Digital Transformation and its role in supporting Strategic Human Resources Management

(An Applied Study on Egyptian Commercial Banks)

Aly Yasser Aly Makhareta *
Mohamed Mohamed Ibrahim**
Shawky Mohamed ElSubbaugh ***

*MSc Student in Human Resources Management, Faculty of Commerce, Menoufia University, Egypt.

Research Interests: Strategy, Performance, Human Capital. iD https://orcid.org/0000-0001-9699-6241

Email: aly.yasser.makhareta@commerce.menofia.edu.eg

** Professor of Business Administration, Former President of Menoufia University, Egypt. Research Interests: Strategic Management, Marketing

Email: mohamed.ibrahim@commerce.menofia.edu.eg

** Professor of Human Resources Management, Former Dean of the Faculty of Commerce, Menoufia University, Egypt. Research Interests: Human Resources Management, Organizational Behavior, Crisis Management

Email: shawky.elsabagh@commerce.menofia.edu.eg

Aly Yasser Aly Makhareta
Prof.Dr Mohamed Mohamed Ibrahim
Prof.Dr Shawky Mohamed ElSubbaugh

Abstract

This study aimed to identify Digital Transformation and its role in supporting Strategic Human Resources Management, and to achieve the goal of the study, a questionnaire was designed and distributed to the study sample of 399 items.

The data was processed statistically by the SPSS program (Version 28) and one of the most important results of the study was the presence of a statistically significant positive correlation at the level of significance (0.01) between Strategic Planning of Digital Transformation and all five sub-dimensions and the overall degree of strategic human resources management. A statistically significant positive correlational relationship at the level of significance (0.01) between Preparing Leaders for Digital Transformation and all five sub-dimensions and the total degree of strategic human resources management., there is a statistically significant positive correlation at the level of significance (0.01) between Attracting Skills and Competencies for Digital Transformation Process and all five sub-dimensions and the total degree of strategic human resources management, there is a high correlation statistically significant at the level of significance (0.01) between digital transformation as a whole and the strategic human resources management as a whole The employees of the Egyptian commercial banks. The strategic management of human resources for employees in Egyptian commercial banks can be predicted through the four dimensions of digital transformation (strategic planning for digital transformation, preparing leaders in the field of digital transformation, attracting skills and competencies for the digital transformation process, and enterprise architecture of digital transformation), where the component (strategic planning) comes for digital transformation) in the first predictive rank, followed by the component (preparing leaders in the field of digital transformation) in the second predictive rank, followed by the component (attracting skills and competencies for the digital transformation process) in the third predictive rank, and finally the component (enterprise architecture of digital transformation), which comes in the rank fourth predictive.

Keywords: Digital Transformation, Strategic Human Resources Management, Egyptian Commercial Banks

الملخص

هدفت هذه الدراسة الي التعرف علي دور التحول الرقمي في دعم الإدارة الإستراتيجية للموارد البشرية ، ولتحقيق هدف الدراسة تم تصميم قائمة إستقصاء وزعت علي عينة الدراسة البالغة ٣٩٩ مفردة من العاملين بالبنوك المصرية التجارية محل الدراسة.

وتمت معالجة البيانات إحصائياً بواسطة برنامج الحزم الإحصائية في العلوم الإجتماعية SPSS (إصدار ٢٨) ومن أهم نتائج الدراسة وجود علاقة إرتباطية موجبة دالة إحصائياً عند مستوى دلالة (٠٠١) بين التخطيط الإستراتيجي للتحول الرقمي وجميع الأبعاد الفرعية الخمسة و الدرجة الكلية للإدارة الإستراتيجية للموارد البشرية ، وجود علاقة إرتباطية موجبة دالة إحصائياً عند مستوى دلالة (٠٠١) بين إعداد القادة في مجال التحول الرقمي وجميع الأبعاد الفرعية الخمسة و الدرجة الكلية للإدارة الإستراتيجية للموارد البشرية ، وجود علاقة إرتباطية موجبة دالة إحصائياً عند مستوى دلالة (٠٠١) بين البنية المؤسسية للتحول الرقمي وجميع الأبعاد الفرعية الخمسة و الدرجة الكلية للإدارة الإستراتيجية للموارد البشرية ، وجود علاقة إرتباطية موجبة دالة إحصائياً عند مستوى دلالة (٠٠١) بين إستقطاب المهارات و الكفاءات لعملية التحول الرقمي وجميع الأبعاد الفرعية الخمسة و الدرجة الكلية للإدارة الإستراتيجية للموارد البشرية ، هناك علاقة ارتباطية مرتفعة دالة إحصائياً عند مستوى دلالة (٠٠١) بين التحول الرقمي ككل و الإدارة الإستراتيجية للموارد البشرية ككل لدى العاملين في البنوك المصرية التجارية ، يمكن التنبؤ بالإدارة الاستراتيجية للموارد البشرية للموظفين في البنوك التجارية المصرية من خلال الأبعاد الأربعة للتحول الرقمي (التخطيط الاستراتيجي للتحول الرقمي ، وإعداد القادة في مجال التحول الرقمي ، واستقطاب المهارات والكفاءات من أجل عملية التحول الرقمي ، و البنية المؤسسية للتحول الرقمي) ، حيث يأتي المكون (التخطيط الاستراتيجي للتحول الرقمي) في المرتبة التنبؤية الأولى ، يليه المكون (إعداد القادة في مجال التحول الرقمي) في المرتبة التنبؤية الثانية ، يليه المكون (استقطاب المهارات والكفاءات لعملية التحول الرقمي) في المرتبة التنبؤية الثالثة ، وأخيرًا المكون (البنية المؤسسية للتحول الرقمي) الذي يأتي في المرتبة الرابعة التنبؤية.

الكلمات المفتاحية: التحول الرقمي، الإدارة الإستراتيجية للموارد البشرية، البنوك التجارية المصرية

Digital Transformation and its role in supporting Strategic Human Resources Management (An Applied Study on Egyptian Commercial Banks)

**Aly Yasser Aly Makhareta
Prof.Dr Mohamed Mohamed Ibrahim
Prof.Dr Shawky Mohamed ElSubbaugh**

Introduction

With the rise of new digital technologies, e.g., social networks, mobile, big data, etc., firms in virtually all industries domains are conducting multiple initiatives to explore and exploit their benefits (**Fitzgerald, 2013**). This frequently involves transformations of key business operations and affects products and processes, as well as organizational structures, as companies need to establish management practices to govern these complex transformations (**Ross, 2016**). Thus, society is facing a fast and radical change due to the maturation of digital technologies and their ubiquitous penetration of all markets (**Ebert, 2016**). To add to the increased demand from customers, companies are facing ever tougher competition due to globalization **Matt (2015)** and putting pressure to go digital before others do, seeking to survive and attain competitive advantages (**Westerman, 2011**).

Hence, A digitalized business creates value and revenue from digital assets. Organizations go beyond further rounds of process automation to transform processes, business models, and customer experience by exploiting the pervasive digital connections between systems, people, places, and things.

This study aims to identify Digital Transformation and its role in the light of challenges that face organizations. Strategic Human Recourses Management plays significant role to attain organization strategic goals but, the game going to change because COVID-19 rapid reshape all industries, organizations became at a crossroads stay at the same point or going to adapt their strategies with Digital Transformation, so this is motivation from this study to investigate the role of Digital Transformation in supporting Strategic Human Resource Management as pivotal player in organization strategy in the Egyptian commercial Banks.

Theoretical Framework and Literature Reviews

Digital Transformation (DX)

Studies on digital transformation represent a growing field. Recently, considerable literature has grown up around the theme of digital transformation so, the researcher must present the historical development of the digital transformation concept through understanding the digital transformation framework. Digitization refers to the transfer of analog to

digital world **Picard (2011)** or process automation using information communication technologies **(Hess et al., 2016)**.

Digitization has cleared the way for the development of several business / IT methods such as concepts for technology adoption, software selection procedures or data and information integration utilizing information systems **(Imgrund et al., 2018).** Further, points out Significant advances in IT organizations, IT strategy and information processing capacity have emerged from digitization. Digitization has marked the first step towards a comprehensive digital transformation, driven by social, mobile, cloud, and smart technologies convergence and an increasing demand for Big Data apps, automation, and integration **(Sebastian et al., 2017)**. According to **Yoo et al., (2012)** Digitalization, also known as digital transformation, both the digital and digital innovations processes with the goal to improve existing products and services with enhanced capabilities. According to **Holotiuk & Beimborn, (2017)** Digitalization explains the synchronization of business and IT strategy of an organization and the incorporation of information technology into the business strategy.

