



**Applicant Reactions to Personnel Selection
Procedures: Internet-Based Selection, Cross-Country
Differences, and Promotional Procedures**

A thesis submitted for the degree of Doctor of Philosophy

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Abstract

As we live in the information age, technological revolution changes many selection practices toward using more innovative Internet-based selection procedures (IBSPs). Most organizations nowadays are using IBSPs, with online applications, online tests, and online interviews being among the most widely practiced in many Western countries, as well as some non-Western countries. The implementation and adoption of IBSPs have moved at a faster pace compared to empirical research, creating a science–practice gap in our understanding of applicant reactions to these new IBSPs. With globalization comes also the need to understand applicant reactions to IBSPs across many countries and cultures. In addition, it is important to consider applicant reactions from the perspective of internal applicants. To date, relatively limited research has assessed (1) external applicant reactions to new IBSPs, (2) whether privacy and fairness perceptions regarding IBSPs differ across countries, and (3) internal applicant reactions in promotion contexts. Thus, this thesis extends current applicant reactions theory and research in three important areas by conducting and reporting three studies.

Study 1 examined and compared the determinants and outcomes of applicant reactions to IBSPs across three increasingly popular methods - online applications, online tests, and online interviews, providing new theoretical and empirical insight. Data were collected from 506 job applicants from within the UK. The results of structural equation modeling revealed that procedural justice across the three IBSPs was influenced negatively by privacy concerns and positively by internet knowledge. Furthermore, procedural justice across the three IBSPs contributed positively to applicant reactions of organizational trust and attractiveness, person-organization (P-O) fit, and negatively to reactions of litigation intentions. Additional analyses were conducted to compare applicant reactions across the

three IBSPs. The results introduced a new cluster of applicant reactions to IBSPs, suggesting that overall IBSPs are favorably evaluated by applicants.

Study 2 examined cross-country differences in applicant privacy attitudes and fairness reactions toward IBSPs, using data collected from job applicants from two culturally and contextually different countries: Saudi Arabia ($N= 328$) and the UK ($N= 283$). The purpose of this study was to zoom into some of the findings of the first study by examining them more closely and by comparing them with another sample of applicants from Saudi Arabia. The findings demonstrated that both Saudi and UK applicants rated process favorability and procedural justice dimensions of IBSPs favorably, with few differences between their privacy and fairness perceptions, providing more support toward the view of reaction generalizability among job applicants. Overall, this study provides further development toward a more universal and generalizable perspective in understanding applicants' privacy and fairness reactions in the new context of IBSPs.

Study 3 examined internal applicants' justice perceptions in a promotion context and their effects on soft and hard organizational outcomes over time. This study took a longitudinal approach to applicant reactions research across three points of time: Time 1, before the promotion; Time 2, after receiving the promotional decisions; and Time 3, one year later. Data were collected from internal applicants seeking promotion ($N= 253$ cross the three points of time). The findings showed that procedural justice can predict soft organizational outcomes (i.e., P-O fit, organizational trust, and attractiveness), and hard organizational outcomes (i.e., leader-member exchange, job satisfaction, job performance, and turnover intentions) both in the short and long run, and that justice perceptions and reactions differ between accepted and rejected applicants over time. In the general discussion of these findings, six themes were identified as main contributions to applicant reactions literature including the direction for future research, followed by the practical implications.

Dedication

To my precious mother Gamilah who taught me to never give up and supported me with all her strengths, my beloved husband Omar, my precious cousin/sister Amal, and my wonderful children Rana, Renad, Ruba, and Abdulmalik, whose unconditional love and continued support helped me reach my dreams and goals. To my dear father, who passed away years ago, yet instilled in me a love for learning and challenging myself; he simply believed in me.

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Fairness in life is so precious, and justice between any two parties should be recognized from the start. The concept of fairness has always been the center of my attention, and therefore I was driven to explore it in the business world. I have decided to look at the fairness of selection processes as they are the first indications for the future treatment potential job candidates can receive from their employers. Hence, I decided to do my master's dissertation on applicant fairness reactions to traditional selection procedures in my country 'Saudi Arabia', which made me realize the significant role fairness reactions can play on applicants as well as organizations. Thus, I have decided to further explore it in more depth in my PhD project.

There are people in my life who I would like to express my deepest appreciation toward. First, I would like to extend my profound gratitude to both of my supervisors, Prof. Neil Anderson and Dr. Ana Cristina Costa for their ongoing guidance, support, and encouragement, which have been invaluable throughout my PhD journey. Your inspirational instructions, insight, and on-going impetus have given me courage and appreciation for the details of study. I am so grateful for all the effort, time, and support you have put into helping me throughout this PhD, especially during the last few months. Thank you for believing in me!

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Author's Declaration

I declare that this thesis is a presentation of my original research work for the purpose of the PhD program at Brunel Business School, Brunel University, and has not been previously submitted, in whole or in part, for any other degree or qualification to any other academic institution. Wherever contributions of others are involved, this is clearly acknowledged and referenced.

During the preparation of this thesis, some papers were prepared as listed below. The remaining parts of the thesis have not yet been published.

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2. McCarthy, J. M., Bauer, T. N., Truxillo, D. M., Anderson, N. R., Costa, A. C., Ahmed, S. M. (accepted). Applicant perspectives during selection: A literature review addressing “So What?”, “What’s New?”, and “Where to Next?” *Journal of Management*. (ABS 4*).

MANUSCRIPTS IN PROGRESS

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Chapter 1 : Applicant Reactions in Personnel Selection: An introduction

Research Background

Applicant reactions in personnel selection is a field of study concerned with how job applicants view and react to selection procedures, and is primarily focused on the attitudes, effects and cognitions which applicants demonstrate during selection processes (Ryan & Ployhart, 2000). Early studies in applicant reactions focused on the attitudes and reactions applicants may have toward a variety of traditional selection methods (e.g., interviews and work sample tests), and on comparing those reactions across different methods, thus being more descriptive rather than explanatory in nature (Chan & Schmitt, 2004). However, in recent years, researchers have moved beyond the descriptive-comparative nature of applicant reactions, and have started to focus more systematically on key determinants and consequences of applicant perceptions and reactions to selection procedures (e.g., Schinkel, van Vianen, & van Dierendonck, 2013; Truxillo & Bauer, 2011; van Vianen, Taris, Scholten, & Schinkel, 2004; Viswesvaran & Ones, 2004). This shift in focus was aimed at explaining how applicant reactions develop during selection procedures, and whether these reactions can also explain several important individual and organizational outcomes (Ryan & Ployhart, 2000; Truxillo, Steiner, & Gilliland, 2004; Truxillo, Bauer, McCarthy, Anderson, & Ahmed, in press), and provide remarkable implications for research and practice. Indeed, applicant reactions research is important for many reasons.

