of intellectual capital. However, in research by Kianto et al. [34] on knowledge-based HRM practices, innovation, and intellectual capital using data from 180 Spanish companies, their results showed that knowledge-based HRM practices had significant effects on both social and structural capital via human capital. According to Al-Tit [69] and Jiang and Liu [70], high-performance work systems such as employee staffing, training, compensation, work assignments, and empowerment have a considerable effect on social capital by increasing opportunities for interactions among employees and other network actors as well as creating shared understanding and knowledge. In their study on social capital, human resource development, productivity, and emotional intelligence, Brooks and Nafukho [71] regarded human resource development such as employee training, continuous learning, and career development, and organizational development as important requirements for social capital development. Following these findings, the following hypothesis was formulated:

Hypothesis 2 (H2). *A high degree of EDP results in a high degree of social capital.*

2.9. Impact of EDP on KM

Employee development practices play a significant role in enhancing knowledge management [72]. The positive impact of these practices in general, and on KM in particular, is well established in the literature. In previous studies [64,73] that explained the mediating effect of human capital in the relationship between HRM practices and organizational learning capability, it was found that human resource development practices (training, responsibility delegation, individual career management, and employee participation in decision-making) are related to human capital value. Analyzing data collected from managers in the manufacturing sector, Al-Tit [33] found a positive impact of HR practices such as extensive employee training on KM. Gardner et al. [32] confirmed that the appropriate employee training program in the context of employee development is one that will enhance employee knowledge, abilities, and skills. Simply put, employee development practices enable employees to gain new knowledge, which means that these practices enhance the level and type of knowledge employees have, which can be stored, shared, and applied in the organization. Based on these findings, the following hypothesis was formulated:

Hypothesis 3 (H3). *A high degree of EDP results in a high degree of KM.*

2.10. Impact of KM on HC

Knowledge management and intellectual capital management are interrelated constructs upon which organizational success is constructed [74]. Two key trends in knowledge management are intellectual capital measurement and knowledge mapping [49]. Researchers have found significant effects of knowledge management practices (transfer, creation, documentation, and acquisition) on intellectual capital as assessed by human capital, customer capital, organizational capital, and external capital [51]. Using data on intellectual capital, knowledge sharing, and organizational performance collected from high-technology companies in China, Wang et al. [75] pointed out that tacit aspects of knowledge sharing had a significant effect on intellectual capital (social, human, and organizational), while explicit knowledge sharing had a significant impact only on organizational and human capital. Moreover, the results of previous studies revealed a significant influence of knowledge management processes (storage, creation, application, and sharing) on intellectual capital; in particular, knowledge application had a higher effect on intellectual capital dimensions (social, human, and organizational capital) [76]. Hence, the following hypothesis was developed:

Hypothesis 4 (H4). A high degree of KM results in a high degree of HC.

2.11. Impact of KM on SC

Scholars have explored the relationship between social capital and knowledge management [77–80], and the influence of knowledge management on social capital was investigated in some studies. In one study, Lee and Sukoco [81] confirmed the moderating role of social capital in the impact of knowledge management capability and entrepreneurial orientation on organizational effectiveness. Ramadan et al. [51] investigated the mediating role of social capital in the impact of knowledge management on intellectual capital as measured by organizational capital, human capital, customer capital, and external stakeholder capital. The authors found that knowledge documentation, transfer, creation, and acquisition had a significant effect on intellectual capital, and knowledge transfer and acquisition had a significant effect on social capital. Similarly, knowledge management processes (conversion, acquisition, and application) were found to be significant predictors of social capital [82]. Accordingly, the following hypothesis was proposed:

Hypothesis 5 (H5). *A high degree of KM results in a high degree of SC.*

2.12. Impact of EDP on HC through KM

Examining the mediating role of a variable in the impact of the independent variable on the dependent variable means the mediator is significantly related to both variables. As stated above, previous studies indicated that HR practices have a significant influence on knowledge management [33,64] because practices such as employee training and empowerment enhance employee knowledge. In the same vein, intellectual capital and knowledge management are knowledge-related constructs [35]. Chen and Huang [83] found a positive impact of HR practices (compensation, training, staffing, participation, and performance appraisal) on knowledge management. In research on Spanish companies, Kianto et al. [34] noted that intellectual capital significantly mediated the link between knowledge-based HRM practices such as training and innovation, which means that these practices are positively associated with intellectual capital. Moreover, their results revealed that human capital plays a mediating role between knowledge-based human resource management practices and social and organizational capital. This finding confirms that such practices are related to human capital. It can be seen from the HRM practices described in the literature, particularly employee development practices, that these practices are pivotal to improving knowledge management [72,84–87].