According to **Verhoef et al., (2021)** provide a theory to try to provide an understanding digital transformation framework, Digitization is the encoding of analogue information into a digital format (i.e., into zeros and ones) so that computers can store, process, and transmit such information. We can also refer to digitization as a transition from analogue to digital tasks, or as the integration of IT with existing tasks, and, more broadly, as the development or enabler of cost-effective resource configurations using IT (**Tan & Pan, 2003 ; Yoo, Henfridsson, & Lyytinen, 2010 ; Lai, Wong, & Cheng, 2010 ; Dougherty & Dunne, 2012 ; Loebbecke & Picot, 2015; Matt, Hess, & Benlian, 2015 ; Loebbecke & Picot, 2015 ; Li, Nucciarelli, Roden, & Graham, 2016 ; Parviainen, Tihinen, Kääriäinen, & Teppola, 2017 ; Sebastian et al., 2017 ; Vendrell-Herrero, Bustinza, Parry, & Georgantzis, 2017**) .

Digitalization refers to the use of information technology (IT) or digital technologies to transform existing business processes. For example, the development of new internet or mobile communication channels enable all customers to readily communicate with companies and alter traditional firm-customer relationships. Such a shift frequently entails the creation of new sociotechnical systems using digital artefacts, which would not be

**Digital Transformation and its role in supporting Strategic Human
Resources Management
(An Applied Study on Egyptian Commercial Banks)**

**Aly Yasser Aly Makhareta
Prof.Dr Mohamed Mohamed Ibrahim
Prof.Dr Shawky Mohamed ElSubbaugh**

conceivable without digital technology. IT is a crucial facilitator in digitalization, serving as a significant enabler in seizing new business opportunities by transforming old business processes, Communication, distribution, and commercial relationship management are a few examples. Firms employ digital technology to optimize current business processes by enabling for more efficient coordination across operations, and/or to provide more consumer value through improving user experiences. As a result, digitization is not just concerned with cost reductions, but also with process changes that may improve consumer experiences **(Baraldi & Nadin, 2006; Doorn et al., 2010 ; Dougherty & Dunne, 2012 ; Li et al., 2016 ; Ramaswamy & Ozcan, 2016 ; Leviäkangas, 2016 ; Pagani & Pardo, 2017)** .

The most ubiquitous phase is digital transformation, which defines a company-wide shift that leads to the emergence of new business models that may be novel to the focus organization or sector. Firms compete and can gain a competitive edge by utilizing their business models, which are defined as "how the organization generates and provides value to consumers, and then transforms cash received to profits**. (Iansiti & Lakhani, 2014; Kane et al., 2015; Pagani & Pardo,2017)** ".

Strategic Human Resources Management (SHRM)

Boxall (**2007**) defined SHRM as a management strategy that includes HR tactics meant to increase organisational performance and assesses the impact of these strategies on organisational performance. Another view from **Kaufman** (**2015**) defined SHRM as selection, alignment, and integration of an organization's human capital management system so that its human capital resources contribute most effectively to strategic business objectives. The most comprehensive concept of SHRM expressed by **Ibrahim** (**2018**) SHRM is an integrated, overlapping, and distinct set of jobs that take place before, during and after the career life of the employees. These functions are exercised within the framework of the elements of the organization's administrative work system, which is represented in planning, organizing, directing, and

controlling. The external and the resulting opportunities and limitations, and the internal variables and the resulting strengths and weaknesses.

El–Selmy (**2001**) defined SHRM as the ability of the organization to achieve its goals, objectives and vision, by translating the general strategy of the organization into a detailed strategy specialized in human resource issues. It includes the following: –

- The goal that the Human Resources department seeks to achieve is by dealing with the human element in the organization.
- The vision that the management defines for what should be its practice in the field of human resources.
- Specific strategic objectives required in the fields of formation, operation, development, and care of Human Resources.
- The policies governed by the Human Resources department in decision–making and comparison between alternatives to achieve strategic goals.
- The plans are strategic to procure the necessary resources and bridge the gaps in the available resources to achieve performance in the areas of Human Resources to levels that achieve goals and objectives.
- Follow–up and evaluation standards adopted by the management to verify the implementation of the strategy and the achievement of the specified achievements.

According to **Caliskhan (2010)** SHRM have sub strategies which is called "Functional Strategies" that represented in: -

- **HR Formation Strategy**: Which aims to attract qualified and well–experienced personnel for the purpose of employing them and using them to develop and improve their economic situation. This goal is related to manpower planning and assessing their needs.

Digital Transformation and its role in supporting Strategic Human Resources Management (An Applied Study on Egyptian Commercial Banks)

Aly Yasser Aly Makhareta
Prof.Dr Mohamed Mohamed Ibrahim
Prof.Dr Shawky Mohamed ElSubbaugh

- **Training and Development Strategy**: This is for the purpose of raising the efficiency, knowledge and skills of employees and directing their attitudes towards specific activities.

- **Performance Appraisal Strategy**: In order to find out the extent to which the actual performance agrees with the targeted performance in terms of size, quantity, speed, time, quality, cost, continuity and flow, as well as an assessment of the consistency of the performance elements and those responsible for them with the specifications included in the work design.

- **Compensation and Benefits Strategy**: This strategy depends on the system of incentives represented in promotion and attractive wage policies.

Literature Reviews of Digital Transformation (DX) – Independent Variable

Study conducted by **Sinha (2020)** said for all firms, digital transformation is the way forward. Technology is growing at a tremendous speed, and businesses must adapt not just to take advantage of the immense opportunities it brings, but also to remain relevant in this volatile, unpredictable, complicated, and ambiguous environment. The purpose of that study is to describe the notion of digital transformation and what it implies in today's corporate environment. It aids in understanding the various phases of digital maturity, identifying the hurdles to adopting different technologies, and providing solutions to those difficulties and this study was able to reveal - what it means to be digitally changed, the many obstacles that an organisation experiences along the digital transformation path, and viable solutions to these challenges.

Study conducted by **Steiber & et al. (2020)** said large corporations are under growing pressure to transform because of the digitalization process. However, present digital transformation frameworks do not adequately describe what elements contribute to or hinder a firm's digital transformation. As a result, the objective of this study is to add to the current body of research on what contributes to, or inhibits, an industrial firm's digital transformation by using a verified framework based on innovation

diffusion theories to two pioneer cases: EHR/Health Services from General Electric and Siemens. Study findings represented in common drivers and evident impediments to the change of the two organizations were found. The innovation diffusion framework was shown to be quite effective in detecting such aspects.

Another study conducted by **Ghobakhloo & Iranmanesh (2021)** discussed digital transformation success under Industry 4.0. Because the digital transformation under Industry 4.0 is complicated and resource-intensive, a strategic digitalization guideline is critical to the success of small and medium-sized firms in the industry 4.0 transition. The purpose of that study is to equip manufacturing small and medium-sized firms (SMEs) with a roadmap for successful digital transformation under Industry 4.0. Study findings represented in Eleven success factors are critical for SMEs' digital transformation efforts.

Study conducted by **Shi & et al. (2021)** said supply chain integration (SCI) is critical to successfully adopting an omni-channel retailing (OCR) strategy. Using a knowledge management (KM) approach, the study investigates the significance of digitalization as a driver of SCI, as well as the function of human capital (HC) in digitalization. According to the findings of this study, HC is favorably associated to a firm's level of digitalization in OCR, and digitalization is positively related to the retailer's SCI. Furthermore, the study discovered that employees' capital has a bigger influence on digitization than managers' capital, and that digitalization has a greater driving effect on internal and customer integration.

