Determinants of E-HRM and Strategic Performance: Mediating Role of E-HRM Usage

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MS-HRM 2K15

A thesis submitted to NUST Business School for the degree of Master of Science in Human Resource Management

2019

PROJECT / THESIS ACCEPTANCE CERTIFICATE

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Declaration

No portion of the work referred to in the dissertation has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning.

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Acknowledgements

Abstract

This research aims to study the impact of the use of electronic HRM (E-HRM) onto the strategic performance of HR by studying the various factors that influence the intention to use and actual usage of E-HRM. The study combines Unified Theory of Acceptance and Use of Technology (UTAUT) model with the strategic performance of HR in order to meet the aforementioned objective. Gupta and Saxena (2013) have highlighted the services industry's emerging trend of digitization owing to the ever-growing competition, and the consequent transformation of its HR services; E-HRM has recently been introduced as web-based provision of HR services. Besides elaborating on the factors that shall influence the usage of E-HRM, this study will also clarify the link between the latter and an outcome of the usage, strategic performance of HR. In order to meet the aforementioned objective, a survey has been conducted in five major companies constituting the telecom sector of Pakistan. A sample of 497 respondents has been used to verify the proposed model whereby structural equation modeling has been used. Behavioral intention has been verified as the mediator between determinants of E-HRM (performance expectancy, effort expectancy and social influence) and actual usage of E-HRM. Performance expectancy has been observed to negatively influence the actual use of E-HRM while the other determinants (effort expectancy, social influence and facilitating conditions) have shown a positive relation. Lastly, the use of E-HRM has shown positive association with the strategic performance of HR. Researchers can build upon this study by increasing its depth and scope. They may extend the study of performance by investigating aspects other than strategic performance. Practitioners can draw valuable lessons from the results obtained in this study so as to improve the strategic performance of HR employees.

Keywords: Determinants of E-HRM, Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Behavioral Intention, E-HRM Usage, Strategic Performance

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Chapter 1: Introduction

This chapter will build the relevance of this study and introduce the framework that shall guide the overall research process. It shall discuss in depth the rationale and significance of undertaking this research along with providing an insight into the telecom sector of Pakistan so as to build the context for the subsequent chapters.

1.1 Background of the Research

Statistics compiled by Attaa (2016a) portray the vulnerable situation that the telecom sector in Pakistan has been plunged into, during the last few years. Despite having one of the fastest growing markets for 3G and 4G, this sector is undergoing a serious crisis. Although the number of mobile subscribers increased by around 16% (between June 2015 and June 2016), the corresponding rise in the cellular revenue was only around 10%. Similarly, the number of data users almost doubled; leading to a growth of 350% in the data usage. However, this growth brought about only 26% more data revenues. The author (2016a) has further stressed upon the stagnancy of monthly 'Average Revenue Per User' which is quoted to be stuck at around PKR 200/month. The situation is further aggravated by the extremely high taxation that this sector is confronted with; it is the most taxed sector of the country while the major chunk of its customers belong to the lower middle class. Consequently, this sector provides little incentive when it comes to further investment by the parent companies; especially when it provides one of the lowest returns on investment (as compared to other markets globally).

The telecom sector in Pakistan is one of the most competitive ones; competing on price has become a talk of the past (Khan, Memon, Awan, and Zafar, 2017). Already offering the lowest rates, companies must capitalize on some other source of competitive advantage if they are to survive in the industry. While talking about the recent assimilation of HRM into the strategic management process and the consequent revolution in the understanding and realization of strategic fit, Paauwe and Boon (2018) have strongly emphasized upon the notion of added value that strategic HRM has been affiliated with. Having a strategic HR department would not only mean acquisition, development and retention of the best people within the company but would also ensure alignment of the department practices with the company's overall strategy; helping the company achieve its objectives. According to Boxall (2018), strategic HRM brings along benefits for both the parties

associated at workplace; addresses issues pertaining to employees' well-being and simultaneously boosts up organizational performance with the aid of a satisfied workforce. The emerging concept of E-HRM has been looked forward to as the solution, the tool to make HR more strategic. However, sufficient gap exists between theory and practice. According to Marler and Fisher (2013), the link between E-HRM usage and strategic HR has gained popularity in theory but has not been sufficiently tested empirically.

In light of the given need, this study will empirically test the aforementioned relationship. The model to be used has been taken from a study undertaken by Obeidat (2016) whereby the Unified Theory of Acceptance and Use of Technology (UTAUT) model has been extended to investigate the effectiveness of HR employees. This study would investigate the impact of E-HRM usage on HR's strategic performance, making a notable contribution by extending the model along a more refined definition of HR effectiveness.

1.2 Gap in Literature

Unified Theory of Acceptance and Use of Technology (UTAUT), a model presented by Venkatesh, Morris, Davis and Davis (2003), tends to study and investigate the users' attitude towards a given technology and the way its usage is influenced by various factors. Research on UTAUT has been extensively carried out (Venkatesh, Thong & Xu, 2012) and according to the authors (2016), it stands valid and in light of the criteria laid out by Weber (2012) along two dimensions of quality namely 'parts of theory' and 'theory as a whole', has been labeled as a high quality theory. The authors have presented a detailed literature review on the subject based on which they have highlighted the paucity of research in the area of outcome mechanisms, one of the four types of extensions of UTAUT that focus on studying the consequences of the use of technology. Venkatesh et al. (2003) have further highlighted the research opportunities held within UTAUT model; to further verify the assumed positive relationship between behavioral intention and the actual use of technology, and to extend this model by '*tying this mature stream of research into other established streams of work.*' According to Williams, Rana and Dwivedi (2015), UTAUT is still in its infancy and has been tested for validity, combined with other variables and models but none area has yet reached maturity. It therefore, offers many promising opportunities for further research. Out of those outlined by the authors, this study will investigate the theory with an additional variable, that of strategic performance of HR.

Marler and Fisher (2013) have thoroughly examined the existing literature on E-HRM and strategic HRM. Based on their findings, the authors have highlighted the dearth of empirical evidence to support the claim that E-HRM tends to make the HR function more strategic. Hence, they have invited researchers to empirically test the given relationship. Thus, the aim of this research is to verify this claim by examining various dimensions that tend to determine the degree of acceptance and usage of E-HRM. Investigating E-HRM along these lines can help justify certain empirical studies that have been unable to fully verify the above-stated relationship i.e. Parry (2011), Marler and Parry (2016), and Heikkilä, Rentto and Feng (2017).

An empirical research undertaken by Obeidat (2016) in a Jordanian telecommunication firm tends to investigate the association between the use of E-HRM and HRM effectiveness while utilizing the UTAUT model. This study tends to extend the aforementioned research while catering to the areas left unstudied by the author; including the variable 'facilitating conditions' for the use of technology at workplace is definitely impacted by the level of support provided by the organization. Furthermore, HRM effectiveness for this study has been redefined in terms of strategic performance of HR, in line with the explanation proposed by Leatherbarrow and Rees (2017); according to which, an effective HR must reinforce the firm's agenda by playing the four roles proposed by Ulrich.

1.3 Significance of the Study

In light of the 'Resource-Based View of the Firm,' organizations must match their human resources with the competitive strategy that they opt for operating in the market. The aforementioned emphasis has been placed so as to trigger a mutually reinforcing impact such that it helps achieve an internal as well as external fit as discussed by Boxall (1996). The author has emphasized upon the development of human capital so as to build the firms' strategic capabilities which, will eventually help them remain competitive in the market. Building upon this, Saá-Pérez and GarcÍa-FalcÓn (2002) have differentiated capabilities from resources by defining them as the organization's ability to organize its resources so as to move them through its specific processes towards its target. The authors have stressed upon the intricacy of interactions between the organization's resources which, according to them evolves these processes over time and is difficult to imitate. According to Colbert (2004), the complexity of HR systems makes them unique and inimitable which, in turn draws the organization an edge over its competitors. Rothenberg,

Hull and Tang (2015) have emphasized upon the potential of HRM systems to provide a competitive advantage through the development and enhancement of the firm's distinct capabilities. Several researchers have highlighted the potential of E-HRM to shape the organizations' HR in this desirable way. This study will clarify the link for the HR professionals to work upon the different determinants of the acceptance and use of E-HRM in order to move the HR function further along strategic performance. It holds greater relevance in the Pakistani context for it is a developing country and moving through this wave of digitization while transforming the ways things used to be done not only meets resistance at part of the employees but also sets the bar for strategic performance outcomes high. In this regard, the success of E-HRM initiatives has become very critical and this study will help organizations achieve it in a much better way by treating E-HRM introduction as a process and not a single move.

According to Venkatesh, Thong and Xu (2016), Unified Theory of Acceptance and Use of Technology (UTAUT) model has not been sufficiently explored along the dimension of outcome mechanisms. This study will extend it along the dimension of strategic performance so as to direct the attention of academicians towards this under-explored area.

1.4 Problem Statement

Razzaq, Aslam, Bagh and Saddique (2017) have studied the telecom sector of Pakistan and have highlighted the challenge of survival confronted by it in face of the exponentially increasing competition; organizations are providing value-added services to satisfy, retain and benefit from the best-fitting employees. Fareed, Isa and Noor (2016) have expressed their deep confidence in strategic HR so as to positively influence the organization's performance as well as to provide the organization with a sustained competitive advantage through accomplishment of the afore-mentioned purpose. However, Pakistan being a developing country; is not completely equipped with the tools and mindset that shall assist in moving the organizations through this giant transformation in the concept of HR.

According to Atallah (2016), a significant rise in the overall workforce since 2009 has rendered manual operation of HR activities very difficult owing to simultaneous growth in the associated costs and demands for time and effort. Nivlouei (2014) has discussed the benefits and expectations associated with electronic HRM (E-HRM); besides automating routine processes and enhancing productivity, at its best it can play a significant role in transforming the very department, from

administrative to strategic. However, people have traditionally been tuned otherwise and moving them towards this new concept in itself is a potential challenge. Therefore, generating widespread acceptance for the transformation of HR's role coupled with introduction and integration of E-HRM must be ensured before the expected benefits of the entire cycle can be reaped.

According to Shamsuzzaman, Alzeraif, Alsyouf and Khoo (2018), telecom sector across the globe, is highly pressurized by the immense competition coupled with the ever-growing customer demands and expectations for improved services at yet lower rates. On a national level, the situation is equally grave. As emphasized by Attaa (2016b), telecom sector in Pakistan is one of the most competitive ones and hence, competing on price alone has become a talk of the past. Already offering the lowest rates, companies must capitalize on some other source of competitive advantage if they are to survive in the industry. The Resource-Based View of the Firm, as proposed by Lin and Wu (2014), stresses upon the need to hunt and explore internal sources of competitive advantage through the development of its human capital. In this regard, Wright, Dunford and Snell (2001) have laid emphasis upon earning sustainable competitive advantage through the utilization of resources that are rare, valuable, inimitable, and non-substitutable. Inyang (2010) has asserted the impossibility of success in achieving the organization's objectives without the smart use of the aforementioned resources. Contemporary research has been diverted in favor of developing the organizations' human capital in order to gain a sustainable competitive advantage as proposed earlier. Bromiley and Rau (2016) have used the term, Causal Ambiguity in this context, so as to emphasize upon the inability of imitation; describing the unconscious possession of unique capabilities so that mere movement of the top staff across organizations cannot replicate the ideal situation. As emphasized by Lawler III (2008), the relevance of strategic HR management is increasingly growing among most of the organizations and the telecom sector of Pakistan is no exception. Having a strategic HR department would not only mean acquisition, development and retention of the best people within the company but according to Kuipers and Giurge (2017), would also ensure alignment of the department practices with the company's overall strategy; helping the company achieve its objectives. While quoting Shrivastava and Shaw (2003), Marler and Parry (2016) have discussed the emerging concept of E-HRM as the solution, the tool to make HR more strategic. The problem however, arises when the tool itself is met with suspicion; affecting the way it is used and ultimately the impact that it creates.

According to Ruta (2005), determinants of E-HRM influence how the HR employees of any organization perceive and react to the introduction of technology into their work processes. The adoption and usage of E-HRM has further been proposed to contribute to the degree to which these employees can perform at the strategic level. Marler and Fisher (2013) have highlighted the point of convergence between the two streams of E-HRM and strategic HRM; stressing upon how both of them focus on transforming the Human Resource function from the traditional concept of an administrative department into a more strategic one. The authors have reviewed the literature integrating these two streams so as to guide future research which they emphasize should focus on how the two are associated in reality.

In light of the existing literature, the adoption of E-HRM is expected to improve the strategic performance of the HR function (Heikkilä, Rentto & Feng, 2017). However, the potential is not always fully tapped in practice due to negligence of the factors that determine to what extent and how do the people respond to the introduction of this new system (Bondarouk, Parry & Furtmueller, 2017). The model presented by Venkatesh, Morris, Davis and Davis (2003), implies that factors like performance expectancy, effort expectancy and social influence affect the attitude of people towards E-HRM and when combined with the facilitating conditions, they also determine its actual usage at the workplace. It is only after their interactions are studied that the impact of E-HRM can be traced onto the function's strategic performance for Puklavec, Oliveira and Popovic (2018) have emphasized upon the fact that understanding these interactions will help the practitioners to handle the entire process of technology integration in a much better way.

Therefore, the problem statement guiding this research is as follows: "Investigating what relationship exists between the determinants of E-HRM and the strategic performance of the function in the given context." In doing so, it will attempt to address the issue of scarcity of acceptance studies in the developing world as highlighted by Baptista and Oliveira (2015).

1.5 Aim and Objectives of Research

1.5.1 Research Aim

Although research suggests that E-HRM tends to make the HR function more strategic but Marler and Fisher (2013) have hinted at the dearth of empirical evidence to support the claim. The aim of this research is to empirically verify this claim by examining four dimensions as outlined by the Unified Theory of Acceptance and Use of Technology (UTAUT) model; that tend to determine the degree of acceptance and usage of E-HRM.

1.5.2 Research Objectives

The study will revolve around the following objectives:

- To examine and ascertain the mediating role of behavioral intention between performance expectancy, effort expectancy, and social influence and the use of E-HRM

- To examine and ascertain the relationship between performance expectancy, effort expectancy, social influence, and facilitating conditions and the use of E-HRM

- To examine and ascertain the relationship between the use of E-HRM and the strategic performance of the HR function

1.6 Research Questions

In an attempt to explore the relationship between the determinants of E-HRM and the strategic performance of the HR function, this study will tend to address a set of research questions, as listed below:

- Does behavioral intention mediate the relationship between performance expectancy, effort expectancy, and social influence and the use of E-HRM?

- How is E-HRM usage related to performance expectancy, effort expectancy, social influence, and facilitating conditions?

- Is there a relationship between the use of E-HRM and the strategic performance of the HR function?

1.7 Scope of the Study

The scope of this study which, will be guided by the Unified Theory of Acceptance and Use of Technology (UTAUT); is narrow for it will investigate the impact of determinants of E-HRM onto a single dimension of performance, the strategic performance of the HR function. According to Razzaq, Aslam, Bagh and Saddique (2017), organizations in all industries especially the telecom sector, have approached an extremely critical situation; they must struggle really hard if they are to remain competitive in face of ever-growing competition and increasingly aware customers. In order to cope with the pressures that are constantly threatening their survival, let alone growth; they are required to enhance the satisfaction and consequently the performance of employees so as to reinforce the organization's overall strategy. The grave situation re-emphasizes the significance of this study despite having a narrow scope.

1.8 Thesis Structure

This dissertation is divided into six major chapters according to the sequence of conducting this study. Following a quick tour through the study in the introductory chapter, the consequent chapters will elaborate the given theme as discussed in existing literature followed by the procedural details pertinent to conduct of this study. Highlights of the details of data handling will be followed by an elaborate discussion of the study findings. Towards the end, limitations of this study will be noted before the document is concluded.

Chapter 2: Literature Review

This chapter shall summarize and discuss the aforementioned relationship as investigated by researchers to date. It shall provide a brief overview of all the variables constituting the model under study before discussing the relationships between them. The major areas covered hereby include the theoretical backdrop set for this study, factors that influence the intention and use of E-HRM, and ultimately its relationship with the strategic performance of HR department. In light of these, a hypothesized model has been proposed which, will continue to guide this research. A brief summary of all the relevant key themes derived from literature shall conclude the chapter.

2.1 Unified Theory of Acceptance and Use of Technology (UTAUT)

In their research, Venkatesh, Morris, Davis and Davis (2003) have proposed a model that tends to investigate the reasons underlying users' attitude towards technology introduction at their workplace. The authors have therefore provided a common set of metrics to gauge the degree of acceptance exhibited by people towards technology which, is their major contribution. The theoretical backing received by UTAUT is provided by eight different models. According to Martins, Oliveira and Popovic (2014), UTAUT has significantly improved the predictive power of its constituent models by being able to justify 70% of the variance in usage intention.

