https://doi.org/10.68327/MWLM8802
ASRIC Journal on Engineering Sciences Vol.4(1)(2023) 183-197

The Impact of Technological Development and Innovation on the Development of Human Resources for the Sustainability of Egyptian Economic Institutions in Light of Digital Transformation

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Received 17 September 2023; revised 17 November 2023; accepted 24 December 2023

Abstract

Development and innovation are the main pillars of development and development of investment programs that provide the opportunity for countries to follow a new vision to support their economy as a productive element that gives the country the ability to enter the competitive market. Concerning with human element considers one of the most important axes discussed and debated recently either in Arabic studies or in foreign studies. Development and innovation represents one of the remarkably important topics in field of concern in human element, it is a modern contemporary administrative concept that considers development of human resources as a concept for qualifying and training individuals for the purpose of developing human factor for achieving sustainable development in order to prepare the second line of human resources. This research objective is to identify the concept of Development and innovation and its extent of impact on development of human resources factor for achieving sustainable development. The research hypotheses demonstrate a impact exists between Development and innovation and sustainable development. The research objective is to identify the concept of Development and innovation, its significance, and relation with some other concepts; identifying as well the concept and targets of sustainable development. The study uses the descriptive (qualitative)-analytical method for forming the research's theoretical framework. Data are collected through an investigation form as a main tool consisting of (100) employees in Ministry of International Cooperation. Results indicate a significant impact of Development and innovation at (0.05) significance level on human resources development. There is also an impact of developing human resources on sustainability of economic institutions. There is a significant impact at (0.05) between Development and innovation and sustainability of economic institutions. Researchers recommend applying the Development and innovation plan in every institution of the state, that would be supported by a decree of the competent authority and that Development and innovation will be indispensable part of the strategic plan of the human resources management.

Keywords: development and innovation - human resource development - sustainability of economic institutions.

Introduction to the Study

Technology is one of the main factors that requires great attention because of its major role in bringing about fundamental changes to meet the needs of the future. Both technology development and innovation agree on customer satisfaction and the orientation towards serving him. Technological development and innovation have become an inevitable issue in organizations today, especially in light of high technology. The ability to innovate has become the main characteristic of competition in developed countries, because the strong ability to innovate is an indicator of the health of the economy and its ability to confront competition. Innovations have been associated with developed countries, but have become an important topic in light of the technological development of developing countries. Organizations today live in an era of strategies in which they exert their maximum energy of thought and action to coordinate the requirements of the administrative process and strategies for development and innovation, with the goal of improving the quality of performance in the context of new developments and at all levels. Information technology represents a wide range of capabilities, components and various elements in storing and processing data and retrieving and distributing information, in addition to its role in securing the required knowledge that is the product of the combination of accounting systems, communication networks and technological knowledge. The most important characteristics of information technology are the reduction of distances, the reduction of time, the division

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of intellectual tasks with the machine, the increase in networked systems, and the intellectual development of the electronic environment. As for the Ministry of International Cooperation, it is undergoing radical transformations to confront the many changes that the Egyptian economy is experiencing, and the problem of modernizing the Egyptian administrative system and bringing it into line with the future has become one of the greatest concerns of the public authorities. The Egyptian economy is capable of competitiveness, despite its intensity, in the context of its connection to the modernization train, and its goal is to maintain a sector characterized by continuous innovation in light of current developments, with the goal of reaching a certain level of quality in performance and entering the competitive economy. The idea of a leader in any organization must be a motivation for employees to reach the goal, and the effective and successful leadership of the organization is considered one of the main factors that contribute to the success of plans and development of career innovation, considering that the correct systems in institutions and a good leader reduce the system of favoritism, and motivation does not have to be material and can It must be moral, and when job infiltration is applied, the employee must possess leadership skills and the level that he will move to in order to be promoted, and organizations focus business on talent, not performance. Most international institutions and companies have long established clear plans for career development and innovation within the institution, and they are not implemented and developed from time to time according to the talents attracted by that institution or company, which have distinguished talents. Career planning and development is the basis of the sustainability and success of any institution, whether in public or private sector companies or family companies. It is not a methodology but rather a mentality followed. He added that we are working to implement career succession among its employees with the best mechanisms to contribute to preserving distinguished human resource talents, in addition to reducing risks. The tasks that institutions face, is no longer among the objectives of government institutions at the sectoral level or among the strategies of economies at the macro level is only competition in light of the struggle to attract and localize investments, but the goal has become to reach, with the greatest possible efficiency and in the shortest time, global levels of competitiveness and dedication. Sustainability pillars.

In line with the government's directives to develop and support the Egyptian economy, the state has adopted the main role in leading sustainable development by encouraging, supporting and diversifying industrial, commercial and service investments that contribute to pushing forward the economic and social development movement and creating a knowledge-based economy and for the success of succession planning and its importance for the human element and workers of the country. In order to define a vision and achieve an increase in sustainable development to achieve economic well-being in Egypt, represented by planning and developing the Egyptian economy and providing distinguished services using qualified cadres and advanced technical systems in cooperation with institutions.