Studies related to digital transformation agreed to clarify the theoretical framework in terms of the concept, advantages, and the obstacles facing it and its importance in different sectors, and there is agreement among researchers on the importance of digital transformation in organizations and its impact on some other organizational variables such as organizational restructuring **Plesner (2018)** and formal and informal structures **Bonanomi (2019)** and business model innovation **Walliam (2019), Rachinger (2019**) This indicates that digital transformation is an important topic due to its positive impact on the aforementioned organizational variables and the consequent impact on performance and the general climate in the organization **(Bienhaus, 2018)**

Digital Transformation and its role in supporting Strategic Human Resources Management (An Applied Study on Egyptian Commercial Banks)

Aly Yasser Aly Makhareta
Prof.Dr Mohamed Mohamed Ibrahim
Prof.Dr Shawky Mohamed ElSubbaugh

Literature Reviews of Strategic Human Resources Management (SHRM) – Dependent Variable

Study conducted by **Adil & Burcu (2021)** aimed to identify the role of strategic human resource management in corporate governance practices through information obtained from annual reports published on the websites of companies, institutions, and organizations. The analysis was conducted using data from a sample of 15 companies. The most important variable is job design policy that has an impact on governance and its implementation.

Another study conducted by **Fawzy (2022)**, which aimed to determine the impact of human resource management practices represented in (careful selection, training, wage systems, performance appraisal, and employee participation systems) on improving the elements of organizational ingenuity and innovative performance, while determining the extent to which the elements of supportive organizational culture mediate. It is represented in (common vision and organizational diversity), where the study was applied to a sample of hotels operating in Egypt in the governorates of Cairo and Giza and included (63) hotels. The results showed that there is a positive relationship between strategic human resources management practices and organizational ingenuity with a value of 72%, as well as with an indirect effect on organizational ingenuity and through the mediation of organizational culture with a value of 22%. The results also showed a partial mediation of the organizational culture of the relationship. And strong organizational ingenuity and innovative performance with a value of 63%. In light of these results, a number of recommendations were formulated, all of which indicate the importance of building high performance systems based on strategic practices of human resources in the hotel industry.

Another study conducted by **Fahim (2018)** discussed strategic human resource management and public employee retention, the investigation is co-relational in character, with a cause-and-effect perspective. The study's design is both descriptive in the theoretical section and quantitative in the applied section. Aside from an empirical investigation to analyse correlations in practise, this work took an analytical approach to identify the fundamental ideas. The goal of this study is to investigate the dynamics of implementing strategic human resource management (SHRM) methods in the public sector. More precisely, this

study attempts to highlight several key characteristics of SHRM that have a substantial effect on workers' desire to remain. The empirical study presented here reveals further information on the SHRM-retention relationship. According to the findings of this study, the use of optimal HRM practises is a noteworthy strategic instrument in the retention of key public personnel. Furthermore, the findings of the study show that SHRM helps to employee retention at NBE.

Moreover, study conducted by **Backer (2017)** A study sought to reveal the direct and indirect relationship between strategic human resources practices and organizational performance in multinational companies in Kenya. The study included human resource managers in (50) companies, and the study concluded that there is a direct relationship between strategic human resource practices (training and development, reward and compensation system) and organizational performance, while the relationship was indirect with motivation.

Another study conducted by **Huselid et al. (2016)** focused on identifying the main issues of strategic human resources management in the telecommunications sector in Pakistan, and the study sample included (12) managers in five companies. The study concluded that strategic human resources practices are among the important pillars in organizations, and that they have an important role in maximizing profits for the organization. The study also concluded that it is important to integrate human resource management practices with the organization's vision and objectives. The study also found that organizations with an organizational culture characterized by commitment have a relationship between strategic human resource management and strategic planning for the organization.

Research problem and questions

According to previous illustration of theoretical framework and literature reviews so the problem of this study can be identified as follows: -

What is the role of digital transformation in supporting Strategic Human Resources Management in the Egyptian Commercial Banks under study?

Based upon the main question, several research questions will be asked:

Digital Transformation and its role in supporting Strategic Human Resources Management (An Applied Study on Egyptian Commercial Banks)

Aly Yasser Aly Makhareta
Prof.Dr Mohamed Mohamed Ibrahim
Prof.Dr Shawky Mohamed ElSubbaugh

RQ1 Is there a correlation between strategic digital transformation and strategic human resources management in commercial Egyptian banks?

RQ2 Is there a correlation between strategic planning of digital transformation and strategic human resources management in commercial Egyptian banks?

RQ3 Is there a correlation between preparing leaders for digital transformation and strategic human resources management in commercial Egyptian banks?

RQ4 Is there a correlation between enterprise architecture of digital transformation and strategic human resources management in commercial Egyptian banks?

RQ5 Is there a correlation between attracting skills and competencies for digital transformation process and strategic human resources management in commercial Egyptian banks?

RQ6 Is it possible to predict the strategic human resources management through digital transformation?

Research Hypotheses and Model

H1: There is a significant relationship between digital transformation and strategic human resources management in the commercial Egyptian banks
H1/1: There is a significant relationship between strategic planning of digital transformation and strategic human resources management in the commercial Egyptian banks
H1/2: There is a significant relationship between preparing leaders for digital transformation and strategic human resources management in the commercial Egyptian banks
H1/3: There is a significant relationship between enterprise architecture of digital transformation and strategic human resources management in the Egyptian
H1/4: There is a significant relationship between attracting skills and competencies for digital transformation process and strategic human resources management in the Egyptian commercial banks

H2: Strategic human resources management can be predicted through digital transformation.

Figure (2): Research Model
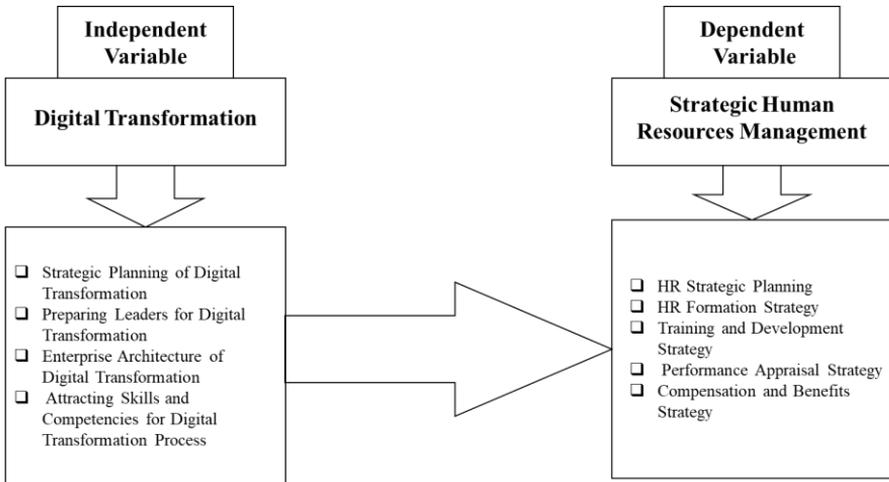
Research Objectives

1) Investigating correlation between digital transformation and strategic human resources management in commercial Egyptian banks.

1/1) Investigating correlation between strategic planning of digital transformation and strategic human resources management in commercial Egyptian banks.

2/1) Investigating correlation between preparing leaders for digital transformation and strategic human resources management in commercial Egyptian banks.

3/1) Investigating correlation between enterprise architecture of digital transformation and strategic human resources management in commercial Egyptian banks.

4/1) Investigating correlation between attracting skills and competencies for digital transformation process and strategic human resources management in commercial Egyptian banks.

2) Determine the relative contribution of the components of the strategic human resources management in predicting the digital transformation of employees in commercial Egyptian banks

**Digital Transformation and its role in supporting Strategic Human Resources Management
(An Applied Study on Egyptian Commercial Banks)**

**Aly Yasser Aly Makhareta
Prof.Dr Mohamed Mohamed Ibrahim
Prof.Dr Shawky Mohamed ElSubbaugh**

Research Importance

The value-added from the research with respect to the following dimensions:
The Scientific Dimension
The research contributes to inducting some scientific dimensions related to the literature review of the problem such as:

▪ Study contributes to the existing literature on the study of the relationship

between digital transformation and strategic human resources management.

▪ This study will provide an important opportunity for researchers to advance

the understanding of the concept of digital transformation, especially in the Egyptian commercial banks.
The Application Dimension
Study will introduce some recommendations for solving the problem,
and accordingly, there will be an application value-added from the research it
is represented by the following: -

▪ This study will help the HR sectors within the Egyptian commercial banks

assess their digital transformation competencies. Therefore, the outcome of the study can be considered a guide for the Egyptian commercial banks.

Research Methodology

This study was designed to investigate digital transformation and its role in supporting strategic human resources management in the commercial Egyptian banks.