According to the theory, the actual use of technology is determined by four key determinants namely, performance expectancy, effort expectancy, social influence, and facilitating conditions. The relationship between the first three variables and the actual use of technology is proved to be mediated by one's intent to use the given technology. The given relationships are moderated by different factors including gender, age, experience, and voluntariness of use; as illustrated in Figure 2.1.
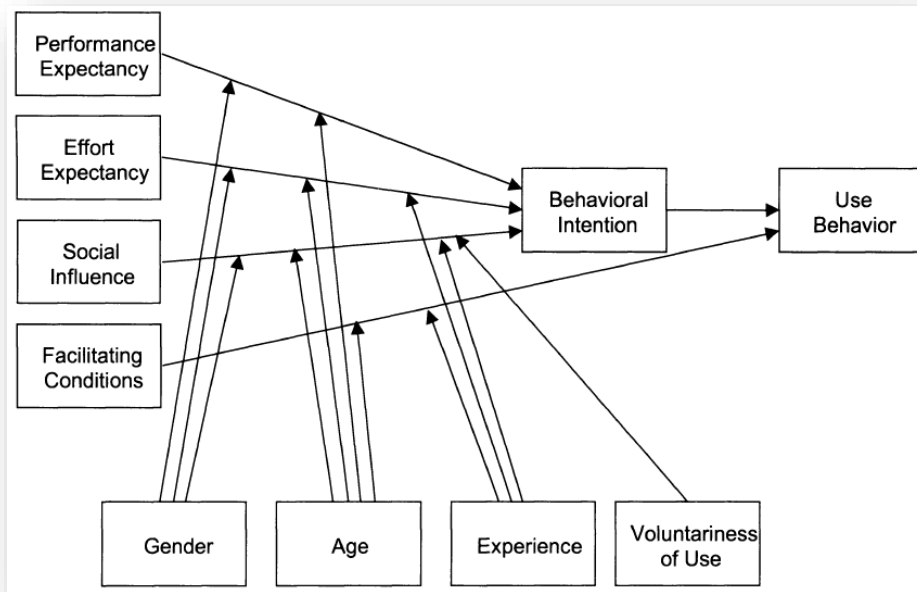
Figure 2.1: Unified Theory of Acceptance and Use of Technology Model (Venkatesh, Morris, Davis and Davis; 2003)

Williams, Rana and Dwivedi (2015) have investigated around 174 different articles being produced on the UTAUT model. Their findings hint at the attraction for further research in the given domain owing to the rapid development yet far from maturity stage, of the theory. Studies conducted so far have either combined the theory with other models or have tested it with other variables in different contexts.

2.1.1 E-HRM Usage

The advent of technology into HR processes has restructured the HR department while steering it in previously unexplored directions (Stone & Dulebohn, 2013). E-HRM has been conceptualized by Bowen and Ostroff (2004) as a platform that connects the HR professionals with the firm's workforce that constitutes their customers. Marler and Fisher (2013) have quoted the earliest definitions associated with E-HRM so as to accommodate the current trends and conceptualize the construct as to be used in the contemporary context. Ruël, Bondarouk and Looise (2004) have defined electronic HRM, commonly referred to as E-HRM as the implementation of HR strategies, policies and practices in organizations through the deliberate and directed support of web technology-based channels so as to serve their HR needs. The definition has been expanded by

Strohmeier (2007) to offer a more specific discussion of the technological and organizational contexts; E-HRM has been viewed as the application of information technology to serve dual purposes, those of networking as well as supporting the interaction of organizational members aimed at facilitating the accomplishment of HR activities.

Bondarouk, Harms and Lepak (2017) have discussed E-HRM usage in terms of its appropriation and frequency for the authors have viewed the construct beyond its technical features; E-HRM usage does not merely encompass these rather it refers to their interaction with the users. According to Ruël, Bondarouk and Looise (2004), people approach the same facility in different styles; they may choose to directly utilize E-HRM at work or they may exhibit a certain bias towards it. These minor differences shalll then pave way for further variations in the use and consequently in its effectiveness. In light of this, the authors (2017) have elaborated the concept of appropriation as the continual process of inferring the worth of E-HRM at work which, shapes the different ways in which people approach it. Sedera and Tan (2007) have termed this as the most important factor to be used to gauge the user-system interaction. Ruel and Kaap (2012) have discussed the 'frequency of use' as the most widely used factor in the context of use of any given technology. Bondarouk and Ruel (2013) have defined the actual usage of E-HRM as the frequency of its use and hence, have used related items to measure the degree of usage at workplace. According to Erdogmus and Esen (2011), E-HRM systems are being used at organizations with increasing frequency and hence, a significant contribution of this study would lie in investigation of the link between E-HRM use and the strategic performance of HR, an intended outcome of the use of E-HRM.

2.1.2 Behavioral Intention

Fishbein and Ajzen (1975) have defined the concept as an individual's subjective probability of executing a particular behavior. Anderson (1983) has extended this definition to include the concept of expectancy so as to look at behavioral intention as one's expectation regarding his/her behavior in a given context. In their work, *Disentangling Behavioral Intention and Behavioral Expectation*, Warshaw and Davis (1985) have quoted these two conceptualizations so as to present their own understanding of the concept as the extent to which an individual consciously drafts plans of undertaking or avoiding any future behavior. According to Erdogmus and Esen (2011), it reflects an individual's desires and determination towards undertaking any task. Similarly, Yusliza

and Ramayah (2011) have captured the notion as the level of effort people invest in performing a particular behavior; asserting it as the most persuasive factor that determines the actual behavior.

2.1.3 Determinants of E-HRM

According to Yusoff, Ramayah and Othman (2015), attitude towards the use of E-HRM is influenced by certain factors and hence these factors are known as its determinants. The UTAUT model has incorporated four such factors which shall be referred to as 'determinants of E-HRM' for the sake of this study.

2.1.3.1 Performance Expectancy

Gagne and Deci (2005) have linked performance expectancy with motivation; people tend to be moved towards performing an action if they perceive it to extend them utility or be instrumental in boosting up their performance. Venkatesh, Morris, Davis and Davis (2003) have discussed this in the technological context so as to conceptualize performance expectancy as an individual's trust in the use of technology to boost his/her performance and attain the set goals. According to Alraja, Hammami, Chikhi and Fekir (2016), an organization's workforce willingly embraces any technology that it feels convinced, would assist it in performing better. Therefore, one important determinant of enhanced performance by the use of technology (E-HRM for the sake of this study) is one's belief in the utility of tool. Pereira, Ramos, Gouvêa and Costa (2015) have defined an optimistic viewpoint regarding the use of technology in its ability to draw benefits to the user as optimism which, closely relates to performance expectancy with respect to the expected benefits as discussed by the authors i.e. provision of flexibility, efficiency and a sense of control. Bandura (1982) has discussed the self-efficacy mechanism (SEM) in this context such that boosting up one's belief in his/her own abilities can actually elevate the performance level and hence, performance accomplishments tend to stem from one's trust in such a relationship. Building upon this argument, Claggett and Goodhue (2011) have further emphasized that individuals who firmly believe in their capabilities tend to challenge themselves with higher goals and more difficult tasks. It is not their actual skills rather self-belief that helps them steer towards these goals and even in the face of failure, such people have been observed to be more consistent in their efforts (Vandana & Tanvi, 2008; Cázares, 2010).

While defining the concept of performance expectancy as implied in the UTAUT model, Ghalandari (2012) has highlighted five factors that have been amalgamated from the constituent

models. Therefore, while discussing the notion of performance expectancy; ideas like perceived usefulness, external motivation, job fit, relative advantages and outcome expectations are the most relevant ones. According to Davis (1989), the attitude exhibited by people towards technology is majorly determined by the degree to which they believe that it would assist them in enhancing their performance at work. While quoting Davis, Bagozzi and Warshaw (1992), and Venkatesh, Morris, Davis and Davis (2003); Maruping, Bala, Venkatesh and Brown (2017) have related performance expectancy to extrinsic motivation for the expected boost in one's performance will motivate the individual to embrace the technology in the first place. Jing, Jinghua and Junquan (2010) have asserted that the belief in utility of any given technology stems out of its relevance to the tasks at work. Therefore, people tend to be more enthusiastic towards technologies that offer them assistance in enhancing their job performance. Lent, Brown and Hackett (1994) have quoted Vroom's (1964) model according to which decisions made by individuals pertaining to the actions they undertake are heavily influenced by their expectations from these actions in terms of the results they'll produce as well as the desirability of these results.

2.1.3.2 Effort Expectancy

According to Venkatesh, Morris, Davis and Davis (2003), effort expectancy refers to the degree of ease associated by the individual with the use of technology. Constructs giving rise to effort expectancy as conceptualized in the UTAUT model include perceived ease of use, complexity and ease of use (Spil & Schuring, 2005). Alrawashdeh, Muhairat and Alqatawnah (2012) have quoted Davis (1989) to emphasize the significance of one's perception of the degree of ease associated with a given technology so as to determine his/her intention and ultimately the actual usage of that technology. Razak, Bakar and Abdullah (2017) have emphasized upon the positive impact that perceived ease of use has upon one's intention of continually using a given system. According to Saravani and Haddow (2011), knowing and understanding the details and complexity involved in any given technology will help an individual better assess whether the effort to learn and ultimately use it will be worth the effort or not. This assessment will shape the individual's attitude towards the given technology and hence determine its actual usage.

2.1.3.3 Social Influence

Social influence in the given context, refers to the degree of importance attached by an individual to the beliefs of people in his/her social circle regarding the use of technology (Venkatesh, Morris,

Davis & Davis, 2003). Carli (1999) has studied the extent to which people accept influence from their social circle along the dimension of gender differences. Discussion in this study revolves around the various styles employed by men and women to exert influence along with the effectiveness of each; men have been granted greater access to different sources of power and hence, are able to exert greater influence. Conclusions derived from the given study suggest that individuals accept influence from others in their circle depending upon their perception of, and relationship with the source of influence. According to Venkatesh and Morris (2000), while making decisions regarding the use of technology, men are more likely moved by factors that tend to boost productivity while women focus on the process-related and social factors. Thus, they take inputs from various sources into consideration and are more readily influenced by the societal forces.

According to Spil and Schuring (2005), subjective norm, image and social factors are the relevant factors while discussing the concept of social influence. Venkatesh and Morris (2000) have quoted Fishbein and Ajzen's (1975) definition of subjective norm as the extent of belief in the significance of undertaking a particular action as perceived by those held in esteem by the individual. According to Ajzen and Madden (1986), subjective norm is a term that holds relevance in a social setting whereby people feel pressurized to perform or avoid a particular behavior through others in their social circle. DeFleur and Westie (1958) have emphasized upon the need to analyze the beliefs, assumptions and values held by people in one's social circle before making any predictions pertaining to his/her behavior. This is essential because human behavior is constrained by the social setting in which one acts (Ajzen & Fishbein, 2005). According to LaPiere (1934), an individual's attitude encompasses all the aspects of his/her personality that have been acquired socially for they are actively involved in adjusting with his/her fellows. Norms have been viewed as an important standard through which individuals' actions are governed; by Ellis and Fisher (1994).

2.1.3.4 Facilitating Conditions

Venkatesh, Morris, Davis and Davis (2003) have viewed the construct as the one defining the degree of organizational and technical support as perceived by an individual towards the use of technology at workplace. Spil and Schuring (2005) have included perceived behavioral control, facilitating conditions and compatibility in their discussion of the construct, *facilitating conditions*.

Ajzen (2002) has discussed the first of the above-mentioned factors in the context of control beliefs so as to emphasize the impact that one's belief in the presence of support factors can have. Parry and Tyson (2011) have discussed the significance of this support in driving the organization towards successful accomplishment of the objectives underlying the adoption and use of E-HRM. The authors have further stressed upon the significance of carefully designing the system and providing the employees with training as and when required if organizations are desirous of reaping maximum benefits from the use of E-HRM.

2.2 Strategic Performance

Jackson (2015) has conceptualized strategic performance as the degree to which an organization's workforce can relate to and contribute to the successful execution of its business strategy. The concept as present in literature has been investigated under the broad categories of organizational performance and organizational effectiveness. Redding and Layland (2015) have developed the context of this notion as the organization's deliberate attempt to infuse its vision into the completion of routine tasks. According to Huang (2016), when applied to the organization's HR, it relates to the degree to which its HR department contributes towards winning it a competitive advantage. According to Kasemsap (2018), focusing onto the strategic performance of HR can help organizations succeed in the acquisition and retention of the best-suited employees such that leaves a positive impact not only on the organization but upon the employees too. Treatment of employees as humans first and workers later; forms the essence of this practice. Meijerink and Bondarouk (2018) have emphasized upon the significance of the perceptions held by an organization's workforce regarding the quality of services offered to them while discussing the value attached with its HRM service provision. This study will look into the telecom sector of Pakistan whereby emphasis upon the HR departments has become more prominent over the years. Therefore, investigating the strategic performance of HR along with the factors that enhance it, is particularly relevant.

While defining strategic human resource management within a firm as the selection, organization, and integration of its HRM structure in a manner that yields a strong contribution to its strategic business objectives; Cascio (2015) has laid down the measures that can be used to gauge the strategic performance of a firm's HR. Ulrich and Dulebohn (2015) have quoted the expectations attached with it in the contemporary scenario; "HR creates value by making sure that services HR

offers inside the company align to expectations outside the company" (p.191). The authors have emphasized upon the HR's partnership with those external to the organization so that it isn't dictated by the strategy rather plays a significant role in shaping it. Nadiv, Raz and Kuna (2017) have used the Ulrich's model of strategic HR roles which, they have quoted as the most commonly used framework to study the strategic performance of HR. The model presented by Ulrich (1997) has delineated four distinct areas of expertise so as to clearly define the duties and expectations that the HR staff is to perform if it is desirous of elevating its role from mere administrative to strategic in nature. These roles have been based upon the foci and activities of HR; foci defined in terms of short or long term while the activities grouped according to the subject of effort in management of processes or people. In doing so, the author has revolutionized the concept of HR as viewed by organizations; shifting the focus from mere administrative to an array of responsibilities ranging from administrative to highly strategic. According to Redman and Wilkinson (2001), as quoted by Harris (2007), HR must serve well in all the four roles if it aims to make a strategic contribution to the organization for failing in either of them would nullify the essence of strategic HR. Petrovic, Saridakis and Johnstone (2018) have used the term, 'strategically focused business partners' so as to signify the desired role for members of an ideal HR department. Further strengthened by Yusoff and Halim (2010) who have conducted exploratory factor analysis to cluster the roles of strategic partners and change agents into business partners; it has therefore, been used to measure the strategic orientation of HR for the sake of this study.

2.1.1 Strategic Partner

Yusuf, Fidyawan and Wekke (2017) have highlighted the expectations held from the firm's HR; to partner with its management and play a lead role in shaping its strategy rather than waiting for dictation. In this regard, HR is looked forward to engage itself in activities that complement and reinforce the firm's business strategy so as to enhance its performance. According to Leatherbarrow and Rees (2017), this move would require the HR staff to play a pivotal role in aligning the firm's workforce with its overall culture and energizing it to work beyond agreement. In doing so, they must prioritize their responsibilities according to the firm's business objectives and the master strategy flowing out of them. Ulrich (1997) has clearly spelled out the expectations as held from an organization's HR, "They must learn to measure results in terms of business

competitiveness…rather than to consolidate, to reengineer, or downsize when a company needs to turn around…it is time to perform and not to preach" (p. 17).

2.1.2 Change Agent

Chatwani (2018) has discussed the role of HR in developing its organization's efficient capability towards managing change. In this regard, HR is expected to carry out a detailed scrutiny of the organization's human resource so as to analyze its success in delivering services and preparing the workforce for timely accommodation of the necessary changes. According to Rajarajeswari (2010), strategizing at the business level often brings along significant changes within the organization which, are not necessarily viewed positively by the members of the organization. Since HR is supposed to handle all people-related issues so the responsibility of managing this aspect of change within the organization, also rests upon its shoulders. While discussing the effectiveness of change initiatives within the organization, Brown, Kulik, Cregan and Metz (2017) have highlighted the concept of change cynicism; inculcating a negative attitude towards the very initiative owing to low level of confidence in the abilities or sincerity of the initiator. The authors have argued that it would hinder a smooth ride through the process of change and hence, HR needs to play a crucial role in facilitating people through this tedious journey.