When measuring human resource management by employee retention, career development, and employee training, researchers note a strong correlation between these practices and knowledge management [88]. Knowledge management practices are also crucial for intellectual capital development [89,90]. Specifically, knowledge application influences human capital, organizational capital, and social capital; knowledge documentation influences organizational capital; and knowledge transfer predicts social capital [91]. These results, though indirectly, indicate that there are links between the study variables.

In investigating the mediating effect of employee development practices on human capital through knowledge management using the current data, the following hypothesis was formulated:

Hypothesis 6 (H6). *KM mediates the effect of EDP on HC.*

3. Methodology

3.1. Data Collection

For this study, 250 employees of Jordanian information and communications technology companies were chosen using a convenience sampling technique. Convenience sampling is a non-random method used to meet specific criteria such as participants'

availability at a given time or easy accessibility [92]. Data were collected by a questionnaire developed based on prior works. A total of 500 questionnaires were administered to research subjects, and 464 valid ones were returned for data analysis. The distribution of questionnaires and the response rate are related to the companies' approving the questionnaire, as some companies refused to cooperate.

3.2. Research Model

Figure 1 shows the research model in this study. The model contains four latent variables with seven hypotheses: five direct effects (H1 to H5) and two indirect effects (H6 and H7). To test these hypotheses, IBM® SPSS and AMOS were used.

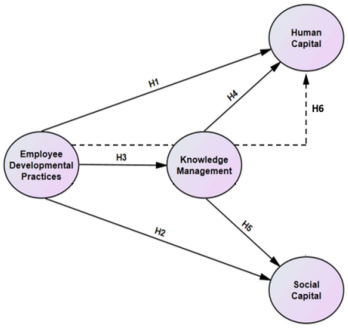

Figure 1. Proposed research model.

3.3. Instrument

The employee development practices were conceptualized in four dimensions: employee training, delegation, involvement in decision-making, and career management [64]. Other researchers have called managers to discuss knowledge-based human resource practices that improved the knowledge management processes in their organizations. Examples of these practices include knowledge-based training, compensation, recruitment, and performance assessment. These study items were integrated for the purpose of this research. That is, 6 items related to employee knowledge-based training and empowerment were used to measure employee development practices. The measurement of knowledge management was based on the sharing, transfer, and application of knowledge using 4 items [93,94]. Human capital was assessed using 4 items related to employee competency and work experience [95]. Social capital is related to internal and external employee relationships, and this variable was evaluated by 4 items [2,26,44]. Items were measured using a five-point Likert scale (1 = strongly disagree; 5 = strongly agree). The initial instrument consisted of 22 items; 6 items were eliminated based on the first run of factor reduction, 3 items on employee development practices and 3 items on knowledge management. The final version of the questionnaire items is given in Table 2.

Table 2. Research variables.

Variable	Code	Items
Employee development practices	EDP1	Employee's training needs are determined based on their prior knowledge
	EDP2	Employees receive training programs to update their knowledge
	EDP3	Employees participate in decision-making process to enrich their knowledge
	EDP4	Employees' careers are developed via acquisition of new knowledge and skills
Knowledge management	KM1	Knowledge is shared in a continuous manner in our organization
	KM2	Knowledge sharing is important for developing employee competencies
	KM3	I have the opportunity to apply the knowledge that I acquire
	KM4	My social relationships are one source of my work-related knowledge
Human capital	HC1	The knowledge I possess is appreciated by my manager
	HC2	I have enough skills to do my job
	HC3	My work experience increased my skills
	HC4	I have already provided innovative ideas to the company

Table 2. *Cont.*

Variable	Code	Items
Social capital	SC1	I have good relations with my co-workers
	SC2	My relationships with others inside and outside the company are based on mutual trust
	SC3	I have good relationships with clients
	SC4	My competencies and skills improve my work relationships

3.4. Validity and Reliability

According to the output of exploratory factor analysis (EFA), the validity and reliability of the study instrument were measured (Table 3). Validity was tested based on convergent and discriminant validity [96,97], and Cronbach's α and McDonald's ω were used to examine reliability with SPSS Ver. (26) and JSAP software Ver. (0.16.3), respectively [98,99]. Gerbing and Anderson [97] indicated that a standardized factor loading (SFL) greater than 0.5 with a significance level is evidence of convergent validity acceptance. Discriminant validity was measured using the square root of the average variance extracted (AVE) [58,100]. These square roots (shown in bold in Table 3) should be greater than the inter-variable correlations [101].

Table 3. Validity and reliability results.