The instrument of collecting data for this study was a questionnaire **(Saunders et al., 2016)** containing 64 items. The original study population is approximately (4000) male and female employees working in HR sectors (Top Management – Middle Management – Lower Management) in Egyptian commercial banks, while the size of the initial study sample was (435) male and female employees, which thus represents (10.87%) of the original study population, and (36) cases were excluded from them; As some of them did not answer both scales, digital transformation and strategic management of human resources, and others left many items without answering them, which prompted the researcher to exclude such cases, and

thus the final study sample becomes (399) male and female employees working in Egyptian commercial banks. Which represents (9.97%) of the original study population. The questionnaires were distributed through an online link that contains the questionnaire items translated into Arabic among the sample units between the period from May 2022 to October 2022.

Respondents had about 15 minutes to complete an online questionnaire. The questionnaire was prepared based on validated and reliable measurement scales found in the literature.

This questionnaire consisted of three major parts; part (1) which measure digital transformation and contain four dimensions represented into the following (Strategic Planning of Digital Transformation (SPDX) - Preparing Leaders for Digital Transformation (PLDX) - Enterprise Architecture of Digital Transformation (EADX) - Attracting Skills and Competencies for Digital Transformation Process (ASCDX)) *Those mentioned dimensions that has been used in this study was originally developed by* (**Hammad,2020**). *The answers could be given by using a five-point Likert-type scale* ranges from: (5) Strongly Agree, (4) Agree, (3) Natural (2) Disagree, (1) Absolutely Disagree.

Part (2) Strategic Human Resources Management (SHRM) and contain five dimensions represented into the following (HR Strategic Planning (HRSP) - HR Formation Strategy (HRFS) - Training and Development Strategy (TDS) - Performance Appraisal Strategy (CBS) - Compensation and Benefits Strategy (PAS)). *mentioned dimensions that has been used in this study was originally developed by (*Aldaibat and Irtaimeh 2012; Chen and Huang 2009**) *based on the three motivational factors determined by (*Chew and Chong 1999**). *The answers could be given by using a five-point Likert-type scale* ranges from: (5) Strongly Agree, (4) Agree, (3) Natural (2) Disagree, (1) Absolutely Disagree.

The researcher wasn't needed to perform reliability and validity tests on each measure of the research instrument to investigate the internal consistency of the questionnaire because used modern-ready measures **Sürücü (2020)** published in respectable journals for both variables (Digital Transformation and *Strategic Human Resources Management*) with non-modification *and* asked the opinion of a group of experts about the validity of the questionnaire, and they praised it.

221

Digital Transformation and its role in supporting Strategic Human
Resources Management
(An Applied Study on Egyptian Commercial Banks)

Aly Yasser Aly Makhareta
Prof.Dr Mohamed Mohamed Ibrahim
Prof.Dr Shawky Mohamed ElSubbaugh

Testing the Study Hypothesis

The proposed research hypotheses were tested to figure out the answers to research questions through the person correlation coefficient test as the most common way of measuring a linear correlation. It is a number between –1 and 1 that measures the strength and direction of the relationship between two variables and stepwise multiple regression analysis as the step-by-step iterative construction of a regression model that involves the selection of independent variables to be used in a final model. It involves adding or removing potential explanatory variables in succession and testing for statistical significance after each iteration.

H1: There is a significant relationship between digital transformation and strategic human resources management in the commercial Egyptian banks.

This hypothesis is divided into four sub-hypotheses represented as follows: -

- **H1/1: There is a significant relationship between strategic planning of digital transformation and strategic human resources management in the commercial Egyptian banks.**

To test this hypothesis, the researcher calculated the value of the Pearson correlation coefficient to reveal the strength and direction of the correlation between the SPDX, the sub-dimensions, and the total degree SHRM for employees in Egyptian commercial banks. By using (SPSS Version 28) the results shown in the following table:

Table (3): Pearson correlation coefficient between (strategic planning for digital transformation) and sub dimensions and total degree for SHRM (n = 399)

SHRM Dimensions	Pearson correlation coefficient
HR Strategic Planning	0.826**
HR Formation Strategy	0.818**
Training and Development Strategy	0.800**
Compensation and Benefits Strategy	0.809**
Performance Appraisal Strategy	0.819**
Total degree	0.838**

** Sig.at the level of (0.01) * Sig.at the level of (0.05)

Based on the results shown in table (3) hypothesis (H1/1) is accepted. Where it is clear that there is a statistically significant positive correlation at the level of significance (0.01) between SPDX and all the five sub-dimensions and the overall degree of SHRM; Where the values of the correlation coefficients ranged between (0.800 - 0.838), all of which are high and statistically significant at the level of significance (0.01).

- **H1/2: There is a significant relationship between preparing leaders for digital transformation and strategic human resources management in the commercial Egyptian banks.**

  To test this hypothesis, the researcher calculated the value of the Pearson correlation coefficient to reveal the strength and direction of the correlation between the PLDX, the sub-dimensions, and the total degree of SHRM for employees in Egyptian commercial banks. By using (SPSS Version 28) The results shown in the following table:

  Table (4): Pearson correlation coefficient between (preparing leaders for digital transformation) and sub dimensions and total degree for SHRM (n = 399)

SHRM Dimensions	Pearson correlation coefficient
HR Strategic Planning	0.735**
HR Formation Strategy	0.736**
Training and Development Strategy	0.718**
Compensation and Benefits Strategy	0.730**
Performance Appraisal Strategy	0.733**
Total degree	0.751**

** Sig.at the level of (0.01) * Sig.at the level of (0.05)

Based on the results shown in table (4) hypothesis (H1/2) is accepted. Where it is clear that there is a statistically significant positive correlation at the level of significance (0.01) between PLDX and all the five sub-dimensions and the overall degree of SHRM; Where the values of the correlation coefficients ranged between (0.718 - 0.751), all of which are high values and statistically significant at the level of significance (0.01).

- **H1/3: There is a significant relationship between enterprise architecture of digital transformation and strategic human resources management in the Egyptian commercial banks.**

223

Digital Transformation and its role in supporting Strategic Human
Resources Management
(An Applied Study on Egyptian Commercial Banks)

Aly Yasser Aly Makhareta
Prof.Dr Mohamed Mohamed Ibrahim
Prof.Dr Shawky Mohamed ElSubbaugh

To test this hypothesis, the researcher calculated the value of the Pearson correlation coefficient to reveal the strength and direction of the correlation between the between EADX, the sub-dimensions, and the total degree of SHRM for employees in Egyptian commercial banks. By using (SPSS Version 28) The results shown in the following table:

Table (5): Pearson correlation coefficient between (enterprise architecture of digital transformation) and sub dimensions and total degree for SHRM (n = 399)

SHRM Dimensions	Pearson correlation coefficient
HR Strategic Planning	0.726**
HR Formation Strategy	0.710**
Training and Development Strategy	0.684**
Compensation and Benefits Strategy	0.689**
Performance Appraisal Strategy	0.696**
Total degree	0.723**

** Sig.at the level of (0.01) * Sig.at the level of (0.05)

Based on the results shown in table (5) hypothesis (H1/3) is accepted. Where it is clear that there is a statistically significant positive correlation at the level of significance (0.01) between EADX and all the five sub-dimensions and the overall degree of SHRM; Where the values of the correlation coefficients ranged between (0.684 - 0.726), all of which are high values and statistically significant at the level of significance (0.01).

- **H1/4 There is a significant relationship between attracting skills and competencies for digital transformation process and strategic human resources management in the Egyptian commercial banks.**

Table (6): Pearson correlation coefficient between (attracting skills and competencies for digital transformation process) and sub dimensions and total degree for SHRM (n = 399)

SHRM Dimensions	Pearson correlation coefficient
HR Strategic Planning	0.835**
HR Formation Strategy	0.819**
Training and Development Strategy	0.791**
Compensation and Benefits Strategy	0.809**
Performance Appraisal Strategy	0.795**
Total degree	0.835**

** Sig.at the level of (0.01) * Sig.at the level of (0.05)

224

Based on the results shown in table (6) hypothesis (H1/4) is accepted. Where it is clear that there is a statistically significant positive correlation at the level of significance (0.01) between ASCDX and all the five sub-dimensions and the overall degree of SHRM; Where the values of the correlation coefficients ranged between (0.791 - 0.835), all of which are high and statistically significant at the level of significance (0.01).