2.1.3 Employee Champion

In the role of employee champion, Ulrich (1997) has held HR responsible for increasing employee commitment while developing their capabilities. Harris (2007) has quoted Ulrich to emphasize the significance of this role if HR is to meet its strategic objectives. Direct contact of HR with the employees has been emphasized as important in facilitation to serve this role well. According to Renwick (2003), adoption of a strategic HR implies a split in strategy and operations which, would assist remote action at part of the HR staff. Consequently, it may lose sight of one of its most important responsibilities, that of employee wellbeing. Strategic HR, as asserted by the author can promote employee wellbeing if and when the HR takes upon the role of a guardian so as to help formulate and implement policies that cater to the employee needs.

2.1.4 Administrative Expert

According to Ulrich and Brockbank (2005a, b), HR serving as administrative experts need to ensure smooth and efficient progression of the traditional tasks associated with the department i.e. recruitment, training, etc. Lemmergaard (2009) has taken this discussion forward by emphasizing

upon the need to prove its worth through enhancement of efficiency in all these processes either via administration or through relevant policies. The focus, according to Sheehan, Cieri, Cooper and Shea (2016), should be on the development and growth of personal abilities as well as the organization's capabilities.

2.3 Mediating Role of Behavioral Intention

According to Heikkilä and Smale (2011), performance expectancy is most strongly related to an individual's intention to adopt and use E-HRM. Davis, Bagozzi and Warshaw (1989) have highlighted the relevance of effort expectancy to the users' intention to use technology for only if they believe in the ease and facilitation of use would they intend to adopt a given technology. While quoting Chiu and Wang (2008), Okumus, Ali, Bilgihan and Ozturk (2018) have reemphasized the afore-mentioned argument for user-friendly systems tend better to 'induce' the desired intention which, prompts the individuals to actually use them. Jewer (2018) has modified the UTAUT model to examine the effect of facilitating conditions onto behavioral intention and while discussing the results, she has presented a contrasting argument; performance expectancy has been replaced by facilitating conditions as the most influential predictor of behavioral intention and effort expectancy has also shown insignificant effect onto behavioral intention. In view of Rogers (2010), individuals tend to be heavily influenced by the perceptions held by people around them so that while making decisions, they are unconsciously affected by the pertinent discussions going around and hence, indirectly led by the others' experiences. Im, Hong and Kang (2011) have discussed the impact of social factors upon the users' intention to use E-HRM in a cultural context so as to conclude that in certain settings like Pakistan where the culture is oriented more towards collectivism, people tend to accept influence from others while making such decisions.

Lazazzara and Galanaki (2018) have emphasized upon the necessity of strategic orientation at part of the HR department if it is to successfully adopt E-HRM. Results of a study conducted by Voermans and Veldhoven (2007) discuss the relationship between various HR role preferences and the corresponding attitude towards adoption of E-HRM. Situations whereby HR is expected to be more strategic in nature have served to be more conducive towards E-HRM usage while people expecting HR to serve as employee champions have been observed to show a negative attitude towards it. The authors have however, hinted at the limitation of their study; the available sample was not sufficiently balanced in terms of the job type.

H1: Behavioral intention mediates the relationship between determinants of E-HRM and the use of E-HRM

- H1a: Behavioral intention mediates the relationship between performance expectancy and the use of E-HRM
- H1b: Behavioral intention mediates the relationship between effort expectancy and the use of E-HRM
- H1c: Behavioral intention mediates the relationship between social influence and the use of E-HRM

2.4 Determinants of E-HRM and E-HRM Usage

Venkatesh, Morris, Davis and Davis (2003) have discussed the four determinants of E-HRM to be positively associated with the use of E-HRM. This link has further been highlighted by Klaus, Gyires, and Wen (2003) and Maatman (2006) as they discuss the four determinants as important dimensions leading to E-HRM Usage. Performance expectancy has been conferred in literature as the strongest factor that influences the use of any given technology (Calderón, López & Peña, 2017). Previous researches have marked effort expectancy particularly relevant in the initial stages of technology adoption for it tends to shape the users' attitude towards its actual use (Davis, Bagozzi & Warshaw, 1989; Szajna, 1996; Venkatesh, 1999). Bondarouk, Harms and Lepak (2017) have emphasized upon greater willingness on part of people to use E-HRM if they perceive it to be convenient and relevant to their tasks at the workplace. Venkatesh and Zhang (2010) have investigated the impact of cultural differences onto UTAUT model by conducting similar studies in an organization that operates in US as well as in China. The motivation driving their study came from the curiosity whether such disparities affect the theorized relationships as proposed by the model. The authors have particularly noted that the two cultures differ across the individualism/collectivism dimension of the Hofstede's taxonomy so that US supports an individualistic environment while China promotes the culture of collectivism whereby people move along with their groups. Findings of this study emphasize upon the critical role that culture has to play in the overall picture sketched by the UTAUT model; its working differed across the two contexts. This research takes motivation from the study conducted by Obeidat (2016) whereby UTAUT model has been extended so as to investigate HRM effectiveness in Jordan. Pakistan and Jordan with relatively low scores on the individualism scale (14 and 30 respectively) both have

been classified as collectivist societies and hence, the impact of social influence (along the individualism/collectivism scale) is expected to be similar. According to Im, Hong and Kang (2011), the probability of adoption and use of any technology by people is highly dependent upon the infrastructure that supports and facilitates the process. Sparks, Guthrie and Shepherd (1997) have used the terms, 'behavioral constraints' and 'facilitators' in this context so as to emphasize the role of infrastructure in driving a particular set of behavior with regard to a given technology. Ajzen and Madden (1986) have highlighted a positive relationship between the availability of opportunities and resources, and the perceptions held by people regarding the use of technology; the more well-equipped they feel, the more positive response they would exhibit. Among many factors that influence the use of E-HRM in the public sector of Pakistan and in light of the study findings, Ahmer (2013) has particularly emphasized upon the top management's support in adoption of the system. Therefore, environments that are conducive to the use of E-HRM will foster a greater degree of E-HRM adoption and use by the people involved.

H2: Determinants of E-HRM are positively related to the use of E-HRM

- H2a: Performance expectancy is positively related to the use of E-HRM
  - H2b: Effort expectancy is positively related to the use of E-HRM
  - H2c: Social influence is positively related to the use of E-HRM
- H2d: Facilitating conditions is positively related to the use of E-HRM

2.5 E-HRM Usage and Strategic Performance

The relationship between the use of E-HRM and the strategic value of HR function, has interested the researchers so as to assert a positive link between the two. While being the focus of contemporary research in the relevant area, it has been and continues to be studied along various dimensions. According to L'Ecuyer and Raymond (2017), there exists a positive relationship between the degree of alignment between strategic HRM and E-HRM competencies, and the department's strategic performance. Panayotopoulou, Vakola and Galanaki (2007) have expressed their confidence in the use of E-HRM to elevate the role of the HR function along the strategic dimension by improving the company's image and aligning itself with the company's goals. The authors have conceptualized E-HRM as a platform making information simultaneously accessible to employees as well as managers, anywhere. Therefore, interaction between the two would increasingly become independent of the HR staff and hence, HR would get some time off from the

administrative chores. Motivation behind the use of E-HRM has been identified at three different levels; dissemination of information, automation of work processes, and HR transformation in the strategic direction. Heikkilä and Smale (2011) have argued that the effective utilization of the opportunities presented by the use of E-HRM can open up the doors to greater strategic involvement of the HR. Members of the HR department can thus improve their status within the organization by serving as the partners at strategic level (Gueutal & Stone, 2005; Bartram, 2006; Kavanagh, Thite, & Johnson, 2011). Keeping the resource-based view in the backdrop, Parry (2011) has investigated the impact of E-HRM onto the structure and responsibilities of the HR function. Results of this study hint at the redefinition of HR's responsibilities from transactional to strategic ones so as to enhance the function's value. In this context, deployment of E-HRM doesn't affect the physical structure (headcount) of the function but redirects the focus of its effort. Therefore, any cost savings derived from the use of E-HRM, do not stem from the reduction in staff but from the efficiencies accrued indirectly. Shobaki, Abu Naser, Abu Amuna and El Talla (2017) have advocated the use of E-HRM in order to attain organizational efficiency through a notable cut-down in the administrative financial expenses and a boost in the speed of processes. Pisano, Rieple and Pironti (2017) have asserted the complexity of human resource that must be well-comprehended and matched with the organization's strategy so as to draw a competitive advantage to its side. Parry and Tyson (2011) have asserted that the continuing focus onto potential aims of E-HRM, distracts the researchers away from the actual consequences and finding their root causes. Performing case studies in ten UK firms, the authors have attempted to fill this gap in literature. The goals often highlighted include boosting efficiency, quality of service, manager empowerment, organization's brand name and the strategic value of the HR function. The study revealed that those pertaining to efficiency and service provision were usually achieved but those of strategic involvement were still an ideal to be achieved. HR staff was found to have time and resources for aiding the organization steer in the direction set by its business strategy. The ground realities however, did not support this claim for the role of HR in business-level decision making was still passive. This discrepancy has somewhat been discussed by Francis and Baum (2017), according to whom the transformation of HR from pure administrative to strategic must take into account the organizational context and the requirements imposed by it; giving rise to the notion of business partnering. The authors have quoted Caldwell (2008) so as to highlight the dearth of research onto the emergent nature of organizational context, an area that must be studied alongside.

The direction and utilization of HR competencies therefore needs to be tuned according to the different stakeholders within the organization and the context pertaining to them. According to Bondarouk, Parry and Furtmueller (2017), organizations must ensure clear and open communication regarding the intended goals of E-HRM before introduction of the system so as to increase the level of acceptance among those who will be required to use it, and hence its success. Marler and Fisher (2013) have investigated the subject further by reviewing around forty studies conducted in a timespan of twelve years, (1999-2011). Based on their review, they have concluded the scarcity of empirical research on the subject.

H3: The use of E-HRM is positively related to the strategic performance of HR function

2.6 Hypothesized Research Model

The following hypotheses have been derived from the literature:

- H1: Behavioral intention mediates the relationship between determinants of E-HRM and the use of E-HRM

    - H1a: Behavioral intention mediates the relationship between performance expectancy and the use of E-HRM

    - H1b: Behavioral intention mediates the relationship between effort expectancy and the use of E-HRM

    - H1c: Behavioral intention mediates the relationship between social influence and the use of E-HRM

- H2: Determinants of E-HRM are positively related to the use of E-HRM

    - H2a: Performance expectancy is positively related to the use of E-HRM

    - H2b: Effort expectancy is positively related to the use of E-HRM

    - H2c: Social influence is positively related to the use of E-HRM

    - H2d: Facilitating conditions is positively related to the use of E-HRM

- H3: The use of E-HRM is positively related to the strategic performance of HR function

Figure 2.2: Hypothesized Research Model (Adapted from Venkatesh, Morris, Davis, and Davis, 2003; Marler & Fisher, 2013)

2.7 Chapter Summary

In line with the literature discussed above, expectations attached with HR are evolving and the traditional image of 'administration people' is increasingly being revolutionized to that of business partners such that they'll assist in the successful execution of the firm's business strategy. Thereupon, this study will investigate the strategic performance of HR in the telecom sector of Pakistan for all the four roles as expected in the contemporary world; assessing through determination of the extent to which HR is actively involved in strategy formulation, assisting the workforce move along turbulence and change initiatives as required by the fast-paced industrial developments, facilitating the more aware and increasingly empowered employees in personal development and career growth, as well as ensuring their well-being at work.

In face of the fierce competition that organizations and consequently their employees have been plunged into, their actions are increasingly becoming performance-driven so as to achieve quick yet the best results. This ambition makes them even more choosy in the selection and use of tools available for the accomplishment of tasks; showing willingness (behavioral intention) only if the tool holds strong relevance to their job (high performance expectancy) and seems to be convenient

(high effort expectancy). It is only after this affirmation has been made that they'll consider the tool worth spending their time and efforts upon. Living in a collectivist society, attitude of this study's subjects; will be further impacted by the social forces around (social influence). Actual use of the tool is influenced by the overall environment of the firm; that with a strategic orientation will prove to be more conducive to the use of technology i.e. E-HRM. Similarly, attitude of the top management also influences the way employees respond to the introduction of such a tool at the workplace (facilitating conditions). Once introduced, the tool needs to be evaluated and re-analyzed for the desired results so as to check for its appropriateness to the tasks at hand.

Chapter 3: Research Methodology

This chapter will provide an overview of the methodology being followed during the course of this research. It shall outline the various procedures and techniques employed, along with their relevance to this study. In order to facilitate the data collection and analysis stages of this research, this chapter shall discuss the pertinent details of sampling, questionnaire development, data collection and analytical procedures.

3.1 Research Design

Hathaway (1995) has categorized the approach of determining the association between cause-and-effect through testing of hypotheses via instruments in quantitative/empirical-analytic paradigm. As elaborated by Tuli (2010), this study has taken the positivist philosophy to knowledge development whereby the purpose of research was to provide support for the existing theorized relationships through empirical validations; seeking empirical evidence for the already-theorized relationship between the use of E-HRM and the strategic performance of HR (as highlighted in the third research objective and research question). While following an objectivist ontology, results of this study have been derived on the basis of relationships already theorized in literature. Since the phenomenon is independent of subjective perceptions and the interactions between the study subjects, objectivism holds greater relevance to this study.

Abutabenjeh and Jaradat (2018) have defined research design as a systematic plan to direct the journey of research commencing from the research objectives and questions, to its outcomes. The study aimed at investigating the impact of E-HRM usage onto strategic performance of the HR function. The relationship has been proposed in several earlier studies and this study tends to verify it, hence a deductive approach has been taken while following a quantitative research strategy as proposed by Newman and Ridenour (1998). According to the authors, quantitative strategy is relevant to all studies that commence with a theory or set of hypotheses in order to test them for confirmation. A cross-sectional study has been conducted in the telecom sector of Pakistan whereby survey method is used to collect data for surveys are particularly useful in obtaining honest and candid responses from a large population (DeFranzo, 2012).

3.2 Participants and Procedure

According to the data provided by the telecom sector representatives (placed in the HR departments), the number of HR employees currently working in Telenor, Jazz, Ufone, Zong and PTCL (in Pakistan) are seventy (70), one-hundred and twenty (120), twenty-eight (28), twenty-one (21), and four-hundred and fifteen (415) respectively. Hence, the total population of HR employees serving in the telecom sector of Pakistan is 654. Since the Headquarters (HQ) are in Islamabad and the HR services are usually centralized, majority of these employees work in the HQ offices and hence, in Islamabad. Tongco (2007) has defined purposive sampling as the conscious selection of the study subjects on basis of their qualities. The decision stems out of the researcher's assessment of information requirements and the best possible sources (Lewis & Sheppard 2006; Bernard, 2011). For the sake of this study and in light of the aforementioned reasons, employees located in Islamabad offices have been purposively sampled.

Thompson (2012) has defined simple random sampling as the sampling technique whereby distinct subjects are chosen in a manner that every member of the population is equally likely to be selected. Utilizing the Krejcie and Morgan table (Krejcie & Morgan, 1970), a sample of 242 employees needs to be drawn from the population of 654 employees working in Islamabad in order to maintain a confidence level of 95%. Simple random sampling has been used to draw the required sample for the sake of this study.

3.3 Measures

Following a quantitative research design, data for this study has been collected through self-administered and online surveys. The survey questionnaire was developed from those formulated and being used by researchers who have already studied the constructs in similar contexts. Items being used to quantify the four determinants of E-HRM namely, performance expectancy *(Cronbach alpha, α = 0.753)*, effort expectancy *(α = 0.925)*, social influence *(α = 0.864)*, and facilitating conditions *(α = 0.705)* as well as the behavioral intention to use E-HRM *(α = 0.927)*; have been derived from the questionnaire being used in a similar context by Venkatesh, Morris, Davis and Davis (2003). Following the model of Obeidat (2016), a seven-point Likert scale has been used to assess each item of the questionnaire; 1=completely disagree, 2=moderately disagree, 3=slightly disagree, 4=neither agree nor disagree, 5=slightly agree, 6=moderately agree, and 7=completely agree. The questions being adopted for this study (as appended in the survey

questionnaire section at the end of this document) include 'I would find the system useful in my job', 'I would find the system easy to use', 'In general, the organization has supported the use of the system', 'I have the resources necessary to use the system', 'I intend to use the system in the next 1 month', etc.

