

# COMBINED EFFECT OF GREEN INTELLECTUAL CAPITAL AND KNOWLEDGE MANAGEMENT MATURITY ON KNOWLEDGE PERFORMANCE ANALYTICAL STUDY OF OPINIONS OF A SAMPLE OF EMPLOYEES OF PUBLIC COMPANY FOR TELECOMMUNICATIONS AND INFORMATICS-DIWANIYAH BRANCH

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## ABSTRACT

*The goal of the present study is to highlight maturity of knowledge management in its dimensions (workers, processes, technology, skills) and the importance of green intellectual capital in its aspects (green human capital, green structural capital and green relational capital) in knowledge performance.*

*Current studying attempted to answer a set of questions that embodied studying problem, perhaps most important of which is its dimensions affecting performance of knowledge, green intellectual capital or maturity of knowledge management in General Company for Telecommunications and Informatics, Diwaniyah branch, To achieve goal of studying, two main hypotheses were formulated, from which several sub-hypotheses were branched out, using descriptive analytical approach, By using SPSS vr.24 software, AMOS vr 24, And EXCEL program, need to consolidate joint effect between green intellectual capital and maturity of knowledge management in order to ensure continuity of improving knowledge management in studying company.*

**Keywords:** Green Intellectual Capital, Knowledge Management Maturity, Knowledge Performance, Green Human Capital, Green Relational Capital, Structural Capital Green, Operations, Technology, Skill

## INTRODUCTION

Green Intellectual Capital: Intellectual capital is known to be the sum of all intangible organizational resources, knowledge and abilities, information, technologies, intellectual property, experience and organizational education, skills, communication systems, working teams and customer and brands relationships capable of creating competitive values or benefits for the attainment of their main objectives (Salvadó & Verde, 2014), Employees like to work in order to fulfill the goals and expectations of the company (Leonova et al., 2021), Intellectual money funds represent a combination of four factors: genetic factors, education, experience, and attitudes towards life and business (Liu, 2010).

In general, intellectual capital consists of three basic categories: human, structural and relational. Human capital is the accumulated tacit knowledge of any organization's personnel. Structural capital offers a tool for supporting people to improve work performance and organizational performance in general (Liu, 2010). Relational capital is relationship shares, in

which organization can cooperate or communicate with companies, institutions and studying centers. And other clients, with strong levels of understanding, trust, relationship and cooperation (Chen, 2008), Green management became a major administrative goal for many organizations, because of its relevance in conserving the environment. A resource-based vision is based on the fact that organizations' competitive benefits stem from their main resources and capabilities, and that social and environmental responsibility can be a major capability that leads to a competitive advantage in their strategy and that sustainable capacity should be considered. Green management may therefore be an essential part of its type (Chang & Chen, 2012).

Here, Green management businesses can modify their competitive positions to get a competitive market advantage in terms of environmental consciousness. If green management is embraced, businesses might be forced to produce green goods or processes. Rather, it may generate high obstacles to market entry and, according to the institutional theory, it can help to get the support from other institutions and players who can get greater legitimacy. Stakeholder Theory (Chen & Chang, 2012) Here it is necessary to know that green management was defined in 2009 as a process by which organization manages environment by developing strategies based on green intellectual capital. (Sudin, 2011), Despite its significance, definitions of green intellectual capital or environmental intellectual capital are rare. A sum of all sorts of intangible goods, knowledge, capacity, relationships and so on at the individual and organizational levels on environmental preservation or green innovation to obtain a competitive edge by controlling the environment.

He sees it as an expression concepts of employment of environmental in intellectual capital to compensate for its aspects Previous deficiencies in environmental issues, It represents intangible assets of organization (Huang & Kung, 2011, 1407), which are environmental protection understanding, knowledge, capability, expertise and creativity (Verde & Salvadó, 2014, 263), refers to organization's ability to generate new knowledge, new product and any innovative ideas aimed at addressing environmental issues (Yahya & Arshad, 2015).

Studying believes that it is environmental awareness of organization that leads it to adopt green management in all its activities and invest in its intangible assets in order to achieve creativity or green innovation, which leads to preservation of environment

## **LITERATURE REVIEW AND HYPOTHESES**

Dimensions of Green Intellectual Capital: According to studyinger's perusal of a number of studyinges and studies interested in measuring intellectual capital Green, it has come to existence of a single measure pertaining to Chen, 2008 which consists of three dimensions: green human capital, green structural capital, and green relational capital. This scale has been used by a number of studyingers such as: Kung & Huang (2011); Yahya & Arshad (2015); Sultana & Zayed (2018); Verde & Salvadó (2014); Chang & Chen (2012). Thus studyingers have sufficient scientific justification to use this scale in Current search. Following is an explanation of dimensions of green intellectual money variables as follows.