First, selection decisions are bilateral, that is, both organizations and job applicants evaluate their counterpart in order to predict future job performance and behaviors (from an organizational perspective) or job conditions (from an applicant perspective). Applicants and organizations consider alternatives and both reach a selection decision on whether to offer or accept a job position (Hülshager & Anderson, 2009). Therefore, research on applicant

reactions to personnel selection complements research which focuses on selection from an organizational perspective.

Second, applicant perceptions can influence their reactions toward hiring organizations in many ways. For example, negative perceptions during selection procedures can affect the image of the organization as these applicants may share their experiences with their colleagues, families, and friends, which in turn may influence their perceptions about the organization, and may even refrain them from applying to this organization in the future (Bauer, Maertz, Dolen, & Campion, 1998; Bell, Wiechmann, & Ryan, 2006; Giumetti & Sinar, 2012; Hausknecht, Day, & Thomas, 2004; Truxillo & Bauer, 2011). In addition, applicants who perceive selection procedures as being unfair or as having unjustified invasion of privacy or even as producing discriminatory treatment may file formal complaints or institute legal proceedings, especially if they are rejected from the selection procedure. Even when applicants are accepted after selection, they may still take forward their negative reactions, which are more likely to impact their job attitudes, behaviors, and performance in the long-term (Anderson, 2011; Gilliland, 1993; Ryan & Ployhart, 2000). In some extreme cases, applicants can initiate legal proceedings and involve the media, particularly in future promotion conditions, which can brutally damage the image of the organization (Anderson, 2011). Furthermore, applicant perceptions during selection can also affect their purchase intentions (Maertz, Mosley, Bauer, Posthuma, & Campion, 2004), and their willingness to accept any subsequent job offers (e.g., LaHuis, 2005; Macan, Avedon, Paese, & Smith, 1994). Disappointed applicants may even withdraw from the selection procedure (Schmit & Ryan, 1997), which contributes to two types of costs: the immediate cost of the selection process and the long term cost of losing potentially high performing applicants to competitors (Murphy, 1986).

Third, applicant reactions research refers not only to external job applicants but also to internal job applicants. Thus, fairness perceptions of promotional procedures and decision outcomes can negatively impact employees' views of the organization, which in turn can affect their level of job satisfaction, commitment toward the organization, and intentions to leave, which subsequently impacts organizational performance (Ambrose & Cropanzano, 2003; Ford, Truxillo, & Bauer, 2009; Hausknecht et al., 2004).

Although applicant reactions research has seen several important developments in the past, there are still several relevant gaps in the literature that need further study in order to consolidate this field. This chapter begins with sketching the research problem and gaps. Following this, a statement of the thesis aims and objectives and the research questions will be presented. Finally, the empirical studies conducted within this thesis will be briefly described, finally concluding with an outline of the thesis structure.

Research Problem

Applicant reactions research has attracted a lot of attention in the past, resulting in a large number of empirical studies as well as several narrative reviews' papers and handbook chapters (e.g., Anderson, 2003; Anderson, Born, & Cunningham-Snell, 2001; Chan & Schmitt, 2004; Hausknecht, 2013; Nikolaou, Bauer, & Truxillo, 2015; Ryan & Ployhart, 2014, 2000; Truxillo & Bauer, 2011; Truxillo, Bauer, & McCarthy, 2015; Truxillo et al., 2004; Truxillo et al., in press), and meta-analysis (e.g., Anderson, Salgado, & Hülshager, 2010; Chapman, Uggerslev, Carroll, Piasentin, & Jones, 2005; Hausknecht et al., 2004; Truxillo, Bodner, Bertolino, Bauer, & Yonce, 2009). However, a critical and in-depth analysis of existing literature identifies three major knowledge gaps: (1) *applicant reactions to Internet-based selection procedures (IBSPs)*, (2) *cross-country differences in applicant*

privacy and fairness perceptions and reactions to IBSPs, and (3) applicant reactions in contexts of promotion.

Applicant reactions to Internet-based selection procedures (IBSPs). This particular gap concerns the lack of theory and research in relation to applicant reactions to IBSPs. While in practice, numerous organizations have become more reliant upon IBSPs (i.e., online applications, online tests, and online interviews) to screen and select prospective job applicants (Braddy, Meade, Michael, & Fleenor, 2009; Bauer, Truxillo, Mack, & Costa, 2011), there is a great scarcity of empirical research into applicant reactions to IBSPs. IBSPs are known for providing organizations with a greater choice of job applicants and for being more effective and assure objectivity in the handling of job applications compared to traditional selection methods (Konradt, Warszta, & Ellwart, 2013). IBSPs also have the advantage of offering 24/7 access to job applicants despite their physical locations and for saving considerable costs for both applicants and organizations when compared with more traditional selection methods.