Leadership plays a major role in directing institutions and individuals towards excellence and creativity. The topic of second-level leaders and how, methods, and approaches to preparing them has become one of the important and advanced topics in modern institutions. Despite agreement on the position of second-level leaders in the strategic management of these institutions, knowing how and methods to prepare these leaders and mechanisms The steps to prepare them are still preoccupying senior management and those responsible for investment, development and development of human resources in contemporary institutions amidst extremely complex global, regional and local challenges. Many institutions suffer from problems due to deficiencies in the planning process, and their lack of interest in strategic management and strategic planning, but here the deficiency in planning may extend to their basic wealth, which is the human element.

The solution lies in institutions adopting a technological development and innovation approach. It may make it easier for the institution to manage some of its resources that it was surprised to need due to lack of planning, but it loses a lot when it comes to human competencies that need organized planned effort and experiences accumulated over time in order to be qualified to occupy a leadership position. Knowledge has become a real wealth for every individual, group, and organization. It is the vital and effective tool through which it is able to carry out its volume and carry out its activities in order to achieve its goals efficiently. In addition, it is a source of excellence for organizations and economic institutions, and the basis for their advancement and success, as many of them are characterized by Characteristics: They are specific to the human element over other resources. Effective investment in human resources is embodied in the best form of talent management. In this era in which we live, which is characterized by speed and competition, talent has become the most valuable human capital, which has made talent management a major priority.

Terminology of study:

Innovation	The organization's ability to come up with something new that adds greater value and faster than competitors in the market, that is, the innovative organization must be in the ranking.
Technological innovation	It is the essence of digital transformation, as it gives companies and individuals the opportunity to develop new ideas and innovative innovations to improve business and facilitate life, and this is done by using modern technology and available digital tools.
Digital transformation	Creating changes in how individuals perceive, think and behave at work and seeking to improve the safe work environment by focusing on information and communications technology in addition to changing organizational assumptions about jobs. Digital transformation is the change associated with the application of digital technology in all aspects, and it is the process of applying digital technologies to renew the way business is done and to create and deliver new value.
Thinking	Any mental activity in order to reach a solution to a problem or make a decision, which is the main stage of creativity.
Creative thinking	The method that an individual uses to produce the largest possible number of ideas about the problem he is exposed to (intellectual fluency). These ideas are characterized by diversity.
Strategic Planning	The process by which the future of the bank is envisioned and envisioned and the process of developing the procedures and processes necessary to achieve this.
Strategic management forecasting	Predicting the future and replenishing human resources needs in quantity and quality according to what is currently and future available in the labor market with the aim of determining the surplus or deficit of the human element.
Strategic management	A set of administrative decisions and practices that determine the long-term performance of the organization efficiently and effectively. This includes developing or formulating the strategy, its application and its diversity as a methodology or method of work. It includes the executive steps and clear means used to direct activities to the level you want to reach.
Talent management	The process of developing, unifying and integrating focusing on the capabilities and talents of employees to achieve competition,
	differentiation and development of new employees, maintaining current employees and attracting talented employees with high experience in institutions.
knowledge management	The result of processed information collected to form beliefs, judgments, concepts, ideas, and visions that can be used to address problems, make decisions, and deal with different situations.
Human resources development	A group of planned, institutionalized and ongoing activities that work to increase the motivation of individuals towards training and learning and increase their capabilities with knowledge, skills and attitudes for the purpose of improving the level of their skills, improving their performance, raising the level of productivity and the sustainability of their organization.
sustainable development	It is the process of change in which resources are exploited, investment is directed, technology is developed, and institutions are changed in a harmonious manner that leads to stimulating all current and future capabilities to meet the individual's needs and ambitions.

The Study Problem

The study problem is as follows: Some Egyptian agencies and institutions suffer from deficiencies in the technological development and innovation system due to the exploitation of their human resources due to the lack of early application of the technological innovation process. This led to the existence of a gap in the leadership positions in the Ministry of Investment and International Cooperation under study. This was confirmed through a personal interview with a number of (10) ministry leaders. On the existence of the problem, which negatively affected its overall performance, and thus this deficiency affects the development of human resources and the preparation of future leaders to achieve sustainability for state institutions, and given that technological development and innovation did not take its due place in Arab studies, and applied studies on this subject, both Arab and foreign, need further study. As for Egyptian institutions, some studies have indicated that employees in general and employees of the Ministry of Investment and International Cooperation in particular are among the workers most in need of

implementing career development and innovation programs to develop human resources for the sustainability of Egyptian economic institutions, as this ministry has dealt with all international economic institutions for the benefit of all ministries. In the Arab Republic of Egypt, the problem of the study is summarized in examining the mutual relations between career development and innovation represented by (strategic planning - strategic thinking - creativity and strategic innovation) and the impact of each of them on the development of human resources represented by (strategic management - talent management - knowledge management) for the sustainability of economic and Egyptian institutions.