### **Green Human Capital**

Human capital in general is Human Resource approach of motivation firmly advocates the notion of job satisfaction with a view to ensuring higher productivity of the employees (Murad et al., 2013), represented by all human resources with distinguished capabilities to occupy administrative and technical positions, which have innovative and superior creativity capabilities. These include employees' advanced knowledge, accumulated experience of life and practical experience, and their technical and artistic skills. As well as their satisfaction, morale and cohesion as an integrated team, as for green human capital, it is a collection of employees' knowledge, skills, abilities, experiences, attitudes, wisdom, creativity, commitments, etc. related to environmental protection or green innovation (Chen & Chang, 2012).

Finally, most of previous studies concluded that green human capital can be formed from: Non-personnel working in organizations, and can be developed through training and education: 2008, (Chen, 2008) Here, role of green human resources management appears in directing attention and behavior of employees towards achieving sustainability goals (Huang & Kung, 2011).

**Green Structural Capital:** Environmental management and culture are a key part in formulation and implementation of environmental strategies to search for new opportunities or to obtain new competitive advantages. This calls for formation of a new concept known as "green structural capital", which is defined as cod stock. Corporate services, corporate duties, knowledge management systems, corporate culture, business photographs, patents, intellectual property rights and trademarks as well as environmental protection or green innovation inside the corporation; (Chen & Chang, 2012), It should be noted here, that structural capital consists of several systems, for example: patents, innovation and discovery, copyright, trademarks, databases and information systems.

**Relational green capital:** It represents the aggregate of links between the company and its key stakeholders, such as customers, suppliers and partners. In light of green trends, firms should invest more resources in developing their environmental interests-relating connections in a way that allows them to retain closer ties with their external institutions and stakeholders. In this context, he created an organization-associated notion of relational green capital which is described as the inventory of interactive business interactions with customer, supplier, network members and partners, with links to the environmental management and green innovation of organization (Chen & Chang, 2012).

It consists of several parts related to customer satisfaction, meeting his needs and desires (loyalty), adherence and pride. By dealing with organization (and keeping it) continuity of working with organization and its ability to keep it with it) and empowering it by paying attention to his opinions and suggestions and taking them into consideration when planning new and existing products and deleting some of them when their market share decreases and their involvement in organization's business and business deals and exchange of information and ideas with him. Studies show that green intellectual capital of an organization and its various intellectual components affect creativity capabilities, and in same way, organizations that manage their environmental capital appropriately adapt better to new reality that emerges from challenge of sustainable development, Limited studies have been conducted that attempted to analyze intangible green factors that underpin strategies of green organizations or engines of green intellectual capital. However, despite this recent interest in internal factors, few studies have proven in practice, that contributes to developing sustainable strategies. However, number of invested resources in environmental management will increase green creativity of organizations (Salvadó & Verde, 2014).

If environmental concerns are regarded from a positive perspective, organizations tend to focus on stakeholder interests and exhibit more sophisticated environmental plans, including greater resources within green intellectual capital (Kung & Huang, 2008).

### **Knowledge Management Maturity**

There is a small number of literature related to maturity of knowledge management in universities, and assessing knowledge management maturity in governmental and private organizations is important to determine current status of knowledge management and how it can improve knowledge management fields, according to previous studies, use of knowledge and knowledge management has become a crucial condition for continuation of life of dynamic organizations. And creativity, that ability to compete in markets and transactions is related to acquisition, development and implementation of individual and organizational knowledge, and below we will deal with concept of maturity of knowledge management according to opinions of a number of studyings:

Knowledge management describes it as state of development and improves the quality and efficiency of management of knowledge and the adequacy of social and technical environments for organizational knowledge management (Ramo&Noon, 2018; wibowoa&waluyob, 2015) see it as path in which knowledge management practices are developed and improved to bring organization to highest stage of maturity, which is creativity and excellence that enables it to develop and improve its knowledge (Ramo&Noon, 2018), It is effectiveness in managing knowledge assets in organizations (Silva, 2019). While Mikovie (2019) knows her It is a description of organization's position when it comes to knowledge management and what can be improved in order to be able to compete in market (Mikovie, 2019), There are those who know it as organization's ability to gain a sustainable competitive advantage by effectively managing scarce and valuable knowledge assets (Harono et al., 2019).