Despite the growth of IBSPs in selection practice, very little is known about applicant perceptions and reactions to different types of IBSPs and about the antecedents and consequences of their reactions (Ryan & Ployhart, 2014; Truxillo & Bauer, 2011; Truxillo et al., in press). The few existing studies tend to predominantly examine only one type of IBSPs, web-based/online screening (e.g., Dineen, Neo, & Wang, 2004; Konradt et al., 2013), with most addressing only a single justice aspect without examining the complex construct of procedural justice in detail (e.g., online screening: Bauer et al., 2006). In addition, and despite being one of the most popular selection procedures among organizations in the United Kingdom (UK) (CIPD, 2015), to date there have not been any studies examining applicant reactions to IBSPs in the UK. Although a number of IBSPs are used by organizations (e.g.,

online applications, online tests, and online interviews), they have never been studied simultaneously. Given that organizations tend to use several of these IBSPs during one job application, it becomes imperative to understand how applicants react to different types of IBSPs. This includes examining specific determinants that are unique to IBSPs and several organizational outcomes that have not yet been examined in applicant reactions literature. Indeed, the Internet revolution has brought new technology-related determinants of applicant reactions that are unique to IBSPs. Submitting private employment-related information via the Internet can raise information privacy and confidentiality concerns, which might adversely affect applicant justice perceptions of IBSPs (Harris, Hoyer, Lievens, 2003). In addition, an applicant's Internet knowledge as well as computer anxiety may play an influential role in forming and affecting their justice perceptions of IBSPs (Coyne, Warsztal, Beadle, Sheehan, 2005; Wiechmann & Ryan, 2003). There are also a number of outcome variables of particular importance to organizations that have not yet been examined in a selection context from applicant perspectives, such as organizational trust and person-organization (P-O) fit perceptions. Organizational trust and P-O fit are currently seen as crucial outcomes of human resource (HR) practices and organizational image; trust in an organization appears to be significant to the HR function in reducing overall vulnerability of HR (i.e., to compromised professional ethical and legal standards) and in selection practices (Beatty, Ewing, & Tharp, 2003). Also, P-O fit and organizational trust have a positive impact toward a myriad of job attitudes and work behaviors, such as job choice intentions, job satisfaction, willingness to recommend the organization to others, organizational commitment, turnover intentions, and organizational performance (Costa, Ferrin & Fulmer, in press).

Given the need for further research on applicant reactions to different types of IBSPs and for key determinants and outcomes of their reactions, the first study in this thesis

examines applicant reactions to the three common types IBSPs: online applications, online tests, and online interviews, which are widely known and typically most used in many multinational organizations as well as domestic organizations in the UK. More specifically, the first study assesses the determinants and outcomes of applicant justice perceptions of IBSPs and compares their perceptions and reactions across the three types of IBSPs in the UK.

Cross-country differences in applicant privacy and fairness reactions to IBSPs.

This knowledge gap is concerned with a lack of understanding about applicants' privacy and fairness reactions to different types of IBSPs across Western and Eastern countries, and whether reactions to IBSPs can be generalized internationally. Several researchers argue that applicant perceptions and reactions are likely to vary across countries and such variations might be a function of variances in country culture, contextual and societal factors, such as HR practices, privacy protection policies and law for job applicants as well as exposure to different selection methods, especially between Western and Eastern countries (Moscoso & Salgado, 2004; Steiner & Gilliland, 2001; Truxillo et al., 2015). This debate has been fueled by the notion of whether reactions are primarily influenced by local factors that vary considerably across countries so-called "*situational specificity*" (i.e., that reactions are locally constrained and affected by proximal contingencies) or whether reactions are more stable and are a function of a general pattern of responses common across countries so-called "*reaction generalizability*" (i.e., applicant reactions are adequately similar, thus generalized across procedures, organizations and countries) (Anderson et al., 2010, p.291). This has led to a comparison of applicant reactions to popular traditional selection procedures in different countries, such as the United States of America (US) and France (Steiner & Gilliland, 1996), Spain and Portugal (Moscoso & Salgado, 2004), the Netherlands, US, Singapore, France,

Spain and Portugal (Anderson & Witvliet, 2008). More recently, Anderson et al. (2010) meta-analysis covered reactions to ten traditional selection procedures across 17 countries and suggested similar results across the countries regarding the overall process favorability supporting the reaction generalizability hypothesis. Nevertheless, some differences were also found in applicant reactions to several justice dimensions. One noticeable short-coming in Anderson et al.'s (2010) meta-analysis was that the country samples were initiated mostly from North American and European countries, except one sample from Eastern countries (i.e., Singapore). Another short coming was that these studies were only comparing applicant reactions to traditional selection procedures, thus not including IBSPs. Therefore, these findings cannot be generalized to other countries or to IBSPs. Indeed, there is no empirical evidence with regard to applicant reactions to IBSPs in any Eastern or Middle Eastern countries, where many multinational organizations, as well as some domestic organizations are operating their and using IBSPs to select applicants from those countries. Therefore, there is a need for future research to examine applicant privacy and fairness reactions to IBSPs across different countries, in particular Eastern/Middle Eastern countries, in order to examine whether applicant reactions are generalizable also to non-Western countries (e.g., Anderson, Ahmed, & Costa, 2012; McCarthy, Bauer, Truxillo, Anderson, Costa, & Ahmed, forthcoming; Morgeson & Ryan, 2009; Truxillo & Bauer, 2011; Truxillo et al., 2015; Truxillo et al., in press).

Moreover, while IBSPs have been used for more than a decade in many Western countries, such as the UK, they have only recently begun implementation and thus used in several Eastern and Middle Eastern countries, such as in Saudi Arabia (Ministry of Labor of Saudi Arabia, 2015). Thus, Middle Eastern applicants (e.g., in Saudi Arabia) may be much less familiar with IBSPs, and their reactions to IBSPs may vary considerably to applicants in

Western countries, such as the UK. Yet, to date, research has failed to assess applicant reactions to IBSPs in any Eastern or Middle Eastern countries.

This gap is readdressed in the second study in this thesis by examining cross-country differences in applicant privacy and fairness reactions to IBSPs between Saudi Arabia (a Middle Eastern country) and the UK (a Western country), where no previous studies have been conducted concerning IBSPs. Thus, it is important to examine and compare applicant reactions to IBSPs in Saudi Arabia and the UK, given the great variation in familiarity with the Internet, country cultural values, and employment and privacy protections law, all of which can lead to great differences in reactions to IBSPs between Saudi and UK job applicants. Also, understanding applicant reactions in this context provide valuable insight for domestic as well as multinational organizations operating in both countries and using IBSPs to recruit and select applicants from these countries.