Some studies have indicated that at least 50% of institutions and companies in the West have a plan for career development, while the percentage reaches less than 15% in the East. Despite this, 47% of career development and innovation followed by some institutions fail miserably. Because what you want is 80% of the processes used to develop career development and innovation targeting employees with distinguished capabilities that can be developed in the future.

The study problem can be formulated in the following questions:

- Is there technological development and innovation represented by (strategic planning - strategic thinking - functional creativity) on human resources development ?
- Is there an impact of human resources development (strategic management - talent management - knowledge management) on the sustainability of Egyptian economic institutions?
- Is there an impact of succession planning on the sustainability of Egyptian economic institutions represented by (institutional sustainability - economic sustainability - human sustainability)? Study objectives:

This study is based on many general and specific objectives. The general objective is to identify the impact of technological development and innovation on the development of human resources for the sustainability of Egyptian economic institutions, and to attempt to contribute to increasing the stock of theoretical knowledge in one of the most important topics on the scene and to know the ability and ability of Egyptian economic institutions to benefit. Among the technological development and innovation programs and the institutional rehabilitation program as an urgent necessity and inevitability imposed by international changes and their role in providing appropriate conditions for achieving sustainable development, and through the current study we attempt to achieve the following goals:

1) Implementing the technological development and innovation plan in all state institutions.
2) Paying more attention and attention to attracting and managing talents and competencies and motivating them to ensure development and technological innovation in order to serve Egyptian economic institutions.
3) Defining and organizing strategies, development and technological innovation activities for leadership and sensitive functions according to strategic management.
4) Recognizing the importance of investing in technological development and innovation and the specialized benefits of leadership development programs for the sustainability of Egyptian institutions.
5) Developing technological development and innovation plans to preserve talent and future leaders in Egyptian institutions.
6) Working to help ministries and government agencies qualify employees to fill current and future vacant positions by providing forms of training and development for their employees.
7) Qualifying a second row of leaders for sensitive positions in state institutions.

Study assignments

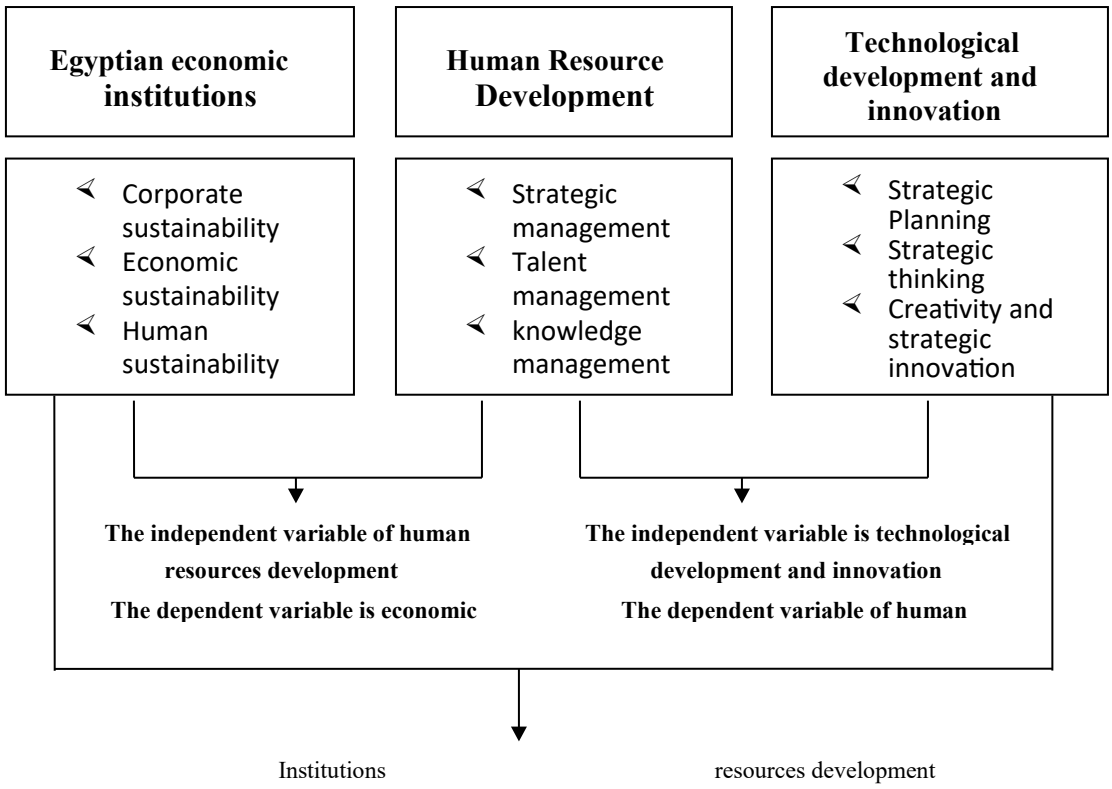
1- There is a significant effect of the dimensions of technological development and innovation on the dimensions of human resources development.

2- There is a significant impact of the exclusion of human resources development on the sustainability of Egyptian economic institutions.

