

**The Relationship between Human Resource Flexibility and
Organizational Ambidexterity**
(An Applied Study on the Commercial Banks in Egypt)

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Abstract

This research mainly aims at exploring the nature of the relationship between human resource Flexibility and Organizational Ambidexterity. The required primary data for this research was obtained through a questionnaire distributed over a sample of 400 managers working in commercial banks in Great Cairo. In order to test research hypotheses, appropriate statistical techniques such as descriptive statistics and multiple correlations and regression analysis had been employed.

The findings of this research revealed that there is a statistically significant positive relationship between human resource flexibility and organizational ambidexterity as a whole, where the most influential human resource flexibility' dimensions on organizational ambidexterity were behavior flexibility, followed by HR practices flexibility. In particular, results indicated that the most influential human resource flexibility' dimensions on exploration were HR practices flexibility, followed by behavior flexibility. Moreover, results showed the most influential human resource flexibility' dimensions on exploitation were behavior flexibility, followed by HR practices flexibility. Finally, based on these results, number of recommendations for managers had been proposed aiming to improve human resource flexibility and organizational ambidexterity in banks under research.

ملخص البحث

يتمثل الهدف الرئيسي لهذا البحث في استكشاف طبيعة العلاقة بين مرونة الموارد البشرية والبراعة التنظيمية. تم الحصول على البيانات الأولية المطلوبة لهذا البحث من خلال قائمة إستقصاء تم توزيعها على عينة مكونة من ٤٠٠ مدير يعملون بالبنوك التجارية بالقاهرة الكبرى. ومن أجل اختبار فرضيات البحث، تم استخدام الأساليب الإحصائية المناسبة مثل الإحصاء الوصفي وتحليل الارتباط المتعدد وتحليل الانحدار.

أظهرت نتائج هذا البحث أن هناك علاقة إيجابية ذات دلالة إحصائية بين مرونة الموارد البشرية والبراعة التنظيمية ككل، حيث كانت أبعاد مرونة الموارد البشرية الأكثر تأثيراً على البراعة التنظيمية هي مرونة السلوك، تليها مرونة ممارسات الموارد البشرية. وعلى وجه الخصوص، أشارت النتائج إلى أن أكثر أبعاد مرونة الموارد البشرية تأثيراً على الاستكشاف هي مرونة ممارسات الموارد البشرية، تليها مرونة السلوك. كما أظهرت النتائج أن أكثر أبعاد مرونة الموارد البشرية تأثيراً على الاستغلال هي مرونة السلوك، تليها مرونة ممارسات الموارد البشرية. وأخيراً وفي ضوء هذه النتائج تم تقديم عدداً من التوصيات للمديرين تهدف إلى تحسين مرونة الموارد البشرية والبراعة التنظيمية في البنوك محل الدراسة.

1- Introduction

Organizations now operate in environments with unprecedented and unpredictable events resulting from several factors, such as technological advances or market globalization (Shafer et al., 2001). These circumstances have forced managers to make paradigm shifts in guiding their organizations, and new principles have emerged for managing firms in these environments where time frames for strategic decisions are shorter.

The heightened demands on organizations have subsequently called for a corresponding staff of flexible and capable individuals (Beltrán-Martín et al., 2008). It is no surprise that flexibility and organizational ambidexterity are hot topics of discussion within labor relations in some industries, where firms need trained and multi skilled employees as well as access to external knowledge to improve their production processes and develop new products faster and more frequently than before (Martinez-Sanchez et al., 2021).

In particular, human resource (HR) flexibility plays a vital role in responding to the varied challenges of the growing business. HR flexibility is a reservoir for business. It signifies the vibrant competency of the firm to pro-act or responds to changing competitive environments and thereby develops and maintains a competitive advantage over time (Ketkar & Sett, 2010). This dependent on the capability of individuals inside the organization to balance the optimum exploitation of opportunities and search for new opportunities simultaneously (Oreilly & tushman, 2007).

In that regard, it was explained that organization which balance exploitation and exploration of opportunities are said to practice organizational ambidexterity, which results in reducing the length of time required and contribute to firm competitive advantage and the sustainability of a firm (Jurksiene & Pundziene, 2016). Meanwhile ambidextrous firms possess the capabilities to compete both in mature markets, where cost, efficiency and incremental innovation are critical aspects, and in emerging markets, where experimentation, speed, flexibility and radical innovations are critical aspects (Tushman and O' Reilly, 1996b). Therefore, the development of ambidexterity has become a fundamental aspect for today's managers and it has been widely studied by researchers (Birkinshaw et al., 2016; D' Souza et al., 2017).

Accordingly, in light of the above presentation and as an extension of the research efforts in this regard, which are characterized by their scarcity, the main objective of this research is to explore the nature of the relationship between human resource flexibility and organizational ambidexterity.

2- Conceptual Framework, Literature Review, and Hypothesis Development

In this section the researcher will introduce theoretical background for Human Resource Flexibility and organizational ambidexterity in terms of their definition, dimensions, previous studies, and their relationship. This can be shown as follows:-

2.1 Human Resource Flexibility

In general, Flexibility is a broad concept and has been concluded as a managerial task, managerial capabilities that endow the firm with flexibility and; an organizational design task or the changeability of the organization (Volberda 1996). In particular, Human resource flexibility has been perceived as a capability that helps organization to adapt to changing environmental contingencies. It provides a context of high corporate performance in a dynamic environment by managing employee's behavior at the individual, group and organizational level (Raisch & Birkinshaw 2008). Therefore, HR flexibility has been and continues to be an important topic of study for a number of different disciplines. Hence, this part of research will focus on the HR flexibility issue through its definition, dimensions, and previous studies.

2.1.1 Definition of Human Resource Flexibility

Reviewing the literature the researcher find, the terms associated with the use human resources flexibility have been used rather loosely and that different researchers have used diverse denominations to call this type of flexibility. In fact, it has been named as labour flexibility, human resources flexibility, human resource management flexibility, or strategic human resource management flexibility. In this regard, some authors have noticed the disparity and ambiguity of the definitions proposed (Ketkar & Sett, 2009; Mayne et al., 1996; Wright & Snell, 1998). However, the concept of human resource flexibility was formulated by Sanchez (1995) where he addressed the concept as the ability of the organization to expand in order to redefine the product strategy, reshape the resource chain, and redistribute those resources appropriately.