Applicant reactions to promotion. The third knowledge gap concerns the understanding of reactions from internal applicants' perspectives, who are applying for promotions. So far, the majority of applicant reactions studies have focused on external applicants at entry-level, whereas research into internal applicants has been far less studied and their consequences have been largely ignored (Ford et al., 2009; García-Izquierdo, Moscoso, & Ramos-Villagrasa, 2012; Giumetti & Sinar, 2012). Promotion contexts are vital for both organizations and internal applicants (i.e., employees). From an organizational point of view, it is essential that promotion processes are successfully organized and perceived to be fair, making sure that the selected applicants will be able to adequately adapt and respond to their changing environment and successfully perform in their new positions (De Pater, van Vianen, Bechtoldt, & Klehe, 2009). From the perspective of the internal applicant, promotion procedures are important because they provide a chance for advancing their professional

career, depending on whether they have fair chances to move upward within an organization (Kaplan & Ferris, 2001). Therefore, internal applicants' perceptions regarding promotional procedures may have strong consequences for organizations because whatever the promotional decisions, applicants may remain members of the organization. Subsequently, their reactions to promotional procedures and decisions can potentially impact many important organizational outcomes, including job attitudes and work behaviors beside applicants' self-perceptions and well-being (Ford et al., 2009). These effects might be greater for those applicants receiving a rejection (Truxillo et al., 2004; Truxillo et al., in press).

Another important issue, which requires further attention, is the effect of justice perceptions of promotion procedures on hard organizational outcomes, i.e., those that concern tangible actions and behaviors. To date, only a handful of studies have addressed this issue, producing equivocal results; thus, the extent to which the effects of applicants' justice perceptions on hard organizational outcomes are difficult to establish (Truxillo et al., in press; Truxillo et al., 2011; Truxillo et al., 2004). However, examining internal applicant reactions opens up the possibility of studying several under-examined hard organizational outcomes, such as turnover, leader-member exchange (LMX), job satisfaction, and job performance, with some outcomes (e.g., LMX) being unique to promotional settings (Colquitt, Conlon, Wesson, Porter, & Ng, 2001; Colquitt et al., 2013; Ford et al., 2009; Truxillo & Bauer, 2011). These outcomes are less applicable in external applicant settings, where most studies of applicant reactions have been conducted, which may explain the limited research on the effects of justice perceptions on hard organizational outcomes.

Furthermore, one of the most neglected yet important areas is examining changes in applicant reactions over time, especially in promotional settings (Ambrose & Cropanzano, 2003; Truxillo & Bauer, 2011; Chan & Schmitt, 2004). The promotional context is likely to be remarkably salient as dissatisfied applicants remain members of the organization.

Examining justice perceptions and reactions to promotion over time has substantial theoretical, methodological, and practical implications. With regard to theoretical implications, it helps to learn and understand more about promotional justice impact by assessing its effect on key work attitudes and behaviors in the short and the long term. In terms of methodological implications, using longitudinal design allows the researcher to explicitly explore the role of time in applicant reactions and draw stronger conclusions regarding causality. In terms of practical implications, it is important to understand whether promotional justice perceptions have a long-term impact on applicants' reactions toward the organizations as well as on their work attitudes and behaviors (i.e., continues to affect organizational outcomes over time, or dissipates rapidly), which can eventually affect the overall organizational performance.

Therefore, the third study in this thesis responds to these calls by examining the effects of procedural and distributive justice perceptions on several soft and hard organizational outcomes over time in a promotional setting, using actual internal applicants. This study used a longitudinal strategy design, and considered the under-examined soft as well as hard organizational outcomes that are more applicable to internal applicants; thus expanding substantially beyond the outcomes and procedures typically tested in external applicant reactions contexts.

Research Aims and Objectives

The main aim of this research is to significantly advance knowledge and understanding of applicant reactions to selection procedures by focusing on three specific areas that have been neglected in previous studies. These include applicant reactions to IBSPs, potential cross-country differences in privacy and fairness reactions to IBSPs, as well as internal applicant reactions to promotion.

The main research objectives for this thesis are therefore:

1. To critically analyze literature on applicant reactions, with a particular focus on organizational justice concepts highlighting important aspects that are particularly salient within an Internet-based selection context, the potential cross-country difference in perceptions of privacy and fairness to IBSPs, and promotional selection context.
2. To develop and empirically test three conceptual models/frameworks concerning:
 - a. Determinants and outcomes of applicant reactions to three types of most used and popular, yet under-examined, IBSPs: i.e., online applications, online tests, and online interviews.
 - b. Cross-country differences in relation to privacy and fairness perceptions to IBSPs, using two similar samples from Saudi Arabia (a Middle Eastern country) and the UK (a Western country), in relation to three IBSPs, to assess whether the reaction generalizability hypothesis holds true with respect to IBSPs; and
 - c. The effects of internal applicant reactions on organizations (i.e., soft and hard organizational outcomes) within the promotional context.
3. To discuss the findings and delineate theoretical and empirical contributions, outline the overarching contribution themes, important recommendations for future research and the implications for practice.

Research Questions

In order to achieve these stated aims and objectives, this thesis develops three important research questions for each of the three research gaps (i.e., applicant reactions to IBSPs, cross-country differences in reactions to IBSPs, and internal applicant reactions to

promotion procedure) that help in shaping and designing the studies needed to fulfil them.

Three main research questions are therefore presented:

1. What are the main determinants and outcomes of applicant reactions to the three most common IBSPs, i.e., online-applications, online-tests, and online-interviews?

To answer this question, the following three sub-questions help addressing it:

- a. What is the relation between applicants' privacy concerns, Internet knowledge, computer anxiety and their justice perceptions of IBSPs?
 - b. What is the relation between applicants' justice perceptions of IBSPs and their reactions toward the hiring organizations (i.e., organizational trust, P-O fit perceptions, organizational attractiveness, and litigation intentions)?
 - c. Do applicant reactions vary between the three IBSPs (i.e., online applications, online tests, and online interviews)?
2. Are there cross-country differences between the Saudi Arabia and the UK, concerning applicant privacy and fairness reactions to IBSPs? i.e., does the reactions generalizability hypothesis hold true in case of IBSPs in Saudi Arabia and the UK?
3. What are the effects of promotional justice perceptions on soft and hard organizational outcomes over time? The three sub-questions below can assist addressing this question with the following:
 - a. To what extent do internal applicant justice perceptions of promotion predict soft organizational outcomes (i.e., organizational trust, P-O fit perceptions, and organizational attractiveness)?
 - b. To what extent do internal applicant justice perceptions of promotion predict hard organizational outcomes (i.e., LMX, job satisfaction, job performance, and turnover)?