The value of the Pearson correlation coefficient to reveal the strength and direction of the correlation between digital transformation as a whole and the strategic management of human resources as a whole for workers in Egyptian commercial banks, and the value of the correlation coefficient between them was (0.903**). It is a statistically significant high value at the significance level (0.01).

H2: Strategic human resources management can be predicted through digital.

To test this hypothesis, the researcher used the method of multiple regression analysis by the method of gradual addition of the variables Stepwise, where the four sub-dimensions of digital transformation (SPDX,PLDX,EADX,ASCDX) were included as independent variables In the regression analysis model in order to reveal the predictive power of each of them in predicting the overall performance of the SHRM (the dependent variable) for employees in Egyptian commercial banks, where this statistical method is characterized by the possibility of introducing the strongest independent variables affecting the dependent variable in the first step and then introducing The variable that follows it in the strength of influence in the second step .. and so on until all the independent variables that have a significant effect on the dependent variable are included, while the independent variables that have a weak effect or that explain a small percentage of the variation in the degrees of the dependent variable are not included. The results of the statistical treatment using the SPSS program (version 28) resulted in the results shown in the table (4-17)

Digital Transformation and its role in supporting Strategic Human Resources Management (An Applied Study on Egyptian Commercial Banks)

Aly Yasser Aly Makhareta
Prof.Dr Mohamed Mohamed Ibrahim
Prof.Dr Shawky Mohamed ElSubbaugh

Table (7): Results of regression analysis in predicting SHRM through digital transformation (SPDX, PLDX, EADX, ASCDX) among the study sample (n = 399)

Independent Variables	regression coefficient B	standard error B	Standard regression coefficient Beta	T Value	significance level	F Value	significance level	R	R²	The square of the modified multiple correlation coefficient
Strategic Planning of Digital Transformation	7.410	0.242	0.838	30.65	0.01	939.78	0.01	0.838	0.703	0.702
Constant = 32.36										
Strategic Planning of Digital Transformation	5.352	0.249	0.606	21.48	0.01	787.21	0.01	0.894	0.799	0.798
Preparing Leaders for Digital Transformation	3.578	0.260	0.388	13.75	0.01					
Constant = 2.51										
Strategic Planning of Digital Transformation	3.866	0.303	0.437	12.76	0.01	620.98	0.01	0.908	0.825	0.824
Preparing Leaders for Digital Transformation	2.625	0.273	0.284	9.619	0.01					
Attracting Skills and Competencies for Digital Transformation Process	2.862	0.373	0.293	7.667	0.01					
Constant = 6.358										
Strategic Planning of Digital Transformation	3.151	0.426	0.357	7.395	0.01	472.58	0.01	0.910	0.828	0.826
Preparing Leaders for Digital Transformation	3.055	0.326	0.331	9.362	0.01					
Attracting Skills and Competencies for Digital Transformation Process	2.273	0.447	0.233	5.091	0.01					
Enterprise Architecture of Digital Transformation	1.062	0.448	0.118	2.370	0.05					
Constant = 9.449										

The results in Table (7) show that the third hypothesis was accepted. Where the following appears:

(A) The regression analysis model showed that the four dimensions of digital transformation (SPDX, PLDX, EADX, ASCDX) contribute to predicting the SHRM among employees of Egyptian commercial banks. Where the results indicate the significance of the predictive regression analysis equation for the following reasons:

- The first step: The value of t is an indication of differences according to the variable of SPDX in the first step (30.65), which is a statistically significant value at the level of significance (0.01), and the value of P was (939.78), which is a value of a statistical function at the level of significance (0.01).
- The second step: the two values of t to indicate the differences according to the two variables (SPDX, PLDX) were (21.48, 13.75), respectively, both of which are statistically significant at the level of significance (0.01). The value of q to indicate the differences according to the two variables together was (787.21), which is a statistically significant value at the level of significance (0.01).
- The third step: the t values to indicate differences according to the variables (SPDX, PLDX, ASCDX) were (12.76, 9.61, 7.66), respectively. All of which are statistically significant values at the level of significance (0.01). The value of q to indicate the differences according to the three variables together was (620.98), which is a statistically significant value at the level of significance (0.01).
- The fourth step: the values of t to indicate differences according to the four variables SPDX,PLDX,ASCDX,EADX) were (7.39, 9.36, 5.09, 2.37), respectively, and all of them Statistically significant values at the level of significance (0.01), with the exception of the variable "EADX", the level of significance came at (0.05), and the value of q for the significance of differences according to the four variables together amounted to (472.58), which is a statistically significant value at the level of significance (0.01).

(B) The value of the multiple correlation square (R^2) in the fourth step of the regression analysis model indicates that the four predictive variables (SPDX, PLDX, EADX, ASCDX) contribute together by (82.8)% of the variation in SHRM among the study sample of employees in Egyptian commercial banks; The variable (SPLDX) is considered the most influential in SHRM as it ranked first in the regression equation and contributed alone by (70.3%) of the variation in SHRM, then the variable (PLDX) came in the rank The second in terms of influence, as it alone contributes (9.6%) of the variance in SHRM among the study sample, and the variable (ASCDX) came in the third rank in terms of influence, as it alone contributes (2.6%) of the variance in management. Finally, the variable (EADX) ranked fourth in

Digital Transformation and its role in supporting Strategic Human Resources Management (An Applied Study on Egyptian Commercial Banks)

**Aly Yasser Aly Makhareta
Prof.Dr Mohamed Mohamed Ibrahim
Prof.Dr Shawky Mohamed ElSubbaugh**

terms of influence, contributing alone by (0.3%) of the variation in SHRM among employees in Egyptian commercial banks.

(C) The positive values of the regression coefficient indicate the four variables (SPDX, PLDX, ASCDX, EADX), which amounted to (3.15, 3.05, 2.27, 1.06). Accordingly, these four variables are (positive) predictors of SHRM practices; In the sense that the rise in behavioral manifestations and practices of any of these four variables in the study population is followed by a prediction of a rise in behavioral manifestations or practices of SHRM, and vice versa.

(D) The predictive equation for this hypothesis can be formulated as follows: SHRM practices = 3.15 (SPLDX) + 3.05 (PLDX) + 2.27 (ASCDX) + 1.06 (EADX) + 9.44. These results mean, in their entirety, that it is possible to predict SHRM for employees in Egyptian commercial banks through the four dimensions of digital transformation (SPDX,PLDX,ASCDX,EADX), Where the dimension (SPLDX) comes in the first predictive rank, followed by the component (PLDX) in the second predictive rank, followed by the dimension (ASCDX) in the third predictive rank, and finally the dimension (EADX), which comes in the fourth predictive rank.

The Key Finding and Recommendations

The field study revealed several key findings. In this part a brief on those findings is demonstrated as follows:

- There is a statistically significant positive correlation at the level of significance (0.01) between SPDX and all the five sub-dimensions and the overall degree of SHRM; Where the values of the correlation coefficients ranged between (0.800 - 0.838), all of which are high and statistically significant at the level of significance (0.01).
- There is a statistically significant positive correlation at the level of significance (0.01) between PLDX and all the five sub-dimensions and the overall degree of SHRM; Where the values of the correlation coefficients ranged between (0.718 - 0.751), all of which are high values and statistically significant at the level of significance (0.01).
- There is a statistically significant positive correlation at the level of significance (0.01) between EADX and all the five sub-dimensions and the overall degree of SHRM; Where the values of the correlation

228

coefficients ranged between (0.684 - 0.726), all of which are high values and statistically significant at the level of significance (0.01).

- There is a statistically significant positive correlation at the level of significance (0.01) between ASCDX and all the five sub-dimensions and the overall degree of SHRM; Where the values of the correlation coefficients ranged between (0.791 - 0.835), all of which are high and statistically significant at the level of significance (0.01).

- The value of the Pearson correlation coefficient to reveal the strength and direction of the correlation between digital transformation as a whole and the strategic management of human resources as a whole for workers in Egyptian commercial banks, and the value of the correlation coefficient between them was (0.903**). It is a statistically significant high value at the significance level (0.01).

