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Abstract
This study investigates the moderating role of electronic human resource management (e-HRM) in the relationship between human resource management ambidexterity (HRMA) and talent management (TM) using data collected from 430 managers working in 10 international banks in Egypt. e-HRM was found to be an important moderator of the relationship between HRMA and TM. The more dependence on e-HRM in executing human resource policies in banks, the greater influence of HRMA on TM. The results referred also a positive and significant influence of both HRMA and e-HRM on TM. This study concludes by discussing managerial implications and the limitations should be addressed in future research.

Keywords: electronic human resource management, human resource management ambidexterity, human resource management, organizational ambidexterity, talent management

1. Introduction

Human Resource Management Ambidexterity (HRMA) refers to the ability of HRM to both explore and exploit talented employees needed to adapt with intense competitiveness in a changing business world. As Huang and Kim (2013) referred, the notion of ambidexterity is relatively new to HRM research, but its potential has gradually recognized. Past studies noted that in order for an organization to be ambidextrous, its HRM also needs to be ambidextrous (Huang & Kim, 2013; Kang & Snell, 2009). In addition, organizations seeking ambidexterity are recognizing that their employees are critical resources to work effectively on exploration and exploitation activities. Therefore, this study examines how HRMA contributes in supporting TM.

Generally, Organizational ambidexterity (OA) plays a critical role in achieving success for an organization. Therefore, it has attracted researchers’ attention along few past periods. Additionally, there is a general agreement between researchers about achieving OA by simultaneously pursuing exploration and exploitation of resources because they are critical to long-term organizational success (Veider & Matzler, 2015; Choi & Lee, 2015; Wei, Zhao & Zhang., 2014; Laureiro-Martínez, Brusoni, Cañessa & Zollo, 2014). However, drawing on literature review, there are conflicting views concerning how to achieve the trade-off between exploitation and exploration to support OA. One stream of literature adopts the point of view that sees they are incompatible because of resource scarcity. Thus, the balance of resource allocation is required to achieve exploration and exploitation (Uotila, Maula, Keil & Zahra, 2009).

On contrary, the second stream adopts the complementary view between exploitation and exploration to support performance levels of the firm (Lin & Ho, 2015; Wei, Yi & Guo, 2014; Li, Wei, Zhao, Zhang & Liu, 2013; Andriopoulos & Lewis, 2009). Although Exploration and exploitation considered mutually exclusive, most scholars have shown that they can both achieved by an ambidextrous organization (Turner, Maylor & Swart, 2015). As the result, this study adopts the second view that values the role of the complementary effects between exploration and exploitation in supporting HRMA.

Furthermore, TM considers one of the most debated themes that faces scholars in HRM theory and professionals in practice alike in recent years. Therefore, Fakhr Eldin (2013) defined TM as: "the process of ensuring that the organization attracts, retains, motivates, and develops the talented employees it needs". Indeed, many practitioners of HR around the world have reported that TM enables organizations to achieve competitive advantage in a highly changing and volatile environment (Cascio & Boudreau, 2016; Meyers & Van Woerkom, 2014). Nowadays,
organizations must deal effectively with the change to adapt, grow, and achieve their purposes. Therefore, authors and practitioners of HR have a great belief in the critical role of TM to achieve organizational excellence (Butter, Valenzuela & Quintana, 2015; Sparrow & Makram, 2015; Dries, 2013). Accordingly, TM occupies a great importance in the human resource field because of launching the expression of ‘war for talent’ by a group of McKinsey consultants in the 1990s (Michaels, Handfield-Jones & Axelrod, 2001). The roots of war for talent arise because of human talent is a renewable resource not easily copied or stolen by competitors (Iles, 1997) on the one hand, in addition, the task of attracting and retaining talented employees is becoming harder today due to demographic changes and psychological contract trends (Dries, 2013) on the other hand. Therefore, this study aims at examining the effect of HRMA on supporting TM to deal with the changing workforce in the banking environment.

Currently, Facebook and Apple are now going to offer their staff a new range of reproductive services by freezing female employees’ eggs to retain talented female employees and enable them to focus on their careers. This procedure cost the companies about 20 thousand dollars for every female want to freeze her egg (Vincent, 2014). Proper TM considers a critical determinant of organizational success and a necessity for the livelihood and sustainability of organizations (Gallardo-Gallardo, Dries & González-Cruz, 2013). So, Thunnissen, Boselie & Fruytier (2013) asserted that dealing with ‘war for talent’ requires making the search for talented HR occupies the first managerial priority for organizations in this decade to increase their ability in dealing with intense competitiveness associated with a changing business environment. Unequivocally, many authors concluded that TM, in fact, adds value more than other strategic human resource management practices (Dries, 2013). Therefore, many organizations realize their needs by having talented employees to reach their purposes (Rani & Joshi, 2012).