Dimensions of Knowledge Management Maturity: study (Hartono et al., 2019) and study (Kuriakose et al., 2011) dimensions have been relied upon to meet requirements of current studying, which are:

### **Individuals**

The most essential components in the organization are the human resources and knowledge, which contribute to its competitiveness. Organizations must pay attention to human aspects in order to make the most use of their expertise by organizations. Institutions increasingly want to increase their members' commitment on the basis of different advantages linked to enhancing people's performance and better performance by means of emotional commitment. And promote knowledge use, minimize the turnover of work and boost the transfer rate of knowledge (Razzaq et al., 2018).

### **Operation**

Process relates to aspects related to knowledge management activities that help organization generate, discover, capture, share and apply knowledge, and branching process spreads it among employees and works to transfer expertise and information and its management, work procedures and strategic planning in organization (Hussink et al., 2017), It also means acquiring, understanding, storing, implementing and sharing knowledge in organizational learning process that relates to strategies and culture of organization, and it is a complete systematic management strategy that distributes, transfers, develops, implements and stores knowledge in order to be able to increase efficiency and effectiveness of individuals working in organization (Gholami, 2013).

### **Skill**

Non-Knowledge skills such as social skills play an important part in economic life and social abilities in the job market are increasingly valued. Human management abilities minimize the attrition of employees, especially attrition that company wants to avoid as well as organizational rewards, and they affect positively across hierarchical levels and countries. And professions, which provides an accurate quantitative estimate of administrative differences within a diversified organization (Hoffman&Tadeliis, 2020).

### **Knowledge Performance**

In a knowledge-based economy, in particular in high technology businesses that rely heavily on knowledge, know-how performance is typically important (Shoid&Kassim, 2016), Knowledge performance embodies creativity and future profit potential of organization (Watkins, 2017). Knowledge performance is a measure of the knowledge-building condition and

the ability to improve creativity inside a company (Ortega et al., 2010). Gunjal(2019) indicated that human capital is most important indicator of future economic health in any organization, Knowledge performance relates to ability of individuals, teams, and organizations to understand what they have learned(Shoid et al., 2011).

Stated that traditions, culture, technology, processes, systems and procedures of any organization are always based on knowledge and experience (Lee et al., 2005). It shows (Pour et al., 2018), Sustainable knowledge is split into 4 subsystems, among which acquisition, creativity, storage and transport. The knowledge performance pertains to a person and a team and an organization's capacity to grasp what they learnt (Shoid&Kassim,2014).

Indicated that it is creation and promotion of products and services due to ability of learning and knowledge (Kim, 2016), through main indicators of intellectual capital. Knowledge performance is outcome of knowledge management and describes its outcomes (Ebrahimi et al., 2020). Santiago(2020) adds that knowledge performance is knowledge generated within organization (as a result of learning, information distribution, integration, etc.), while it is used to create new products that improve competitive position of organization.

Importance of knowledge performance: the performance of knowledge depends on the organizational culture of a firm, which can benefit from stress reduction and motivation and empowerment of employees. The positive attitude to errors is facilitated by improving exchange of information and learning from errors (Shoid&Kassim, 2014). Employees are paid as a reward for the organization's performances and contribution, and the pay methods are extensively used to promote employee morals and motivate them more (Nahar&Zayed, 2019).

It is necessary to note that knowledge performance means more than just developing a new product. Measuring knowledge performance is critical for organization to verify whether knowledge management processes are achieving adequate results and to correct methods used when performance is low (Santiago, 2020; Shoid&Kassim, 2016).

## **Dimensional Knowledge Performance**

### **Formalization**

The term officialisation refers to the extent to which formal rules, standard policies and procedures regulate decision making and working interactions, which restricts knowledge production by regulating the chances of organizational members of communicating and interacting with one another (Shoid et al., 2011). Show (Shoid&Kassim, 2016) Higher flexibility and informal behavior can lead to increased knowledge building inside the organizational structure. Formalization and Organizational Routine, (Ortega et al., 2010) show that two notions are comparable. Implicit knowledge is explicit and codified through formalization.