- The strategic management of human resources for employees in Egyptian commercial banks can be predicted through the four dimensions of digital transformation (strategic planning for digital transformation, preparing leaders in the field of digital transformation, attracting skills and competencies for the digital transformation process, and enterprise architecture of digital

transformation), where the component (strategic planning) comes for digital transformation) in the first predictive rank, followed by the component (preparing leaders in the field of digital transformation) in the second predictive rank, followed by the component (attracting skills and competencies for the digital transformation process) in the third predictive rank, and finally the component (enterprise architecture of digital transformation), which comes in the rank fourth predictive.

Digital Transformation and its role in supporting Strategic Human Resources Management (An Applied Study on Egyptian Commercial Banks)

Aly Yasser Aly Makhareta
Prof.Dr Mohamed Mohamed Ibrahim
Prof.Dr Shawky Mohamed ElSubbaugh

Recommendations

	Recommendation Scope	Recommendation	Recommendation Executor
1	**Talent Empowerment**	**Empowering digital talents within the framework of career succession plans**	**Top Management**
2	**Digital Empowerment**	**Developing digital mastery by taking control of the organizational digital agenda rather than being controlled by the outside digital world**	**Top Management**
3	**Support Specialized Certificates Programs**	**Motivating employees to get specialized professional certificates**	**Top Management**
4	**Enabling OKRs**	**Adopted OKRs as an innovative approach for managing performance**	**Top Management**
5	**Enabling Agile Practices**	**Change organization's mindset and culture from the inside out**	**Top Management**

Table (8): Study Recommendations

Directions for Future Research

Although the current study attempted to study digital transformation and its support for strategic human resource management in Egyptian commercial banks, the findings of the study indicate that there are areas for future studies in need of research and study, and no less important. Among the research areas are the following:

- Apply current study on another industry such as pharmaceutical industry.
- Enter organizational culture as mediating variable and restudy this study.
- Study the effect of another management fields on digital transformation.

References

A.Martin (2008), Digital literacy and the "digital society", In: Digital Literacies
Concepts Policies Practices 30, p. 151–176.

Adil Salepçioğlu & Burcu Sarı, (2021) , Investigation of strategic human
resources activity in corporate governance practices: A research with Artificial
Neural Networks, Journal of Transnational Management, 26:2, pp118-138

Aldaibat, B.F., and Irtaimeh, H. (2012),"The Role of Strategic Human Resource
Management at Jordanian Banking Sector Through Implementation Total
Quality Management (TQM)", European Scientific Journal, 8 (25)

Baraldi, E., & Nadin, G. (2006). The challenges in digitalising business
relationships: The construction of an IT infrastructure for a textile-related
business network.Technovation, 26(10), 1111–1126.

Boue´e CE, Schaible S (2015) Die Digitale Transformation der Industrie. Roland
Berger Strategy Consultans und Bundesverband der Deutschen Industrie
e.V., Berlin

BMWi (2015) Industrie 4.0 und Digitale Wirtschaft – Impulse für Wachstum,
Bescha¨ftigung und Innovation. Bundesministerium für Wirtschaft und
Energie, Berlin

Becker, B. and Huselid, M. (2017) ,"Strategic Human Resource Management :
Where do we go from Here?", Journal of Management, Vol.32 No.6,
pp.898-925.

Boxall, P F (2007) The goals of HRM, in Oxford Handbook of Human Resource
Management, ed P Boxall, J Purcell and P Wright, pp 48–67, Oxford
University Press, Oxford

Bienhaus, F., & Haddud, A. (2018). Procurement 4.0: factors influencing the
digitisation of procurement and supply chains. Business Process
Management Journal.

Bonanomi, M. M., Hall, D. M., Staub-French, S., Tucker, A., & Talamo, C. M. L.
(2019). The impact of digital transformation on formal and informal
organizational structures of large architecture and engineering firms.
Engineering, Construction and Architectural Management.

Chaniasa, S., Myers, M. D. & Hess, T. (2019). Digital transformation strategy
making in pre-digital organizations the case of a financial services provider,
Journal of Strategic Information Systems, 1-17.

Castro, M. V. de M., de Araújo, M. L., Ribeiro, A. M., Demo, G., & Meneses, P. P.
M. (2020). Implementation of strategic human resource management
practices: a review of the national scientific production and new research
paths. Revista de Gestão, 27(3), 229–246. https://doi.org/10.1108/rege-10-
2018-0102

Caliskhan, E. (2010). The Impact of Strategic Human Resource Management
on Organizational Performance. Journal of Naval Science and Engineering.

Digital Transformation and its role in supporting Strategic Human Resources Management (An Applied Study on Egyptian Commercial Banks)

Aly Yasser Aly Makhareta
Prof.Dr Mohamed Mohamed Ibrahim
Prof.Dr Shawky Mohamed ElSubbaugh

Vol. (6), no. 2, p. 106

Chen, C., and Huang, J., (2009),"Strategic Human Resource Practice and Innovation Performance the Mediating Role Knowledge Management Capacity", Journal of Business Research, Vol (62)

Chew, I.K., and Chong, P., (1999),"Effects of Strategic Human Resource Management on Strategic Vision", International Journal of Human Resource Management, Vol (10), No (6)

Dougherty, D., & Dunne, D. (2012). Digital science and knowledge boundaries in complex innovation. Organization Science, 23(5), 1467–1484

Donald J. Bowersox, David J. Closs, and Ralph W. Drayer (2005), The Digital Transformation: Technology and Beyond, Supply Chain Management Review.

El-Selmy, A., (2001). Strategic Human Resources Management, Dar Ghareeb, Cairo.

Ebert, C., Duarte, C. (2016): Requirements engineering for the digital transformation: industry panel. In: Requirements Engineering Conference IEEE 24th International, pp. 4–5

Fahim, M. G. A. (2018). Strategic human resource management and public employee retention. Review of Economics and Political Science, 3(2), 20–39. https://doi.org/10.1108/reps-07-2018-002

Fawzy, H., (2022). The effect of strategic human resources management practices on organizational ingenuity and innovative performance in light of the mediating role of organizational culture. Scientific Journal of Commercial and Environmental Studies., 12 (1), 1-3

Fitzgerald, M., Kruschwitz, N., Bonnet, D., Welch, M. (2013): Embracing Digital Technology: A New Strategic Imperative. MIT Sloan Management Review, Research Report

Ghobakhloo, M., & Iranmanesh, M. (2021). Digital transformation success under Industry 4.0: A strategic guideline for manufacturing SMEs. Journal of Manufacturing Technology Management, 32(8), 1533-1556.

Huselid, M. Jackson,S. and Schuler, R. (2016) : Technical and strategic human resource management effectiveness as determinants of firm performance. Academy of Management Journal, Vol. 40, pp. 171 -188.

Holotiuk, F., & Beimborn, D. (2017). Critical Success Factors of Digital Business Strategy. 13th International Conference on Wirtschaftsinformatik, 991–1005

Hess, T., Matt, C., Benlian, A., & Wiesböck, F. (2016). Options for Formulating a Digital Transformation Strategy Use of Social Live Streaming Services at the Individual Level View project Research Project on Digital Transformation of Corporations View project.

Hammad, M., (2020)," The Role of Digital Transformation in Developing Employee Performance: A Field Study on Egyptian Company for Pharmaceutical ", Scientific Journal of Financial and Administrative Studies and Research, Vol (7)

Imgrund, F., Fischer, M., & Winkelmann, A. (2018). Approaching Digitalization with Business Process Management. https://www.researchgate.net/publication/323665985

Iansiti, M., & Lakhani, K. R. (2014). Digital ubiquity: How connections, sensors, and data are revolutionizing business. Harvard Business Review, 92(11), 90–99.

Ibrahim, M., (2018). Strategic Human Resources Management, Rushd Bookstore, KSA.

Kaufman, B E (2015) The evolution of strategic HRM as seen through two founding books: a 30th anniversary perspective on development of the field, Human Resource Management, 54 (3), pp 389–407.

Kane, G. C., Palmer, D., Philips, A. N., Kiron, D., & Buckley, N. (2015). Strategy, not technology, drives digital transformation. MIT Sloan Management Review and Deloitte University Press, 14, 1–25.

Lai, K. H., Wong, C. W. Y., & Cheng, T. C. E. (2010). Bundling digitized logistics activities and its performance implications. Industrial Marketing Management, 39(2), 273–286.

Loebbecke, C., & Picot, A. (2015). Reflections on societal and business model transformation arising from digitization and big data analytics: A research agenda. Journal of Strategic Information Systems, 24(3), 149–157.