E-HRM Usage has been measured through a set of six questions that've been adopted from the study undertaken by Bondarouk, Harms and Lepak (2017) whereby the relationship between the use of E-HRM and HRM service quality has been investigated. A seven-point Likert scale as mentioned above, has been used. The sample questions include 'I use the E-HRM tools in accordance with what manuals (documentation) state is intended', 'I use E-HRM in my daily work', etc. *(α = 0.792)*

Yusoff and Halim (2010) have quoted the patent questionnaire of Ulrich and Conner, as the most commonly used instrument in contexts whereby HR roles are to be investigated. The authors have conducted exploratory and confirmatory factor analyses so as to further cluster the roles originally suggested by Ulrich and Conner into three factors namely, business partner, employee champion and administrative expert. They further assert sufficient reliability and validity of these subscales for use in large organizations whereby the role being played by HR is to be investigated. The baseline model, the Ulrich's model; has further been validated by Nadiv, Raz and Kuna (2017) as one that has received widespread empirical support and methodological instruments due to which, it can reliably be used in situations whereby the strategic performance of HR is to be measured. It had originally been used to assess the multiple roles being played by mid-to-upper-level HR executives working in mid to large-sized firms. It has since been validated by numerous researchers in different contexts for similar purposes. Therefore, no reliability or validity tests are required as a prerequisite to the use of this questionnaire. In line with these researches, this study has taken the refined form of Ulrich and Conner questionnaire as presented by Yusoff and Halim (2010) so as to measure the strategic performance of its subjects. It too makes use of a seven-point Likert scale to assess each item of the questionnaire; similar to the ones stated above. Questions measuring the strategic performance of HR include 'HR works to align HR strategies and business strategy', 'HR's credibility comes from maintaining employee morale', 'HR works to monitor administrative processes', etc. *(α = 0.966)*

Control Variables: In line with the previous studies, five control variables namely, organization, gender, age, work experience, and knowledge of IT, have been included in this research. Voermans and Veldhoven (2007) have suggested the use of these as control variables in studies that investigate the employees' attitude towards E-HRM. Panos and Bellou (2016) have quoted Parry (2011) to suggest the inclusion of age, and Bondarouk and Ruël (2009) to take IT knowledge as control variables in contexts similar to that of this research.

3.4 Data Analysis

Data obtained for this study was first cleaned for missing values and outliers, edited for reverse-coded questions, freed from unengaged responses, coded (in Excel 2016) and then made subject to quantitative data analysis. Two software have been used for the purpose, Statistical Package for Social Sciences (SPSS) v.23 and AMOS v. 23.

Watkins (2018) has defined exploratory factor analysis (EFA) as a multivariate statistical procedure employed in order to identify the fundamental factors that can fully explain the structure and relationship between the measured variables. The survey used for this study has been developed from existing questionnaires (already published research) and EFA has only been used to further validate the items for the sake of this research. SPSS has been used for the purpose.

Schreiber et al. (2006) have described Confirmatory Factor Analysis as a method employed so as to confirm relationships proposed in theory. Therefore, the procedure commences with a hypothesized model which lays the basis for comparison of observed and unobserved variables; with the objective to minimize it. According to Gorsuch (1983), the power and relevance of confirmatory factor analysis accrues from its ability to confirm a given theory and hence, the theoretical contribution that it makes. Considering its power, this study made use of CFA to test the fitness of the model proposed earlier. A series of analyses were conducted in AMOS so as to verify the distinctiveness of model variables.

The results of bivariate correlation analysis revealed correlation among the independent variables; hinting towards the problem of multicollinearity. Garson (2015) has described structural equation modeling (SEM) as a technique similar to multiple regression but being much more powerful owing to its multiple abilities e.g. testing overall models rather than individual coefficients, incorporation of multiple latent dependents/independents while each being gauged through

multiple measures. SEM has thus been used in AMOS to verify the hypotheses being developed in light of the existing literature rather than conducting a series of regressions.

Baron and Kenny (1986) have laid the necessary conditions for mediation to occur as a third variable is introduced between the independent (X) and dependent (Y) variables (diagrammatically represented in Figure 3.1). The independent variable must be related with the third variable introduced, known as the mediator (M). It must also correlate with the dependent variable. The mediator must also affect the dependent variable when independent variable is being controlled (else its effect will be included). There are two types of mediation that may occur as a consequence of addition of the mediator into the equation; complete and partial. The former occurs when there is no effect of X on Y (path c' becomes 0) as M is controlled while partial mediation occurs when this effect diminishes but does not reduce completely to 0. Mediation analysis for 'behavioral intention' has been conducted by comparing the values for direct, indirect and total effects.
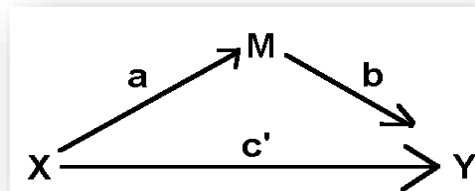
Figure 3.1: Mediation Model

3.5 Ethical Considerations

In the context of research, Aguinis and Henle (2002) have defined ethics as provision of guidelines to researchers so that they morally conduct each phase of their exploration so as to review and evaluate it accordingly. Consequently, rights of this study's participants were ensured so that they were completely informed about the purpose and scope of this research before being requested for contribution. Anonymity of study participants was ensured and guaranteed. Besides these, special effort was made at each step of the research to maintain honesty and transparency in order to comply with the moral standards.

Chapter 4: Results

The driving factor behind development of this thesis was to investigate the impact of the use of E-HRM onto the strategic performance of HR; through the application of UTAUT model. This chapter presents data gathered from the survey conducted for the aforementioned purpose. Out of approximately 600 questionnaires, 497 useful responses were obtained; indicating a high response rate of 83%. Various techniques applied on the raw data so as to prepare it for final analysis have been conferred followed by a description of the results derived through the software, SPSS V.23 and AMOS 23.

4.1 Descriptive Statistics

The study was conducted across five major companies in the telecom sector of Pakistan, out of which maximum response was obtained from PTCL (62.2%). The detailed statistics are presented in Table 4.1 below; according to which majority of respondents lie in the age bracket of 25-30 (34.8%), have a work experience of 4-6 years (26%) and have rated themselves 'good' in their knowledge of IT. There were approximately equal number of male and female respondents.

Table 4.1: Demographic Characteristics (N=497)

Variables	N	%
Organization		
Jazz	82	16.5
Telenor	63	12.7
Ufone	25	5.0
Zong	18	3.6
PTCL	309	62.2
Gender		
Male	249	50.1
Female	248	49.9
Age		
<25	51	10.3

25-30	173	34.8
31-35	139	28.0
36-40	89	17.9
41-45	27	5.4
Above 45	18	3.6
Work Experience in Years		
<1	58	11.7
1-3	98	19.7
4-6	129	26.0
7-9	99	19.9
>10	113	22.7
Knowledge of IT		
None	4	0.8
Little	62	12.4
Fair	125	25.2
Good	151	30.4
Very Good	102	20.5
Excellent	53	10.7

4.2 Data Cleansing

Firstly, all the study variables were being coded so as to be used for analysis. Raw data obtained from the surveys distributed amongst the HR employees was first treated in Excel so as to get rid of unengaged responses as well as to treat the missing values; resulting in the deletion of eleven (11) responses (whose standard deviation values were less than 0.45). Since four items of the survey questionnaire were negatively worded so the valid responses were then reverse coded before being run into further analysis. The significant responses were then entered into Statistical Package for Social Sciences (SPSS) software Version 23.

4.3 Reliability and Correlation Analysis

Small samples require a check for normality during significance testing in the calculation of p values. However, with larger samples (>200), this assumption need not be checked for the

normality of disturbance term's spread is taken care of by the Central Limit Theorem (Statistical Solutions, 2013). Mordkoff (2016) has quoted the Central Limit Theorem to state "given random and independent samples of N observations each, the distribution of sample means approaches normality as the size of N increases, regardless of the shape of the population distribution." According to Maas and Hox (2004), larger samples are less likely to be effected by non-normality of data. The sample size of this study is significantly large (497>200) and hence, further analysis was safely being conducted.

The Cronbach alpha values of all the variables being studied, lied in the acceptable range; the lowest one being 0.705 (greater than the minimum threshold of 0.7 as quoted by Kim et al. (2016)). Table 4.2 presents the sample's mean, standard deviation, and correlation values for all the variables being studied in this research.

Table 4.2: Mean, standard deviation, correlation scores, and Cronbach α values for all the variables

	Mean	Standard Deviation	PE	EE	SI	FC	BI	AU	SP
PE	5.787	0.729	(0.753)	0.716**	0.559**	0.554**	0.247**	0.326**	0.448**
EE	5.894	0.834		(0.925)	0.568**	0.588**	0.339**	0.438**	0.489**
SI	5.694	0.743			(0.864)	0.496**	0.324**	0.446**	0.499**
FC	5.565	0.665				(0.705)	0.372**	0.575**	0.594**
BI	5.550	1.076					(0.927)	0.438**	0.374**
AU	5.480	0.622						(0.792)	0.560**
SP	5.875	0.583							(0.966)

*Notes: N=497, PE=Performance Expectancy, EE=Effort Expectancy, SI=Social Influence, FC=Facilitating Conditions, BI=Behavioral Intention, AU=Actual Usage, and SP= Strategic Performance. Cronbach α values of each variable are in diagonal places (italic). *p<0.05; **p<0.01; ***p<0.001*

The correlation scores for independent variables (PE, EE, SI and FC) majorly lie in the range of 0.5 to 0.7; indicating moderate correlation between them which, might lead to the problem of multicollinearity. Kassambara (2018) has defined multicollinearity as a critical situation marked by the existence of collinearity between multiple variables despite the absence of high correlation

between any single pair of variables; leading to redundancy of independent variables. According to the author, variance inflation factor (VIF) is a score that helps determine the degree to which variance of a given regression coefficient gets inflated by the existence of multicollinearity. James, Witten, Hastie and Tibshirani (2014) have stated that VIF values greater than 5 or 10 signify such a problem. The VIF values of this study's independent variables, as presented in Table 4.3, are all less than 3 which, shows that there was no concern of multicollinearity in this dataset. In spite of this, the model is better fit for analysis through structural equation modeling rather than regressing the individual relationships because according to Garson (2015), the former technique inherently takes into account the correlated independents.

Table 4.3: Collinearity Statistics

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	PE	.438	2.284
	EE	.414	2.418
	SI	.606	1.650
	FC	.595	1.681

Notes: N=497, PE=Performance Expectancy, EE=Effort Expectancy, SI=Social Influence, FC=Facilitating Conditions.

4.4 Exploratory Factor Analysis

In line with this study's model of 7 variables, EFA was run in SPSS V.23 for seven factors. The cumulative variance explained was 64.147%. According to the results as presented in Table 4.4, p-value for the Bartlett's Test of Sphericity is less than 0.05 and hence, is significant while the KMO value is 0.939; significantly above the threshold of 0.50. Therefore, the existence of patterned relationships between the variables is verified.

Table 4.4: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.939
Bartlett's Test of Sphericity	Approx. Chi-Square	20701.075
	Df	1326
	Sig.	.000

Factors extracted from this analysis were then checked for internal consistency by evaluating their Cronbach alpha (α) values. According to Kim et al. (2016), $\alpha \geq 0.9$ indicates an excellent level of internal consistency while $0.7 \leq \alpha < 0.9$ is deemed as good. Since all factors yielded α values in the range of $0.78 < \alpha < 0.96$, it may be concluded that all the factors have good internal consistency and can be used for the given study.

4.5 Confirmatory Factor Analysis

Table 4.5 presents the results of three CFA attempts; seven-factor (default) model following the hypothesized relationships, three-factor model representing three different themes within the hypothesized model, and the one-factor model that amalgamates all the variables into a single factor. The table values indicate best results in case of the default model such that the *chi-square value (CMIN/DF), Normed Fit Index (NFI), Relative Fit Index (RFI), Incremental Fit Index (IFI), Tucker-Lewis Index (TLI), Comparative Fit Index (CFI), and Root Mean Square Error of Approximation (RMSEA)*; all approach towards the standard values (CMIN/DF < 3; NFI, RFI, IFI, TLI, CFI >= 0.9; RMSEA < .06), set to ensure increased internal consistency within the variables. Schreiber et al. (2006) have asserted that the probability of good fit is improved with increasing number of indexes approaching their standards. Since this condition is best met in the default model, it has been used for the sake of this study.

Table 4.5: Confirmatory Factor Analysis Results

Model	CMIN/DF	NFI	RFI	IFI	TLI	CFI	RMSEA
Seven-Factor (default)	2.564	0.87	0.84	0.91	0.90	0.91	0.056
Three-Factor	5.870	0.65	0.64	0.69	0.68	0.69	0.099
Single-Factor	8.095	0.52	0.50	0.55	0.53	0.55	0.120

Notes: N=497. The seven-factor model followed the hypothesized model of this study. In three-factor model; performance expectancy (PE), effort expectancy (EE), social influence (SI), and facilitating conditions (FC) were amalgamated into determinants of E-HRM, behavioral intention (BI) and actual usage (AU) were combined into E-HRM Usage, and all aspects of strategic performance (business partner, employee champion and administrative expert) were taken together as strategic performance (SP). In one-factor model, all the items were taken together as a single latent variable.

4.6 Control Variable Analysis

The effect of control variables on the hypothesized research model has been captured in AMOS v.23 and the results are appended at the end of this document (Appendix F). Organization has a significant negative impact *(β=-0.111, p<0.01)* while gender *(β=0.106, p<0.05)* and knowledge of IT *(β=0.179, p<0.001)* have significant positive impacts on behavioral intention. Gender *(β=0.075, p<0.05)*, age *(β=0.147, p<0.01)* and knowledge of IT *(β=0.108, p<0.01)* have significant positive impacts while work experience *(β=-0.137, p<0.05)* has a significant negative impact on E-HRM usage. Knowledge of IT *(β=0.138, p<0.001)* is the only control variable that has a significant positive impact upon strategic performance of HR.

4.7 Structural Equation Modeling

With reasons established earlier in Sections 3.4 and 4.3, analysis for this study was conducted through SEM in AMOS v.23. Figure 4.1 represents the model that was run in the software in order to obtain the results.
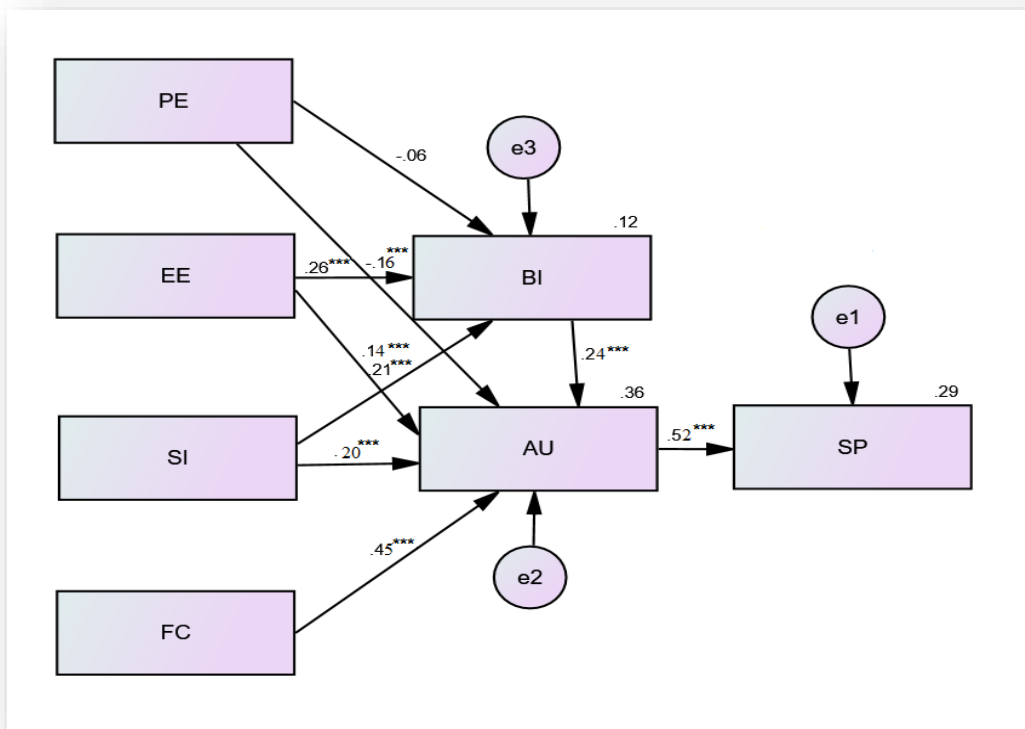
Figure 4.1: SEM Hypothesized Research Model

Mediation Analysis

In line with Gunzler, Chen, Wu and Zhang (2013), the error terms, e2 and e3 (illustrated in Figure 4.1) have been assumed to be uncorrelated along with the supposition of multivariate normality for the two. Following the aforementioned conditions, behavioral intention has been tested for mediation (data presented in Tables 4.6, 4.7 and 4.8) between the independent variables namely, performance expectancy, effort expectancy, and social influence and the dependent variable, E-HRM usage. The total effect (c) of performance expectancy on actual usage is -0.174 while the direct (c') and indirect effects (ab) are -0.161 and -0.013 respectively (all the paths have been reported as significant). Since the direct effect has been reduced but not eliminated, behavioral intention partially mediates the relationship between performance expectancy and actual usage; supporting hypothesis 1a. Analyzing for effort expectancy, its total effect (c) on actual usage is 0.199 while the direct (c') and indirect effects (ab) are 0.136 and 0.063 respectively (all the paths being significant). The effect of effort expectancy on actual usage has been reduced by the addition of behavioral intention but not completely eliminated; hence, behavioral intention partially mediates the relationship between effort expectancy and actual usage; providing support for hypothesis 1b. The effect of social influence on actual usage reduces from 0.251 (total effect, c) to 0.201 (direct effect, c') as behavioral intention is introduced between them with indirect effect (ab) accounting for 0.050. Having the direct effect reduced with the addition of behavioral intention, and not eliminated; evidence for partial mediation is being provided while supporting hypothesis 1c.