3- There is a significant impact of the dimensions of technological development and innovation on the sustainability of Egyptian economic institutions.

Study Variables

The current study builds a hypothetical model that expresses the logical relationship between the independent variables and the dependent variable, as the study contains more than one independent variable and a dependent variable, where technological development and innovation in the organization is considered a sample of independent variable research that includes subvariables (strategic planning - strategic thinking - functional creativity). affects the dependent variable, which is human resources development.



Source: Prepared by researchers

Figure 1: shows the study variables

The independent variable is technological development and innovation
The dependent variable is the sustainability of economic institutions

The importance of studying

- The study attempted to delve into the practical reality and explore the contribution of technological development and innovation and its various functions to the development of human resources in the sustainability of the human element and economic institutions.
- Providing a scientific contribution to administrative officials in economic institutions
- Attention to development issues and economic policies in government institutions in light of the study, this study represents a degree of importance on several levels.

1) Professional or practical level :
The Technological Development and Innovation Program of the Ministry of Investment and International Cooperation is implemented in order to reach the appropriate level of work performance as it should be.
2) Practical or academic level:
Adding a new dimension in terms of studying technological development and innovation, which is expected to play a major role in developing human resources for the sustainability of economic institutions.
3) The personal level of the researcher:

It is expected that this study will help enrich the researcher's thinking on the subject of technological development and innovation on the development of human resources for the sustainability of Egyptian economic institutions.

Study Methodology

In order to achieve the objectives of the study, the researcher will use the descriptive analytical method to form the theoretical framework for the study. In collecting data, the researcher will use two main sources of information:

1. Secondary Sources: which include relevant Arabic and foreign books and references, periodicals, articles, reports, faith, and previous studies that dealt with the subject of study and reading on various Internet sites .

2. Primary Sources: which represent all primary data through a survey form as the main tool for the study, then distributed to a sample of 100 employees at the Ministry of Investment and International Cooperation and compared to other ministries.

The Study Sample:

The study was limited to a deliberate sample of the group of middle and senior leaders working at the Ministry of Investment and International Cooperation, numbering 100 individuals. The Ministry of International Cooperation was the largest sample, numbering 50 individuals, at a rate of 50%, then Al-Helmiya Electricity Company, numbering 20 individuals. With a percentage of (20%), while the number of Petrotrade Company was (19) individuals and a percentage of (19%) of the total study sample, followed by (Banque Misr) with a number of (11) individuals and a percentage of (11%).

The limits of the study

The limitations of the study were as follows:

A. Time limits: 2023

B. Spatial boundaries: The study population is limited to a group of the administrative body (senior-middle) of the Ministry of Investment and International Cooperation due to the presence of a gap in leadership positions therein. It includes a sample of administrators in the ministry and compares them with another ministry.

Previous Studies:

The importance of previous studies:

Reviewing relevant previous studies represents a rich source of providing the researcher with data, information, and knowledge that achieve richness of ideas and breadth of perceptions. The researcher defines these studies in terms of the title of the study, its most important objectives, and the most important findings of its results, as follows:

Studies Related to Technological Innovation and Digital Transformation:

Les Processus D'innovation Une Approche Par La Complexite

1. (Abu Hilal and Al-Tahan 2022): The relationship between innovative thinking and academic achievement among a sample of outstanding students. "This study was conducted in the United Arab Emirates, and the study aimed to find the relationship between intelligence, innovation, and achievement. The sample consisted of (406) male and female students from the third and sixth grades of middle school. The study tool was to choose the follow-up matrices (Raven) to measure intelligence, the Lawrence test (circles), and another measure through which the teacher estimates some of the students' mental and personality characteristics and the students' achievement scores in the Arabic language, mathematics, science, and art subjects. The study concluded: that achievement, intelligence, and innovative ability They form separate dimensions. Comparisons between grades also showed that sixth-grade primary students are less innovative than third-grade preparatory students. Likewise, the variables of intelligence and achievement have a specific prophetic ability that explains some of the variation in degrees of flexibility and fluency. None of the independent variables were able to predict degrees of originality.

2. (Ben Mazouzia study 2021) entitled The role of human resources planning in achieving competitive advantage for small and medium enterprises, a memorandum submitted for obtaining a master's degree, Faculty of Economic, Commercial and Management Sciences, University of Ouargla, It aimed to analyze the problem of the contribution of human resources planning to achieving competitive advantage for small and medium

enterprises. The analysis of the problem required testing some hypotheses, including: Recruitment activity, training, motivation, Performance evaluation is one of the most important requirements for human resources management in small and medium enterprises.

3. Marzouki's 2021 study, "The Role of Innovation in the Competitiveness of Small and Medium Enterprises, a Case Study of Algeria," a thesis submitted to obtain a Master's degree in Economic Sciences, Faculty of Law and Economic Sciences, University of Ouargla, 2021, as it aims to address the problem of the extent to which creativity contributes to the competitiveness of small and medium enterprises. This required testing his hypotheses, including that small and medium enterprises do not care about the policy of technological innovation, and that small and medium enterprises have a wide space, advantages and characteristics that encourage the practice and application of organizational and technological creativity, where the descriptive analytical approach was used in order to explore all aspects of the subject with the use of a questionnaire tool. Finally, this study concluded that technological innovation is the primary guarantee for removing institutions and the state from their creation, accompanied by the ABCs of management, organization, research and development. Through our research, we touched on some of the ABCs through which the organization can achieve such innovations.