### **Centralization**

Day after day, globalization means that the market is becoming competitive every day. Business needs more skilled and inventive individuals in its organization to meet this competition and changing people's desire (Tumpa&Zayed, 2016), A low degree of centralization can complement and improve the performance of knowledge that may arise through formalism and complexity (Shoid et al., 2011). While decentralization of decision-making is caused by the allocation of authority across the various structural elements (Shoid&Kassim, 2016), decentralization encourages the involvement in strategic thought of a larger number of persons and the level of organization. This can help create knowledge, since other people take part in decision making and more variety, and the quantity of ideas and these ideas will probably be vital. Decentralization into lower levels of organisation. To improve the performance of knowledge (Ortega et al., 2010).

## Complexity

Refers to the level of differentiation within the company (Shoid et al., 2011). Ortega, et al.,(2010) indicated that organizational complexity enhances formulation of proposals to generate new knowledge and their implementation for several reasons:

- A. High degrees of complexity are based on a variety of experiences (knowledge heterogeneity) that can lead to a wide range of issues and information and knowledge available on how to solve difficulties.
- B. Complexity includes diverse interests that might encourage new suggestions, as different professional groups, departments and classes strive to strengthen or defend the status of different professionals in companies.
- C. Structural complexity is made feasible by the official or informal attribution of unique tasks, and may frequently necessitate modifications in organizational activities for certain roles and subunits. This enables institutional complexity to offer the variation necessary to generate knowledge, while at the same time facilitating internal uniformity between departments and units to improve the performance of knowledge.

Researcher adopted one-dimensional (Pertusa& Ortega,2010) scale for its applicability in studied company and its suitability for requirements of its practical reality.

## METHOD

### Studying Problem

Studying problem is summarized in raising following questions:

- 1) What is nature of relationship between green intellectual capital in knowledge performance in General Company for Telecommunications and Informatics, Diwaniyah branch?
- 2) What is nature of relationship between knowledge management maturity and knowledge performance in General Company for Telecommunications and Informatics, Diwaniyah Branch?
- 3) Which one is working on influencing knowledge performance, green intellectual capital or maturity of knowledge management in public company and information and informatics branch of bureau?
- 4) What is impact of dimensions of green intellectual capital and maturity of knowledge management on Knowledge performance?

### Importance of Studying

Importance of studying can be summarized as follows:

- 1) Importance of studying lies in dealing with variables characterized by modernity and linked between them and applied in General Company for Telecommunications and Informatics - Diwaniyah branch, where studying is sought to identify factors driving relationship between green intellectual capital and maturity of knowledge management and employing them to improve knowledge performance.
- 2) Telecommunications service has become a basic necessity whose importance increases with increase in needs and expectations of customer, but has become more influenced by green intellectual capital and maturity of knowledge management, by using dimensions of independent variables and then its effect on independent variable on Knowledge performance in Telecommunications and Informatics Company, Diwaniyah branch.
- 3) studying is sought to verify objectivity of relationship between green intellectual capital and maturity of knowledge management and extent of their influence on knowledge process, and try to add objective and

Knowledge efforts and to contemplatelinks and results of their effects on Knowledge performance and add qualitative and practical imprints through this studying.

### Objectivesof Studying

Studying mainly deals with determining impact of green intellectual capital and maturity of knowledge management on Knowledge performance in General Company for Telecommunications and Informatics, Diwaniyah Branch, and following sub-goals emerge from them:

- 1) Analyzing level of green intellectual capital and maturity of knowledge management in General Company for Telecommunications and Informatics, Diwaniyah Branch.
- 2) Analyzing level of Knowledge performance in General Company for Telecommunications and Informatics, Diwaniyah Branch.
- 3) Determineinfluence of green intellectual capital andmaturity of knowledge management inGeneral Company for Telecommunications and Informatics, Diwaniyah Branch
- 4) Analyzing level of Knowledge performance in General Company for Telecommunications and Informatics, Diwaniyah Branch.
- 5) Examination of level of Knowledge performance of studying sample in General Company for Telecommunications and Informatics, Diwaniyah Branch.
- 6) Enriching theoretical and field frameworks through this studying to benefit studyingers and practitioners in field of knowledge management.