Table 4.6: Standardized Total Effects

	SI	EE	PE	FC	BI	AU
BI	.210	.264	-.056	.000	.000	.000
AU	.251	.199	-.174	.452	.238	.000
SP	.131	.104	-.091	.237	.125	.524

Notes: PE=Performance Expectancy, EE=Effort Expectancy, SI=Social Influence, FC=Facilitating Conditions, BI=Behavioral Intention, AU=Actual Usage, and SP= Strategic Performance.

Table 4.7: Standardized Direct Effects

	SI	EE	PE	FC	BI	AU
BI	.210	.264	-.056	.000	.000	.000
AU	.201	.136	-.161	.452	.238	.000
SP	.000	.000	.000	.000	.000	.524

Notes: PE=Performance Expectancy, EE=Effort Expectancy, SI=Social Influence, FC=Facilitating Conditions, BI=Behavioral Intention, AU=Actual Usage, and SP= Strategic Performance.

Table 4.8: Standardized Indirect Effects

	SI	EE	PE	FC	BI	AU
BI	.000	.000	.000	.000	.000	.000
AU	.050	.063	-.013	.000	.000	.000
SP	.131	.104	-.091	.237	.125	.000

Notes: PE=Performance Expectancy, EE=Effort Expectancy, SI=Social Influence, FC=Facilitating Conditions, BI=Behavioral Intention, AU=Actual Usage, and SP= Strategic Performance.

Regression Analysis

The standardized regression weights (beta values denoted by β) as listed in Table 4.9; represent the direction of relationship between the different variables. Performance expectancy is negatively related to behavioral intention *(β=-0.056, p=0.186)*; the relation however, is not significant (represented by the p value). It is also negatively related with actual usage of E-HRM *(β=-0.161, p<0.001)* but this relationship is significant. Hypothesis 2a is therefore not supported by the results of this study. Effort expectancy is significantly related with behavioral intention *(β=0.264, p<0.001)* as well as actual usage *(β=0.136, p<0.001)*; supporting hypothesis 2b. The relationship between social influence and behavioral intention *(β=0.210, p<0.001)* is significant and so is the former's relationship with actual usage *(β=0.201, p<0.001)*. The latter provides support for the hypothesis 2c. Facilitating conditions is significantly related with actual usage *(β=0.452, p<0.001)* and therefore, hypothesis 2d holds valid in this study. Behavioral intention and actual usage are significantly related *(β=0.238, p<0.001)*. The relationship between actual usage and strategic performance *(β=0.524, p<0.001)* is significant; providing support for hypothesis 3.

Table 4.9: Regression Weights

	Unstandardized Regression Weights (β)				Standardized Regression Weights (β)
	Estimate	**S.E.**	**C.R.**	**P**	
BI <--- PE	-.081	.061	-1.322	.186	-.056
BI <--- EE	.336	.054	6.265	***	.264
BI <--- SI	.299	.060	4.968	***	.210
AU <--- PE	-.125	.035	-3.564	***	-.161
AU <--- EE	.092	.026	3.478	***	.136
AU <--- SI	.153	.029	5.210	***	.201
AU <--- FC	.384	.038	10.001	***	.452
AU <--- BI	.127	.021	5.958	***	.238
SP <--- AU	.525	.038	13.693	***	.524

Notes: PE=Performance Expectancy, EE=Effort Expectancy, SI=Social Influence, FC=Facilitating Conditions, BI=Behavioral Intention, AU=Actual Usage, and SP= Strategic Performance. [*p<0.05; **p<0.01; ***p<0.001]

4.8 Chapter Summary

According to the results obtained from data analysis, behavioral intention partially mediates the relationship between the three determinants of E-HRM namely, performance expectancy, effort expectancy, and social influence and E-HRM usage. As hypothesized; effort expectancy, social influence and facilitating conditions have shown a positive association with the use of E-HRM. However, a negative relation has been observed between performance expectancy and the use of E-HRM. E-HRM usage has been observed to relate positively with the strategic performance of HR.

The findings have been summarized in Table 4.10 so as to present the status of hypotheses that were proposed earlier in this study.

Table 4.10: Summary of Results

Hypotheses	Accepted	Rejected

H1: Behavioral intention mediates the relationship between determinants of E-HRM and the use of E-HRM		
H1a: Behavioral intention mediates the relationship between performance expectancy and the use of E-HRM	✓	
H1b: Behavioral intention mediates the relationship between effort expectancy and the use of E-HRM	✓	
H1c: Behavioral intention mediates the relationship between social influence and the use of E-HRM	✓	
H2: Determinants of E-HRM are positively related to the use of E-HRM		
H2a: Performance expectancy is positively related to the use of E-HRM		✓
H2b: Effort expectancy is positively related to the use of E-HRM	✓	
H2c: Social influence is positively related to the use of E-HRM	✓	
H2d: Facilitating conditions is positively related to the use of E-HRM	✓	
H3: The use of E-HRM is positively related to the strategic performance of HR function	✓	

Chapter 5: Discussion

The major aim of this study was to provide empirical evidence for the theoretical relationship between E-HRM and the strategic performance of HR. In doing so, it addressed the underlying factors as proposed by the Unified Theory of Acceptance and Use of Technology (UTAUT) model; that influence E-HRM usage. The preceding chapter has discoursed the interpretation of results and in continuation, this chapter will confer the data analysis at length; benefitting not only future researchers but also the practitioners who are desirous of boosting up the strategic performance of HR employees.

5.1 Major Findings

5.1.1 Research Question#1: Does behavioral intention mediate the relationship between performance expectancy, effort expectancy, and social influence and the use of E-HRM?

According to Chua, Rezaei, Gu, Oh, and Jambulingam (2018), determinants including performance expectancy, effort expectancy, and social influence affect behavioral intention which in turn shapes and influences the use of social networking apps. Arefin, Hoque, Yeasir and Islam (2018) have studied the employees' attitude towards introduction of e-recruiting systems within a large manufacturing company. Along with some other factors, they have suggested performance expectancy, effort expectancy and social influence to affect the employees' attitude. Sair and Danish (2018) have studied the adoption of mobile commerce in Pakistani consumer market. Their results provide evidence for behavioral intention being a significant mediator between performance expectancy and effort expectancy, and the adoption. According to Awwad and Al-Majali (2015), behavioral intention is a strong predictor of actual usage. Mtebe and Raisamo (2014) have investigated different factors through the application of UTAUT model that influence the adoption and use of mobile learning by higher education students in East Africa. Findings of their research provided evidence for a positive attitude towards use of the aforementioned services. Results of this study have also supported the relationship of determinants of E-HRM with its actual usage through behavioral intention (that acts as a mediator), as suggested in Hypothesis 1. It is only when the perceptions of employees regarding utility and ease of use develop and couple with viewpoints of people they hold important that they develop an intention whether to use or avoid

E-HRM system at their workplace. Once developed, this intention drives them towards using or avoiding the given system.

Performance expectancy has been observed to relate with behavioral intention (non-significantly) as well as E-HRM usage (significantly). Behavioral intention has also shown a significant relationship with E-HRM usage. According to Hayes (2013), the indirect path, ab (as illustrated in Figure 3.1) can be significant even if one of the individual paths is non-significant. Therefore, the indirect path between performance expectancy and E-HRM usage through behavioral intention is significant and hence, provides evidence for mediation. Further explanation may be provided with the help of statistical figures. Since the relationship between performance expectancy and behavioral intention *(β=-0.056, p=0.186)* is statistically insignificant; therefore, the negative association may be ignored. This is further validated through the analysis of direct, indirect and total effects in Section 4.6. It may be inferred from here that people with higher expectations pertaining to their productivity boosts, along with greater confidence in the ability of E-HRM to hold utility at work; craft a better attitude towards the adoption of E-HRM. Greater belief in the relevance and utility of E-HRM helps reduce the resistance that would have had emerged at part of the HR employees as it was introduced. Therefore, this belief tends to promote and encourage the use of the system rather than acting as an inhibitor. Once developed, it is this intention that in turn drives them towards the actual use of E-HRM. While getting the survey filled, many respondents expressed their view that their job was all about E-HRM and hence, rated the relevant items higher. However, they had little belief in the potential of E-HRM to help earn them a significant raise in their salaries. Thus, despite their faith in the utility of E-HRM, they did not develop a positive attitude towards the use of E-HRM; explaining the negative relation observed in this study and strengthening the arguments of Eisenberger, Huntington, Hutchison, and Sowa (1986) and Cheung, Peng and Wong (2018).

In their research, Singh and Srivastava (2018) have studied various factors that affect the adoption of mobile banking in India. Their results suggest that in combination with other factors, 'perceived ease of use' does significantly affect the intention towards the use of mobile banking. Results of this study have shown a positive association between effort expectancy and behavioral intention, and between the latter and E-HRM usage. The participants were majorly educated young (25-30 yrs) individuals who were comparatively quite comfortable with the use of technology. Being

young and enthusiastic, they were open to learning and new experiences in case they were not very familiar with any tool. Hence, their attitude towards the use of E-HRM was mostly positive; facilitating its use at the workplace. Since the relationships between effort expectancy and E-HRM usage, effort expectancy and behavioral intention, and behavioral intention and E-HRM usage, are all significant and the first one reduces in the presence of behavioral intention; mediation in this case has been proved.

Kim (2018) has highlighted a contemporary issue; people tend to be heavily influenced by what they come across on social media. The author has discussed a health-risk related post on Facebook that not only influenced the perceptions of people but also drove them towards finding preventive measures. According to this study's findings, social influence is significantly associated with behavioral intention and the latter significantly relates with E-HRM usage. In presence of behavioral intention, the direct relationship between social influence and E-HRM usage reduces. Fulfilling the fundamental conditions for mediation as laid by Baron and Kenny (1986), this study provides evidence for mediation of the relationship between social influence and E-HRM usage through behavioral intention. In the study's context (collectivist society in Pakistan), people tend to accept influence from their social circle as well as the top management. Therefore, despite shaping their intention to use or avoid E-HRM through various factors; the final push into the decision comes majorly from the social influence for they need to move with the group.

5.1.2 Research Question#2: How is E-HRM usage related to performance expectancy, effort expectancy, social influence, and facilitating conditions?

On the basis of this study's results, performance expectancy is negatively related with the use of E-HRM, thereby rejecting H2a. This has been in contrast with many studies in literature (Heikkilä & Smale, 2011; Williams, Rana & Dwivedi, 2015; Obeidat, 2016; Arefin, Hoque, Yeasir & Islam, 2018) that propose a positive relation between the two. Analyzing the individual items of this measure revealed an interesting observation. Respondents have majorly expressed greater confidence in the ability of E-HRM to boost up their productivity by speeding up their work and having utility. They have however, less hope in it helping them gain any raise in their pay. Eisenberger, Huntington, Hutchison and Sowa (1986) provide support for this reasoning by asserting that the employees' practical efforts in favor of the organization are ruled by their exchange ideology for they expect some material and/or symbolic benefits in return for the

additional effort that they invest in the process. One of the contemporary studies reinforcing this has been undertaken by Cheung, Peng and Wong (2018) in China where they have investigated the employees' attitude towards helping their organization in cases they don't expect a significant compensation in return. Tang, Tillery, Lazarevski and Luna-Arocas (2004) have asserted that money acts as a significant motivator for certain employees to perform exceptionally well in order to get to the top. Further evidence for money being an important motivator has been provided by Mitchell and Mickel (1999), Tang and Chiu (2003), Gbadamosi and Joubert (2005), and Vitell, Singh and Paolillo (2007). In line with these studies, it may be inferred that employees are significantly moved by monetary incentives and since E-HRM is deemed as not bringing any; HR employees are not sufficiently motivated into using E-HRM. From the table of correlations, performance expectancy is observed to be positively linked with actual usage of E-HRM *(r=0.326, p<0.01)* but when incorporated into the model with other determinants, it has shown negative association with the use of E-HRM. This behavior may be attributed to the discussion provided by Carlsson, Carlsson, Hyvonen, Puhakainen and Walden (2006) in their article, 'Adoption of Mobile Devices/Services - Searching for Answers with the UTAUT.' The researchers have studied the adoption of mobile services in Finland through application of the UTAUT model. In doing so, they concluded that performance expectancy has an important crude effect but with the introduction of an attitude-based variable, this effect was observed to change considerably. Therefore, in context of this study; when observed in combination with other variables (effort expectancy, social influence and facilitating conditions) while being moderately correlated (as depicted in Table 4.2), performance expectancy no longer remains a significant positive contributor towards the use of E-HRM. Further evidence pertaining to this observation may be drawn from Oliveira, Thomas, Baptista, and Campos (2016) according to whom; the impact of greater ease of use of mobile payment can trigger higher expectations regarding performance boosts but not necessarily its adoption. Therefore, participants of this study too; might have had increased performance expectancy but this increase was not accompanied with a rise in the deliberate use of E-HRM. Furthermore, regarding performance expectancy, Laumer, Maier, Eckhardt and Weitzel (2012) have argued that usually people preferring routine and stable environments exhibit a negative attitude towards technology. Laumer (2012) has quoted an HR manager to have said, "We are HR and HR is a people business, and for a people business I do not want to work with IT" (p.16). It is possible that some HR employees have a mindset along these lines and therefore, despite being

put into the position of using E-HRM (by their respective organizations), do not have high performance expectancy. It may be this low confidence in the relevance of E-HRM at part of some study subjects that a negative association between performance expectancy and E-HRM usage has been observed. It is also possible that telecom being a dynamic sector, pushes some of its employees into seeking a relatively stable environment so as to reduce the workload upon them and also to minimize the pressure and risks associated with industry turbulence. In doing so, they have developed a negative behavior towards E-HRM. Thereupon, the negative relation between performance expectancy and E-HRM usage may be attributed to either/all of the three explanations; absence of any significant direct incentive, interaction of performance expectancy with other independent variables, and a contrasting mindset of some study subjects in face of industry turbulence.

Talukder, Chiong, Bao and Malik (2018) have studied the influence of numerous variables including effort expectancy onto the adoption of fitness wearable technology and have concluded that their direct as well as indirect effects are significant. Effort expectancy in this study has also been verified as a significant positive predictor of the use of E-HRM. According to *Vroom's Expectancy Theory,* it is human nature to make choices on the basis of motivation and that in an organization's context; employees are motivated towards work that help them reap maximum benefit with the least investment of effort. Majority of this study's respondents were young (25-30 yrs) and educated, hence were more comfortable with the use of technology. Since they had rated themselves fair to good in terms of technical knowledge, and expressed their confidence in ease of use of E-HRM; they seemed to be more willing to learn and embrace change initiatives that E-HRM had brought at their workplace.

According to the results discussed in the previous chapter, social influence has shown a significant positive association with E-HRM usage. This is in line with results of some major studies in the existing literature as discussed above in Chapter 2. Contemporary works in a similar context have further strengthened this argument; Carcary, Maccani, Doherty and Conway (2018) have emphasized upon the significance of the role being played by social influence and normative pressure in particular, in affecting the adoption of IoT. The context of this study is a collectivist society where people tend to rely upon their fellows much more than those living in individualistic

societies. Therefore, their behavior is expected to be majorly shaped by the influence they allow themselves to receive from those around them.