Leviäkangas, P. (2016). Digitalisation of Finland's transport sector. Technology in Society,47(1), 1–15.

Li, F., Nucciarelli, A., Roden, S., & Graham, G. (2016). How smart cities transform operations models: A new research agenda for operations management in the digital economy. Production Planning & Control, 27(6), 514–528.

Matt, C., Hess, T., & Benlian, A. (2015). Digital transformation strategies. Business and Information Systems Engineering, 57(5), 339–343.

McDonald, A. Roswell-Jones (2012), The Digital Edge: Exploiting Information &Technology for Business Advantage, Gartner Inc.

Management Journal 12: 463–466

Mazzone DM (2014) Digital or death: digital transformation: the only choice for business to survive smash and conquer. Smashbox Consulting

Nowińska, E. (2020). Use and application of the internet of things in the digital transformation of enterprises. Acta Universitatis Nicolai Copernici. Zarządzanie, 47(2), 21-35.

Ochoa, O. (2016). Digital culture: Building new organizarional behaviors and habits to maximize the potencial of technology.Economic studies bulletin,

Digital Transformation and its role in supporting Strategic Human Resources Management (An Applied Study on Egyptian Commercial Banks)

Aly Yasser Aly Makhareta
Prof.Dr Mohamed Mohamed Ibrahim
Prof.Dr Shawky Mohamed ElSubbaugh

217,
71-83.

Plesner, Ursula & Justesen, Lise & Glerup, Cecilie. (2018). The transformation of work in digitized public sector organizations. Journal of Organizational Change Management. 31. 10.1108/JOCM-06-2017-0257.

Parviainen, P., Tihinen, M., Kääriäinen, J., & Teppola, S. (2017). Tackling the digitalization challenge: How to benefit from digitalization in practice. International Journal of Information Systems and Project Management, 5(1), 63–77.

Pagani, M., & Pardo, C. (2017). The impact of digital technology on relationships in a business network. Industrial Marketing Management, 67, 185– 192.

Picard, R. G. (2011). Digitization-Media-Business-Models-20110721. 5. www.mappingdigitalmedia.org

PwC (2013) Digitale Transformation – der gr€oßte Wandel seit der industriellen Revolution. PwC, Frankfurt

Ross, J., Sebastian, I., Beath, C., Scantlebury, S., Mocker, M., Fonstad, N., Kagan, M., Moloney, K., Geraghty Krusel, S. (2016): Designing Digital Organizations, vol. 46. MIT Center for IS Research

Ramaswamy, V., & Ozcan, K. (2016). Brand value co-creation in a digitalized world: An integrative framework and research implications. International Journal of Research in Marketing, 33(1), 93–106.

Rachinger, M., Korajman, I., & Müller, C. (2019). Systematic literature review of business model innovation in business ecosystems. In ISPIM Conference Proceedings (pp. 1-22). The International Society for Professional Innovation Management (ISPIM).

Sebastian, I. M., Moloney, K. G., Ross, J. W., Fonstad, N. O., Beath, C., & Mocker, M. (2017). How big old companies navigate digital transformation. MIS Quarterly Executive, 16(3), 197–213. https://doi.org/10.4324/9780429286797-6

Stolterman, Erik & Fors, Anna. (2004), Information Technology and the Good Life. International Federation for Information Processing Digital Library; Information Systems Research; 143. 10.1007/1-4020-8095-6_45.

Sürücü, Lütfi & Maslakci, Ahmet. (2020). Validity and Reliability in Quantitative Research. 8. 2694-2726. 10.15295/bmij.v8i3.1540.

Saunders, M., Lewis, P., & Thornhill, A. (2016). Research Methods for Business Students. England: Journal of Futures Studies 44 Pearson Education Limited.

Sebastian, I. M., Moloney, K. G., Ross, J. W., Fonstad, N. O., Beath, C., & Mocker, M. (2017). How big old companies navigate digital transformation. MIS Quarterly Executive, 16(3), 197–213. https://doi.org/10.4324/9780429286797-6

Shahi, C., & Sinha, M. (2020). Digital transformation: challenges faced by organizations and their potential solutions. International Journal of Innovation Science.

Steiber, A., Alänge, S., Ghosh, S., & Goncalves, D. (2020). Digital transformation of industrial firms: an innovation diffusion perspective. European Journal of Innovation Management.

Song, S., Shi, X., Song, G., & Huq, F. A. (2021). Linking digitalization and human capital to shape supply chain integration in omni-channel retailing. Industrial Management & Data Systems.

Schwertner, K. (2017). Digital transformation of business. The Journal of Supercomputing, 15, 388-393.

Tan, C. W., & Pan, S. L. (2003). Managing e-transformation in the public sector: An e-government study of the inland revenue authority of Singapore (IRAS). European Journal of Information Systems, 12(4), 269–281. https://doi.org/10.1057/palgrave.ejis.3000479

Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Qi Dong, J., Fabian, N., & Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda. Journal of Business Research, 122, 889–901. https://doi.org/10.1016/J.JBUSRES.2019.09.022

Van Doorn, J., Lemon, K. N., Mittal, V., Nass, S., Pick, D., Pirner, P., & Verhoef, P. C. (2010). Customer engagement behavior: Theoretical foundations and research directions.Journal of Service Research, 13(3), 253–266.

Vendrell-Herrero, F., Bustinza, O. F., Parry, G., & Georgantzis, N. (2017). Servitization,digitization and supply chain interdependency. Industrial Marketing Management, 60(1), 69–81.

William, F., Gaetano, M., & Giuseppe, N. (2019). The impact of intellectual capital on firms' financial performance and market value: Empirical evidence from Italian listed firms. African Journal of Business Management, 13(5), 147-159.

Westerman, A. McAfee, D. Bonnet, C. Calmejane, P. Ferraris (2011), Digital transformation:A roadmap for billion-dollar organizations, MIT Center for Digital Business and Capgemini Consulting, p. 1-68.

Yoo, Y., Boland, R. J., Lyytinen, K., & Majchrzak, A. (2012). Organizing for innovation in the digitized world. Organization Science, 23(5), 1398–1408. https://doi.org/10.1287/orsc.1120.0771

Yoo, Y., Henfridsson, O., & Lyytinen, K. (2010). The new organizing logic of digital innovation:An agenda for information systems research. Information Systems Research,21(4), 724–735

Digital Transformation and its role in supporting Strategic Human Resources Management (An Applied Study on Egyptian Commercial Banks)

Aly Yasser Aly Makhareta
Prof.Dr Mohamed Mohamed Ibrahim
Prof.Dr Shawky Mohamed ElSubbaugh

Questionnaire

Honorable Mr. / Honorable Mrs.......

After Greetings,

This questionnaire is a part of a thesis submitted to fulfil the requirements of the academic master's degree (MSc) in business administration - Human Resources Management

<u>Title</u>: THE ROLE OF DIGITAL TRANSFORMATION IN SUPPORTING STRATEGIC HUMAN RESOURCES MANAGEMENT - AN APPLIEED STUDY ON THE COMMERCIAL EGYPTIAN BANKS

The researcher appreciates your valuable participation in this study to achieve its objectives, The researcher is confident in your sincere cooperation in completing the list of questions included in this questionnaire, knowing that all data received will be treated with complete confidentiality and will only be used for scientific research purposes.

Thank you very much

The researcher

<u>Key Terminology in Questionnaire</u>

- **Digital Transformation:** is the framework that works on networking between actors such as organization and customers across all sectors of the value-added chain and the application of digital transformation technologies through skills that include data extraction and exchange, as well as analysis and transformation of that data into actionable information, so that information is used to calculate options and evaluated in order to make highly efficient decisions that increase the organization's performance, which helps it gain a sustainable competitive advantage that enables the organization to occupy a pioneering position.

236

Strategic Human Resources Management (SHRM): is defined as alignment of strategic business goals of the organization with human resources, to foster innovation and improve motivation, satisfaction, productivity, and eventually overall performance. Strategic HRM is a relatively new term, which differentiates itself from traditional HRM which was just merely an organizational function

Part One

1- Digital Transformation

Below are a set of phrases that refer to (disapproval/approval) about digital transformation. Please put a tick (✓) in front of the appropriate choice.