### Studying Hypotheses

#### First Major Hypothesis

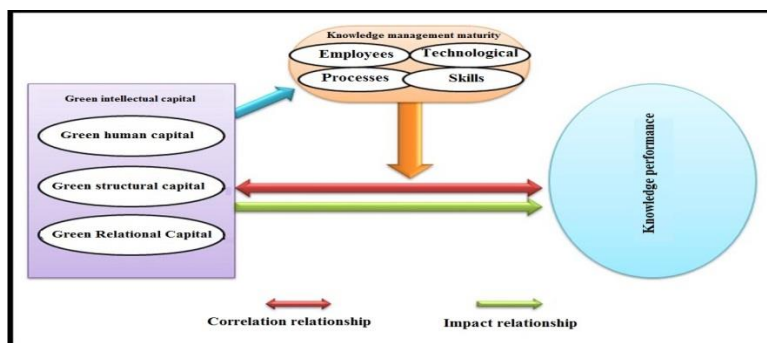
The correlation between green human capital and knowledge performance is statistically significant and influences the following sub-hypotheses apply:

- The correlation between green human capital and knowledge performance exists statistically significantly.
- The correlation between green structural capital and knowledge performance is statistically relevant.
- The correlation between relational green money capital and performance of knowledge exists statistically significantly.
- second main hypothesis: The link between maturity and knowledge performance is statistically significant and influences the sub-hypotheses resulting from it:
- There is a statistically significant correlation and influence relationship between workers and Knowledge performance.

There is a statistically significant correlation and influence relationship between processes and Knowledge performance.

There is a statistically significant correlation and influence between technology and Knowledge performance.

There is a statistically significant correlation and influence relationship between skill and Knowledge performance, (see Figure 1 for our model)



## FIGURE 1 HYPOTHETICAL MODEL OF STUDY

Source: Prepared by researcher based on previous literature

### RESULTS

#### Coding and Description of Variables

It is advisable, before starting to enter data and subject it to analysis, to express it with a set of symbols expressing it in order to create a clear perception for reader about variables included in analysis, and to clarify results reached by studying easily and easily, and accordingly Table (1) shows description and coding of variables and dimensions of studying entering in analysis.

<b>Table 1 CHARACTERIZATION AND CODING OF VARIABLES</b>			
<b>Variable</b>	<b>Dimensions</b>	<b>P</b>	<b>Code</b>
Green intellectual capital (XA)	Green human capital	5	XAA
	Structural capital green	6	XAB
	Green Relational Capital	3	XAC
Knowledge management (XB) maturity	Workers	5	XBA
	Operations	5	XBB
	Technology	5	XBC
	Skill	5	XBD
Knowledge performance (YY)	One-dimensional	6	YY

Source: Prepared by researcher based on previous literature

#### Analyzing Normal Distribution of Studying Data

Table (2) results show that the significant value of the Klumgrove – Smirnov and Shapiro – Willick tests are higher than (0.05), and that data follow normal distribution, meaning that no hypotheses have been disclosed, and that alternative hypotheses have been accepted, assuming data derived from the study community follow natural distribution.

<b>Table 2 NORMAL DISTRIBUTION OF VARIABLES AND DIMENSIONS OF STUDY</b>		
<b>Variables</b>	<b>Kolmogorov-Smirnov<sup>a</sup></b>	<b>Shapiro-Wilk</b>
Green human capital	0.141	0.956
Structural capital is green	0.251	0.867
Green Relational Capital	0.340	0.792
Green intellectual capital	0.196	0.798
Workers	0.229	0.888
Operations	0.189	0.872
Technology	0.152	0.904
Skill	0.244	0.820
Knowledge management maturity	0.160	0.875
Knowledge performance	0.307	0.673
	Sig.= P > 0.05	Df= 135

Source: Prepared by researcher based on outputs (SPSS vr.24)

#### Stability of Measuring Instrument



Reliability refers to research scale consistency, scales stability, which may be achieved over time and structural stability is checked by applying Cronbach alpha test, with a significant value above (75%) and Table (3) showing the Cronbach alpha coefficient of the variables included in the analysis.

<b>Variable</b>	<b>Cronbach Alpha for Variable</b>	<b>Dimensions</b>	<b>P</b>	<b>Cronbach Alpha for Every Dimension</b>
Green intellectual capital	0.788	Green human capital	5	0.806
		Structural capital green	6	0.757
		Green Relational Capital	3	0.755
Knowledge management maturity	0.772	Workers	5	0.764
		Operations	5	0.772
		Technology	5	0.809
		Skill	5	0.817
Knowledge performance	0.792	One-dimensional	6	0.792

Source: Prepared by researcher based on outputs (SPSS vr.24)

The results of Table (3) for variables included in analysis related to Cronbach alpha coefficients indicates that all the values range from their reliability coefficients (0.755-0.817) and shows that the measuring tool has a relatively high reliability and stability which satisfies the requirements and opinions of the sample under examination..