Al-Qadi (2018) has investigated the relationships between different variables and E-Payment Adoption, out of which the strongest association has been observed to be the users' perception of support. Awwad and Al-Majali (2015) have applied the UTAUT model to the electronic library services in public Jordanian universities. Their findings provide maximum support to facilitating conditions and behavioral intention in shaping the students' use of these services. Results of this study have also provided similar results; facilitating conditions *(β=0.433, p<0.001)* has been observed as the strongest predictor of actual use of E-HRM. This may be attributed to the employees' strong dependence on their organization and within them on their senior management. Given the high rate of unemployment in Pakistan and in face of the ever-growing inflation, this dependence has only increased in the recent years. With the growing emphasis on performance appraisals and consequently the role of senior management, employees tend to shape their behavior according to the needs and instructions of the former. Furthermore, E-HRM has automated many processes and hence, reduced direct contact between HR and the employees but the way it has connected the two can help them receive customized services especially when the employees can access the portal through self-service. With this increase in the accessibility of information and transparency of processes, the degree of trust between the two parties is likely to increase. However, for greater acceptance at part of the employees; organizations must openly discuss their motives and maintain strong communication while facilitating them through the entire journey. In light of the aforementioned discussion, this finding (acceptance of H2d) strengthens the validity of this study by filling in the gap left by Obeidat (2016) as he omitted 'facilitating conditions' from his research.

5.1.3 Research Question#3: Is there a relationship between the use of E-HRM and the strategic performance of the HR function?

According to Kasemsap (2019), E-HRM tends not only to boost up the organization's performance but also helps accomplish its goals set in the strategic direction. Nemanja, Biljana and Sandra (2018) have defined the term as an innovation that aims to stimulate, improve and smoothen the HRM systems not only for the HR department itself but also for the rest of the organization. L'Ecuyer and Raymond (2017) have conducted a research in the manufacturing SMEs in Canada

so as to establish a positive link between the firms' strategic orientation and expansion of their strategic HRM proficiencies. This alignment was further observed to significantly improve the firms' strategic HRM performance. Results of this study have also verified the theoretically established link between the use of E-HRM and strategic performance of HR; as indicated by the significant positive relation between the two. Since the telecom sector is already placing great emphasis upon the need to improve strategic performance of HR through greater involvement in the business-level decision making; this finding is particularly useful. Telecom companies can utilize efficient E-HRM systems not only to enhance the performance of administrative tasks by their HR departments but also upgrade their role in strategic dimensions. Having routine tasks automated not only frees up much hassle that manual procedures brought along but also provides extra time that the department can invest in activities geared towards increased strategic involvement in the company. With this strategic orientation, HR representatives can greatly benefit the company by providing useful insights into higher level decisions and also by aligning their strategies with the company's business level strategy. Once the HR strategy will be aligned, all employees will be better tuned with the business-level strategy and hence, would contribute better towards its successful execution. In this regard, the role of E-HRM is very important for it can provide the organization's employees with better opportunities for expressing their views and raising concerns (through anonymous submissions) without being exposed. Since HR employees handle this procedure and are closest to the rest of the employees, they can not only convey their emotions but also help cater them in higher level decisions that impact the entire organization. Furthermore, when actively involved in business-level decision-making, HR employees can tune and align their practices accordingly which, ultimately impact the entire organization. In doing so, they'll promote and support the desired behavior within the organization and at a larger scale, smooth up processes in order to effectively reinforce the firm's business-level strategy.

Strategic performance in this study has been measured through three dimensions; HR employees need to proficiently perform three functions in order to enhance their performance along strategic lines namely, *business partner, employee champion* and *administrative expert*. Since HR has traditionally been associated with administration and management of routine tasks, it must uphold these expectations by ensuring smooth accomplishment of these tasks. E-HRM helps in this context by automating many manual procedures; thereby cutting down administration costs, reducing the time invested on them and boosting up the overall efficiency of these processes.

Therefore, E-HRM helps save the repute of HR by ensuring smooth continual of the processes. The time saved as a consequence of automation may then be invested in other activities that help the organization move along its desired trajectory. HR in the past, used to be considered an organization's liability and hence, was detached from the main organization. With an improved image of HR in the contemporary scenario, as emphasized within the telecom sector of Pakistan, and with freed up time; HR experts can actively participate in business-level decision-making while providing useful insights and the human aspects of various moves. This shall provide a two-fold advantage, consideration of employees' viewpoints while making major decisions at the higher level, and re-alignment of HR activities in order to reinforce these decisions and consequently the organization's strategy. Bringing all the employees at the same page, strategic HR improves the organization's ability to accomplish its goals and objectives. It further enhances its negotiation power within the organization so as to cater for its customers, the employees, in a much better way. In this regard, E-HRM helps HR to improve and expand its image from mere *administration people* to *guardians* of the employees. In light of the communication through E-HRM platforms, HR can improve not only its own processes but also those at higher level. E-HRM therefore, improves the strategic performance of HR along all three dimensions.

Acceptance of H3 along with the supporting results, has made a significant contribution to the existing literature for it not only provides empirical evidence for the association between the use of E-HRM and the strategic performance of HR; but also justifies the relevance of strategic performance in the given context and hence, the replacement of HR effectiveness with it (Obeidat, 2016).

5.2 Contribution to Theory

As discussed earlier, Unified Theory of Acceptance and Use of Technology (UTAUT) model is still in its infancy and researchers are continuing to study, test and expand it in various directions. This study makes a significant theoretical contribution in two ways; confirming the mediating role of behavioral intention so as to further verify the validity of the theory and extend it along an outcome mechanism by studying it with the strategic performance of HR (consequence of the use of E-HRM). Furthermore, this research also provides empirical evidence for the fundamentally theoretical relationship between E-HRM usage and the strategic performance of HR. In doing so, it has helped implement a theoretical principle and strengthened the power of this argument.

With a few changes (addition of a variable and redefinition of another), this study has replicated the research undertaken by Obeidat (2016) in the telecom sector of Jordan. In doing so, it aims at investigating the theorized relationships in a different setting so as to further validate the universality of the theory; thereby making a contextual contribution.

5.3 Chapter Summary

Findings of this study have validated the Unified Theory of Acceptance and Use of Technology (UTAUT) model by confirming the mediating role of behavioral intention and the positive relationships between the determinants of E-HRM namely, *performance expectancy, effort expectancy, social influence,* and *facilitating conditions* and E-HRM usage. They also provide empirical evidence for the association between E-HRM usage and strategic performance of HR, as theorized at multiple places in the literature.

Observations from this study are in line with the hypotheses derived from literature. However, the link between performance expectancy and the use of E-HRM has shown to be negative unlike that proposed in literature. This contradiction may be explained in light of the exchange theory or alteration of the variable's impact through incorporation into the model or the employees' preference for a relatively stable environment.

Chapter 6: Conclusions

This chapter will summarize the major findings of this research on the basis of which, implications have been drawn for academicians as well as researchers. Limitations of this study have been discussed so as to assist researchers in developing this further in the future.

6.1 Summary of Major Findings

6.1.1 Research Question#1: Does behavioral intention mediate the relationship between performance expectancy, effort expectancy, and social influence and the use of E-HRM?

Findings of this study re-emphasize the mediating role of behavioral intention in the context of E-HRM usage. The path has been proven for partial mediation; there exists a direct relationship between performance expectancy, effort expectancy, and social influence and the use of E-HRM. However, the three determinants of E-HRM usage significantly influence the use of E-HRM through behavioral intention.

HR employees in the telecom sector of Pakistan have expressed their willingness which, ultimately leads to the actual use of E-HRM; if they get positive vibes from the idea of introducing E-HRM at workplace. Belief in the utility and convenience of E-HRM coupled with social pressure, helps develop a positive attitude towards its adoption and use. It is this attitude that then acts as a driving force behind employees actually using E-HRM rather than retaliating against it.

6.1.2 Research Question#2: How is E-HRM usage related to performance expectancy, effort expectancy, social influence, and facilitating conditions?

In light of this study's results, determinants of E-HRM have shown a significant relationship with the actual use of E-HRM at the workplace. Performance expectancy has been observed to negatively influence the use of E-HRM while effort expectancy, social influence, and facilitating conditions have shown a positive association with E-HRM usage.

HR employees have shown little confidence in the use of E-HRM to help them gain some raise in their salaries. Therefore, it may be implied that they are not moved towards using E-HRM for the sake of significantly improving their productivity. Other possible explanations for this observation

include interaction of performance expectancy with other independents to exhibit the anomalous attitude or the employees' preference for a stable environment. However, they have shown faith in the ease of using E-HRM and are encouraged by their fellows to use it which, makes their effort worthwhile. The strongest motivation has been observed to come from the support from senior management and organization as a whole. Therefore, employees coming from firms that promote and support the use of E-HRM have shown widespread and smooth process of using E-HRM.

6.1.3 Research Question#3: Is there a relationship between the use of E-HRM and the strategic performance of the HR function?

Results of this study reveal a positive and significant relationship between the use of E-HRM and the strategic performance of HR. E-HRM has helped automate many processes and hence, enabled the HR employees to save a lot of time and effort. Using E-HRM can speed up the administrative processes and hence, make them a lot more efficient. Moreover, it can help HR employees to free up their time which may be and should ideally be spent on the strategic-level decision-making. This transformation in the concept of HR from the traditional 'administration people' to 'strategic business partners' will redefine their role within the organizations as well as boost their performance along the strategic dimension.

6.2 Implications

6.2.1 Theoretical Implications

This research has extended the Unified Theory of Acceptance and Use of Technology (UTAUT) model along an under-researched area; that of outcome mechanisms. There have been only two major studies that serve a similar purpose; therefore, studying the consequences of the use of technology (E-HRM for the sake of this study) shall bring into limelight the relevance and worth of the use itself. The major contribution of this study lies in the fact that it not only relates the use of E-HRM to the degree to which it makes HR strategic but also elaborates onto the underlying factors that shall determine the use of E-HRM. Clarifying all these links in the chain that connects these factors to the strategic performance of HR, shall provide a better picture of the causal relationships between them. Thereupon, this study makes a significant contribution to the literature on UTAUT by enriching the subject which has yet not reached maturity stage, and by providing empirical evidence for the already theorized relationship between E-HRM usage and strategic

performance of HR. The foundations strengthened by this study can be used by researchers in future to explore yet other consequences of the use of E-HRM as well as other dimensions of performance.

This study suggests that the HR employees are moved towards using E-HRM if they consider it convenient and socially-in, and perceive positive support from their top management. The use of E-HRM has also shown a positive contribution to the strategic performance of HR, thereby strengthening the proposition prevailing in literature.

6.2.2 Practical Implications

This study presents some notable implications for the practitioners within the telecom sector of Pakistan if they are desirous of reaping the intended benefits of E-HRM. Firstly, introduction of E-HRM must not be considered as a mere tool that can be used to transform the role of HR; rather a process that needs to be closely monitored in order to be effective. Besides concentrating upon the impact of E-HRM onto the strategic performance of HR, organizations must also take into account the underlying factors that determine and influence the usage itself. In doing so, they must extend maximum support to their employees as and when needed; help quiet their fears regarding the new technology, boost their confidence, and create an environment conducive to the use of E-HRM. Secondly, they must develop and encourage a strategic orientation at macro level if they expect their HR to significantly contribute at strategic level. Thus, organizations must view, gauge and treat their HR with a different lens; associate a different set of expectations with them. This move shall automate many routine processes and hence, shift some responsibility towards the line managers and other employees. Acceptance towards these changes will help organizations better transform the role of their HR. Thirdly, top management of the organizations must welcome the involvement of HR in business-level decision-making if the ideal concept of strategic HR is to be practically implemented.

6.3 Limitations and Future Directions

The foremost limitation of this study was to gain personal access to the HR staff within the telecom companies. Data pertaining to this department was considered confidential and the permission for self-administration of surveys was not granted. Therefore, distribution and collection of survey questionnaires was solely done through representatives working within the companies.

Regarding the nature of study, this research has investigated a single dimension of performance (strategic) of one department within an organization whereas different types of performance can be studied. Moreover, this study has been limited to the telecom sector of Pakistan. Since strategic HRM is gaining popularity across the globe and organizations of various industries are looking forward to reap the benefits that are expected to accrue from it, similar studies can be conducted in different industries. Furthermore, this study has utilized the most commonly used Ulrich's model in order to gauge the strategic performance of HR. Various authors have employed other tools i.e. strategic performance measurement systems (SPMS) in order to study strategic performance (Kaplan & Norton, 2001; Chenhall, 2005; Ittner & Larcker, 2005; Guo, Libby, Wong-On-Wing & Yang, 2018). The results of this study may thus be replicated with different models and tools. Moreover, the current study results can be extended and validated further through the use of a mixed approach; supporting the quantitative results with detailed interview responses so as to gain further insights into the subject matter which may bring better implications for practitioners into limelight. The use of a longitudinal study in order to investigate the desired relationships can yield more reliable results for the adoption of technology leaves behind a long-term impact on human behavior and hence needs to be captured over a longer period.

6.4 Conclusion

During the recent years, terms like E-HRM and strategic HR have come into vogue and different studies in existing literature have discussed them enthusiastically. There is however, scarce empirical evidence to verify the link between the two. Besides these, Unified Theory of Acceptance and Use of Technology (UTAUT) has also grown in popularity and the number of studies attempting to validate and experiment it further, have been on a rise. A study by Obeidat (2016) has followed the trend and investigated the impact of the use of E-HRM onto HR effectiveness in the telecom sector of Jordan. Taking this forward, this study has incorporated the missed variable from the UTAUT model (facilitating conditions) and in line with Leatherbarrow and Rees's definition of HR effectiveness, strategic performance of HR (in particular) has been studied within the telecom sector of Pakistan.

According to the statistics provided by telecom sector representatives, the total population of HR employees within Pakistan is approximately 654. Since HR services are usually centralized and located in the Headquarters, so the population of interest was majorly placed in Islamabad. A

minimum sample of 242 was to be drawn from this population that was spread in five companies namely, Jazz, Telenor, Ufone, Zong, and PTCL. Approximately 600 questionnaires were being floated out of which 497 useful responses were obtained; a response rate of 83%.

Data for the sake of this study has been collected through the use of survey questionnaires whose items were adopted from published sources. The survey items were first validated through exploratory factor analysis whereby seven different factors were extracted. After validating their Cronbach alpha values, these items were safely being used for the sake of this study.

Raw data was first cleaned, edited and then coded before being run into analysis. The fundamental analysis showed correlation between the independent variables (performance expectancy, effort expectancy, social influence and facilitating conditions). Structural equation modeling technique has therefore, been used to test the entire model in AMOS v.23. According to the results, performance expectancy is negatively related with the use of technology, thereby rejecting hypothesis, H2a and establishing one of the goals mentioned in Section 1.5. Multiple justifications for this unanticipated finding have been presented; performance expectancy when combined with other variables in the model no longer has a positive relationship with the actual usage of E-HRM. Since people have a lower level of confidence in the use of E-HRM to bring them a significant rise in their pay, they'll not be pushed sufficiently into using it. Another possible explanation to this may be the preference at part of employees for a stable environment. The remaining hypotheses were validated through this study's model. Behavioral intention was verified as a mediator between the first three determinants of E-HRM namely, performance expectancy, effort expectancy, and social influence and the actual usage of E-HRM. Therefore, once the individual developed faith in the utility of E-HRM and considered him/herself capable enough, coupled with the societal acceptance of the use; he/she would make the necessary intention. It is this intention that will be driven into action, the actual use of E-HRM. In the context of this study, people were moved into using E-HRM if it was deemed convenient and socially in. Effort expectancy, social influence and facilitating conditions were also verified for their positive association with the actual use of E-HRM. Lastly, the positive relation between the use of E-HRM and strategic performance of HR was also proved. The latter was measured along three dimensions namely; strategic partner, employee champion and administrative expert. Findings in this regard suggest a high score; using E-HRM has improved the performance of human resource employees at a strategic level. They

have upgraded their status from being administration people to business partners who are not only participating in higher level business decisions but also simultaneously ensuring the smooth running of daily processes and employee-related chores.

Results of this study have provided empirical evidence for the already theorized relationships; they may be extended in future to incorporate/study other aspects of performance. Practitioners can utilize the findings of this study to help overcome the hurdles in way of smooth adoption and use of E-HRM by the HR employees. Furthermore, they can concentrate on the factors that have shown to improve the employees' strategic performance so as to reap maximum benefits of the latter.