In a similarly pioneering work Wright and Snell (1998) defined flexibility in HRM as the extent to which the firm's human resources possess skills and behavioral repertoires that can give a firm options for pursuing strategic alternatives in the firm's competitive environment, as well as the extent to which the necessary HRM practices can be identified, developed, and implemented quickly to maximize the flexibility inherent in those human resources.

Later on, Zolin, et al, (2010) stated that human resource flexibility is the ability of the human resources system to facilitate the ability of the organization to adapt effectively and in a timely manner to the changing or varied demands of its environment, or from within the organization itself. In similar context, Kumari & Pradhan, (2014) indicated that HR flexibility refers to the structure of HR by giving flexibility to employees by renovating them and removing the unimportant things that the organization needs, by providing skills that will increase the capacity and effectiveness of the organization

Also, Pradhan et al., (2017) introduced human resource flexibility as the ability to develop (redevelop), organize (reconfigure) and install HR systems which will manage HRs who possess competencies that enhance the capacity of the firm as a whole to compete on the basis of market responsiveness and innovation.

Accordingly, The researcher define human resource flexibility as employees' skills and behaviors which can be transformed into human energies through flexible HR practices that can be directed to adapt to different work condition within short time.

2.1.2 Dimensions of Human Resource Flexibility

In current study, the researcher relied on the dimensions of human resource flexibility, which are most agreed upon by researchers (Bhattacharya et al., 2005, Wright & Snell, 1998, Ngo et al., 2011, Ngo& Loi, 2008, Pradhan et al., 2017, Do et al., 2016) that is based on the theoretical approaches offered by Wright and Snell (1998) and Bhattacharya et al. (2005), When proposing their strategic human resource management models, these authors argue that there are different ways in which flexibility can be incorporated in the human resources system of the company.

According to them, human resource flexibility has three components or dimensions, (1) employee skills flexibility, (2) employee behaviors

flexibility and (3) human resource practices flexibility. Accordingly, the following section represents these dimensions in details.

▪ **Skill flexibility (SF)**

The first dimension of HRF is employee skill flexibility, which refers to the “number of potential alternative uses to which employee skills can be applied” and “how individuals with different skills can be redeployed quickly” (Wright & Snell, 1998: 764-765; Bhattacharya et al., 2005).

Skill flexibility can be generated in two different ways. *First*, organizations may have employees who own a set of broad-based skills and are capable of using them under different require conditions. Broad-based skills are valuable because they generate output streams for existing requirements and are also capable of producing output for possible alternative requirements. However, skills possessed by employees, but not currently be of use may open up new opportunities of business for the organization, and indeed, may influence strategic choices. *Second*, an organization may employ a wide variety of “specialist” employees who provide flexibility by allowing the firm to reconfigure skill profiles to meet changing needs (Lengnick-Hall & Lengnick-Hall, 1988 Kumari & Pradhan, 2014).

As indicated by Bhattacharya et al. (2005), flexible skills are valuable because they generate output streams for existing requirements and are capable of producing output for possible alternative requirements. Skills possessed by employees but not currently used may open up new business opportunities for the firm and may influence strategic choices.

▪ **Behavior flexibility (BF)**

The second dimension of HRF is employee behavior flexibility, which refers to the to the extent to which employees possess a broad repertoire of behavioural scripts that can be adapted to situation-specific demands. If employees are able to apply these behavioural scripts appropriately under various conditions, rather than follow standard operating procedures, the firm can adjust and respond to the changing situations and thereby increase its competitiveness (Wright & Snell, 1998; Bhattacharya et al., 2005).

Also, behavioral flexibility states about adjusting to new circumstance contradicted to the routine conduct. It represents an adaptable attitude of the employees as opposed to routine behaviors and the

extent to which employees possess a broad range of behavioral characters that can be adapted according to the situation-specific demands (Pradhan et al., 2017).

As indicated by Bhattacharya et al. (2005) Employee behavior flexibility is valuable because it enables the employee to deal with a variety of situations towards facilitating change implementation. Organizations having employees with enhanced learning behavior capabilities means that the organization does not need to hire new people with new attributes to address environmental changes. This is because employees with behavioral flexibility usually have more likability in the workplace and enjoy favorable relationships with colleagues, superiors and subordinates. They are more likely to behave positively in every situation and context that arises. This will help the employees as well as the organization to perform effectively in a wide range of contexts.

▪ **Human Resource Practice Flexibility(PF)**

The third dimension of HRF is human Resource Practice Flexibility which refers to the extent to which the organization's human resource practices can be adapted and applied across a variety of situations, or across various sites or units of the firm, and the speed with which these adaptations and applications can be made (Wright & Snell, 1998; Bhattacharya et al., 2005).

Human resource practice flexibility in workforce management refers to the degree to which human resource systems are comprised of human resource practices that can be staffing, developing, dismiss, retain, and motivate employees across different environmental contexts. Human resource practice flexibility allows the firm to offer similar human resource practices across different units in achieving strategic consistency while adapting parameters to meet local concerns (Kumari & Pradhan, 2014).

Bhattacharya et al. (2005) further argued that firms that possess this type of flexibility not only create values such as achieving strategic consistency across different units and enhancing responsiveness to environmental changes, but also build a capability that is difficult to imitate and non-substitutable. They further assert that HR practice flexibility creates value in several ways. First, the firm is more readily able to adapt its HR practices to changed situations second; flexibility of HR practices may induce flexible employee behaviors. Third, HR practice flexibility

allows the firm to offer similar HR practices across different units—achieving strategic consistency—while adapting parameters to meet local

2.1.3 Previous Studies Related to Human Resource Flexibility

There are many studies that dealt with human resource flexibility, one of these studies was a study done by Tretiakov et al., (2023) to investigate the impact of employee empowerment on human resource flexibility at IT SMEs. The study's results confirmed positive effects of employee empowerment on four dimensions of HR flexibility: resource flexibility in employee skills and behaviors, coordination flexibility in employee skills and behaviors, resource flexibility in HR practices, and coordination flexibility in HR practices.