4. The study (2020, Victoria, al et Four insurance companies operating in the regions of Aricaiba, Cosco and EcoTos, and to us, and we want to be in Bero. Finally, the processes based on digital transformation greatly affect task performance and contextual performance, and there is no effect on counterproductive behavior. Finally, with regard to the impact of the business model based on digital transformation, there is no effect on task performance and contextual performance, while it generates counterproductive behavior. The study (M, Cozza, 2020) examined the impact of digitization on employee participation in providing banking services, and the strategies that managers apply to involve employees in digitization processes in the Swedish banking industry. The study relied on the method of interviews that were conducted via phone calls. With employees and managers from banks The study concluded that digitization is considered a factor that positively affects employee participation in providing banking services through digital platforms that enable employees to perform their tasks efficiently. Moreover, managers used strategies such as advanced support systems, digital communication methods, and various digital tools. To stimulate employee participation in work.

5. Study (Maha Khalil Shehadeh 2022) entitled Digital Transformation and Digital Entrepreneurship. This paper aims to contribute to clarifying the concept of digital transformation and its role in the emergence of new business models called digital entrepreneurship, and to explore the emerging concept of digital entrepreneurship and its advantages and challenges. It also aims to identify To the importance of modern technology in stimulating a climate of entrepreneurship and creativity, in addition to researching the relationship between digital transformation and achieving sustainable development goals. The study concluded that digital transformation is of great importance to governments and business organizations, especially small and medium-sized ones, by raising their operational efficiency, improving their organizational performance, and enhancing their competitiveness. In the field of community and sustainable development, digital transformation and digital or technology-based entrepreneurship are considered among the most important mechanisms considered in moving the wheel of sustainable development goals.

6. Study (Saniya Muhammad Suleiman (2021), a study entitled The Impact of Digital Transformation and the Quality of Educational Service on Student Satisfaction). The research aimed to study the direct impact of both digital transformation and the quality of educational service on the satisfaction of students at Mansoura University. In order to do this, the researcher designed a survey list that includes: The research variables were distributed to a sample of Mansoura University students, which amounted to 384 items among six different colleges of the university, including three practical colleges and three theoretical colleges (Faculty of Engineering, College of Pharmacy, College of Science, College of Education, College of Commerce, College of Arts). 331 empty questionnaires were retrieved. Of brotherhood and valid for statistical analysis using 25.SPSSV with a response rate of 86%. The results found that there was a positive moral impact for some dimensions of digital transformation represented by information technology infrastructure, digital education, digital libraries) on student satisfaction, as well as for some dimensions of educational service quality represented by In the tangible material aspects, reliability, safety (a positive moral impact on student satisfaction

7- (Shadid Study, 2021) entitled The Impact of Digital Transformation on the Level of Performance of the Service Provided by Application to the Service Provided: The aim of the study is to identify the role of the process of digital transformation with its various application requirements in improving the dimensions of the level of performance of the services provided. The researcher relied on the descriptive approach in approaching and presenting the study. To address the conceptual aspect and the analytical approach in dealing with the applied aspect of the study, the survey form was used as a tool for collecting primary data. The study reached a set of results, the most important of which is the existence of a strong correlation between the requirements for implementing digital transformation combined, and improving the level of performance of the service provided, in addition to presenting a proposal for the steps of digital transformation in Public service organizations. The study also recommended at its conclusion the necessity of accelerating the national project for digital transformation to become one of the most important tools for achieving sustainable development, developing the government work environment, providing electronic services, and moving towards the digital economy.

8. Study (Derbala 2020): entitled The unified model for digital transformation: Towards a unified application of optimal digital transformation to achieve strategic planning. The study aimed to present a complete unified model for the digital transformation process with the aim of supporting the Egyptian government's efforts in digital transformation within public institutions and building a common unified standard among all Governmental bodies and associations responsible for digital transformation, thus unifying the common concepts used in the digital transformation process and unifying the approach to studying, planning and implementing these initiatives to ensure that they achieve the goals set for them.

Studies related to human resources development:

1. Study (Mohamed, 2021) The impact of human resources development on preparedness for crises and the ability to confront them, an applied study on Ain Shams hospitals. It aimed to identify the level of human resources development in terms of training, learning and attitudes and the extent of their contribution to preventing the occurrence of crises and the ability to confront them. To identify the impact of knowledge, skills and attitudes acquired from training programs in reducing the effects resulting from crises.

The results showed that there is a significant effect between human resources training and the ability to confront crises, and the existence of a relationship with a significant effect between learning human resources and the ability to confront crises, and the existence of an effect of individuals' attitudes acquired from training and learning programs on preparing for crises, and the existence of a relationship with a significant effect between combined human resource development and ability. To confront crises.