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Appendix A – Key Themes of the Study

Key Variables	Sources	Findings	Contribution to this study
Strategic Performance	Ulrich and Dulebohn (2015)	Alignment of HR services with the company's standard deliverables	Provision of a standard for HR in the contemporary world, emphasizing upon its role as business partners
	Nadiv, Raz and Kuna (2017) quoting Ulrich (1997)	Ulrich's framework quoted to be the most frequently cited model	Provision of a framework for measurement of HR's strategic performance
	Redman and Wilkinson (2001), quoted by Harris (2007)	Emphasis on HR to serve all four roles as outlined by Ulrich	Elaboration of the definition of strategic performance for derivation of a more relevant set of measures
	Petrovic, Saridakis and Johnstone (2018)	Introduction of the term, 'strategically focused business partners'	Facilitation in the selection of measures to study the strategic performance of HR
Determinants of E-HRM	Venkatesh, Morris, Davis and Davis (2003)	Integration of common metrics into one model that determines the actual use of technology	Provision of a framework that shall guide this study
	Williams, Rana and Dwivedi (2015)	Review of previous researches on UTAUT – theory yet in developmental stage while being tested with	Supporting the study of theory through its combination with strategic performance of HR

		either different models or variables.	
	Obeidat (2016)	Positive relationship between the use of E-HRM and HR effectiveness	Identification of a gap in literature
Performance Expectancy	Gagne and Deci (2005)	Provision of a concrete definition	Clarification of the concept; laying the foundation for further study
	Bandura (1982), Claggett and Goodhue (2011), Vandana and Tanvi (2008), and Cázares (2010)	Relationship of the construct with self-belief	Explanation of the mechanism through which people are moved towards using technology (E-HRM in this study)
	Ghalandari (2012)	Introduction of five different aspects that constitute the construct	Provision of a clearer picture of the construct so as to help in choosing relevant measures
	Heikkilä and Smale (2011)	Strongest relationship with the intention to use and actual usage of technology	Hypothesis development
Effort Expectancy	(Spil & Schuring, 2005)	Expansion of the construct	Provision of a reference against which it will be studied in this research

	Davis, Bagozzi and Warshaw (1989), Chiu and Wang (2008), and Okumus, Ali, Bilgihan and Ozturk (2018)	Positive relationship with the intention to use technology	Hypothesis development
Social Influence	Venkatesh and Morris (2000)	Discussion of the gender differences in its context	It will help explain the differences to be observed in the responses
	Venkatesh and Zhang (2010)	Investigation of UTAUT in cultures differing along individualism scale	Derivation of a standard – setting expectations for the findings of this study
	Spil and Schuring (2005)	Explanation of the concept in terms of other well-known constructs	Elaboration of the construct so as to guide its usage in this study
	Rogers (2010), and Im, Hong and Kang (2011)	Positive relationship with the intention to use technology	Hypothesis development
Facilitating Conditions	Spil and Schuring (2005)	Elaborate discussion of the construct – in terms of other ones	Provision of a detailed explanation of the construct
	Ajzen and Madden (1986), Im, Hong and Kang (2011), and Jewer (2018)	Positive relationship with the use of technology	Hypothesis development

Behavioral Intention	Warshaw and Davis (1985), Erdogmus and Esen (2011), and Yusliza and Ramayah (2011)	Definition of the concept	Explanation that shall guide its use in this study
	Voermans and Veldhoven (2007)	Relationship between the HR role preferences and one's attitude towards E-HRM	Connection with the study of HR roles under strategic performance, as defined above
E-HRM Usage	Bondarouk, Harms and Lepak (2017)	Elaboration of the construct into 'appropriation' and 'frequency of use'	Guidance in choosing relevant measures
	Ruël, Bondarouk and Looise (2004), Strohmeier (2007), and Panayotopoulou, Vakola and Galanaki (2007)	Conceptualization of E-HRM	Provision of a standardized definition to be used during this research
	Gueutal and Stone (2005), Bartram (2006), Panayotopoulou, Vakola and Galanaki (2007), Kavanagh, Thite, and Johnson (2011), and Heikkilä and Smale (2011)	Positive relationship with the strategic performance of HR	Hypothesis development

	Marler and Fisher (2013)	Review of ~40 studies (1999-2011) – scarcity of empirical research on the relationship between E-HRM and strategic performance of HR	Identification of a gap in literature

Appendix B – Survey Questionnaire

Dear Sir/Ma'am!

Your kind support is requested in pursuing a research that tends to study the relationship between electronic HRM (E-HRM) and strategic HR while addressing the underlying factors that not only influence the employees' attitude towards E-HRM but also its effectiveness in making HR more strategic. Your valuable input in this research will allow the researcher to highlight the effectiveness of E-HRM in the above-mentioned context. The information provided by you will be used solely for academic research purposes and your confidentiality will be valued and fully ensured. You are requested to please spare few minutes from your schedule and to please fill this questionnaire after due consideration and based on your understanding and experiences. For any suggestions or comments, please write to hadiya.mhr15nbs@nbs.nust.edu.pk. Thank You!

Section A: Basic Information
Instructions: Please select and tick (✓) one option from the following:
1. **Organization**
   □ Jazz   □ Telenor   □ Ufone   □ Zong   □ PTCL
2. **Gender**
   □ Male   □ Female
3. **Age**
   □ ≤25   □ 26-30   □ 31-35   □ 36-40   □ 41-45   □ Above 45
4. **Work Experience in Years**
   □ <1   □ 1-3   □ 4-6   □ 7-9   □ > 10
5. **Knowledge of IT**
   □ None   □ Little   □ Fair   □ Good   □ Very Good   □ Excellent

Section B:

Instructions: This section has been designed on a Likert Type Scale ranging from 1 to 7 with 1 = Completely Disagree, 2 = Moderately Disagree, 3 = Slightly Disagree, 4 = Neither agree nor disagree, 5 = Slightly Agree, 6 = Moderately Agree to 7 = Completely Agree. You are requested to please tick (✓) one option that most closely expresses your views against the statements.

	Completely disagree (1)	Moderately disagree (2)	Slightly disagree (3)	Neither agree nor disagree (4)	Slightly agree (5)	Moderately agree (6)	Completely agree (7)
The following statements are about the expectations held by HR staff regarding the use of E-HRM in helping to boost their performance at work. Please indicate the extent of your agreement or disagreement with each statement after careful consideration.							
I would find the system useful in my job	1	2	3	4	5	6	7
Using the system enables me to accomplish tasks more quickly	1	2	3	4	5	6	7
Using the system increases my productivity	1	2	3	4	5	6	7
If I use the system, I will increase my chances of getting a raise	1	2	3	4	5	6	7

The following statements are about the expectations held by HR staff regarding the ease of use of E-HRM at workplace. Please indicate the extent of your agreement or disagreement with each statement after careful consideration.							
My interaction with the system would be clear and understandable	1	2	3	4	5	6	7
It would be easy for me to become skillful at using the system	1	2	3	4	5	6	7
I would find the system easy to use	1	2	3	4	5	6	7
Learning to operate the system is easy for me	1	2	3	4	5	6	7
The following statements are about the influence accepted by HR staff from people in their social circle regarding the importance of using E-HRM at their workplace. Please indicate the extent of your agreement or disagreement with each statement after careful consideration.							
People who influence my behavior think that I should use the system	1	2	3	4	5	6	7
People who are important to me think that I should use the system	1	2	3	4	5	6	7
The senior management of this business has been helpful in the use of the system	1	2	3	4	5	6	7
In general, the organization has supported the use of the system	1	2	3	4	5	6	7
The following statements are about the perceptions held by HR staff regarding the extension of organizational and technical support for the use of E-HRM at their workplace. Please indicate the extent of your agreement or disagreement with each statement after careful consideration.							
I have the resources necessary to use the system	1	2	3	4	5	6	7
I have the knowledge necessary to use the system	1	2	3	4	5	6	7
The system is not compatible with other systems I use	1	2	3	4	5	6	7
A specific person (or group) is available for assistance with system difficulties	1	2	3	4	5	6	7
The following statements are about the deliberate intentions of HR staff regarding the use of E-HRM at their workplace. Please indicate the extent of your agreement or disagreement with each statement after careful consideration.							
I intend to use the system in the next 1 month	1	2	3	4	5	6	7
I predict I would use the system in the next 1 month	1	2	3	4	5	6	7
I plan to use the system in the next 1 month	1	2	3	4	5	6	7
The following statements are about the actual usage of E-HRM by the HR staff at their workplace. Please indicate the extent of your agreement or disagreement with each statement after careful consideration.							
I use the E-HRM tools in accordance with what manuals (documentation) state is intended	1	2	3	4	5	6	7
IT experts would not agree with the way I use the E-HRM tools	1	2	3	4	5	6	7
I use the E-HRM applications differently from the initial purposes	1	2	3	4	5	6	7
I do not use the E-HRM applications in an optimal way	1	2	3	4	5	6	7
I use E-HRM in my daily work	1	2	3	4	5	6	7
I use E-HRM very intensively	1	2	3	4	5	6	7

The following statements are about the extent to which HR staff is contributing towards the successful execution of the firm's business strategy. Please indicate the extent of your agreement or disagreement with each statement after careful consideration.							
FACTOR 1: Business Partner							
HR develops processes and programs to link HR strategies to accomplish business strategy	1	2	3	4	5	6	7
HR is seen as a business partner	1	2	3	4	5	6	7
HR's credibility comes from helping to make strategy happen	1	2	3	4	5	6	7
HR is an active participant in business planning	1	2	3	4	5	6	7
HR helps the organization accomplish business goals	1	2	3	4	5	6	7
HR spends time on strategic issues	1	2	3	4	5	6	7
HR works to align HR strategies and business strategy	1	2	3	4	5	6	7
HR is measured by its ability to help make business strategies	1	2	3	4	5	6	7
HR participates in the process of defining business strategies	1	2	3	4	5	6	7
HR makes sure that HR strategies are aligned with business strategy	1	2	3	4	5	6	7
HR's credibility comes from making change happen	1	2	3	4	5	6	7
HR is seen as a change agent	1	2	3	4	5	6	7
HR is an active participant in organization renewal, change, or transformation activities	1	2	3	4	5	6	7
HR is measured by its ability to help an organization anticipate and adapt for future issues	1	2	3	4	5	6	7
HR works to reshape behavior or helps anticipate future people needs	1	2	3	4	5	6	7
HR makes sure that HR processes and programs increase the organization's ability to change	1	2	3	4	5	6	7
HR spends time on supporting new behaviors for keeping a firm competitive	1	2	3	4	5	6	7
FACTOR 2: Employee Champion							
HR develops processes and programs to take care of employee personal needs	1	2	3	4	5	6	7
HR works to offer assistance to help employees meet family and personal needs	1	2	3	4	5	6	7
HR is an active participant in listening and responding to employees	1	2	3	4	5	6	7
HR spends time on listening and responding to employees	1	2	3	4	5	6	7
HR's credibility comes from maintaining employee morale	1	2	3	4	5	6	7
HR participates in building employee morale	1	2	3	4	5	6	7
HR makes sure that HR processes and programs meet need of employees	1	2	3	4	5	6	7
HR helps the organization generate employee commitment	1	2	3	4	5	6	7
FACTOR 3: Administrative Expert							
HR works to monitor administrative processes	1	2	3	4	5	6	7

HR is seen as an administrative expert	1	2	3	4	5	6	7

Thank you very much for sparing some time to complete this survey. Your feedback is valued and very much appreciated!

Appendix C – Descriptive Statistics

ORGANIZATION

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	82	16.5	16.5	16.5
	2	63	12.7	12.7	29.2
	3	25	5.0	5.0	34.2
	4	18	3.6	3.6	37.8
	5	309	62.2	62.2	100.0
	Total	497	100.0	100.0	

GENDER

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	249	50.1	50.1	50.1
	2	248	49.9	49.9	100.0
	Total	497	100.0	100.0	

AGE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	51	10.3	10.3	10.3
	2	173	34.8	34.8	45.1
	3	139	28.0	28.0	73.0
	4	89	17.9	17.9	90.9
	5	27	5.4	5.4	96.4
	6	18	3.6	3.6	100.0
	Total	497	100.0	100.0	

WORK_EXPERIENCE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	58	11.7	11.7	11.7
	2	98	19.7	19.7	31.4
	3	129	26.0	26.0	57.3
	4	99	19.9	19.9	77.3
	5	113	22.7	22.7	100.0
	Total	497	100.0	100.0	

KNOWLEDGE_OF_IT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	4	.8	.8	.8
	2	62	12.5	12.5	13.3
	3	125	25.2	25.2	38.4
	4	151	30.4	30.4	68.8
	5	102	20.5	20.5	89.3
	6	53	10.7	10.7	100.0
	Total	497	100.0	100.0	

Descriptive Statistics

	Mean	Std. Deviation	N
SP	5.8751	.58325	497
PE	5.7872	.72895	497
EE	5.8939	.83381	497
SI	5.6942	.74293	497
FC	5.5649	.66538	497
BI	5.5500	1.07587	497
AU	5.4799	.62166	497

Correlations

		SP	PE	EE	SI	FC	BI	AU
SP	Pearson Correlation	1	.448[**]	.489[**]	.499[**]	.594[**]	.374[**]	.560[**]
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000
	N	497	497	497	497	497	497	497
PE	Pearson Correlation	.448[**]	1	.716[**]	.559[**]	.554[**]	.247[**]	.326[**]
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000
	N	497	497	497	497	497	497	497
EE	Pearson Correlation	.489[**]	.716[**]	1	.568[**]	.588[**]	.339[**]	.438[**]
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000
	N	497	497	497	497	497	497	497
SI	Pearson Correlation	.499[**]	.559[**]	.568[**]	1	.496[**]	.324[**]	.446[**]
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000
	N	497	497	497	497	497	497	497
FC	Pearson Correlation	.594[**]	.554[**]	.588[**]	.496[**]	1	.372[**]	.575[**]
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000
	N	497	497	497	497	497	497	497
BI	Pearson Correlation	.374[**]	.247[**]	.339[**]	.324[**]	.372[**]	1	.438[**]
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000
	N	497	497	497	497	497	497	497
AU	Pearson Correlation	.560[**]	.326[**]	.438[**]	.446[**]	.575[**]	.438[**]	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	497	497	497	497	497	497	497

**. Correlation is significant at the 0.01 level (2-tailed).

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	2.148	.214		10.039	.000		

PE	-.145	.046	-.170	-3.175	.002	.438	2.284
EE	.122	.041	.163	2.956	.003	.414	2.418
SI	.182	.038	.218	4.774	.000	.606	1.650
FC	.435	.043	.465	10.110	.000	.595	1.681

a. Dependent Variable: AU

Reliability

Scale: ALL VARIABLES

Reliability Statistics

Cronbach's Alpha	N of Items
.753	4

Item Statistics

	Mean	Std. Deviation	N
PE1	6.1066	.91289	497
PE2	6.0262	.85036	497
PE3	5.9497	.83972	497
PE4	5.0664	1.20048	497

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PE1	17.0423	5.020	.647	.643
PE2	17.1227	4.914	.760	.591
PE3	17.1992	5.091	.714	.617
PE4	18.0825	5.681	.241	.903

Reliability Statistics

Cronbach's Alpha	N of Items
.925	4

Item Statistics

	Mean	Std. Deviation	N

EE1	5.9235	.92577	497
EE2	5.8913	.87313	497
EE3	5.8672	.93674	497
EE4	5.8934	.95181	497

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
EE1	17.6519	6.469	.806	.910
EE2	17.6841	6.624	.832	.902
EE3	17.7082	6.268	.848	.896
EE4	17.6821	6.290	.823	.905

Reliability Statistics

Cronbach's Alpha	N of Items
.864	4

Item Statistics

	Mean	Std. Deviation	N
SI1	5.6861	.92570	497
SI2	5.6982	.88300	497
SI3	5.6881	.86912	497
SI4	5.7042	.84663	497

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SI1	17.0905	5.143	.674	.843
SI2	17.0785	5.032	.762	.806
SI3	17.0885	5.153	.741	.815
SI4	17.0724	5.442	.676	.841

Reliability Statistics

Cronbach's Alpha	N of Items
.705	4

Item Statistics

	Mean	Std. Deviation	N
FC1	5.7264	.84813	497
FC2	5.7867	.93906	497
FC3	5.1952	.96310	497
FC4	5.5513	.89908	497

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
FC1	16.5332	4.270	.598	.580
FC2	16.4728	3.931	.610	.563
FC3	17.0644	4.754	.334	.740
FC4	16.7082	4.550	.450	.666

Reliability Statistics

Cronbach's Alpha	N of Items
.927	3

Item Statistics

	Mean	Std. Deviation	N
BI1	5.6318	1.11949	497
BI2	5.5352	1.16539	497
BI3	5.4829	1.17097	497