Katou, (2022) conducted a study to investigate the impact of high-performance work systems (HPWS) on organizational performance through the mediating role of human resources (HR) flexibility. The study finds that although HPWS positively influences all three HR flexibility dimensions, this positive effect is not transferred equally to organizational performance. The dominant effect on organizational performance is attributed to skills malleability, a smaller effect to behavioural flexibility and a negligible effect to functional flexibility.

Luu, (2021) investigates how and when human resource (HR) flexibility promotes hospitality employees' innovative work behavior. The positive association was observed between HR flexibility and innovative work behavior. Harmonious passion functioned as a mediator for such a relationship. While promotion focus was found to positively interact with HR flexibility to predict employee harmonious passion, prevention focus demonstrated an attenuating effect on the association between HR flexibility and harmonious passion.

Another study made by Tuan (2019) aimed to seek an insight into the relationships between HR flexibility and job crafting at both individual and team levels via knowledge sharing as a mediator. The results supported the positive links between HR flexibility and individual as well as collective job crafting through the mediating mechanism of knowledge sharing.. Moreover, HR flexibility also demonstrated the interaction effect with public service motivation in predicting knowledge sharing among public employees.

Najafi Kalyani et al, (2018) propose a model of the impact of HR flexibility both on creativity at the individual level and on innovation at the

organizational level. The results show that creativity partially mediated the impact of HR flexibility on organizational innovation. Also, the results suggest that HR flexibility has important effects on creativity at both the individual and organizational levels.

Furthermore, there is also a study made by Pradhan et al., (2017), it's purpose was to the influence of human resource (HR) flexibility on organizational effectiveness. It also examines the mediating role of organizational citizenship behavior between HR flexibility and organizational effectiveness. The findings indicate significant influence of HR flexibility on organizational effectiveness. The findings also reported that organizational citizenship behavior has significant mediating effect on the relationship between HR flexibility and organizational effectiveness.

Another study done by Mahmood et al., (2016) the purpose of this study was to examine the impact of high performance work system on employee attitude with the mediating role of human resource flexibility. The results of the study showed the partial mediation of human resource flexibility between HPWS and employee attitude. Results also depict that HPWS influence the employee attitude (organizational commitment, job satisfaction, and turnover intension) through human resource flexibility.

2.2. Organizational Ambidexterity

Ambidexterity is an interesting research topic in strategic management and organization theory. Prior Studies have indicated that successful organizations are ambidextrous (March, 1991; Tushman & O'Reilly, 1996).

Ambidextrous firms possess the capabilities to compete both in mature markets, where cost, efficiency and incremental innovation are critical aspects, and in emerging markets, where experimentation, speed, flexibility and radical innovations are critical aspects (Tushman & O' Reilly, 1996). Therefore, the development of ambidexterity has become a fundamental aspect for today's managers and it has been widely studied by researchers (Birkinshaw et al., 2016; D' Souza et al., 2017). That is organizational ambidexterity has been and continues to be an important topic of study for a number of different disciplines. Hence, this part of research will focus on organizational ambidexterity issue through its definition, dimensions, and previous studies.

2.2.1 Definition of Organizational Ambidexterity

The word ‘ambidexterity’ is derived from the Latin *ambos*, ‘both’, and *dexter*, ‘right’ (as opposed to left). Thus, ambidexterity is ‘right on both sides’. The term “organizational ambidexterity” was first used by Duncan (1976), who argues that organizations need to change their structures over time to enable innovation and efficiency.

Organizational ambidexterity refers to two different focuses and internal resource utilization activities that a firm adopts when making decisions or developing strategies. When a firm possesses organizational ambidexterity (Simsek, 2009; Gibson & Birkinshaw, 2004), it may provide complementary ways and approaches to manage innovation streams and decision-making processes (Zimmermann et al., 2018).

In other words, the term reflects the ability of the organization to effectively manage the tension between exploitation and exploration, and pursue both simultaneously to enhance performance and achieve organizational success (He & Wong, 2004; Junni et al., 2015; Lin & Ho, 2016; Zimmermann et al., 2015).

Furthermore, Patel et al., (2013) indicated that organizational ambidexterity focuses on the ability of an organization to both efficiently exploit its existing competencies and explore innovativeness on products and/or services. In the same vein Stokes et al., (2015) stated that Organizational ambidexterity can be understood as the relationship and dynamic potential operating between exploitative and explorative resources and dispositions in organizational contexts

Based on the previous definitions, the researcher defines organizational ambidexterity as an organizational process in which all organizational levels are integrated and seeks for successive exploration of new activities in the markets to maximize the sustainable value of the organization mixed with the optimal utilization of available resources to maintain the quality of daily operations through work teams integrated with each other.

2.2.2 Dimensions of Organizational Ambidexterity

Majority of studies that dealt with organizational ambidexterity have related to the organizational ambidexterity construct have utilized the exploitation and exploration as the dimensions of organizational ambidexterity (Lubatkin et al., 2006; Jansen et al., 2005; He & Wong, 2004; Gibson & Birkinshaw, 2004; Cao et al., 2009; Jansen et al. , 2009; Patel et al., 2013). Accordingly, the following section represents these dimensions in details.

▪ **Exploration**

Exploration refers to the search for and pursuit of new knowledge within an organization's external domains, accompanied by variety generation, distant search, risk taking, experimentation, and discovery (Suzuki, 2013; March, 1991).

Across different research contexts, exploration has been variously associated with search, discovery, experimentation, risk taking, flexibility, new routines, divergent thinking, decentralization, variance increase, innovation, loose cultures, new knowledge and new technology uses (Benner & Tushman 2003; Cheng & Van de Ven, 1996; Rivkin & Siggelkow, 2003). In the same vein, He & Wong (2004) stated that organic structures loosely coupled systems, path breaking, improvisation, competence-building, autonomy, chaos, emerging markets, and technologies have also been associated with exploration

Moreover, Stokes et al., (2015) asserted that exploration focuses on meeting the requirements of new customers and markets. It involves "new knowledge" and may involve a departure from existing knowledge through the creation of new knowledge, technologies and competencies (Benner & Tushman 2003; Danneels 2002; Jansen et al. 2006).