Variable	Items	Descriptive		Validity				Reliability	
		Mean	SD	SFL	1	2	3	4	α	ω
EDP	EDP1	2.99	0.64	0.651	(0.67)				0.715	0.721
	EDP2			0.544						
	EDP3			0.728						
	EDP4			0.757						
KM	KM1	3.29	0.63	0.721	0.590 *	(0.71)			0.753	0.763
	KM2			0.794						
	KM3			0.729						
	KM4			0.564						
HC	HC1	3.09	0.67	0.692	0.509 *	0.619 *	(0.74)		0.834	0.836
	HC2			0.727						
	HC3			0.749						
	HC4			0.772						
SC	SC1	3.49	0.58	0.787	0.411 *	0.465 *	0.624 *	(0.68)	0.701	0.704
	SC2			0.707						
	SC3			0.563						
	SC4			0.657						

* α = 0.05.

The results in Table 3 confirm that reliability and validity criteria were met: all standardized factor loadings were higher than 0.5, square roots of AVE were greater than the correlations between each pair of related variables, and Cronbach's α and McDonald's ω were greater than 0.70 [102].

4. Results

4.1. Research Measurement Model

Confirmatory factor analysis (CFA) was used to confirm the results of exploratory factor analysis. Figure 2 shows the measurement model tested by CFA, which was constructed based on the results of EFA. In terms of model fit, eight goodness-of-fit indices were used, as shown in Table 4.

The results in Table 4 confirm the measurement model fits the current data well. All values of goodness-of-fit indices were within the intended criteria except AGFI, which was close to 0.90 [103–108].

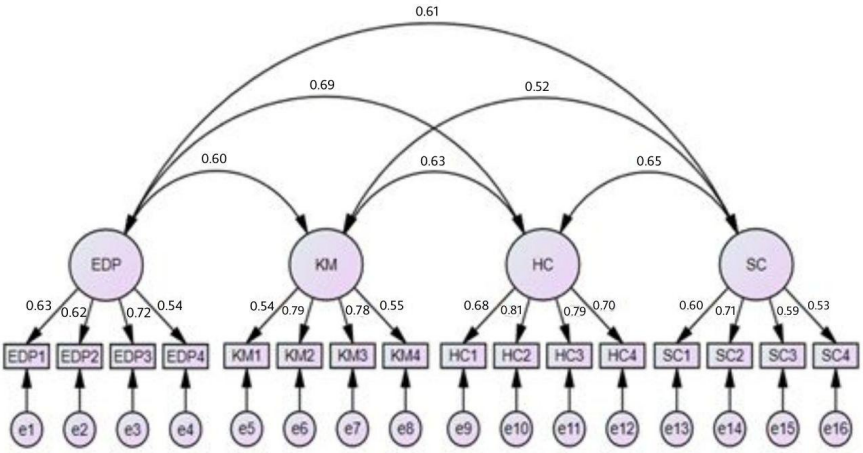

Figure 2. Research measurement model.

Table 4. Summary of model fit.

Index	Value	Threshold
Chi-square ratio (CMIN/DF)	1.546	>3.00
Root mean square residual (RMR)	0.036	<0.10
Goodness of fit index (GFI)	0.919	>0.90
Adjusted goodness of fit index (AGFI)	0.887	>0.90
Parsimonious goodness-of-fit index (PGFI)	0.662	>0.50
Comparative fit index (CFI)	0.951	>0.90
Tucker–Lewis index (TLI)	0.940	>0.90
Root mean square error of approximation (RMSEA)	0.051	<0.08

4.2. Research Structural Model

The structural model, shown in Figure 3, was found to be a good fit for the data (CMIN/DF = 1.62 < 3; GFI = 0.915 > 0.90; CFI = 0.994 > 0.90 and 0.54 < 0.08). Concerning hypothesis testing, the results indicate that six of the seven hypotheses were supported, as detailed in Table 4. Employee development practices were found to have significant direct effects on human capital (ß = 0.736, $p = 0.007$), knowledge management (ß = 0.605, $p = 0.007$), and social capital (ß = 0.660, $p = 0.007$). Additionally, knowledge management was found to have a significant effect on human capital (ß = 0.304, $p = 0.045$).