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
BI1	11.0181	5.159	.788	.942

BI2	11.1147	4.578	.899	.853
BI3	11.1670	4.664	.867	.880

Reliability Statistics

Cronbach's Alpha	N of Items
.792	6

Item Statistics

	Mean	Std. Deviation	N
AU1	5.6640	.91238	497
AU2	5.1408	.88004	497
AU3	5.0946	.79382	497
AU4	5.5976	.93489	497
AU5	5.7264	.83132	497
AU6	5.6559	.96320	497

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
AU1	27.2153	10.246	.485	.775
AU2	27.7384	9.940	.576	.753
AU3	27.7847	10.948	.445	.782
AU4	27.2817	9.626	.588	.749
AU5	27.1529	10.017	.609	.746
AU6	27.2233	9.605	.566	.755

Reliability Statistics

Cronbach's Alpha	N of Items
.966	27

Item Statistics

	Mean	Std. Deviation	N

SPBP1	5.7928	.82018	497
SPBP2	5.7746	.82643	497
SPBP3	5.7626	.85899	497
SPBP4	5.7847	.86131	497
SPBP5	5.8390	.82931	497
SPBP6	5.8712	.80542	497
SPBP7	5.8350	.78091	497
SPBP8	5.7948	.80955	497
SPBP9	5.8451	.87652	497
SPBP10	5.8934	.83684	497
SPBP11	5.8410	.85010	497
SPBP12	5.8290	.82117	497
SPBP13	5.8793	.78385	497
SPBP14	5.8330	.83417	497
SPBP15	5.8652	.79561	497
SPBP16	5.7988	.81305	497
SPBP17	5.8350	.81378	497
SPEC1	5.9336	.80923	497
SPEC2	5.8370	.78519	497
SPEC3	5.8531	.77548	497
SPEC4	5.8612	.77436	497
SPEC5	5.9336	.87160	497
SPEC6	5.8873	.82999	497
SPEC7	5.9135	.80732	497
SPEC8	5.9497	.81535	497
SPAE1	5.8893	.81433	497
SPAE2	5.9135	.80982	497

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SPBP1	152.2535	242.710	.675	.965

SPBP2	152.2716	240.714	.751	.965
SPBP3	152.2837	240.756	.718	.965
SPBP4	152.2616	239.520	.765	.965
SPBP5	152.2072	240.237	.767	.965
SPBP6	152.1751	239.996	.801	.964
SPBP7	152.2113	242.211	.733	.965
SPBP8	152.2515	242.322	.701	.965
SPBP9	152.2012	239.818	.739	.965
SPBP10	152.1529	241.271	.718	.965
SPBP11	152.2052	241.768	.687	.965
SPBP12	152.2173	241.388	.728	.965
SPBP13	152.1670	242.285	.727	.965
SPBP14	152.2133	242.704	.663	.965
SPBP15	152.1811	241.161	.763	.965
SPBP16	152.2475	240.517	.772	.964
SPBP17	152.2113	240.288	.781	.964
SPEC1	152.1127	242.217	.706	.965
SPEC2	152.2093	243.250	.685	.965
SPEC3	152.1932	243.273	.693	.965
SPEC4	152.1851	242.901	.710	.965
SPEC5	152.1127	242.511	.640	.966
SPEC6	152.1590	242.259	.685	.965
SPEC7	152.1328	243.047	.673	.965
SPEC8	152.0966	242.785	.677	.965
SPAE1	152.1569	246.084	.544	.966
SPAE2	152.1328	246.257	.540	.966

Appendix D – Collinearity Statistics

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	FC, SI, PE, EE[b]	.	Enter

a. Dependent Variable: AU

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.617[a]	.380	.375	.49137

a. Predictors: (Constant), FC, SI, PE, EE

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	72.897	4	18.224	75.481	.000[b]
	Residual	118.790	492	.241		
	Total	191.688	496			

a. Dependent Variable: AU

b. Predictors: (Constant), FC, SI, PE, EE

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.148	.214		10.039	.000		
	PE	-.145	.046	-.170	-3.175	.002	.438	2.284

EE	.122	.041	.163	2.956	.003	.414	2.418
SI	.182	.038	.218	4.774	.000	.606	1.650
FC	.435	.043	.465	10.110	.000	.595	1.681

a. Dependent Variable: AU

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions				
				(Constant)	PE	EE	SI	FC
1	1	4.970	1.000	.00	.00	.00	.00	.00
	2	.010	21.795	.54	.06	.27	.00	.02
	3	.008	24.679	.04	.02	.04	.97	.13
	4	.006	27.724	.29	.17	.02	.03	.81
	5	.005	32.273	.12	.75	.67	.00	.04

a. Dependent Variable: AU

Appendix E –Exploratory Factor Analysis Results

Communalities

	Initial	Extraction
PE1	1.000	.654
PE2	1.000	.750
PE3	1.000	.694
PE4	1.000	.349
EE1	1.000	.731
EE2	1.000	.732
EE3	1.000	.758
EE4	1.000	.699
SI1	1.000	.679
SI2	1.000	.764
SI3	1.000	.704
SI4	1.000	.635
FC1	1.000	.451
FC2	1.000	.562
FC3	1.000	.352
FC4	1.000	.387
BI1	1.000	.775
BI2	1.000	.890
BI3	1.000	.874
AU1	1.000	.531
AU2	1.000	.599
AU3	1.000	.471
AU4	1.000	.516
AU5	1.000	.572
AU6	1.000	.519
SPBP1	1.000	.619
SPBP2	1.000	.661
SPBP3	1.000	.647
SPBP4	1.000	.672
SPBP5	1.000	.711
SPBP6	1.000	.726
SPBP7	1.000	.618
SPBP8	1.000	.611
SPBP9	1.000	.668
SPBP10	1.000	.613

SPBP11	1.000	.604
SPBP12	1.000	.608
SPBP13	1.000	.640
SPBP14	1.000	.528
SPBP15	1.000	.631
SPBP16	1.000	.645
SPBP17	1.000	.671
SPEC1	1.000	.704
SPEC2	1.000	.686
SPEC3	1.000	.681
SPEC4	1.000	.671
SPEC5	1.000	.546
SPEC6	1.000	.710
SPEC7	1.000	.656
SPEC8	1.000	.631
SPAE1	1.000	.790
SPAE2	1.000	.763

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	20.276	38.993	38.993	20.276	38.993	38.993	10.982	21.119	21.119
2	4.100	7.885	46.878	4.100	7.885	46.878	6.495	12.490	33.609
3	2.497	4.802	51.679	2.497	4.802	51.679	4.676	8.992	42.601
4	1.939	3.728	55.407	1.939	3.728	55.407	3.534	6.797	49.398
5	1.793	3.448	58.855	1.793	3.448	58.855	3.021	5.809	55.208
6	1.504	2.893	61.748	1.504	2.893	61.748	2.852	5.485	60.693
7	1.248	2.399	64.147	1.248	2.399	64.147	1.796	3.454	64.147
8	1.222	2.350	66.497						
9	1.075	2.068	68.565						
10	.994	1.912	70.477						
11	.912	1.754	72.231						
12	.846	1.628	73.859						
13	.830	1.596	75.454						
14	.732	1.407	76.862						

15	.710	1.364	78.226
16	.681	1.310	79.537
17	.652	1.254	80.790
18	.631	1.213	82.004
19	.558	1.072	83.076
20	.534	1.027	84.103
21	.510	.981	85.084
22	.487	.936	86.020
23	.458	.881	86.902
24	.436	.838	87.740
25	.426	.820	88.560
26	.380	.731	89.291
27	.375	.721	90.012
28	.348	.670	90.682
29	.338	.649	91.331
30	.326	.626	91.957
31	.310	.596	92.553
32	.302	.580	93.133
33	.279	.536	93.669
34	.266	.512	94.182
35	.262	.503	94.685
36	.256	.492	95.177
37	.241	.464	95.641
38	.225	.432	96.073
39	.203	.390	96.464
40	.197	.379	96.842
41	.192	.370	97.212
42	.185	.356	97.568
43	.166	.319	97.887
44	.157	.303	98.190
45	.157	.302	98.492
46	.147	.282	98.774
47	.142	.274	99.048
48	.122	.234	99.283
49	.116	.222	99.505
50	.095	.183	99.688
51	.087	.167	99.855
52	.075	.145	100.000

Extraction Method: Principal Component Analysis.

Rotated Component Matrix[a]

	Component						
	1	2	3	4	5	6	7
SPBP9	.770						
SPAE1	.770						
SPBP6	.762						
SPBP13	.753						
SPAE2	.747						
SPBP8	.744						
SPBP5	.741						
SPBP4	.738						
SPBP10	.730						
SPBP2	.719						
SPBP11	.711						
SPBP17	.707						
SPBP7	.698						
SPEC6	.697						
SPBP16	.694						
SPBP3	.683						
SPBP12	.673						
SPBP14	.667						
SPEC2	.667						
SPBP15	.663						
SPEC3	.647						
SPEC7	.646						
SPEC1	.640						
SPEC4	.614						
SPBP1	.613						
SPEC8	.598						
SPEC5	.544						
PE2		.819					
PE3		.766					
PE1		.759					
PE4		.527					
EE3			.794				
EE1			.777				
EE2			.773				
EE4			.767				
SI2				.779			
SI1				.691			

	1	2	3	4	5	6	7
SI3				.669			
SI4				.570			
FC2					.553		
FC1					.457		
FC3					.450		
FC4					.350		
AU2						.730	
AU3						.651	
AU1						.619	
AU5						.531	
AU4						.502	
AU6						.463	
BI2							.908
BI3							.895
BI1							.778

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.[a]

a. Rotation converged in 7 iterations.

Appendix F – Confirmatory Factor Analysis Results

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	311	2869.280	1119	.000	2.564
Saturated model	1430	.000	0		
Independence model	104	21488.105	1326	.000	16.205

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.866	.842	.914	.897	.913
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.844	.731	.771
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	1750.280	1595.935	1912.237
Saturated model	.000	.000	.000
Independence model	20162.105	19690.584	20640.041

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	5.785	3.529	3.218	3.855
Saturated model	.000	.000	.000	.000

Model	FMIN	F0	LO 90	HI 90
Independence model	43.323	40.649	39.699	41.613

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.056	.054	.059	.000
Independence model	.175	.173	.177	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	3491.280	3565.696		
Saturated model	2860.000	3202.167		
Independence model	21696.105	21720.990		

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	7.039	6.728	7.365	7.189
Saturated model	5.766	5.766	5.766	6.456
Independence model	43.742	42.792	44.706	43.792

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	208	213
Independence model	33	34

Minimization: .287
Miscellaneous: 2.361
Bootstrap: .000
Total: 2.648

Appendix G – Control Variable Analysis Results

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
BI	<---	PE	-.111	.089	-1.240	.215	
BI	<---	EE	.289	.080	3.598	***	
BI	<---	SI	.282	.074	3.795	***	
BI	<---	ORGANIZATION	-.075	.029	-2.597	.009	
BI	<---	GENDER	.228	.089	2.566	.010	
BI	<---	AGE	-.036	.059	-.611	.541	
BI	<---	WORK_EXPERIENCE	-.025	.057	-.443	.658	
BI	<---	KNOWLEDGE_OF_IT	.160	.041	3.909	***	
AU	<---	PE	-.141	.044	-3.247	.001	
AU	<---	EE	.093	.040	2.308	.021	
AU	<---	SI	.161	.037	4.352	***	
AU	<---	FC	.347	.042	8.261	***	
AU	<---	BI	.119	.022	5.514	***	
AU	<---	ORGANIZATION	-.002	.014	-.141	.888	
AU	<---	GENDER	.092	.043	2.146	.032	
AU	<---	AGE	.075	.029	2.613	.009	
AU	<---	WORK_EXPERIENCE	-.064	.027	-2.332	.020	
AU	<---	KNOWLEDGE_OF_IT	.055	.020	2.715	.007	
SP	<---	AU	.475	.038	12.664	***	
SP	<---	ORGANIZATION	.004	.014	.254	.800	
SP	<---	GENDER	.010	.044	.218	.828	
SP	<---	AGE	.048	.029	1.636	.102	
SP	<---	WORK_EXPERIENCE	-.040	.028	-1.414	.157	
SP	<---	KNOWLEDGE_OF_IT	.067	.020	3.394	***	

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
BI	<---	PE	-.075
BI	<---	EE	.224
BI	<---	SI	.195
BI	<---	ORGANIZATION	-.111
BI	<---	GENDER	.106
BI	<---	AGE	-.041
BI	<---	WORK_EXPERIENCE	-.031
BI	<---	KNOWLEDGE_OF_IT	.179
AU	<---	PE	-.167

	Estimate
AU <--- EE	.126
AU <--- SI	.194
AU <--- FC	.375
AU <--- BI	.208
AU <--- ORGANIZATION	-.005
AU <--- GENDER	.075
AU <--- AGE	.147
AU <--- WORK_EXPERIENCE	-.137
AU <--- KNOWLEDGE_OF_IT	.108
SP <--- AU	.503
SP <--- ORGANIZATION	.010
SP <--- GENDER	.008
SP <--- AGE	.100
SP <--- WORK_EXPERIENCE	-.089
SP <--- KNOWLEDGE_OF_IT	.138

Appendix H – Structural Equation Modeling Results

Estimates (Group number 1 - Default model)

Scalar Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
BI	<---	PE	-.081	.061	-1.322	.186	
BI	<---	EE	.336	.054	6.265	***	
BI	<---	SI	.299	.060	4.968	***	
AU	<---	PE	-.125	.035	-3.564	***	
AU	<---	EE	.092	.026	3.478	***	
AU	<---	SI	.153	.029	5.210	***	
AU	<---	FC	.384	.038	10.001	***	
AU	<---	BI	.127	.021	5.958	***	
SP	<---	AU	.525	.038	13.693	***	

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
BI	<---	PE	-.056
BI	<---	EE	.264
BI	<---	SI	.210
AU	<---	PE	-.161
AU	<---	EE	.136
AU	<---	SI	.201
AU	<---	FC	.452
AU	<---	BI	.238
SP	<---	AU	.524

Means: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
PE	5.787	.033	176.990	***	
EE	5.894	.037	157.584	***	
SI	5.694	.033	170.868	***	
FC	5.565	.030	186.451	***	

Intercepts: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
BI	2.333	.588	3.967	***	
AU	1.949	.301	6.470	***	
SP	2.997	.211	14.179	***	

Covariances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
FC <--> PE	.268	.025	10.798	***	

Correlations: (Group number 1 - Default model)

	Estimate
FC <--> PE	.554

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
PE	.530	.034	15.748	***	
EE	.694	.044	15.748	***	
SI	.551	.035	15.748	***	
e1	.992	.063	15.748	***	
FC	.442	.028	15.748	***	
e2	.224	.014	15.748	***	

	Estimate	S.E.	C.R.	P	Label
e3	.233	.015	15.748	***	

Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate
BI	.117
AU	.299
SP	.274

Matrices (Group number 1 - Default model)

Total Effects (Group number 1 - Default model)

	SI	EE	PE	FC	BI	AU
BI	.299	.336	-.081	.000	.000	.000
AU	.191	.135	-.135	.384	.127	.000
SP	.100	.071	-.071	.202	.067	.525

Standardized Total Effects (Group number 1 - Default model)

	SI	EE	PE	FC	BI	AU
BI	.210	.264	-.056	.000	.000	.000
AU	.251	.199	-.174	.452	.238	.000
SP	.131	.104	-.091	.237	.125	.524

Direct Effects (Group number 1 - Default model)

	SI	EE	PE	FC	BI	AU
BI	.299	.336	-.081	.000	.000	.000
AU	.153	.092	-.125	.384	.127	.000
SP	.000	.000	.000	.000	.000	.525

Standardized Direct Effects (Group number 1 - Default model)

	SI	EE	PE	FC	BI	AU
BI	.210	.264	-.056	.000	.000	.000
AU	.201	.136	-.161	.452	.238	.000
SP	.000	.000	.000	.000	.000	.524

Indirect Effects (Group number 1 - Default model)

	SI	EE	PE	FC	BI	AU
BI	.000	.000	.000	.000	.000	.000
AU	.038	.043	-.010	.000	.000	.000
SP	.100	.071	-.071	.202	.067	.000

Standardized Indirect Effects (Group number 1 - Default model)

	SI	EE	PE	FC	BI	AU
BI	.000	.000	.000	.000	.000	.000
AU	.050	.063	-.013	.000	.000	.000
SP	.131	.104	-.091	.237	.125	.000