Indeed, everything in today’s business world depends on technology and becoming automated day after day and this resulted in a new generation of employees. Consequently, many organizations adopted e-HRM applications to increase their HRM effectiveness (Nivlouei, 2014). In recent years, human resources are managed in ways differently than ever before because of the development of information technology. Therefore, many organizations can provide their services directly to employees and managers using self-service systems (Parry, 2011). Ultimately, the use of information technology enables organizations to adopt e-HRM to manage whole employee life cycle from his recruitment to his exit from the organization (Agarwal, Goel & Gupta, 2014). Thus, Alshibly (2014) argues that e-HRM is a critical factor to work more effectively and efficiently throughout HR policies.

Accordingly, this study considers one of the first studies to address the need for practical work on the topic of HRMA and TM. Therefore, it examines the impact of HRMA on TM through the moderating role of e-HRM. This study extends its importance from three reasons. First, it examines the kind of relationship between exploration and exploitation of HRM practices and its effect on TM by the moderating role of e-HRM. Second, scholars who investigate talent still disagree about a clear definition of TM, but this study suggests a comprehensive definition for TM. Third, most of past studies on TM were carried out in western cultures, but this study concerned with how Egyptian banks manage well on the acute shortage of banking talents through using HRMA and e-HRM in gaining TM.

2. Literature Review and Hypotheses

2.1 The effect of HRMA on TM

A recurring theme around a variety of organizational literature is that successful organizations in a dynamic environment are ambidextrous when they are able to manage their HR operations in an efficient way as well as adapt to the emerging changes in their environment (Tansley, Kirk, Williams & Barton, 2014; Paliokaitê & Pačësa, 2014). Therefore, organizations need to renew their HR by both exploiting existing competencies and exploring new ones to accommodate with intensive competition of business environment (Kitapcia & Celik, 2014). Furthermore, Bonesso, Gerli & Scapolan (2015) identified how the consistency between individuals’ perceptions and their behaviors may contribute to sustaining or jeopardizing full HRM because of the critical effect of this kind of ambidexterity on sustaining and developing talents.

In addition, the resource allocation perspective has its importance in the ambidexterity literature because HR characterized by scarcity (Gupta, Smith & Shalley, 2006). Therefore, this study argues that exploitation and exploration of HR are compatible. Exploratory dimension is defined as exploring new knowledge, cognitive abilities, talents and processes that led to HRM by transforming traditional HRM into TM through employing information technology in executing HR function, but exploitative dimension is defined as developing the current knowledge, abilities and processes of HRM needed to become ambidextrous through improving HRM to address current labor market challenges. Therefore, Tansley et al. (2014) referred to HR exploitation is concerned with short-term horizons, but HR exploration is concerned with long-term horizons. Moreover, He and Wong (2004) argued that an ambidextrous organization must balance between exploitation and exploration to achieve superior performance. Additionally, Kitapcia and Celik (2014) argued that exploitation of existing capabilities often needed to explore new capabilities and enhances a firm’s existing
knowledge base. Therefore, we can say that exploratory and exploitation are complementary dimensions aimed at HRMA.

Accordingly, organizations should make a balance between exploratory and exploitative innovation, whereby organizations make explicit choices to emphasize one or the other leading to an ‘optimal mix’. A structural ambidexterity can be used to achieve a balanced combination of exploitation and exploration, by allocating their responsibilities among different organizational units (Derbyshire, 2014). Furthermore, exploitative from HRM perspective is essential for generating short-term results by developing current skills and knowledge of HR, this type of development constitutes the primary focus of many organizations due to its ability to achieve certain outcomes. In addition, organizations need to explore new options to be ready for future changes in the environment and to ensure long-term survival (Paliokaitė & Pačėsa, 2014).

Surely, Organizations will be more effective to tackle with the challenges of change by attracting and recruiting new candidates who have the capabilities needed to adapt with intense competitiveness. Therefore, in their study, Salvador, Chandrasekaran & Sohail (2014) argued that CEOs who are interested in enhancing their firms’ ability to compete by offering configurable products will not achieve it without ambidextrous human resource which depends on exploitation of existing skills as well as exploration of new competencies that leads the organization to be ambidextrous. Furthermore, Mi Yang, Cheih Fang, Rong Fang & Hui Chou (2014) argued that ambidexterity used to describe an organization's ability to do two different things -exploitation and exploration- dexterously at the same time.

On the other hand, although research on TM suffers from lacking in its theoretical foundation and the clarity of its definitions with regard to what talent really constitutes as well as with respect to how to manage it effectively, the academic literature on TM is noticeably expanding from year to year (Thunnissen, 2016; Gallardo-Gallardo, Nijs, Dries & Gallo 2015; Sparrow & Makram, 2015; Festing & Schafer, 2014; Sidani & Al Ariss, 2014). In their study, Meyers and van Woerkom (2014) refer to TM as “the systematic utilization of human resource management (HRM) activities to attract, identify, develop, and retain individuals who are considered talented”. In addition, from the strategic importance in our days, TM defined as an HR-focused management process that allows organizations to close the gap between the required talents and the existing ones on their way to their targets (Gallardo-Gallardo & Thunnissen, 2016; Tajuddin, Ali & Kamaruddin, 2015; Altinoz, Cakirouglu & Cop, 2013).