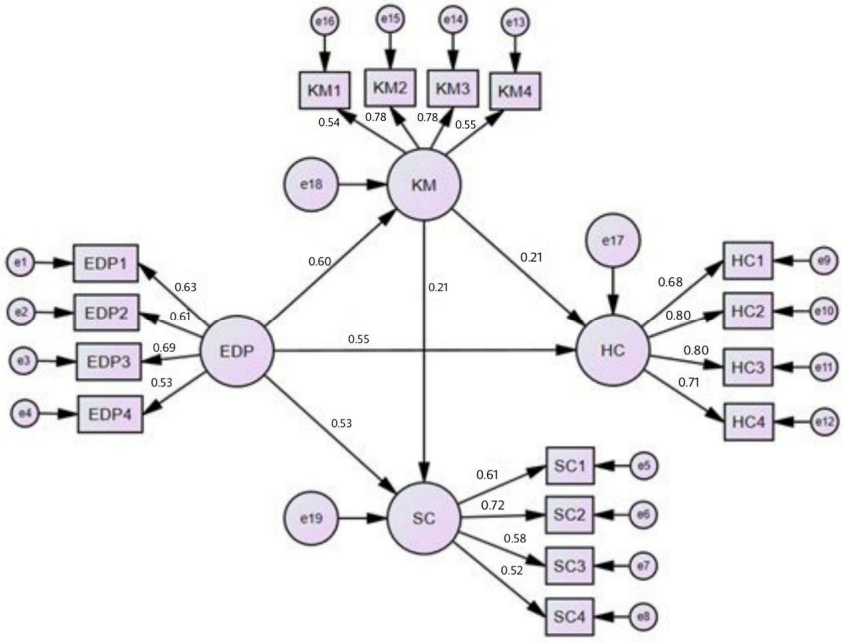

Figure 3. Research structural model.

In relation to indirect effects in the model (Table 5), it was found that employee development practices had a significant indirect impact on human capital (ß = 0.660, p = 0.045), thus establishing a mediating role in the impact of employee developmental practices on human capital.

Table 5. Structural model.

Default Path				Total Impact		Direct Impact		Indirect Impact	
				ß *	p **	ß *	p **	ß *	p **
H1	EDP	→	HC	0.736	0.007	0.553	0.007	0.184	0.045
H2	EDP	→	SC	0.660	0.007	0.532	0.007		
H3	EDP	→	KM	0.605	0.007	0.605	0.007	-	-
H4	KM	→	HC	0.304	0.045	0.304	0.045	-	-
H5	KM	→	SC	0.212	0.200	0.212	0.200	-	-

* Standardized effects. ** α = 0.05.

5. Discussion

The results indicate a significant influence of employee development practices (knowledge-based training and empowerment) on human capital. These practices are crucial for the development of employee competency, which in turn boosts organizational competency [109]. Knowledge-based development and training refers to activities by which an employee is prepared to acquire general knowledge and expertise [34] and to accomplish specific tasks in conjunction with continuous personal development. Cabello-Medina et al. [64] found a positive correlation between HRM practices, including employee selection based on competencies and skills and employee empowerment, and human capital enhancement. Researchers have noted a significant effect of skill-enhancing HR practices such as employee training and development on human capital [63]. Other researchers have also reported that employee development and training can enhance human capital [1,2].

It is suggested that organizations spend more of their resources on improving their ability to innovate. This will help companies perform better. The process of innovation requires a lot of knowledge, experience, intelligence, and education from the human resources or human capital perspective. In general, human capital is viewed as the most important basic knowledge asset in organizations. An organization will excel in innovation if it has a good understanding of how to develop creativity in its human capital [110].

The hypothesis in this research that a high degree of employee development practices results in a high degree of social capital was supported, in agreement with some previous studies. Kianto et al. [34] described the impact of knowledge-based HRM practices on social and structural capital in the presence of human capital as a mediating variable. Researchers indicated that HRM practices such as employee staffing, training, and empowerment are positively related to social capital, since such practices increase employee interactions and knowledge sharing [70]. Moreover, social capital represents internal and external employee relationships [2], which require that employees have the knowledge that qualifies them to deal with customers, suppliers, and stakeholders as well as self-management ability [37,44].

In this research, employee developmental practices were found to trigger knowledge management. This result agrees with some earlier studies. Al-Tit [33] noted a significant impact of HRM practices such as employee training on knowledge management. Gardner et al. [32] regarded employee training and development as activities that pave the way for employees to acquire new knowledge. Generally stated, employee knowledge, skills, and abilities can be enhanced through HRM practices such as employee training and development [111,112]. Indirectly, several studies on employee development and training and employee performance [113–115] indicated that employee training and development represent key sources of employee knowledge.

Training adds value to employees' skills and enhances their innovation; it is considered the most important way to retain and motivate employees. Therefore, organizations invest

a lot of time and money in training their employees on environmental issues and providing them with the knowledge and skills to enable them to contribute to these issues [116].