▪ **Exploitation**

Exploitation is the use and refinement of existing knowledge within an organization's internal domains associated with existing improvements, increased efficiency, and incremental adjustments (Suzuki, 2013; March, 1991)

Across other research contexts, exploitation has been associated with tightly coupled systems, path dependence, stable markets & technologies, routinization, competence-leveraging, control & bureaucracy, centralization, and tight cultures (He & Wong, 2004; Benner & Tushman 2003).

In the same vein, Stokes et al., (2015) stated that exploitative resources generally encompass the use of more mechanistic-style processes to cultivate and develop extant knowledge and options.

2.2.3 Previous Studies Related to of Organizational Ambidexterity

There are many studies that dealt with human resource flexibility, one of these studies was a study done by Ojiako et al., (2023) examines not

only the extent to which project portfolio management (PPM) practices impact orchestrations of organizational ambidexterity, but also whether these orchestrated PPM practices impact further lead to superior project performance. The study finds portfolios performance to be strongly and highly correlated with organizational ambidexterity. Furthermore, the more organizations exhibited efficient project-portfolio-management practice, the more they were found to develop ambidextrous capabilities.

Another study done Ghanizadeh et al., (2022) tries to examine the mediating role of organizational ambidexterity in the relationship between psychological capital and the performance of public organizations that have bureaucratic limitations to their activity and are not as competitive as the private sector.

The results indicated the significant relationship between psychological capital and organizational performance and the positive mediation effect of organizational ambidexterity on this relationship.

Ubeda-Garcia et al., (2021) conducted a study aims to analyze the relationships between knowledge management, internationalization and ambidexterity, also exploring the influence of these variables on Spanish hotel chain performance. This study shows that knowledge may be considered an essential resource to improve hotel firms' results. Also, Spanish hotel firms should manage their knowledge to stimulate international activity because this could enhance learning capabilities related to organizational ambidexterity and positively influence performance.

Also, Brix (2019) provide a synthesis of exploration and exploitation based on the two areas of literature. Results advances current understanding of exploration and exploitation by building a new model for organizational ambidexterity that takes into account multiple levels of learning, perspectives from absorptive capacity and inter-organizational learning.

In addition, there is a study made by Severgnini et al., (2018) aimed to propose that three dimensions of Performance measurement systems (PMSs) increase organizational ambidexterity and consequently they influence organizational performance. In this framework, organizational ambidexterity mediates the relationships between three dimensions of PMS and organizational performance. Results showed that; *first*, the three dimensions of PMS, namely—attention focus, legitimization and strategic decision-making—influenced organizational ambidexterity. *Second*,

organizational ambidexterity had a major effect on organizational performance. *Third*, organizational ambidexterity mediated the indirect effects of attention focus, legitimization and strategic decision-making on organizational performance. *Fourth*, exploration and exploitation—two dimensions of organizational ambidexterity—mediated the indirect effect of the abovementioned PMS dimensions on organizational performance.

Another study done by Jurksiene & Pundziene (2016) offered a theoretical explanation of the relationship between dynamic capabilities, organizational ambidexterity and firm competitive advantage. Results of this study suggested that organizational ambidexterity plays a mediating role in the relationship between dynamic capabilities and firm competitive advantage

2.3. The Relationship between Human Resource Flexibility and

Organizational Ambidexterity

Martinez-Sanchez et al., (2019) mentioned that HR flexibility can be seen as the capacity of human resource management to facilitate the organization's ability to adapt effectively and in a timely manner to changing or diverse demands from either its environment or from within the firm itself. In this sense, HR flexibility constitutes a valuable capacity and a specific resource for the firm which is difficult to imitate and is capable of generating sustainable competitive advantages and improving performance. According to resource-based theory of the firm, competitive advantage only arises from the use of scarce, intangible and firm-specific assets (Spender, 1996).

In this context, Wright & Boswell (2002) asserted that employees having HR flexibility systems in their organization are more competitive and show higher performance and this is very significant to the current business surroundings which are facing rapid economic growth and shifting strategic demands.

Therefore, the flexibility of HRs (understood as the conjunction of flexibility in behaviours, skills and HR practices) will have a positive effect on organizational ambidexterity, insofar as it facilitates the possession of skills and behaviour repertoires on the part of employees, thanks to which they can exploit and explore new strategic alternatives. In keeping with the previous studies, the researcher proposed the research main hypothesis:-

H01: There is no significant relationship between human resource

flexibility and organizational ambidexterity taken as a whole and for each sub variable in commercial banks under study.

This hypothesis is divided into two sub-hypotheses as follows:

H01/1: There is no significant relationship between human resource flexibility' dimensions and exploration at commercial banks under study.

H01/2: There is no significant relationship between human resource flexibility' dimensions and exploitation at commercial banks under study.

3- Exploratory Study and Research Problem

The researcher conducted an exploratory study aimed at obtaining exploratory data about human resource flexibility and organizational ambidexterity, in addition to helping the researcher to define research problem and formulate research questions and hypotheses accurately.

The exploratory study included secondary data collection in which the researcher reviewed dissertations, theses, journals, text books and web sites that are related to both human resource flexibility and organizational ambidexterity. In addition, the researcher had conducted individual interviews with 34 managers (Branch & departments managers, and their deputies) who are working in commercial banks in Great Cairo to identify their perceptions and opinions about human resource flexibility and organizational ambidexterity in banking sector. Furthermore, individual interviews were conducted to know the extent of the availability of activities, procedures and practices that indicate flexibility of human resources, as well as to identify the extent to which banking departments realize the importance of organizational ambidexterity as a competitive field and one of the competitive opportunities in the banking market.

A group of questions were discussed, including the diversity & modernity of services provided by the bank, employees' competencies & skills, the extent of banks' ability to exploit opportunities available in the market, and the extent to which automation is used in bank's operations.