Furthermore, academic literature in this regard adopted different terms of “talent”, for example, it may mean employees working in key positions, high potentials or employees with excellent abilities. This variety in terms of talent involve a great debate on the definition of TM. Therefore, Tansley (2011) referred to two approaches for the meaning of talent. The first is an inclusive approach which focusses on the talents of all employees, but the second is an exclusive approach which aims at attracting and retaining certain employees in key positions. Accordingly, this study adopts an exclusive approach which defines TM as an HR practice aimed at managing talented HR to achieve a sustainable competitive edge for banks which working in a changing environment.

As a result, from a strategic point of view, organizations strive to manage their talent effectively. This necessarily imposed by changing demographic patterns of the workforce means that more employees are nearing retirement than the number entering the workforce. In addition, younger workforce has different needs; interests and are renegotiating successfully on the psychological contracts with their employer. Thus, they will have the intent to quit if their organization does not meet their expectations (Rani and Joshi, 2012). Accordingly, retaining and developing talented employees in the organization will be a critical success factor in the next period, especially in the banking industry which is characterized by intensive competition.

Accordingly, most organizations depend mainly on TM to create competitive advantage and add value for their customers. Therefore, talented employees represent the key asset to handle today and future’s competitive world, especially in emerging economies (Beamond, Farndale & Härtel, 2016). Thus, if organizations want to grow and keep a profitable and sustainable competitive edge, they need to have human resources that come up with innovative and creative projects (Altinoz et al., 2013). Additionally, Swayne & Blackburn (2016) referred to employees who are related to talent pools have positive attitudes towards their organization.

Indeed, employees tend to prefer organizations where they can continuously improve themselves and keep learning by offering interesting and significant tasks. In addition, the manifestation of talent in the workplace depends not only on innate factors, but also on that latent, intervening, and evolving components which play an important role in shaping talent in the workplace (Dries, 2013). This study divides TM’s practices into four categories according to its stages as follows:

- **Attracting talents**: This stage concerns with attracting talented candidates whether from internal or external sources.
- **Selecting talents**: In this stage, HR professionally is engaged in selecting talented candidates through objective criteria.
- **Developing talents**: aligning HR strategy with organizational strategy to develop talents’ capabilities to accommodate with job requirements.
- **Retaining talents**: It is the last stage of TM, which is responsible for keeping talented, and decreasing their intention to quit.

As discussed earlier, although the popularity of TM in the human resource literature, there has been a big gap between research and practice. Therefore, many scholars asserted that future research must pay more attention to TM through doing more empirical research to develop and test the existing frameworks currently found in the conceptual literature about TM (e.g. Iles, 2013; Thunnissen et al., 2013). Furthermore, Dries (2013) concluded that TM has yet to reach the status of a ‘mature’ field because it depends on assumptions and hypotheses. To date, there has been relatively little empirical research around the nature and application of TM strategies in organizational practice and its issues arising (Böhmer & Schinnenburg, 2016; Iles, Chuai & Preece, 2010). So, this study comes to fill this gap by examining the moderating role of e-HRM between HRMA and TM.

Recently, Zhang, Edgar, Geare & O’Kane (2016) referred to the importance of interaction between entrepreneurial orientation and capability-based HRM on innovation ambidexterity in HRMA and, therefore, sustaining talents. Thus, King (2016) referred to the great role of HRM in supporting TM. However, despite the critical role of TM to achieve competitive advantage for organizations, most literature in this area was theoretical and merely assumptions on one hand and there are no studies have been investigating the relationship between HRMA and TM on the other hand. Therefore, this study expects that banks with sound HRMA will achieve TM than another one because exploitation of existing skills in the banks and at the same time exploring new ones will gain TM effectively. Thus, the first hypothesis can be formulated as follows:

**H.1:** HRMA positively influences on TM.

### 2.2 The effect of e-HRM on TM

Information technology is considered one of the most contemporary means which organizations depend on it to manage a large number of their HR processes in an increasingly effective manner to improve competitive advantage. e-HRM means: "adopting of technology in delivering Human Resource practices due to the digital revolution in the world to achieve business success" (De Alwis, 2010). Therefore, e-HRM is considered an advanced way which depends on web technology-based channels to implement HR strategies, policies, and practices in contemporary organizations. According to Rawash and Saydam (2012), e-HRM is "the planning, implementation, and application of information technology in HRM to create value within an organization". Thus, information technology aims at supporting HR activities across the entire employment cycle from attracting to retain HR in an organization by providing online real-time HRM applications.

In addition, e-HRM can improve the efficiency of HR activities by reducing costs and increasing the speed of processes (e.g. Rangarao & Raju, 2014; Parry, 2011). Furthermore, e-HRM produces high competence towards the capacities of employees to learn new tasks and roles when circumstances require it (Huu, Tanya & Jan Kees, 2004). Therefore, Oswal and Narayanappa (2014) argued that e-HRM could enhance organizational effectiveness through developing HR policies. Thus, e-HRM can help the organizations to upgrade the HR policies for web-based technology to support both efficiency and effectiveness of HRM (Karampour, Nazari, Alinia & Kameli, 2014). Accordingly, e-HRM plays a critical role in eliminating of unnecessary HR activities (Lakshmi, 2014).