- c. Are there any significant differences in reactions between the accepted and rejected internal applicant after receiving the promotional decisions?
- d. Do internal applicant reactions change overtime as a result of the promotion procedure?

Empirical Studies

In order to gain a better understanding of the gaps identified, this thesis comprises of three field studies. Study 1 was designed to address the first gap regarding applicant reactions to IBSPs. This study focused on the determinants and outcomes of applicant justice perceptions to three types of IBSPs - online applications, online tests, and online interviews. To the best of the researcher's knowledge, this was the first study so far to examine and compare the reactions to more than one IBSP simultaneously and to these specific IBSPs, which were reported to be the most used across organizations. This study proposed an updated model of applicant reactions to IBSPs. Using a sample of actual job applicants in the UK, the first study examined technology-related factors (i.e., privacy concerns, Internet knowledge, and computer anxiety) determining justice perceptions of IBSPs considered, the extent to which these perceptions relate to several organizational outcomes (i.e., organizational trust, P-O fit, organizational attractiveness, and litigation intentions), and whether any difference in perceptions and reactions emerged from these IBSPs.

Study 2 redressed the second knowledge gap regarding cross-country differences in applicant reactions to IBSPs. It consisted of two similar samples of external job applicants (graduates and postgraduates) from Saudi Arabia and the UK, countries that are significantly different in terms of cultural values, experience of IBSPs, Internet usage, HR and employment practices, and privacy laws. This study proposed a framework of the potential relations between cultural values and applicant justice perceptions and was used to guide and

generate the study hypotheses in terms of potential cross-country differences between Saudi and UK applicant reactions to IBSPs. Specifically, this study examined and compared applicant privacy and fairness perceptions of three types of IBSPs (online applications, online tests, and online interviews) using two samples of Saudi and UK applicants.

Study 3 shifted the focus from IBSPs to promotion procedure and covered the third research gap regarding the longitudinal effect of internal applicants' reactions to promotion on organizational outcomes. Data was collected longitudinally at three different time periods (Time 1: pre-promotion allocation, Time 2: post-promotional decision (short-term), and Time 3: long-term post-promotion - one year later) using a sample of internal job applicants, applying for promotion at a large Saudi-based organization. The focus was on examining the effects of internal applicants' justice perceptions on soft and hard organizational outcomes (i.e., job attitudes and work behavior) overtime. That is, this study examined the extent to which procedural and distributive justice perceptions of promotional procedures could be used as a predictor of applicant reactions toward the organization (soft organizational outcomes) and their job attitudes and behavior (hard organizational outcomes) over time, and whether applicant reactions differ between accepted and rejected applicants and change overtime (i.e., before and after promotion).

Structure of the Thesis

This thesis is composed of seven chapters.

Chapter 1: *Introduction*: This chapter discusses the research background. Following this, it identifies the research problem and sets the research aim and objectives necessary to provide answers to the research questions. Finally, it gives an overview of the three empirical studies conducted in this thesis.

Chapter 2: *An Overview of Applicant Reactions Literature*: this chapter builds the theoretical foundation of the thesis by reviewing applicant reactions literature. This chapter provides an overview of theories and research into applicant reactions, discusses the effect of selection fairness on individual and organizational outcomes, highlights the new and under-examined areas requiring further research attentions, and outlines the main methodological and research design issue in the field.

Chapter 3: *Study 1- Applicant Reactions to Internet-Based Selection Procedures*: this chapter aims to fill the first research gap by examining the determinants and outcomes (soft organizational outcomes) of applicant reactions to three types of IBSPs and comparing their reactions across these three IBSPs accordingly.

Chapter 4: *Study 2- Cross-Country Examination of Applicant Privacy and Fairness Reactions to IBSPs: Saudi Arabia and the UK*: this chapter zooms in on some of the findings of chapter 3 by closely examining and comparing applicant privacy and fairness reactions to IBSPs across Saudi and UK applicants to assess whether their reactions can be generalized in case of IBSPs.

Chapter 5: *Study 3- A Longitudinal Assessment of Applicant Reactions in Promotion context*: this chapter extends the literature and examines the effect of promotional justice perceptions on several important soft and hard organizational outcomes over time. It also assesses the changes in reactions over time among accepted and rejected applicants.

Chapter 6: *Overall Discussion and Conclusion*: An integration and explanation of the main contribution themes of the thesis will be discussed in detail, including suggestions and recommendations for future research and the implications for practice.

Chapter 2 : An Overview of Applicant Reactions Literature

Applicant reactions in personnel selection have been recognized important for several performance related outcomes for both the individual and the organization. For the individual applicants, perceptions of selection procedures have been shown to influence test performance, test-taking self-efficacy (McCarthy, Van Iddekinge, Lievens, Kung, Sinar, & Campion, 2013; Hausknecht et al., 2004), well-being (Schinkel, van Dierendonck, & Anderson, 2004), and intentions to accept job offers (Chapman et al., 2005). For organizations, applicant perceptions have been shown to influence job offer acceptance rates (Harold, Holtz, Griepentrog, Brewer, & Marsh, 2015), attraction toward organizations (Bauer et al., 1998), and even ultimate purchase intentions toward organizational products (Macan et al., 1994; Wiechmann & Ryan, 2003). Furthermore, research has also shown that applicant reactions are important for organizations operating multinational selection systems, as well as those selecting for expatriate assignment roles (Anderson et al., 2010; Truxillo & Bauer, 2010; Steiner & Gilliland, 2001). Our analysis of the literature demonstrates that, on average, 10-20 papers on applicant reactions research are published yearly, generating high citations (See Figure 2.1) since the research took off in the late 1990's. This illustrates the importance of studying applicant reactions for both research and practice and the necessity to look at this from a different angle, taking into account the changing nature of selection practices in the 21st century.