The results of the exploratory study confirmed the weak awareness of employees in commercial banks under study of the concept of organizational ambidexterity (According to the answers of 22 bankers from the sample, at a rate of 64%) and the concept of human resource flexibility (According to the answers of 21 bankers from the sample, at a rate of 61%), as well as the lack of clarity of the relationship between human

resource flexibility and organizational ambidexterity (According to the answers of 20 bankers from the sample, at a rate of 58%). Results also indicated that there is low ability of some managers to exploit the available resources in a way that achieves competitive advantage over other sectors, as a result of their limited decision-making powers, they are governed by strict regulations from the Central Bank (According to the answers of 19 bankers from the sample, at a rate of 55%). In addition, results confirmed that some banks were late in taking advantage of certain market opportunities, because they were slow to act (According to the answers of 19 bankers from the sample, at a rate of 55%).

However, the banking sector represents a vital and important role in the Egyptian economy. Rather, it is one of the main pillars on which that economy rests, especially with the tremendous development that is taking place in the world today in the field of networks and communication and information systems. They face challenges due to continuous change in customers' needs, diversity of services provided, globalization, information & communication technology (ICT) revolution, and increase in the intensity of competition in the banking sector and the rapid development in the banking industry at local, regional, and global levels. These challenges can be represented as follows (Central bank report, 2020):-

- Scarcity of expertise, executive ability, and lack of sufficient knowledge
- Inability, limited capabilities, and fear of directing huge investments for digital transformation
- Lack of banking and technological awareness
- The scarcity of complete Arab experiences with the variation in assimilation of the human element according to education and culture
- The difficulty and scarcity of attracting trained talent and the increasing digital skills gap
- The transition from the form of traditional financial entities and institutions (buildings, people and money) with a tangible physical presence to digital entities through screens, the virtual world and technological technologies, and the extent to which society accepts and reassures the idea
- Low financial literacy and difficulties in accessing financing for the Egyptian banking sectors

There is no doubt that these aspects have affected the level of organizational ambidexterity. So, based upon the exploratory study and

reviewing the related literature it can be said that despite the development of banking services in recent years, it is clear that the level of the ability of Egyptian banks to exploit and explore opportunities has not reached the required level, especially in the digital age that the world is witnessing which is characterized by rapid change and innovation, and the keenness of all institutions to activate financial inclusion and digital transformation.

This is evident in the weakness of the banks' ability to collect all customers' savings, and this became clear when they recently introduced high-yield certificates, which were widely accepted by customers, compared to international banks (Central bank report, 2020). Accordingly, Based upon the exploratory study and the literature review, the problem of this study can be formulated in the following statement.

Organizational ambidexterity of the commercial banks under study has not reached the required level, and therefore there is an urgent need to improve this level. As well as the lack of clarity of the relationship between human resource flexibility and organizational ambidexterity and the scarcity of studies that have addressed the relationship between human resource flexibility and organizational ambidexterity in the banking sector in particular within the limits of the researcher.

Therefore, there is a research gap in this framework, which is what the current study seeks to study. Therefore, it is necessary to study this phenomenon and identify its sources. From this logic, the research problem can be formulated in a main question, which is: what is the relationship between human resource flexibility and organizational ambidexterity taken as a whole and for each sub variable in commercial banks under study?

4- Research Objectives

The main objective of this research is to explore the nature of relationship between human resource flexibility and organizational ambidexterity, which can be achieved through the following sub objectives

- Identifying the nature of relationship between human resource flexibility's dimensions and organizational ambidexterity, and determine which dimensions have the most impact on organizational ambidexterity
- Identifying the nature of relationship between human resource flexibility's dimensions and exploration and determine which dimensions have the most impact on exploration
- Identifying the nature of relationship between human resource flexibility's dimensions and exploitation and determine which dimensions have the most impact on exploitation

5- Research Importance

This research derives its importance from the scientific and applied contributions it may have.

Scientific Contributions

- This study acquires its importance from its subject, where it deals with human resource flexibility and organizational ambidexterity which represent critical tools for achieving competitiveness, success, and excellence for organizations
- This study may provide basic data for future studies and stimulate further research on how to advance organizational ambidexterity in developing countries.

Applied Contributions

- This study is applied on the banking sector which is considered the cornerstone of modern economies and it constitutes the 'fuel' that runs most other sectors and wider social mechanisms.
- Human resources managers in commercial banks can benefit from the results of this study in restructuring some human resources practices, which will increase their skills and capabilities and thus give them a competitive advantage in facing other banks.
- Research on human resource flexibility and organizational ambidexterity enhances the amount of information available to managers and allows them to respond to both internal and external customers' needs more accurately.

6- Research Methodology

This section is presenting a description of the research variables & measurements, population & sample, the statistical techniques that will be used in analyzing the collected data for this research, and reliability & validity of instrumentation. This can be introduced as follows:-

6.1 Research Variables & Measurements

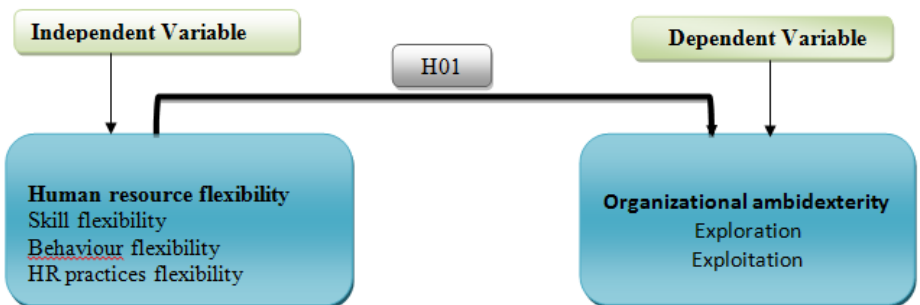
The main purpose of the present study is exploring the nature of the relationship between human resource flexibility dimensions and organizational ambidexterity. Hence, this study includes two main variables; independent variable and dependent variable which can be presented as follows:-

6.1/1 Independent Variable; Human Resource Flexibility: Human Resource Flexibility was measured using 22 items scale from Bhattacharya et al. (2005) Questionnaire. This is most frequently used scale in extensive researches measurement (Ngo et al., 2012, Ngo & Loi, 2008, Pradhan et al., 2017, Do et al., 2016). The scale development and construct clarification by Bhattacharya et al. (2005) provided an instrument with value for research through strong factor structures and good validity criteria performance. The items measure three dimensions of Human Resource flexibility: skill flexibility, behavior flexibility and HR practice flexibility.