Although many scientists have studied e-HRM increasingly, most of these studies were concerned with the impact of e-HRM on organizational effectiveness generally, but there is no one study tries to examine the impact of e-HRM on TM especially. On the other hand, many of past studies conducted in the United States and Europe, but there are a few studies conducted in underdeveloped countries which are different in their economic environment and technology. Therefore, this study comes to close the gap in this area in Egypt.

Accordingly, this study expects that e-HRM will promote TM through facilitating the task of the bank to attract and retain talents to accommodate with intensive competition in the banking sector. Thus, the second hypothesis can be formulated as follows:

**H.2:** e-HRM positively influences on TM.

### 2.3 Moderating Role of e-HRM

Nowadays, many organizations have been adopted e-HRM for moving towards ambidextrous organization through developing skills of its existing employees and using information technology in attracting and retaining new
competencies. Thus, an integration of information technology with HR processes can be beneficial in achieving TM as follow (Babajee, Goolaup & Mamode Khan, 2014; Kulkarni, 2014; Sharma, 2014; Ahmadi, Darayi & Rastgoo, 2014; Abzari, Radmehr & Shalikar, 2013):

- **e-Recruitment**: This system aims at using electronic bulletin, online request forms, and different database to attract potential candidates whose competencies match the organization goals and objectives. Thus, e-recruitment aims at reducing the cost of HR activities, fostering HR processes, access to a wider pool of applicants and improving employer branding (Sharma, 2014).

- **e-Selection**: This process is concerned with attracting qualified candidates who are capable of achieving its goals.

- **e-Training and Development**: According to this system, organizations employ their own online training material for workers to gain required knowledge and skills in real time and place to support their role in achieving organizational objectives.

- **e-Performance management**: This system aims at providing more transparency, speed, and reduction in the cost of performance management system. Staff managers can depend on this system to get the results of performance evaluation in the shortest time and it helps in automatic linking of performance with the compensation for each employee. In addition, employees can know their competency level because of updating of performance evaluation on an intranet system with security.

- **e-Compensation**: This subsystem refers to using information technology in tracing the records of an employee benefits package and crucial compensation information. It helps managers also in analyzing the impact of current incentive systems and its fairness.

- **e-Discipline**: This subsystem presents different job violations and discipline efforts on the organization’s website. Thus, employees will perceive justice in the organization because they can pursue the continuous discipline efforts through this system.

In their update study, Tavakoli, Nazari, Ahmadi & Niknam (2015) have recommended organizations to use e-HRM in promoting internal marketing to evaluate their staff by creating the web. This enables the organization to receive feedback from every individual working with the company. In addition, Laumer, Eckhardt & Weitzel (2010) suggested that e-HRM may help in solving "War for Talent" and asked about how could e-HRM provide solutions supporting a holistic TM system. Thus, if information technology influences on TM and it is considered as a necessity for HRMA, how will e-HRM influence on the relationship between HRMA and TM of the studied banks? In another meaning, are the banks with more e-HRM has greater influence of HRMA on TM or not? Figure 1 illustrates this relationship. Thus, the third hypothesis can be formulated as follows:

**H.3**: e-HRM moderates the relationship between HRMA and TM.

3. **Methodology**

3.1 **Sample and Data Collection**

Banks consider an example of an outstanding organization which require talented employees to tackle with changing and volatile business environment. Therefore, this study depends on a survey for collecting field data from 430 managers working in 10 international banks in Egypt. At first, a pilot study was applied on 20 managers to know the main problem and develop questionnaire of the study. Pilot study aimed at ensuring that all items of the questionnaire were understood correctly from respondents. After that, some modifications were made according to the suggestions
introduced during the pilot study. The respondents were managers who working in key positions in the bank. Lastly, 250 complete and valid questionnaires were received with a response rate of 58.14%. Table 1 reports the sample profile.

Table 1. Demographic analysis of the sample.

<table>
<thead>
<tr>
<th>Demographic variables</th>
<th>(n= 250)</th>
<th>percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>165</td>
<td>66.00</td>
</tr>
<tr>
<td>Female</td>
<td>85</td>
<td>34.00</td>
</tr>
<tr>
<td>Total</td>
<td>250</td>
<td>100</td>
</tr>
<tr>
<td>Age:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>36- 45 years</td>
<td>42</td>
<td>16.80</td>
</tr>
<tr>
<td>46- 55 years</td>
<td>135</td>
<td>54.00</td>
</tr>
<tr>
<td>More than 55</td>
<td>73</td>
<td>29.20</td>
</tr>
<tr>
<td>Total</td>
<td>250</td>
<td>100</td>
</tr>
<tr>
<td>Department:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human Resource</td>
<td>138</td>
<td>55.20</td>
</tr>
<tr>
<td>Other Departments</td>
<td>112</td>
<td>44.80</td>
</tr>
<tr>
<td>Total</td>
<td>250</td>
<td>100</td>
</tr>
<tr>
<td>Education:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor</td>
<td>197</td>
<td>78.80</td>
</tr>
<tr>
<td>Post Graduate</td>
<td>53</td>
<td>21.20</td>
</tr>
<tr>
<td>Total</td>
<td>250</td>
<td>100</td>
</tr>
<tr>
<td>Experience:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10- 20 years</td>
<td>62</td>
<td>24.80</td>
</tr>
<tr>
<td>20- 30 year</td>
<td>124</td>
<td>49.60</td>
</tr>
<tr>
<td>More than 30 years</td>
<td>64</td>
<td>25.60</td>
</tr>
<tr>
<td>Total</td>
<td>250</td>
<td>100</td>
</tr>
</tbody>
</table>

3.2 Measures

This study established scales in the light of existing literature except TM scale that is established particularly for this study. Items were measured on a 5-point Likert scale ranging from “1” represents “strongly disagree” to “5” represents “strongly agree”.