Published Items in Each Year

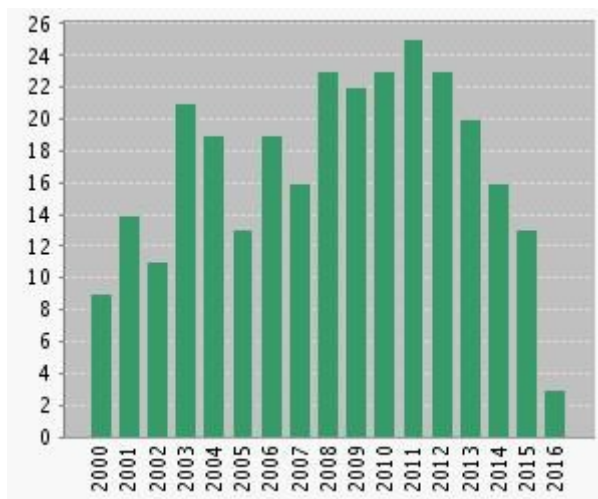


Figure 2.1: Number of Applicant Reactions Journal Articles by Year as Reported in Web of Science from 2000 to 2016, Using the Search Term ‘Applicant Reactions’.

In the first section, the current chapter provides a brief overview of the evolution of applicant reactions literature along with a description of the theoretical approaches and related models, with a focus on the selection fairness approach. In the second section, the literature is reviewed in relation to individual outcomes, soft and hard organizational outcomes, while consistent and inconsistent findings and outcomes are also discussed. The third section will provide a consideration for the three new and under-studied areas addressed in this thesis and will integrate theories and research across these areas as well as propose three frameworks for their study. The fourth and last section will discuss methodological and research design issues limiting the contribution of applicant reactions research and the design utilized within this thesis.

Applicant Reactions Theory and Research: Historical Perspective

Applicant reactions research took off in the early 1970's and was primarily descriptive and comparative in nature, mostly focused on face validity viewpoints and on comparing different selection procedures, such as interviews (Schmitt & Coyle, 1976), paper-and-pencil, and work sample tests (Schmidt, Greenthal, Hunter, Berner, & Seaton, 1977). Earlier studies suggested that applicants preferred more face valid selection procedures, such as work sample tests, simulation, and interviews, to selection process such as biodata, multiple-choice and personality tests (e.g., Macan et al., 1994; Rynes & Connerley, 1993; Smither, Reilly, Millsap, Pearlman, & Stoffey, 1993). Until the 1990's, most of this research lacked solid theoretical frameworks to explain its findings, and it was only then that a number of theories and frameworks emerged to explain applicant reactions.

The dominant framework in applicant reactions research has been organizational justice theory (Greenberg, 1990; Lind & Tyler, 1988) since Gilliland (1993) proposed a justice-based model of applicant reactions to selection system. This line of research focused on applicant justice perceptions of the selection procedures and decisions and their subsequent impact upon applicants' self-perceptions and reactions toward the hiring organization (Ryan & Ployhart, 2000). This framework has been tested and improved several times over the years and has led to considerable advances in applicant reactions literature and practice. The second theoretical framework in this field is the test-taking attitude approach. This approach has been used mainly to explore applicant's dispositional test-taking reactions that are more specific to stable individual differences (e.g., applicant's characteristics, test motivation, and test anxiety). It focused more on test-taking attitudes-test performance relationship, such as the influence of applicants' test motivations and anxiety (among other

attitudes) on their test performance and test validity while participating in the selection processes and receiving selection decisions.

The third framework, although much less popular among applicant reactions researchers, is the social psychological approach, focusing on the perceptual-attributitional process that underlies applicant reactions. This approach has been used to understand the interactions that take place between job applicants and the hiring organizations during the hiring process from social psychological lens, but has not received much attention. Although the main focus of this thesis is on the organizational justice framework (i.e., selection fairness), all of these other theoretical frameworks are reviewed and discussed below.

Test-Taking Attitudes

This approach is the second most important theoretical approach in applicant reactions research initiated by Arvey, Strickland, Drauden, and Martin (1990). It was developed as an instrument for assessing applicant reactions to employment tests and was named, the Test Attitude Survey (TAS), in an attempt to understand the impact of job applicants' test-taking motivations and attitudes on their test performance and test validity. The TAS comprises of nine dimensions, including motivation, comparative anxiety, lack of concentration, belief in tests, test preparation, external attribution, future effects, need for achievement and test ease. Significant relationships were found between person factors (i.e., race, gender, and age), test attitudes scores, and test performance, with test motivation accounting for the most variance in their measure.

The TAS provided a foundation for later studies on test-taking attitudes and dispositions of job applicants, with the majority focusing on test-taking motivation and anxiety, and their influence on test validity and test performance. Chan, Schmitt, DeShon, Clause, and Delbridge (1997) showed that test motivation was associated with test

performance and face validity. Also, Schmit and Ryan (1992) found that TAS scores, including test-taking motivation and anxiety, differently moderated the validities of both personality test (less valid) and cognitive ability test (more valid) used to predict a performance criterion. A meta-analysis by Hausknecht et al. (2004) found that test anxiety ($r = -.25$) and test motivation ($r = .27$) were associated with attitudes toward tests. In a more recent study, McCarthy et al. (2013) found that motivation to take the test was not related to the criterion-related validity of selection tests, while test-taking anxiety was negatively related to test performance and performance on the job.

The work by Arvey and colleagues also triggered a number of studies that operationalized test-taking attitudes and dispositions in unique ways. Some of the test-taker dispositions have been conceptualized as outcomes of selection fairness (e.g., Gilliland, 1993; Hausknecht et al., 2004). For example, Gilliland's (1993) justice-based model posited that justice perceptions are likely to influence self-efficacy perceptions and test motivation. In support of this proposition, Bauer et al. (1998) found that procedural justice perceptions explained variance in test-taking self-efficacy beyond decision outcomes (i.e., passed or failed). Several other studies revealed that selection fairness was related to test-taking motivation (Bauer et al., 2006) and self-efficacy (Truxillo, Bauer, Campion, & Paronto, 2002; Truxillo, Bauer, & Sanchez, 2001). These findings highlight the importance of ensuring that selection procedures are perceived as fair, which in turn can serve to boost applicants' motivation to take the test and their self-efficacy.