6.1/2 Dependent Variable; Organizational Ambidexterity: Organizational ambidexterity will be measured through 12-item scale established by Lubatkin et al. (2006). This measure is based on the He & Wong (2004) and is one of the most used survey items within organizational ambidexterity literature (Patel et al., 2013; Lee et al., 2021). The items measure two dimensions of Organizational ambidexterity: exploitation and exploration.

A five point likert scale of agreement and disagreement was used to measure respondents' perception regarding human resource flexibility, entrepreneurial orientation, and organizational ambidexterity. According to this scale, 1 refers to "strong disagreement", and 5 refers to "strong agreement". The other numbers in between 1 and 5 reflect the different degrees of agreement or disagreement. Also, the items were altered slightly to fit the specific context of the study. Accordingly, research variables can be introduced through figure (1) as follows:-

Figure (1) Research Model



Source: prepared by the researcher

6.2 Research Population & Sample

A research population is generally known as a well-defined collection of individuals or objects having similar characteristics which represent the phenomena under investigation, and that is the main focus of a scientific query (Edress, 2008). Meanwhile, this study is applied on commercial banks in Great Cairo. In light of this the target population for this research was basically composed of all managers who are working in commercial banks in Great Cairo. The total number of study population is about 3040 respondents.

Due to the large size of the population and considerations of time and cost, the researcher will draw a representative sample of the study population. The sample size was calculated according to the formula provided by (Edrees, 2008). Hence The sample is drawn from the total number of commercial banks in Great Cairo was about 384 respondents and the researcher decided to increase sample size to 400 respondents to avoid sample error.

6.3 Research Instrument & Data Collection

The instrument of collecting data for this study was a questionnaire. The simplicity and clarity of its design were taken into account, and the questions and phrases were arranged in accordance with the sequence of research variables. questionnaire was prepared based on validated and reliable measurement scales found in the literature and it included 34 questions which were divided into two major parts as follows: *Part one*; this part focused on measuring the independent variable which is Human Resource Flexibility and It included 22 questions. *Part Two*; this part focused on measuring the independent variable which is Organizational ambidexterity and it included 12 questions.

Self-administering questionnaires with cover letters that assure confidentiality and aggregation of data were distributed to managers in the commercial banks in great Cairo. The researcher used personal contact, and sourcing groups within business-related social networks such as LinkedIn to find appropriate contacts to ensure an acceptable response rate. Follow up phone calls and email rounds were conducted regularly to maximize the response rate. Of 400 sent questionnaires, 297 are returned, completed and ready for further analysis, yielding an acceptable response rate of 74 % (Hair et al., 2014).

6.4 Statistical Techniques

The researcher used the major data preparation techniques such as data coding and data entry to prepare data for analysis. The researcher chooses a number of statistical techniques which are appropriate for this study and also are available in statistical Package for the social sciences (SPSS), which can be presented as follows (Akar et al., 2007):-

- A. Alpha Correlation Coefficient (ACC):** will be used for verifying the degree of reliability and stability of multi-items scales used in this research
- B. Descriptive Statistical Techniques:** include arithmetic mean and standard deviation in order to describe the study variables.
- C. Multiple Correlation and Regression Analysis:** will be used to investigate whether there is a relationship between Human Resource Flexibility and Organizational Ambidexterity, and to verify the strength degree of this relationship.

6.5 Reliability and Validity Assessment of the Research Scales

Reliability analysis was conducted to investigate the internal consistency of the questionnaire. The internal consistency reliability means the extent to which there is cohesiveness among the questionnaire's items that has been used in the field study (Yang & Green, 2011). The coefficients of Cronbach Alpha (α) were calculated to measure the internal consistency reliability as it is the most widely employed method of analyzing reliability. According to Yang & Green (2011) the acceptable values of Cronbach Alpha coefficients range from 0.60 to 0.95 in accordance with levels of reliability analysis in social sciences.

SO, it was decided to exclude variables that had a correlation coefficient of less than the agreed upon standard (Edress, 2008; Nafei et al., 2012). Validity is also required in order to ensure the adequacy of the measurement's instruments. The validity coefficient is equal the square root of alpha Cronbach coefficient, it has to be in the needed limit (equal or more than 60%) (Yang & Green, 2011). This can be presented through table (1).

Table (1): Reliability and Validity Outputs of Human Resource Flexibility and Organizational Ambidexterity scales

Type of variables	Variables	Number of items	Cronbach's Alpha	Validity
Independent variable	Skill Flexibility	7	0.796	0.892
	Behavior Flexibility	8	0.840	0.916
	HR Practice Flexibility	7	0.922	0.960
	Human Resource Flexibility	22	0.928	0.963
Dependent variable	Exploration	6	0.902	0.949
	Exploitation	6	0.901	0.949
	Organizational Ambidexterity	12	0.941	0.970

Source: Statistical analysis results

According to table (1), the results of reliability analysis revealed that ACC for study variables and their dimensions ranges from 0.796 to 0.928 which were above 0.6. In addition, Validity values ranges from 0.892 to 0.970 which were above 60%. Accordingly it is indicated that the scales used in the current study have a high degree of reliability and validity.

7- Research Results

This section presents the statistical findings of data analysis and testing hypotheses. At first, it tackles the descriptive analysis of the research variables. After that, it discusses the analysis results related to the relationship between human resource flexibility and organizational ambidexterity. This can be presented as follows:

7.1 Descriptive Analysis of the Research Variables

The descriptive analysis of the respondents' views concerning human resource flexibility dimensions and organizational ambidexterity dimensions was conducted in order to study, profile, and identify the level of human resource flexibility and organizational ambidexterity in commercial banks under the research. This can be illustrated in details through table (2).