- **Human Resource Management Ambidexterity**: we modify the scale used by March (1991), at the same time, we took some items from the scale designed by He and Wong (2004), this variable consists of 10 items, we classified 5 items to measure exploration dimension and 5 items to measure exploitation dimension which together represent HRMA (see Table2).

- **Electronic Human Resource Management (e-HRM)**: This variable was measured depending on scales available in the literature review (e.g. Oswal & Narayanappa, 2014; Kulkarni, 2014; Babajee et al., 2014) after modifying them to a suite with the Egyptian banking environment. The scale consists of 18 items about e-HRM practices in banks.

- **Talent Management**: Depending on literature review, TM was measured using a scale established especially for this study. This scale consists of 24 items distributed on four dimensions (attracting; selecting; developing, and retaining talents) every dimension has six items.

3.3 Measure the Reliability and Validity

The researcher used two criteria to measure the reliability and validity. First, as Table 2 shows, all items loading is above 0.70, it ranges between 0.72 and 0.87. Thus, this result refers to each construct has a good convergent validity (Fornell & Larcker, 1981). In addition, the results show also composite reliability and Cronbach’s alpha values are all greater than the cut-off point 0.70, where composite reliability ranges between 075 and 0.83, but Cronbach’s alpha ranges from 0.79 to 0.86. Thus, the values of composite reliability and convergent validity were high for all the constructs and eligible them to be reliable and validated (Nunnally, 1978). Second, to evaluate the discriminant validity, the average variance extracted (AVE) method was used. The values of square roots of AVE for each construct represented in table 2 were significantly greater than its correlation with other variables as shown in table 3. Depending on the criteria used to examine the validity and reliability of the measures in the study, we can say that these measures possess an adequate reliability and validity to collect required data for analysis.
### Table 2. Construct Reliability and Validity

<table>
<thead>
<tr>
<th>Items</th>
<th>Standardized factor loading</th>
<th>Composite reliability</th>
<th>Average variance Extract (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(1) Human Resource Management Ambidexterity (HRMA)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>(A) Exploration</strong></td>
<td></td>
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<tr>
<td>Over the last five years, our bank…</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1. Was the creator of new sources for attracting talents.</td>
<td>0.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Introduced new ways for selecting candidates.</td>
<td>0.81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Made major changes to training policy.</td>
<td>0.72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Developed new techniques to appraise the performance of human resources.</td>
<td>0.79</td>
<td></td>
<td></td>
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<tr>
<td>5. Made every effort to achieve excellence in HRM.</td>
<td>0.83</td>
<td></td>
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<tr>
<td><strong>(B) Exploitation</strong></td>
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<tr>
<td>Over the last three years, our bank…</td>
<td></td>
<td></td>
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<tr>
<td>1. Developing current knowledge and skills of HR in the bank.</td>
<td>0.75</td>
<td>0.71</td>
<td></td>
</tr>
<tr>
<td>2. Allocating enough resources to benefit from current technologies to improve employees’ skills and knowledge.</td>
<td>0.81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Encouraging employees to introduce solutions of current problems.</td>
<td>0.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Restructuring current processes to develop new skills of HR.</td>
<td>0.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Improving HR efficiency through current innovative activities.</td>
<td>0.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>(2) Electronic Human Resource Management (e-HRM)</strong></td>
<td>0.76</td>
<td>0.72</td>
<td></td>
</tr>
<tr>
<td>1. Our e-HRM application supports the routine day-to-day tasks of HRM.</td>
<td>0.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Our e-HRM application supports the decision making of HRM.</td>
<td>0.86</td>
<td></td>
<td></td>
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<tr>
<td>3. Our e-HRM application supports the forecasting of HRM.</td>
<td>0.79</td>
<td></td>
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<tr>
<td>4. Our HR ability to articulate the value proposition of the bank is increased as a result of our bank’s adoption of e-HRM.</td>
<td>0.81</td>
<td></td>
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<tr>
<td>5. Our HR ability to interpret the banking environment is increased as a result of our bank’s adoption of e-HRM.</td>
<td>0.86</td>
<td></td>
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<tr>
<td>6. Our HR ability to develop the suitable skills needed of employees is increased as a result of our bank’s adoption of e-HRM.</td>
<td>0.73</td>
<td></td>
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<tr>
<td>7. Our HR ability to manage labor policies and procedures is increased as a result of our bank’s adoption of e-HRM.</td>
<td>0.85</td>
<td></td>
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<tr>
<td>8. Our HR ability to monitor the progress of change initiatives is increased as a result of our bank’s adoption of e-HRM.</td>
<td>0.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Our HR ability to design and deliver HR practices that create and maintain the banking culture is increased as a result of our bank’s adoption of e-HRM.</td>
<td>0.81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Our HR ability to use new emerging technologies for the design and delivery of HR practices is increased as a result of our bank’s adoption of e-HRM.</td>
<td>0.74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Our HR ability to leverage information technology for HR practices is increased as a result of our bank’s adoption of e-HRM.</td>
<td>0.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Our bank’s e-HRM application aims at increasing the performance of HR forecasting for employee needs.</td>
<td>0.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Our bank’s e-HRM application aims at reducing the banking costs for the performance of HR practices.</td>
<td>0.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Our bank’s e-HRM application aims at enabling HR practices to serve as self-service for employees, HR staff and/or managers.</td>
<td>0.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Our bank’s e-HRM application aims at reducing the inconsistent practices across different HR functions.</td>
<td>0.74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. As a result of our bank’s adoption of e-HRM, a higher level of success is noticeable in the collection of personal data.</td>
<td>0.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. As a result of our bank’s adoption of e-HRM, a higher level of success is noticeable in the decreasing administrative costs for the bank.</td>
<td>0.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. As a result of our bank’s adoption of e-HRM, a higher level of success is noticeable in the contribution of HR to building the bank brand with customers, shareholders and employees.</td>
<td>0.83</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>(3) Talent Management (TM)</strong></td>
<td>0.77</td>
<td>0.76</td>
<td></td>
</tr>
<tr>
<td><strong>(A) Attracting Talents:</strong></td>
<td>0.75</td>
<td>0.72</td>
<td></td>
</tr>
</tbody>
</table>