The influence of knowledge management on human capital is significant, according to the results of this research. Similarly, Daud et al. [117] showed that knowledge management is linked to human capital. For organizations to achieve success, knowledge management and human capital strategy should be linked [118]. Ramadan et al. [51] pointed out that knowledge of documentation, acquisition, transfer, and creation, on intellectual capital as assessed by human capital, customer capital, external capital, and organizational capital. Furthermore, intellectual capital dimensions (structural, customer, and human capital) are regarded as components of knowledge management initiatives [89]. In research by Hsu [119], the hypothesis that knowledge sharing is associated with human capital as measured by employee competency was accepted. According to some authors [75,120], a key benefit of knowledge management practices is that they enhance human capital. Innovation and knowledge have been recognized as the basis for economic competitiveness and growth. With the advent of the knowledge economy, intellectual capital has become one of the most valuable sources of proactive activity [62].

On the other hand, the findings of the current study show that knowledge management does not have an influence on social capital. Although few studies have examined the correlation between knowledge management and social capital, some studies have shown a significant effect of knowledge management practices on social capital. Ramadan et al. [51] showed that there was a significant effect of knowledge management practices on customer capital, human capital, organizational capital, and external capital. Here, customer capital and external capital are considered as social capital. In contrast, another study [121] found a significant relationship between social capital and knowledge management practices such as knowledge integration.

The current results reveal that knowledge management mediates the influence of employee developmental practices on human capital. This result is logical according to the availability of the three conditions for the variable to play a mediating role in the relationship between the independent and dependent variables. Statistically, the results indicate that employee development practices have a significant impact on both knowledge management and the independent variable, human capital, and knowledge management also has a significant influence on human capital. Theoretically, employee development and training should encourage human capital [1,2,34,63,64] and knowledge management practices [32,111–115]. Moreover, knowledge management practices should boost human capital [51,75,89,117–120].

6. Conclusions

The aim of this study was to test the impact of employee development practices (knowledge-based training and empowerment) on human capital (employee competencies and work experiences) and social capital (employees' internal and external relationships) through knowledge management (knowledge sharing and application). The results show that knowledge management significantly mediates the impact of employee development practices on human capital. Therefore, we can conclude that knowledge-based employee development practices are pivotal for human capital development.

7. Limitations and Research Implications

7.1. Limitations

A key limitation of this study has to do with the measures used to assess the research constructs. Employee development practices were measured using two dimensions: knowledge-based training and knowledge-based empowerment. Knowledge management practices were evaluated based on knowledge application and sharing, and intellectual capital was measured by social and human capital. It should be noted that all of these constructs were appraised as a whole construct. In addition, seven hypotheses were considered in this research to test the mediating role of knowledge management practices in the effect

of employee development practices on social and human capital. However, the influence of human capital on social capital was not tested. Finally, the research was conducted using a sample of employees working at information and communications technology companies. Accordingly, further research applications are suggested in the following section.

7.2. Implications

Based on the conclusions, two major implications can be stated. First, organizations that seek to develop their human capital should adopt knowledge-based employee development practices such as employee training and empowerment instead of traditional practices. The reason is that knowledge-based practices are more appropriate, as the ultimate goal of the organization is to develop its human capital, which represents employees' knowledge, capabilities, and skills. Second, intellectual capital development must treat intellectual capital as a multidimensional variable. This means using appropriate approaches to develop each dimension, because the approach that is appropriate for improving human capital may not be appropriate for enhancing social capital.

Organizations should increase their focus on two important dimensions of strategic human resource management, knowledge management and intellectual capital development, if they seek to develop their intellectual capital toward achieving organizational goals. The literature refers to human capital as a key source of positive organizational outcomes. In the current study, knowledge-based employee development practices as a package represented a major antecedent of knowledge management, which is a crucial component of human capital development. Inappropriate knowledge management strategies or ignorance of knowledge management consequences were considered in previous studies [122,123] as two reasons for knowledge management system failure. Therefore, organizations should consider these issues.

Researchers are called upon to investigate the influence of knowledge management practices on social capital. In the current study, we found that knowledge management had no significant effect on social capital and explored the most critical factors required for social development to fill the research gap on this topic. In a recent study based on a theoretical inquiry, the researchers indicated that employee knowledge sharing, as one dimension of high-performance HR practices, is linked to intellectual capital development [124]. According to the findings of the current study, researchers should conduct empirical studies on the impact of knowledge management practices on social capital to generalize the findings. In terms of the instruments used to assess variables, the hypotheses, and the sample size, future studies should use other dimensions to measure variables and test other hypotheses, such as the influence of human capital on social capital, using the same conceptual model in this research. Finally, larger samples from different industries could be used to examine the same effects.

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