2. Study (Mustafa Abdel-Al, 2013). Presentation and analysis of talent management and previous studies that have dealt with it The study aimed to:

- "Attracting the right talent and helping them understand what the organization expects from their work experience, as well as providing the means to develop and retain them to create a competitive advantage for the organization."
- "Recruit, develop, retain, and plan people in line with and advance the current and future goals of the organization."
- "The ability to attract, develop and retain key diverse talent to meet critical current and future business needs."

Results: Talent management or part of it, shows the level of interest in talent management or part of it, shows the level of interest in talent management as a modern approach to managing talented people in institutions, and the impact of this approach on improving the performance of institutions, whether production or service, and despite the great interest in talent management and its applications in institutions In the Western world, however, Arab studies focusing on this approach in terms of concept and application are still somewhat limited, if not non-existent.

3. Study (Ismail, 2013) activating the role of human resources in achieving sustainable development in Egypt (an applied study on most of North Sinai). The study aimed to try to find the best ways to exploit the economic or human resources of North Sinai Governorate for the purpose of achieving development in the governorate and thus raising development rates in Egypt in general, through:

- Finding out how to advance the development of North Sinai Governorate by working on developing a plan to increase the rates of the volume of investments to increase the rates of job opportunities in North Sinai.
- Finding out how the outcomes of technical education can be linked to the requirements of the labor market.
- Finding out how the role of human resources can be activated by preparing training courses and developing human resources skills through training on modern equipment and technology to optimally exploit resources to preserve the right of current and future generations and its productive role to activate their role towards achieving sustainable development.
- As a result of the decline in the level of skills and the low level of income, the category of human resources in the state's administrative apparatus has become the state's administrative apparatus as of the wage budget as a result of the presence of an outdated structure in each ministry of service and economic budgets that is not commensurate with scientific and technological development and the need for development, and that is the reason for the failure of the apparatus. The state administration aims to form more than 75% of the volume of human resources in non-specialized jobs and jobs that do not exist in any functional structure, in a way that does not violate the conditions for filling the job.

4. Study by Abla Hammadi, 2013 The role of knowledge management in building a learning organization - a case study of the ENAD-SIDET Foundation in Sur al-Ghizlan. The study aims to shed light on the most important contemporary administrative concepts in light of conventional economics and to study the relationship of knowledge management with organizational learning at the institutional level. The study concluded that knowledge management is the most vital department in the organization, as it is relied upon to produce and generate knowledge that the organization uses within all its operations. It also showed that applying knowledge management requires providing all means of success, both material and human.

5. Study by Safaa Abdel Aziz Ayed, 2015 "Strategic planning to attract human resources and its role in achieving economic and social development in North Sinai Governorate"

The study aimed to give the human resources recruitment activity the importance it deserves in the human resources department, and to identify the organizational incentives offered by the North Sinai Governorate directorates for the success of the process of attracting and recruiting human resources, and also to analyze the extent to which these directorates adopt scientific methods for attracting human resources, and the extent to which the recruitment activity is linked to the planning process. Strategic human resources at the organization level.

The study reached some results, the most important of which are: With regard to the extent to which managers and employees of the Human Resources Department are aware of the scientific concept of strategic planning to attract human resources, the result of the survey form showed that all employees of the Human Resources Department are aware of the concept and importance of the activity of attracting human resources, and it came with a relative importance of 68.50%.

6. Study (Al-Masry, 2016): Human talent management in Palestinian universities is an applied, strategic development proposal. The study aimed to identify the level of application of the human talent management strategy in Palestinian universities and to reveal the standards that achieve academic excellence. The results showed that applying a human talent management strategy leads to the formation of a knowledge society and then achieving academic excellence in Palestinian universities. 7. Study (Betts, Natal, 2018)

Sustainable Economic Development as A Cluster Strategy

This article discusses sustainable economic development as a cluster strategy with cohesive elements for Austin's recycling-based green industries in the Texas Economic Development Program. The article describes the city's basic plan in determining how it will reach its zero-waste goal by focusing on economic development opportunities in the recycling and reuse industry. Topics included green industry package matching, understanding gaps in the supply chain (filling gaps), small enterprises and business development.

Research results and discussion: Hypothesis validation test:

Testing the stability of the first hypothesis:

The first hypothesis states: "There is a correlation between technological development and innovation and human resources development." To verify the validity of the hypothesis, both the correlation coefficient and the multiple regression coefficient were calculated.

1- Correlation coefficient:

Measuring the relationship of technological development and innovation to human resources development, as in the following table:

Table (1) The correlation between technological development and innovation and human resources

Variables		**Human Resource Development**
Technological development and innovation	Correlation coefficient	)**(0.711
	Moral	0.001

From the previous table, it is clear that there is a correlation between technological development and innovation and human resources, as the value of moral significance reached (0.001), which are significant values at a significant level (0.01), and the value of the correlation coefficient was (0.711), which confirms the validity of the first hypothesis, which states: "There is a correlation between... Technological development and innovation on human resources development.