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Strategic Planning of Digital Transformation		1	2	3	4	5
1	The bank has taken strategic planning procedures of digital transformation					
2	The bank has a strategic plan for digital transformation that includes a vision and a mission that is aligned with its strategic objectives.					
3	The Bank continuously develops executive plans for the strategic plan for digital transformation in accordance with technical, regulatory, and legislative developments.					
4	The strategic plan for digital transformation included a plan for integration with the efforts of other relevant government agencies.					
5	The Bank has adopted creative and innovative methods in the strategic planning process for digital transformation.					
Preparing Leaders for Digital Transformation		1	2	3	4	5
6	The Bank has set a plan to develop and prepare leaders and raise their level of awareness of the digital transformation process.					
7	The bank is working to implement plans to develop and prepare leaders in the digital transformation process, while continuously improving these plans.					
8	The bank is developing digital transformation leaders in all departments and branches in a way that achieves integration in the digital transformation process.					
9	All leaders are involved in the decision-making process related to digital transformation.					
10	The Bank engages leaders in the digital transformation process in creative and innovative ways.					
Enterprise Architecture of Digital Transformation		1	2	3	4	5

Digital Transformation and its role in supporting Strategic Human Resources Management (An Applied Study on Egyptian Commercial Banks)

Aly Yasser Aly Makhareta
Prof.Dr Mohamed Mohamed Ibrahim
Prof.Dr Shawky Mohamed ElSubbaugh

11	The Bank is implementing the Enterprise Architecture for Digital Transformation project.					
12	The Bank established an organizational unit of the Enterprise Architecture for digital transformation, linked to the senior management with clear tasks and responsibilities.					
13	The organizational unit of the Enterprise Architecture for digital transformation has a clear and effective mechanism.					
14	Coordination is carried out between the organizational unit of the Enterprise Architecture for digital transformation and other departments in an integrated manner.					
15	The Enterprise Architecture contributed to the development of the bank's approach to digital transformation based on criteria that consider in accordance with the objectives related to quality, time, and cost.					
Attracting Skills and Competencies for Digital Transformation Process		1	2	3	4	5
16	The Bank has taken measures to attract skills and competencies for digital transformation process					
17	The Bank has prepared an approved plan to attract digital talent to enhance the capabilities necessary to achieve the digital transformation strategy.					
18	The bank is attracting several digital competencies according to the plan that it has developed, while evaluating this plan continuously for the purpose of improvement.					
19	The Bank has attracted and exchanged specialized competencies, while benefiting from the outputs of national programs related to the preparation of competencies in the field of digital transformation.					
20	The Bank has found creative and innovative ways to attract and maintain skills and competencies for the digital transformation process.					

Part Two

2- Strategic Human Resources Management (SHRM)

Below are a set of phrases that refer to (disapproval/approval)
about Strategic Human Resources Management (SHRM)
. Please put a tick (✓) in front of the appropriate choice.

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
HR Strategic Planning		1	2	3	4	5
1	There is a strategic plan for human resources that emerges and is integrated with The general strategic plan of the bank.					
2	The human resources department in your bank has an official document its own mission and goals.					
3	The Bank analyzes its external environment to exploit opportunities and avoid threats related to its human resources.					
4	The Bank analyzes its external environment to take advantage of opportunities and avoid threats.					
5	The Bank is keen to analyze the internal environment to determine the strengths and weaknesses of its human resources.					
6	The Bank considers the results of the analysis of its internal and external environment when formulating human resource strategies.					
7	The bank takes into consideration when determining its strategic options what it has of human skills and experiences capable of implementing them.					
8	The Bank develops its strategies to enhance the importance of the role of its human resources in the success of achieving these strategies.					
9	The bank develops its competitive strategies in line with the evolution in the quality of human resources.					
10	Prepare written and documented long-term plans covering periods future time for all activities.					
11	Policies, programs, and budgets are set for all human resource management activities necessary to implement the bank's strategy.					
12	The strategic plan for human resources is flexible so that it can be modified as new circumstances arise.					
HR Formation Strategy		1	2	3	4	5
13	The human resource formation strategy is geared towards achieving the bank's mission and					

Digital Transformation and its role in supporting Strategic Human Resources Management (An Applied Study on Egyptian Commercial Banks)

Aly Yasser Aly Makhareta
Prof.Dr Mohamed Mohamed Ibrahim
Prof.Dr Shawky Mohamed ElSubbaugh

	objectives.					
14	The Bank is keen to design jobs in line with its competitive strategy.					
15	The Bank updates job analysis according to the changes that occur in its internal and external environment.					
16	The Bank relies on its main strategies in determining its human resource needs.					
17	The Bank analyzes its human resource needs in terms of number and quality and compares them with its strategic requirements.					
18	The bank analyzes its human resource needs.					
19	The Bank is developing plans to deal with the expected gap between the skills currently available and the future needs of them.					
20	The bank determines the sources of attraction (internal or external) to fill the vacant positions depending on their suitability to the general strategy of the bank.					
21	The Bank is keen to appoint qualified human resources capable of achieving its strategic objectives.					
22	The Bank is keen to design its recruitment strategy in line with its competitive strategy.					
Training and Development Strategy		1	2	3	4	5
23	The training and development strategy is geared towards achieving the bank's mission.					
24	Training plans and programs are set in the bank in line with the requirements to achieve the strategic objectives.					
25	Training needs are determined considering the Bank's overall strategy.					
26	Training needs are determined considering the current and future challenges facing the Bank.					
27	The Bank is keen on designing training programs in line with the competitive strategy it adopts.					
28	Mechanisms and methods of implementing the training and development strategy are defined.					
29	Clear criteria are defined for evaluating and improving the effectiveness of the training strategy.					
30	The Bank reviews the strategic plan for training when changes occur in its internal and external environment.					
Performance Appraisal Strategy		1	2	3	4	5
31	The strategy of evaluating the performance of human resources is geared towards achieving the Bank's mission.					
32	Performance appraisal is linked to the strategic objectives that the bank seeks to achieve.					
33	The performance appraisal system in the bank is based on objective criteria specified in the job description.					
34	The Bank periodically reviews its performance standards in accordance with the changes that occur in its external and internal environment.					

		1	2	3	4	5
35	The performance appraisal strategy is aligned with the competitive strategy adopted by the Bank.					
36	The mechanisms and methods for implementing the performance appraisal strategy are defined.					
37	The Bank relies on the results of performance appraisal as a basis for amending the strategic plans of the Human Resources Department.					
Compensation and Benefits Strategy		1	2	3	4	5
38	Compensation and Benefits strategy is geared towards achieving the bank's mission.					
39	The compensation and benefits strategy in the bank depends on the extent of the employees' contribution in implementing the plans in order to achieve the strategic objectives.					
40	The Compensation and Benefits strategy is in line with the overall strategy of the Bank.					
41	The Bank is keen to design the Compensation and Benefits strategy to be consistent with the general strategy of the Bank.					
42	The mechanisms and methods for implementing the Compensation and Benefits strategy are defined.					
43	The Compensation and Benefits strategy supports the maintenance of competencies and creative abilities and prevents them from leaking to competing banks.					
44	The Compensation and Benefits plan in the bank is reviewed based on the analyze of the competitive environment and what the competing banks offer to its employees.					

Part Three

Below is a set of demographic and occupational info, please kindly mark (✓) in front of the appropriate choice.

1) Please specify the type of sector that the bank you work in belongs to by placing a mark (✓) in front of the appropriate choice

    (Public sector)   (Private sector)

2) Please specify the administrative level you occupy in the human resources sector of the bank by placing a mark (✓) in front of the selection the appropriate

(Top Management)   (Middle Management)   (Lower Management)

Digital Transformation and its role in supporting Strategic Human Resources Management
(An Applied Study on Egyptian Commercial Banks)

Aly Yasser Aly Makhareta
Prof.Dr Mohamed Mohamed Ibrahim
Prof.Dr Shawky Mohamed ElSubbaugh

3) Please specify the years of your professional experience in the field of human resources by placing a mark (✓) in front of the appropriate choice
- Less than 5 years
- From 5 years to less than 10 years
- From 10 years to less than 15 years
- 15 years and over

4) Please select the last educational level you reached by placing a mark (✓) in front of the appropriate choice

   (University Education)   (Postgraduate Studies)

5) Have you obtained a professional certificate specialized in the field of human resources?

   (YES)   (NO)

6) Gender

   (Male)   (Female)   **Thanks**