The *Self-Serving Bias Mechanism*, which examines the extent to which preservation of a positive self-image has an influence on applicant reactions, has been studied in this area of test attitude and motivation. Several researchers (i.e., Chan, Schmitt, Jennings, Clause, & Delbridge, 1998a; Schmitt, Oswald, Kim, Gillespie, & Ramsay, 2004) suggested that poorly performing or rejected job applicants attribute their poor performance in a selection test by

forming beliefs that the method was not valid or was irrelevant. However, a recent study by McLarty and Whitman (2016) showed that applicants' behavioral intentions were attributable to their core self-evaluation (a dispositional approach) after controlling for test performance, and that self-serving attributions seem not to be the only relevant driving factor.

Social Psychological Theories

Another theoretical approach deriving from researchers, who explored applicant reactions from a social psychological perspective, was first explored by Herriot (1989), but later further developed in 2004. Herriot (2004) proposed a social identity framework of applicant reactions derived from social identity theory. Herriot (2004) argued that applicants' personal social identities are matched or fit with their perceptions of organizational identities during and after the hiring process (i.e., characteristics of an organization's culture), such that the degree of congruence is assessed. This congruence (or incongruence) between those two (i.e., an applicant's social identity and organizational identity) will influence applicants' perceptions and reactions to the selection procedures used as well as the organization as a potential employer.

Following this, Ployhart and colleagues (Ployhart & Harold, 2004; Ployhart & Ryan, 1997) further extended this approach and explored the role of applicants' self-concept and attribution theory on the applicants' behavioral outcomes. Ployhart and Ryan (1997) integrated organizational justice and attribution theories in order to understand how applicants perceive and react to the selection process and decisions. They concluded that successful applicants attribute selection decisions to more stable, internal and controllable factors, where in contrast, rejected applicants attribute decisions to unstable, external and uncontrollable causes. A somewhat understandable self-serving bias, but the impact of attribution on behavior outcomes was more limited than initially suggested by attribution

theory (Ployhart & Ryan, 1997). Ployhart and Harold (2004) proposed applicant attribution-reaction theory (AART), and argued that attributional process causes and explains applicants' affective, behavioral and cognitive reactions, such as motivation, fairness, test performance and test perceptions. They also argued that applicants' fairness perceptions are simply by-products of their attributions. Recent research (e.g., Ababneh, Hackett, & Schat, 2014) has shown some support to AART, finding that perceptions of fairness was impacted by applicant attribution, which in turn, influences their organizational perceptions, litigation and recommendation intentions. More recently, Oostrom and De Soete (2016) showed that fairness perceptions of cognitive ability tests were prone to applicants' self-serving attributions, which were partly explained by (ethnic differences in) attribution style. Even though some initial support for the attributional model was found, it has not generated enough empirical work, thus, more research is needed to confirm this model (Truxillo et al., in press).

Organizational Justice Theory: Selection Fairness Approach

Schuler (1993) was one of the first researchers who attempted to theoretically explore applicant perceptions of fairness of treatment. He developed a “social validity” model that explains applicant perceptions of selection techniques based on four key characteristics: (1) *informativeness* (i.e., the extent to which the information received regarding organization and job is useful), (2) *participation* (opportunity to participate in the development and execution of the selection process and to have a chance to present themselves sufficiently), (3) *transparency* (i.e., the selection procedures are unambiguous), and (4) *feedback* (i.e., the content and type of feedback received after the selection procedure itself are sufficient). Although Schuler's theoretical model has not been used extensively, it provides a valuable approach for conceptualizing applicant reactions to selection methods and has an important

influence on the way of thinking of other researchers in this field (e.g., Smither et al., 1993; Rynes & Connerley, 1993; Macan et al., 1994).

Also, Arvey and Sackett (1993) proposed a set of factors possibly affecting applicant fairness perceptions of personnel selection system, including the content of the selection procedures, understanding the development of the selection process, the administration of the selection procedures, selection process context and outcomes, some of which remain unexamined. However, this proposed model did not provide a clear understanding of the processes' underlying perception formation or perception–outcome links (Ryan & Ployhart, 2000). Smither et al. (1993) focused specifically on the role job-relatedness of selection procedures. They distinguished two subcomponents of job-relatedness: face validity (i.e., the extent to which a selection procedure seems valid at face value and applicants perceive its content to be relevant to the job) and perceived predictive validity (i.e., the extent to which selection procedure in reality predicts – future job performance- what it should predict in theory), which has been widely used in subsequent applicant reactions research and has been significantly and consistently related to the organizational outcomes (e.g., Hausknecht et al., 2004; Oostrom, Born, Serlir, & Van Der Molen, 2010). One limitation, however, was that such studies did not provide much understanding of how these determinants combine to form fairness perceptions, or the processes underlying perceptions formation or perceptions–outcome links (Anderson et al., 2001; Ryan & Ployhart, 2000).

Applicant reactions research needed a comprehensive and theoretically-based model to better understand and drive further research in this field (Truxillo & Bauer, 2011). This need was fulfilled by Gilliland's (1993) justice-based model of applicant reactions to selection systems, which has driven much of the research into applicant reactions to date. This model posited that applicant perceptions of procedural justice (i.e., process fairness) and distributive justice (i.e., outcome fairness) affect applicant reactions, including individual's

cognitive, attitudinal and behavioral reactions during and after the hiring process. Gilliland's (1993) justice-based model has served as a basis for numerous applicant reactions studies and has been cited nearly 1000 times because of its strong theoretical basis in organizational justice theory (e.g., Anderson et al., 2010; Anderson et al., 2012; Bauer et al., 2006; Gilliland, 1994; Steiner & Gilliland, 1996; Truxillo et al., 2002; Truxillo et al., 2004). Besides providing an established theoretical basis for studying applicant reactions, Gilliland's model comprehensively addresses issues of concern to organizations (e.g., organizations' ability to attract applicants and potentially taking legal action) and to applicants (e.g., interpersonal treatment and chance to perform). Gilliland's model is based on two central constructs: procedural justice and distributive justice.