2- Multiple Regression Coefficient:

Measuring the impact of technological development and innovation on human resources development through the multiple regression coefficient, as shown in the following table:

Table (2) Determination coefficient for the impact of technological development and innovation on human resources development

The ferry	R2	R	Standard error	Degree of freedom	value	Moral
The impact of technological development and innovation on human resources development	0.711	0.506	9.47	421 ،1	431.62	0.001

The previous table shows that the coefficient of determination R2 = 0.711, which means that the impact of technological development and innovation on human resources development was 71%, while the remaining percentage is explained by other variables that were not included in the regression relationship, in addition to random errors resulting from the sampling method, measurement accuracy, and others.

Through the ANOVA test, it was found that the degrees of freedom are (2, 240) and the value of (F) is (431.62), which is a significant value at the level of (0.01).

Table (3) Multiple regression results of the impact of technological development and innovation on human resources development

The ferry	Regresson factor	Beta value	T value	Moral
Fixed coefficient	12.113	- -	5.058	0.001
The impact of technological development and innovation	0.463	0.711	20.776	0.00 1

From the previous table, the variance of technological development and innovation on human resources development is shown, as the significance values were all (0.001), and the calculated T value was (5.058, 20.776) in order, which are significant results at the 0.01 level, and the model for the impact of technological development and innovation on human resources development was as follows:

$$\boldsymbol{y = 12.113 + 0.463x_1}$$

Testing the stability of the second hypothesis:
The second hypothesis states: "There is a correlation between human resources development and institutional sustainability." To verify the validity of the hypothesis, both the correlation coefficient and the multiple regression coefficient were calculated.

Correlation coefficient:
Measuring the relationship between human resources development and the sustainability of institutions together, as in the following table:

Table (4) The correlation between technological development and innovation and human resources development

		Human Resource Development
To sustain economic institutions	Correlation coefficient	)**(0.840
	Moral	0.001

From the previous table, it is clear that there is a correlation between human resources development and the sustainability of economic institutions, as the value of moral significance reached (0.001), which are significant values at a significant level (0.01), and the value of the correlation coefficient was (0.840), which confirms the validity of the second hypothesis, which states: "There is A correlation between the development of human resources and the sustainability of economic institutions.

Multiple regression coefficient:
Measuring the impact of human resources development in terms of (strategic management - talent management - knowledge management) on the sustainability of economic institutions through the multiple regression coefficient as shown in the following table:

Table (5) Determination coefficient for multiple regression of the impact of human resources development in terms of (strategic management - talent management - knowledge management on the sustainability of economic institutions)

The ferry	R2	R	Standard error	Degree of freedom	F value	Moral
The coefficient of determination	0.705	0.840	6.98	421 ،1	1006.8	0.001

The previous table shows that the coefficient of determination R2 = 0.705, which means that the impact of human resources development on the sustainability of institutions was 71%, while the remaining percentage is explained by other variables that were not included in the regression relationship, in addition to random errors resulting from the sampling method, measurement accuracy, and others. Through the ANOVA test, it was found that the degrees of freedom are (1, 241) and the value of (F) is (1006.8), which is a significant value at the level of (0.01).

Table (6) Multiple regression results of the impact of human resources development in terms of (strategic management - talent management - knowledge management) on the sustainability of Egyptian economic institutions

The ferry	Regression factor B	Beta value	T value	Moral
Fixed coefficient	5.969	- -	3.792	0.001
The impact of human resources on organizational sustainability	0.800	0.840	31.731	0.001

The previous table shows the relationship between human resources development and the sustainability of economic institutions. The significance values were all (0.001), and the calculated T value was (5.058, 20.776) respectively, which are significant results at the 0.01 level. The model for the impact of human resources development on the sustainability of economic institutions was as follows: $y = 5.969 + 0.800x_1$ Testing the stability of the third hypothesis:

The second hypothesis states: "There is a correlation between technological development and innovation and the sustainability of economic institutions." To verify the validity of the hypothesis, both the correlation coefficient and the multiple regression coefficient were calculated.

Correlation coefficient:

Measuring the connection between development, technological innovation, and the sustainability of economic institutions, as in the following table:

Table (7) The correlation between technological development and innovation and the sustainability of economic institutions

		Technological development and innovation
Sustainability of economic institutions	Correlation coefficient	)**(0.618
	Moral	0.001

From the previous table, it is clear that there is a correlation between technological development and innovation and the sustainability of economic institutions, as the value of moral significance reached (0.001), which are significant values at a significant level (0.01), and the value of the correlation coefficient was (0.618), which confirms the validity of the third hypothesis, which states: "There is a correlation Between development, technological innovation and the sustainability of economic institutions."