## **Descriptive Statistics**

### **Green Intellectual Capital Variable**

Table (4) data reveal that, with the standard deviation (0.251) and relative relevance of 86%, the general average green intellectual capital variable arithmetic mean reached (4.3) and indicating that the green capital ratio contributed to enrichment of that variable. Of increasing its ability with a standard deviation of (0.362) and an arithmetical mean by (4.49) and an agreement ratio of (90%), While the green structural capital dimension came to second with an arithmetic mean of (4.33) and a standard difference of (0.321) and a relative relevance of (0.321). (87 percent), with an arithmetical mean (4.09) of (0.442), and relative importance (82 percent), the last Green Humans' Dimension indicates that the studied company needs to develop its capabilities. In order to further improve the job functions, it requires an improvement in its skills, capacities and characteristic skills.

<b>NO</b>	<b>Mean</b>	<b>SD</b>	<b>Relative Importance%</b>	<b>Rank of Importance</b>
XAA1	3.56	1.041	71%	5
XAA2	4.12	1.191	82%	4
XAA3	4.13	0.667	83%	3
XAA4	4.41	0.638	88%	1
XAA5	4.22	0.569	84%	2
XAA	4.09	0.442	82%	Third
XAB1	4.39	0.587	88%	3
XAB2	4.46	0.655	89%	2
XAB3	4.47	0.53	89%	1

XAB4	3.99	0.686	80%	6
XAB5	4.38	0.487	88%	4
XAB6	4.3	0.811	86%	5
XAB	4.33	0.321	87%	Second
XAC1	4.56	0.528	91%	2
XAC2	4.79	0.616	96%	1
XAC3	4.13	0.685	83%	3
XAC	4.49	0.362	90%	first
XA	4.3	0.251	86%	***

Source: Prepared by researcher based on outputs (SPSS vr.24)

### Knowledge Management Maturity Variable

Results of Table (5) show that general average of arithmetic mean of knowledge management maturity variable reached (4.25) with a standard deviation of (0.183) and a relative importance equal to (85%), and this indicates that dimension of workers contributed to enrichment of this variable by enhancing their capabilities. With an arithmetic mean of (4.31), a standard deviation equal to (0.223) and an agreement rate of (86%), while dimension of operations came in second place with an arithmetic mean of (4.27) and a standard deviation of (0.285) and a relative importance of (85%), while technology dimension came in last place with an arithmetic mean of (4.19), a standard deviation of (0.44) and a relative importance of (84%), which indicates need for studied company to develop its technological capabilities in a way that keeps pace with contemporary environmental changes.

NO	Mean	SD	Relative Importance%	Rank of Importance
XBA1	4.47	0.689	89%	1
XBA2	4.16	0.601	83%	5
XBA3	4.24	0.431	85%	4
XBA4	4.33	0.546	87%	3
XBA5	4.36	0.617	87%	2
XBA	4.31	0.223	86%	first
XBB1	4.71	0.502	94%	1
XBB2	4.03	0.422	81%	4
XBB3	4.34	0.735	87%	2
XBB4	4.27	0.908	85%	3
XBB5	4	1.045	80%	5
XBB	4.27	0.285	85%	Second
XBC1	4.11	0.435	82%	4
XBC2	4.17	0.54	83%	3
XBC3	4.3	0.477	86%	2
XBC4	4.36	0.779	87%	1
XBC5	4.02	1.047	80%	5
XBC	4.19	0.44	84%	fourth
XBD1	4.33	0.914	87%	2

XBD2	4.21	0.442	84%	3
XBD3	4.03	0.503	81%	5
XBD4	4.44	0.779	89%	1
XBD5	4.17	0.708	83%	4
XBD	4.24	0.42	85%	Third
XB	4.25	0.183	85%	***

Source: Prepared by researcher based on outputs (SPSS vr.24)

### Knowledge Performance Variable

Results of Table (6) show that general average of arithmetic means of variable of knowledge performance reached (4.38) with a standard deviation of (0.406) and a relative importance equal to (88%), and this indicates that sixth paragraph contributed to enriching this variable by enhancing its capabilities with an average An arithmetic of (4.56) and a standard deviation equal to (0.606) and an agreement rate of (91%), while third paragraph came in last place with an arithmetic mean of (4.15) and a standard deviation of (0.697) and a relative importance of its value (83%), which indicates need for studied company to develop its capabilities, and this matter requires improving skills, capabilities and characteristics in order to develop and improve performance of job tasks.