*Our Bank...*
1. Attracts talent effectively. 0.76
2. Has processes in place to align talent management to bank goals. 0.84
3. Has a succession plan in place. 0.75
4. Has processes and policies support talent management. 0.81
5. Sees talent management as vital to banking success. 0.79
6. Considers talent management one of its reference values. 0.75

(B) Selecting Talents:
Our Bank...
1. Uses objective criteria to select talented candidates. 0.81
2. Depends on depth interviews to select skilled candidates. 0.76
3. Carries out orientation programs to adapt new candidates with bank’s rules. 0.83
4. Introduces enough promotions for talented employees. 0.75
5. Shows clear replacement charts for talented employees. 0.82
6. Frequently communicate the importance of talent management. 0.78

(C) Developing Talents:
Our Bank...
1. Determines training needs accurately. 0.84
2. Appraises performance of existing employees accurately to discover their strengths and weakness. 0.83
3. Keeps with talented employees through suitable workplace conditions. 0.81
4. Establishes human resource planning to ensure skills utilization. 0.87
5. Has capabilities to develop talent strategies aligned with bank’s strategies. 0.80
6. Introduces enough opportunities to develop talented employees. 0.86

(D) Retaining Talents:
Our Bank...
1. Supports effective talent management through workplace layout and physical plant. 0.77
2. Designs a motivational plan for wages and benefits. 0.82
3. Retain the talent needed to achieve bank goals. 0.79
4. Has enough budget to support talent management. 0.84
5. Has technological capabilities needed to facilitate talent management. 0.75
6. Cares with career development for existing employees. 0.81

3.4 Common Method Bias

To know whether there is a common method bias exists, confirmatory factor analysis (CFA) was performed. At first, all items of the dependent and independent variables are linked under single factor to examine if it fits the standards proposed by Hair, Black, Babin, Anderson & Tatham (2006). The results referred to the model does not fit the data well and is not acceptable ($\chi^2/df=5.32$, Root Mean Square Error of Approximation (RMSEA) = 0.24, Comparative Fit Index (CFI) = 0.78, Normed Fit Index (NFI) = 0.82, Incremental Fit Index (IFI) = 0.86), this result was unsatisfactory according to fitness standards proposed by Hair et al. (2006) [$\chi^2/df<3$, RMSEA $\leq 0.08$, CFI $\geq 0.90$, NFI $\geq 0.90$ and IFI $\geq 0.90$]. But, when all items were assigned to their theoretical constructs, the model fits the data well ($\chi^2/df=1.13$, RMSEA= 0.041, CFI= 0.96, NFI= 0.94, IFI= 0.97). Therefore, there is no serious threat of common method bias exists.