2- Multiple regression coefficient:

Measuring the impact of technological development and innovation on the sustainability of economic institutions through the multiple regression coefficient, as shown in the following table:

Table (8) Determination coefficient for multiple regression of the impact of technological development and innovation on the sustainability of economic institutions

Variables	R2	R	Standard error	Degree of freedom	F value	Moral
Determination coefficient	0.382	0.618	10.10	421 ،1	260.40	0.001

The previous table shows that the coefficient of determination R2 = 0.382, which means that the impact of technological development and innovation on the sustainability of economic institutions was 38%, while the remaining percentage is explained by other variables that were not included in the regression relationship, in addition to random errors resulting from the sampling method, measurement accuracy, etc., through a test ANOVA shows that the degrees of freedom are (1, 241) and the value of (F) is (260.40), which is a significant value at the level of (0.01).

Table (9): Results of multiple regression of the impact of technological development and innovation on the sustainability of economic institutions

The ferry	Regression factor B	Beta value	T value	Moral
Fixed coefficient	2.371	- -	0.929	0.4
Development and technological innovation	0.383	0.618	16.137	0.001

From the previous table, it shows the relationship of technological development and innovation on the sustainability of institutions, where the significance value of technological development and innovation was (0.001), and the calculated T value was (16.14) in order, which are significant results at the level of (0.01). The model for the impact of technological development and innovation on human resources development was as follows: $y = 2.371 + 0.383x_1$

Testing the validity of the first hypothesis:

- The first hypothesis stated: "There is a correlation between technological development and innovation and human resources development." To verify the validity of the hypothesis, both the correlation coefficient and the multiple regression coefficient were calculated. It became clear that there is a significant correlation at a significant level (0.01) between development, technological innovation and development. Human Resources: Looking at the correlation between the total development and technological innovation and the total development of human resources, it was found that there is a correlation at a significant level (0.01), and the value of the correlation coefficient reached (0.711), which confirms the validity of the first hypothesis.

- From multiple regression coefficient analysis, it was found that the coefficient of determination R2 = 0.711, indicating the impact of technological development and innovation on human resources development was 71%.

Testing the validity of the second hypothesis:

- The second hypothesis states: "There is a correlation between the development of human resources and the sustainability of economic institutions." To verify the validity of the hypothesis, both the correlation coefficient and the multiple regression coefficient were calculated. It was found that there is a significant correlation with significance at the level of significance (0.01). In the correlation between human resources development and institutional sustainability, it became clear that there is a significant correlation at the level of significance (0.01), where the value of the correlation coefficient reached (0.840), which confirms the validity of the second hypothesis.

- From the coefficient of determination of the impact of human resources development on the sustainability of institutions, R2 = 0.705, it is clear that the impact of human resources development on the sustainability of economic institutions was 71%.

Testing the validity of the third hypothesis:

- The second hypothesis states: "There is a correlation between development, technological innovation, and the sustainability of economic institutions." To verify the validity of the hypothesis, both the correlation coefficient and the multiple regression coefficient were calculated. From the results of the correlation coefficient, it became clear that there is a correlation relationship at a significant level (0.01) between development, technological innovation, and sustainability. Economic institutions. Among the results of the correlation between development, technological innovation and the sustainability of economic institutions, it was found that there was a significant correlation at the level of (0.01), and the value of the correlation coefficient reached (0.618), which confirms the validity of the third hypothesis.

- From the coefficient of determination for the impact of technological development and innovation on the sustainability of institutions, the value of R2 = 0.382, from the coefficient of determination for the impact of technological development and innovation on the sustainability of economic institutions, it turns out that it was 38%.

Recommendations

- The necessity of making senior management aware of the importance of technological development and innovation and its benefits, and holding lectures and seminars that describe the nature of technological development and innovation, its functions, benefits and dimensions, through the use of programs that describe and clarify the nature of the relationships between technological development and innovation and the development of effective human resources.

- The need to support the requirements for implementing effective technological development and innovation within the ministry under study. Realizing that innovation is the effective means of absorbing new technology, and the effective element in improving the organization's management

- Senior management must do more to develop their business management within the framework of clear strategies based on the results of development.

- Technological and adaptation to these banking service results in order to achieve the desired development.

- The ministry under study faces many challenges and therefore it must support technology in order to enable the link between the strategic orientation towards technology and the general strategy of the ministry in order to overcome these challenges. Institutions must realize the importance of the interconnection between success and its innovative orientation in the field of employing and investing in technology.

- Economic institutions must generalize their technological operations to specialized international companies, as this is a strategic step, as they must work to examine their technological operations, as well as their services, and structure and rebuild costs, in order to become ready for future business development and competition in the future.

- Educating senior management about the importance and mission of technological development and innovation to provide, assist and develop workers to learn their job tasks and the organization's goals to improve their performance in order to achieve human sustainability.

- Encouraging old department managers, morally and financially, to transfer their expertise and experiences to subordinates in order to continue expertise and continuous improvement in the performance of the human element.

- Motivating department managers to listen well to subordinates and rely on understanding and empathy when dealing with them, in addition to directing and guiding them to achieve goals in a way that helps them achieve the organization's goals and career ambitions.

- The application of technological development and innovation requires spreading the culture of technology practice by workers in the educational field and members of society. The study recommends bridging the cultural gap between those implementing policies for dealing with technology and the recipients.

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