NO	Mean	SD	Relative Importance%	Rank of Importance
YY1	4.37	0.583	87%	4
YY2	4.26	0.68	85%	5
YY3	4.15	0.697	83%	6
YY4	4.53	0.633	91%	2
YY5	4.41	1.06	88%	3
YY6	4.56	0.606	91%	1
YY	4.38	0.406	88%	

Source: Prepared by researcher based on outputs (SPSS vr.24)

### Hypothesis Testing

#### Correlation Hypotheses

This paragraph concerns the measurement of the link between the first independent variable of green intellectual capital, the maturity of the management of information as a second independent variable, and the performance and dimensions of the knowledge as a dependent variable. Table (7) therefore provides the correspondence matrix between research variables.

**Table 7**  
**MATRIX OF CORRELATION BETWEEN STUDY VARIABLES**

	Green Human Capital	Green Structural Capital	Green Relational Capital	Green Intellectual Capital	Workers <sup>1</sup>	Operations	Technology <sup>1</sup>	Skill	Knowledge management	Knowledge performance
<b>Green Human Capital</b>	1									
<b>Green Structural Capital</b>	.821**	1								
<b>Green Relational Capital</b>	.670**	.286**	1							
<b>Green Intellectual Capital</b>	.696**	.670**	.641**	1						
<b>Workers</b>	.650**	.661**	.235**	.490**	1					
<b>Operations</b>	.452**	.483**	.551**	.424**	.820**	1				
<b>Technology</b>	.250**	.353**	.413**	.399**	.287**	.691**	1			
<b>Skill</b>	.290**	.510**	.381**	.711**	.222**	.479**	.634**	1		
<b>Knowledge Management Maturity</b>	.653**	.630**	.478**	.594**	.791**	.649**	.419**	.444**	1	
<b>Knowledge Performance</b>	.331**	.357**	.812**	.619**	.389**	.337**	.619**	.550**	.680**	1
**. Correlation is significant at 0.01 level (2-tailed).						Sig. (2-tailed)=0.000		N= 135		

Source: Prepared by researcher based on outputs (SPSS vr.24)

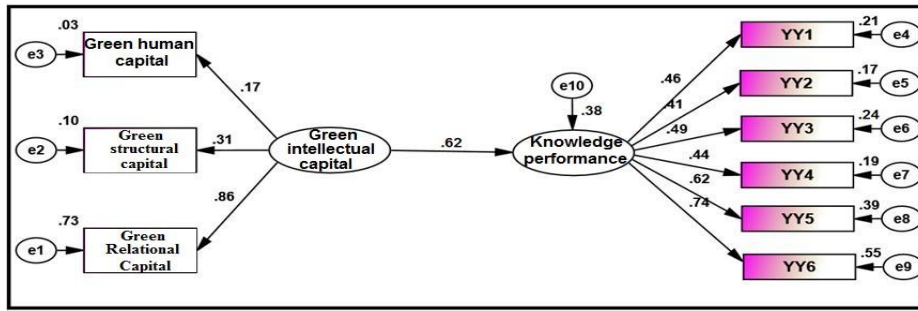
It is noticed from results presented in Table (7) that there is a statistically significant correlation less than (0.01) between green intellectual capital and maturity of knowledge management and its amount is (0.594), in addition to existence of a positive correlation between green intellectual capital and Knowledge performance and reality of (0.619), which is a strong direct relationship, and this indicates rejection of null hypothesis that imposes absence of a correlation between study variables, and acceptance of alternative hypothesis that imposes a correlation between study variables, while strength of correlation ranged with between study variables from (0.222) to dimension Skill to (0.820) operations, which indicates necessity of studied company's interest in improving employees' skills towards developing their Knowledge capabilities and refining them in line with requirements of tasks assigned to them.

## Impact Hypotheses

### Second Main Hypothesis

There is a statistically significant impact relationship for green intellectual capital on knowledge performance.

Results of Table (8) indicate that increased interest of studied company in green intellectual capital contributes to improving knowledge performance by (0.619) and with a standard error rate equal to (0.110) and a critical value of (9.098), which indicates need to strengthen studied company for head Green intellectual money to motivate workers to accomplish required tasks efficiently and effectively.