Table (2) Descriptive Analysis for Human Resource Flexibility and Organizational Ambidexterity

Type of variables	Variables	Mean	Standard Deviation
Independent variable	Skill Flexibility	3.6580	.64601
	Behavior Flexibility	3.6490	.58342
	HR Practice Flexibility	3.5094	.81690
	Total Scale of Human Resource Flexibility	3.6055	.59377
Dependent variable	Exploration	3.5464	.67852
	Exploitation	3.7291	.72532
	Total Scale of Organizational Ambidexterity	3.6377	.66865

Source: Statistical analysis results

Referring to table (2), it is clear that the mean of the study variables recorded values that were close to each other and were slightly higher than 3, which represents the middle of the scale. This result means that human resource flexibility and organizational ambidexterity in commercial banks under study are above average; this is according to the point of view of the managers working in those banks.

7.2 Testing Hypotheses

In this part, proposed research hypothesis was tested to figure out the answers to research main question through a series of statistical analysis. This can be illustrated as follows:-

Before testing the study main hypothesis, the researcher used correlation analysis to describe the nature of the relationship between variables, as follows:

Table (3): Correlation Coefficients Matrix

Variables	1	2	3	4	5	6	7
Skill flexibility	1						
Behavior flexibility	0.619**	1					
HR practice flexibility	0.717**	0.550**	1				
HR flexibility	0.894**	0.804**	0.899**	1			
Exploration	0.498**	0.538**	0.557**	0.612**	1		
Exploitation	0.449**	0.559**	0.473**	0.563**	0.815**	1	
Organizational Ambidexterity	0.496**	0.576**	0.539**	0.693**	0.949**	0.956**	1

Source: Statistical analysis results

According to Table (3), there is a Positive statistical relationship between HR flexibility and Organizational Ambidexterity, where the value of the correlation coefficient is (0.693), in addition to Positive statistical relationship between HR flexibility' dimensions and Organizational Ambidexterity' dimensions. Thus it is possible to test the hypothesis of the effect for study main hypothesis.

The study main hypothesis discusses the extent of impact of human resource flexibility on organizational ambidexterity according to managers' perception under study. This states, "*There is no significant relationship between human resource flexibility, and organizational ambidexterity taken as a whole and for each sub variable at the commercial banks under research*". To test this hypothesis, the researcher used simple regression analysis because of its ability to demonstrate the effect of an independent variable on a dependent variable, and the simple regression analysis test was used at the level of 5% significance. The researcher explains in table (4) the results of simple regression analysis to represent the effect of the independent variable (human resource flexibility) on organizational ambidexterity as a dependent variable.

Table (4): Results of simple regression analysis for human resource flexibility on organizational ambidexterity

Dependent Variable	Independent Variable	Beta	T-Value	Sig.
Organizational Ambidexterity	(Constant)	1.612	8.539	0.000
	Human Resource Flexibility	0.693	13.423	0.000
R= 0.693 R ² = 0.379		F- Value = 180.165 Sig = 0.000		

Source: Statistical analysis results

According to table (4), it is clear that there is a positive significant effect of Human Resource Flexibility on Organizational Ambidexterity from managers' perception under study, as the regression coefficient reached (0.693) at the level of significance 0.000. While F- value reached (422.347) with a significant level of (0.000), which is less than (1%), this means that the model is valid to predict the values of the dependent variable (Organizational Ambidexterity).

As for the explanatory ability of this model, which shows the percentage of change in the dependent variable (Organizational Ambidexterity) due to the change of the independent variable (Human Resource Flexibility), it was found that the determination coefficient reached (0.379), which means that the independent variable (Human Resource Flexibility) model explains an amount of (Only 37.9%) of the change in the dependent variable (Organizational Ambidexterity).

Moreover, multiple regression analysis was used at a level of significance of 5% for more explanation about the effect of Human Resource Flexibility' dimensions on Organizational Ambidexterity. The researcher explains in the following section the results of multiple gradient regression to represent the effect of independent variables (Human Resource Flexibility' dimensions) on Organizational Ambidexterity as a dependent variable, as shown in Figure (5).

Table (5): Results of Multiple regression analysis for human resource flexibility dimensions on Organizational Ambidexterity

Dependent Variable	Independent Variable	Beta	T-Value	Sig.
Organizational Ambidexterity	(Constant)	1.520	7.863	0.000
	Skill Flexibility	0.046	0.660	0.510
	Behavior Flexibility	0.401	7.425	0.000
	HR Practices Flexibility	0.319	5.906	0.000
R = 0.635 R² = 0.403		F- Value = 99.103 Sig = 0.000		

Source: Statistical analysis results

Referring to table (5) it is clear that there is a positive significant effect of Human Resource Flexibility' dimensions (except Skill Flexibility) on Organizational Ambidexterity at the level of significance 0.05.

As for the explanatory ability of this model, which shows the percentage of change in the dependent variable (Organizational Ambidexterity) due to the change of the independent variable (Human Resource Flexibility' dimensions), it was found that the determination coefficient reached (0.403) and this means that the independent variable (Human Resource Flexibility' dimensions) model explains an amount of (Only 40.3%) of the change in the dependent variable (Organizational Ambidexterity). It is clear that all Human Resource Flexibility' dimensions (except Skill Flexibility) have a direct effect on Organizational

Ambidexterity. The most influential Human Resource Flexibility' dimensions on Organizational Ambidexterity were Behavior Flexibility, followed by HR Practices Flexibility.

- For further explanation and clarification about the effect of Human Resource Flexibility' dimensions on each dimension of Organizational Ambidexterity', multiple regression analysis was used at a level of significance of 5%., in order to test the sub-hypotheses of the study main hypothesis as table (6) and (7) show.

Table (6): Results of Multiple regression analysis for human resource flexibility dimensions on Exploration

Dependent Variable	Independent Variable	Beta	T-Value	Sig.
Exploration	(Constant)	1.645	8.273	0.000
	Skill Flexibility	0.057	0.808	0.420
	Behavior Flexibility	0.332	6.078	0.000
	HR Practices Flexibility	0.374	6.835	0.000
R= 0.622 R ² = 0.387		F- Value = 92.726 Sig = 0.000		

Source: Statistical analysis results

Results from table (6) Show that there is a positive significant effect of all Human Resource Flexibility' dimensions (except Skill Flexibility) on Exploration at the level of significance 0.05. As for the explanatory ability of this model, which shows the percentage of change in the dependent variable (Exploration) due to the change of the independent variable (Human Resource Flexibility' dimensions), it was found that the determination coefficient reached (0.387) and this means that the independent variable (Human Resource Flexibility' dimensions) model explains an amount of (Only 38.7%) of the change in the dependent variable (Exploration).in addition, The most influential Human Resource Flexibility' dimensions on Exploration were HR Practices Flexibility, followed by Behavior Flexibility.