4. Results and Analysis

Table 3 shows that the correlations among the variables are all below the marginal threshold of 0.70. In addition, the coefficients of the Variance Inflation Factor (VIF) were less than 10 for all variables (Fornell & Larcker, 1981). Therefore, there is no collinearity problem will have effect on prediction when using regression analysis. In addition, hierarchical multiple regression analysis was performed on the data to examine the moderating role of e-HRM on the relationship between HRMA and TM. TM was regressed on the antecedent sets in four steps as shown in table 4. Firstly, control variables were entered, HRMA in Step 2, e-HRM in Step 3, and interaction moderation (i.e., HRMA $\times$ e-HRM) in Step4. At each step of hierarchical regression analysis, the magnitude of ($r^2$) change was used to determine the variance explained by each set of antecedents. Furthermore, beta values are used to determine the effect of each variable on TM. According to the regression analysis's result in Step 2, HRMA significantly influenced TM ($\beta=0.31$, $p<0.01$, $\Delta r^2=0.07$, $F=6.63$). Therefore, H.1 (there is a positive influence of HRMA on TM) was supported. In step 3, e-HRM also significantly influenced TM ($\beta=0.19$, $p<0.01$, $\Delta r^2=0.09$, $F=5.85$). Therefore, H.2 (there is a positive influence of e-HRM on TM) was supported. In other words, the more HRMA or e-HRM was, the more TM would be. In addition, from the regression analysis result in Step 4, the product of HRMA and e-HRM significantly influenced TM ($\beta=0.43$, $p<0.01$, $\Delta r^2=0.08$, $F=6.94$). Therefore, H.3 (there is a moderating effect of e-HRM between HRMA and TM) was supported.
Table 3. Descriptive Analysis.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean (S.D.)</th>
<th>VIF</th>
<th>Cronbach’s alpha (α)</th>
<th>Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(N= 250)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Age</td>
<td>2.26 (0.74)</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>2. Education</td>
<td>1.11 (0.87)</td>
<td>-</td>
<td>-</td>
<td>0.13</td>
</tr>
<tr>
<td>3. Experience</td>
<td>2.26 (0.46)</td>
<td>-</td>
<td>0.11</td>
<td>0.09 1</td>
</tr>
<tr>
<td>4. HRMA</td>
<td>3.95 (0.83)</td>
<td>1.724</td>
<td>0.82</td>
<td>0.05 0.19 0.15 1</td>
</tr>
<tr>
<td>5. e-HRM</td>
<td>4.01 (0.61)</td>
<td>2.017</td>
<td>0.79</td>
<td>-0.07 0.12 0.11 0.31* 1</td>
</tr>
<tr>
<td>6. TM</td>
<td>3.82 (0.96)</td>
<td>1.830</td>
<td>0.86</td>
<td>0.10 0.16 0.19 0.42** 0.52** 1</td>
</tr>
</tbody>
</table>

*p < 0.05; **p < 0.01.

Table 4. Results of Hierarchical Regression Analysis to predict Talent Management

<table>
<thead>
<tr>
<th>Variables</th>
<th>TM as a dependent variable (Standardized β)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Step 1</td>
</tr>
<tr>
<td>Control Variables</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.02</td>
</tr>
<tr>
<td>Education</td>
<td>0.05</td>
</tr>
<tr>
<td>Experience</td>
<td>0.03</td>
</tr>
<tr>
<td>Independent Variables</td>
<td></td>
</tr>
<tr>
<td>HRMA</td>
<td>0.31**</td>
</tr>
<tr>
<td>e-HRM</td>
<td></td>
</tr>
<tr>
<td>HRMA × e-HRM</td>
<td></td>
</tr>
<tr>
<td>r²</td>
<td>0.11</td>
</tr>
<tr>
<td>Δr²</td>
<td>0.11**</td>
</tr>
<tr>
<td>F</td>
<td>5.29**</td>
</tr>
</tbody>
</table>

*p < .05, **p < .01.

Furthermore, to illustrate the moderating relationship, following the recommendations of Aiken and West (1991), a split-plot analysis was conducted with one standard deviation below the mean as a low level of e-HRM and one standard deviation above the mean as a high level of e-HRM. The results are shown in figure 2 consistent with H.3. Figure 2 shows that the slope of the banks with the low e-HRM was flat, whereas the slope of the banks with the highest e-HRM was steeper. Thus, hypothesis 3 is supported and consistent with figure 2.

![Figure 2](image-url)  
Figure 2. The moderating effect of e-HRM on the relationship between HRMA and TM.

Finally, figure 3 summarizes the results of the moderating effect of e-HRM on the relationship between HRMA and TM. It shows a significant effect for both HRMA and e-HRM on TM, at the same time e-HRM play a moderating role in the relationship between HRMA and TM.
5. Discussion

Although TM has become a key area of focus for academics and practitioners alike over recent decades, it remains relatively young in its development. In addition, little research spent to know the important factors affecting on TM, this study examines the impact of HRMA on TM through the moderating effect of e-HRM. Thus, this study tries to overcome the gap between research and practice in this field by studying the relationship between these two new trends.

Results show that HRMA positively influences on TM. Thus, banks whose have extensive HRMA can achieve TM, because of their ability to attract and recruit talented employees in the key department of the bank to add value in achieving sustainable competitiveness. In this way, when international banks keep in mind that balancing between exploitation and exploration in their HRM practices, they will not only lead and sustain their talents, but they will also adapt to competitive and rapidly changing banking environment. Moreover, most banks have explicit protocols regarding attracting, selecting and retaining talented employees to keep the leadership in the banking industry. This result consistent with past studies which revealed to gain TM’s advantages, organizations must have an ambidextrous HRM to attract a new generation of talented bankers able to deal with a variety of financial products effectively (Thunnissen, 2016; Pinnington, Alshamsi, Karatas-Ozkan & Nicolopoulou, 2015; Meyers & Van Woerkom, 2014).