**FIGURE 2**  
**STANDARD SCHEME FOR EFFECT OF GREEN INTELLECTUAL CAPITAL ON KNOWLEDGE PERFORMANCE**

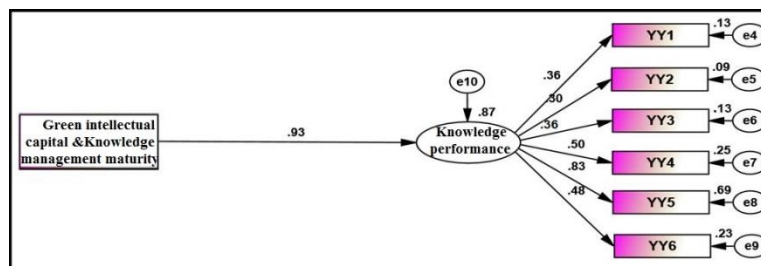
It is noted from results of Table (8) that green intellectual capital contributed to interpretation of (0.384) of requirements of knowledge performance, which means that interest of studied company in green intellectual capital contributes to development of knowledge performance by (0.616).

Table 8								
STANDARD WEIGHTS FOREFFECT OF GREEN INTELLECTUAL CAPITAL ON KNOWLEDGE PERFORMANCE								
Impact Path			Standard Weight	Standard Error	Critical Value	Value R <sup>2</sup>	Probability (P)	Type of Impact
Green intellectual capital	---	Knowledge performance	0.619	0.110	9.098	0.384	***	significant

Source: Prepared by researcher based on outputs (AMOS.vr.24)

**Third Main Hypothesis**

There is a common influence relationship between green intellectual capital and knowledge management maturity in performance of knowledge. results of Table (9) indicate that increased interest of studied company in joint influence between green intellectual capital and maturity of knowledge management contributes to improving Knowledge performance by (0.930) and with a standard error rate equal to (0.126) and a critical value of (7.381), which indicates on need to strengthen studied company to influence joint between green intellectual capital and knowledge management maturity in order to develop and improve knowledge performance of studied company.



**FIGURE 3**  
**STANDARD SCHEME COMMON IMPACT BETWEEN GREEN INTELLECTUAL CAPITAL AND KNOWLEDGE MANAGEMENT MATURITY ON KNOWLEDGE PERFORMANCE**

Source: Prepared by researcher based on outputs (AMOS.vr.24)

It is noted from results of Table (9) that joint influence between green intellectual capital and maturity of knowledge management on knowledge performance contributed to explanation of (0.866) of requirements of knowledge performance, which means that interest of studied company in joint effect between green intellectual capital and maturity of knowledge management contributes in developing knowledge performance by (0.07).

Impact path			Standard Weight	Standard Error	Critical Value	Value R <sup>2</sup>	Probability (P)	Type of Impact
Combined Effect of Green Intellectual Capital and Knowledge Management Maturity	--->	Knowledge performance	0.930	0.126	7.381	0.866	***	significant

Source: Prepared by researcher based on outputs (AMOS.vr.24)

## DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

- 1) Studied company focuses on building green capital with employees in order to improve productivity and contribution of workers in protecting environment.
- 2) Studied company is keen to encourage employees to come up with new ideas to address problems that hinder progress of work, or to urge them to make appropriate changes in service procedures through use of appropriate means that are commensurate with nature of stage in which Telecommunications companies are living.
- 3) Interest of studied company to develop a cooperative system among work teams that contributes to supporting and achieving goals of environmental protection.
- 4) Studied company encourages its employees to express their opinions without any hesitation, which indicates direction of company's departments towards developing career path of employees and enhancing their positive feeling towards making change within studied company.
- 5) Studied company is keen to motivate workers towards exchanging experiences and cooperation in order to accomplish required tasks easily, easily and with high accuracy.

### Recommendations

- 1) Need for studied company to pay attention to instilling morale and confidence among workers in order to enhance cooperative spirit among them in accomplishing required tasks.
- 2) It is important for studied company to urge exchange of knowledge and dissemination of information about company in order for benefit to spread throughout company.
- 3) Studied company should encourage employees to develop their technological and informational capabilities in order to work effectively and objectively.
- 4) Necessity for studied company to be keen on building a knowledge base that motivates workers to put forward innovative ideas in order to develop knowledge performance and continuously improve it.
- 5) Need to consolidate joint influence between green intellectual capital and maturity of knowledge management in order to ensure continuity of improving knowledge performance of company.

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