In light of the above results, it is possible to partially refuse the first sub-hypothesis of the study main hypothesis, which states that " ***There is no significant relationship between Human Resource Flexibility' dimensions and Exploration at the commercial banks under research*** " .

Table (7): Results of Multiple regression analysis for human resource flexibility dimensions on Exploitation

Dependent Variable	Independent Variable	Beta	T-Value	Sig.
Exploitation	(Constant)	1.396	6.389	0.000
	Skill Flexibility	0.032	0.433	0.665
	Behavior Flexibility	0.428	7.611	0.000
	HR Practices Flexibility	0.238	4.235	0.000
R= 0.593 R ² = 0.352		F- Value = 79.796 Sig = 0.000		

Source: Statistical analysis results

Results from table (7) show that there is a positive significant effect of all Human Resource Flexibility' dimensions (except Skill Flexibility) on Exploitation at the level of significance 0.05. As for the explanatory ability of this model, which shows the percentage of change in the dependent variable (Exploitation) due to the change of the independent variable (Human Resource Flexibility' dimensions), it was found that the determination coefficient reached (0.352) and this means that the independent variable (human resource flexibility' dimensions) model explains an amount of (Only 35.2%) of the change in the dependent variable (Exploitation). In addition, The most influential Human Resource Flexibility' dimensions on Exploitation were Behavior Flexibility, followed by HR Practices Flexibility.

In light of the above results, it is possible to partially refuse the second sub-hypothesis of the study main hypothesis, which states that it is "*There is no significant relationship between Human Resource Flexibility' dimensions and Exploitation at the commercial banks under research*".

Accordingly, it is possible to partially refuse the study main hypothesis, which states that "*There is no significant relationship between human resource flexibility, and organizational ambidexterity taken as a whole and for each sub variable at the commercial banks under research*", and partially accept the alternative hypothesis.

8- Discussion of Results

In this section the researcher will discuss the study results as follows:

- Results indicated that there is a positive significant effect of Human Resource Flexibility on Organizational Ambidexterity. This means that enhancing banks' organizational ambidexterity or ability to pursue

exploratory and exploitative innovations simultaneously depends on the extent of banks' ability to develop (redevelop), organize (reconfigure) and install HR systems which will manage HRs who possess competencies that enhance their capacity as a whole to compete on the basis of market responsiveness and innovation

- According to study results the most influential Human Resource Flexibility' dimensions on Organizational Ambidexterity were Behavior Flexibility, followed by HR Practices Flexibility. This means that enhancing banks' organizational ambidexterity depends on the extent to which banks' employees are able to look for new sequences of actions with which to perform their daily activities or to face new circumstances. Also it depends on the extent to which the banks have a flexible human resources system capable of adjusting and executing new HR practices rapidly, viably and productively.
- Findings of this study indicated that, the most influential Human Resource Flexibility' dimensions on Exploration were HR Practices Flexibility, followed by Behavior Flexibility. This means that enhancing banks' exploration activities depends on the extent to which banks' management are interested in designing HR practices which can give employees more flexibility and freedom to explore new ideas and allow them to work in a way that suits them best.

In addition to the extent to which banks' employee are flexible to respond to changing situations within a short time, and willing to try new things.

- According to study results the most influential Human Resource Flexibility' dimensions on Exploitation were Behavior Flexibility, followed by HR Practices Flexibility. This means that enhancing banks Exploitation activities depends on the extent to which the bank possesses flexible employees that have the ability to change their work habits easily and quickly in response to changes in the competitive environment. In addition to the ability of banks making frequent changes in their HR practices to align the HR system with changing work requirements.
- ✚ This results agreed with Úbeda-García et al., (2018) which concluded that there is a statistically significant impact of HR flexibility on Organizational Ambidexterity through the enhancement of HPWS adaptability.

9- Research Recommendations

The findings of this research have several implications for research and practice which can be presented as follows:

- Top management in banking sector should realize the importance of flexibility of both managers and employees and focus on HR flexibility development programs
- Top management in banking sector should consider Changing the job framework in a flexible way so that it allows employees to acquire new skills and develop their behavior and experiences to make the most of the human element that already exists and has banking experience in the face of continuous developments in the work environment.
- Training and development departments may also be established at different levels
- Designing certain programs and strategies to increase the awareness among managers and employees in the banking sector regarding the importance of HR flexibility and organizational ambidexterity practices.
- There must be organizational ambidexterity and flexibility training programs, which should vigorously pursue to enhance the level of HR flexibility and organizational ambidexterity and industrial efficiency of the employees.
- Top management in banking sector should create work environment supportive to flexibility, and organizational ambidexterity.
- Banks should be urged to budget for encouraging employees to pursue further education and developmental practices, in order to promote and improve their professional flexibility which in turn will improve the level of organizational ambidexterity.

10- Areas for Further Researches

While the present study has contributed to the body of scholarly work on human resource flexibility and organizational ambidexterity, it also points strongly to the need for additional research. This can be presented as follows:-

- Future research on human resource flexibility and organizational ambidexterity needs to be repeated in other sectors, settings, other types of organizations, as well as larger number of banks in order to support the generalizability of these findings.
- More research is needed to provide stronger support for the relationship

between human resource flexibility and organizational ambidexterity.

- Potential contextual moderators of relationships between human resource flexibility and organizational ambidexterity should also be investigated, e.g., resource availability and environmental uncertainty
- Longitudinal and inter organizational studies are needed to explore the changes that take place in HR flexibility over time and across situation.
- There continues to be a need further to explain the parameters that affect and are affected by organizational ambidexterity.

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