At the same time, this result consistent with Dries’ results (2013) who concluded to the critical role of TM in achieving organizational excellence. In addition, Tatoglu, Glaister & Demirbag (2016) emphasized on the need for a sophisticated suite of HRM policies and practices that are also capable of developing the skills and competencies of global talent to cope with high rate of turnover in these talents. Accordingly, many studies asserted on the importance of balancing between efficiency and effectiveness of HRM practices to gain TM’s benefits, especially in an economic recession and changing environment (Beamond et al., 2016; McNulty & De Cieri, 2016; Collings, Scullion & Vaiman 2015; Sparrow & Makram, 2015; Gallardo-Gallardo et al., 2013; Thunnissen et al., 2013; Rani & Joshi, 2012).

In addition, the results show that there is a positive and significant relationship between e-HRM and TM; this means that adopting information technology in executing HR policies in the banks enable them to support TM and making them more adapting with changes in the banking environment. When banks adopt e-HRM, a higher level of success is noticeable in the collection of staff data; in decreasing administrative costs for the bank; and in the contribution of HR to build the bank brand with customers, shareholders and employees. This result consistent with past studies which asserted on the role of e-HRM in enhancing organizational effectiveness and sustainability, speed up the flow and implementation of business strategies and processes, and increasing the profit margins of the organizations through attracting and sustaining talented employees (Stone, Deadrick, Lukaszewski & Johnson, 2015; Oswal & Narayanappa, 2014; Karampour et al., 2014; Lakshmi, 2014; Huang, Newell, Huang & Pan, 2014).

Lastly, the results showed that e-HRM plays a moderating role in the relationship between HRMA and TM. This result means that the more bank depends on e-HRM in executing its HR policies in attracting; recruiting; developing and retaining its talents, the greater its ability to achieve TM. In addition, the e-HRM application supports the routine day-to-day tasks of HRM; supports the decision making of HRM; supports the forecasting of HR. It increases HR ability to create the value for the bank; increases HR ability to interpret the banking environment; increases HR ability to develop the suitable skills needed for employees; lastly increases HR ability to manage HR policies and procedures. This result consistent with Tavakoli et al. (2015) who recommended that using e-HRM in HRM enables the organization to receive feedback from every individual working with the company and this will enable it to develop skills and competencies of its employees. Furthermore, this result asserts the conclusion of Laumer et al. (2010) regarding the role of e-HRM may help in solving "War for Talent".
6. Conclusion and Managerial Implications

6.1 Conclusion

This study argues that investigating the moderating role of e-HRM deepens our understanding of the relationship between HRMA and TM. Specifically, this study aimed at investigating the effects of HRMA on TM are different in banks according to their using e-HRM in executing their HR policies. The results showed that both HRMA and e-HRM have a positive influence on TM. Finally, banks with more e-HRM have more influence of HRMA on TM than those who have less e-HRM.

6.2 Academic Contribution and Managerial Implications

This study aims at providing important managerial implications besides its theoretical contributions. First, banks should be aware of the significant influence of e-HRM on the relationship between HRMA and TM. They must know that e-HRM is the most significant factor, which guides a bank’s HRM towards sustainable competitiveness. Therefore, when banks decide to leverage HRMA for achieving TM, managers should start by revisiting the bank’s HRM and make it align with the latest information technology to ensure that bank’s talents are fully used. Second, our findings suggest that e-HRM plays a moderating role to strengthen HRMA in achieving TM. Therefore, managers must develop existing and prospect talents to become more accommodating with an intensive competition.

Third, banks need to be more consciously aware of the processes involved in producing HRMA outcomes to achieve TM. Managers, therefore, must take into their considerations that TM systems can enhance diversity initiatives by ensuring transparency over selection criteria and introduce equal opportunity to enter the talent pool. Fourth, to maximize returns on talent, central ownership for TM is important to achieve alignment with strategic objectives of the bank and to help in diminishing frozen mentalities. Fifth and lastly, managers within the banking industry need to understand the impact of their HRM choices have on their ability to attract, develop and retain talented individuals in their banks.

6.3 Research Limitations and Future Research Suggestions

This study has several limitations. First, it depended on information collected from managers working in international banks in Egypt. The results may be different if we applied it to banks in another environment, especially in high technology ones. Therefore, future research must discuss more demographic characteristics of the bank such as size; home-office location and e-HRM level. Second, this study hypothesized that exploitation and exploration of HRM were complementary in banks, but there is a stream in literature argues that exploitation and exploration are incompatible because of resource scarcity. Therefore, it is possible that the generalizability of this result on other organizations will be uncertain and biased. Furthermore, in addition to the main and moderator effects of e-HRM on TM. Yet, it would be interesting for future research to investigate some potential mediators (e.g., job satisfaction, Job embeddedness, workplace ostracism, engagement with e-HRM, and employee’s workaholism) to explore the possible mechanisms underlying this relationship.

References


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