Procedural Justice. It refers to the perceived fairness of the procedures used to make selection decisions (Gilliland, 1993). Procedural justice in Gilliland's model included 10 procedural justice rules (see Table 2.1 for definitions of these rules), wherein the satisfaction and violation of these rules serve to assess the procedural justice of selection processes and to provide the basis for fairness reactions (Gilliland, 1993). These rules come under three categories: (1) *Formal characteristics* of the procedures, which refer to all kinds of features of the selection procedures (including job relatedness, opportunity to perform, consistency of administration, and reconsideration opportunity), (2) *Explanation*, which refers to perceptions of information applicants receive regarding the selection procedure and outcome (including selection information, feedback, and honesty), and (3) *Interpersonal treatment*, which refers to the way in which applicants feel treated during and after the selection process (including propriety of questions, two-way communication, and interpersonal effectiveness of the administrator). Further, Gilliland's (1993) model posited that HR policy, HR personnel, and selection type can determine applicant's procedural justice perceptions.

Several studies found that perceptions of procedural justice can impact applicant reactions including self-perceptions and several organizational outcomes during and after hiring. For example, positive relationships between procedural justice and recommendation intentions, organizational attractiveness, and intentions to accept a job offer have been found (e.g., Ambrose & Cropanzano, 2003; Anderson et al., 2012; Hausknecht et al., 2004). Although procedural and distributive justice are related conceptually and empirically (Gilliland, 1993; Greenberg, 1990; Hausknecht et al., 2004), previous research has clearly demonstrated that procedural justice perceptions account for more variance in several organizational outcomes than that of distributive justice perceptions (Alexander & Ruderman, 1987; Folger & Konovsky, 1989; Konovsky & Cropanzano, 1991). This explains why most of applicant reactions' research tends to focus on perceptions of procedural justice rather than distributive justice (Hausknecht et al., 2004). Indeed, in most selection events, applicants are first exposed to selection procedures, then to selection decision outcomes later on. Consequently, procedural justice components have vital earlier effects on applicant reactions to the selection methods as a result of primacy. Also, organizations have more control over the procedures than the selection decisions applicants receive (Truxillo et al., 2004).

Table 2.1: Definitions of Procedural Justice Rules

Job relatedness	The degree to which the selection process either appears to measure content relevant to the job the applicant has applied for or appears to be valid (face valid-job relatedness)
Opportunity to perform	The ability to demonstrate one's true ability, knowledge, and skills within the selection process.
Reconsideration opportunity	The opportunity to challenge or modify a selection decision made during the selection process, and to discuss the feedback or scores.
Consistency of administration	The standardization and consistency of the decision procedures across all applicants and over time without bias.
Feedback	The provision of informative and timely feedback on applicant's performance.
Selection information	Information and explanation regarding the selection process they are going through with an organization prior to the process.
Honesty	The degree to which communications are perceived as truthful, open, and honest by applicants.
Interpersonal effectiveness	The degree to which the test administrator treats applicants with respect and warmth.
Two-way communication	The opportunity for job applicants to offer their views and opinions during the hiring process.
propriety of questions	The degree to which questions avoid invasion, the illegality and privacy of an applicant, and are considered fair.

Note: Definitions adapted from Bauer, Truxillo, Sanchez, Craig, Ferrara, and Campion (2001) and Gilliland (1993)

Distributive justice (outcome fairness). It refers to the perceived fairness (whether positive or negative) of the distribution of selection decision outcomes over applicants and whether they feel they deserve this outcomes (Gilliland, 1993). Gilliland's model proposed that distributive justice was based on three organizational justice rules: equity, equality and needs. In a selection context, the *equity distribution rule* is defined as the degrees to which applicants believe their input (e.g., experience, ability and qualifications for the job) justifies a certain selection outcome (Adams, 1965). For example, an applicant may perceive a rejection outcome as unfair if he/she regards his/her qualifications meet or even exceed the job requirements. Similarly, an applicant may perceive an acceptance outcome as unfair if he/she thinks his/her qualifications are insufficient. Inequity perception is generally expected to appear more likely after receiving a rejection decision as people often tend to focus more on negative than on positive outcomes and information (Greenberg, 1986). Nevertheless, perceived inequity as a result of an apparently unjust acceptance decision could greatly affect applicant reactions as well.

The *equality distribution rule* in a selection context proposes that all applicants should have an equal chance of receiving a certain selection outcome. The rule of equality might be more important in case of its violation rather than its satisfaction, and it might be more prominent for job-irrelevant factors, such as ethnic background and gender, than for relevant input, such as qualifications (Gilliland, 1993). For example, if an applicant is selected based on his/her ability, then equality is not violated; however, if ethnic background or gender seems to bias the selection decision, equality will clearly be violated.

Finally, the *need distribution rule* in a selection situation suggests that certain applicants (e.g., subgroup of disadvantaged employees) should receive preferential treatment, mainly for humanitarian reasons. For example, if two applicants for the same job have similar qualifications, the needy one (e.g., disabled or handicapped) should be selected according to

this rule (Gilliland, 1993). Gilliland (1993) suggested that violations of distributive justice during the promotional and selection procedures can negatively influence applicants' attitudes and behaviors.

Organizational justice research has revealed that the dominant distributive justice rule is equity (Gilliland, 1993). It is generally assumed that a lack of equity results in dissatisfaction and negative emotional states, which could lead to cognitive and behavioral attempts to achieve/restore equity or to reduce inequity (Adams, 1965). In a selection context, if an applicant expects to be accepted for the job, but then receives a rejection, the process outcome may be perceived as unfair and inequitable; he/she may feel angry, especially toward the organization and attempt to restore equity by, for example, devaluing the job and the organization and its image, negatively recommending it to other applicants and/or stopping the purchase of its products or services. Also, if an applicant does not expect to get the job and then receives an acceptance decision, he/she may perceive the selection decision outcome as unfair and inequitable and in turn, likewise, be unsatisfied with the selection outcome. He/she may feel rather guilty and may try to restore equity by, for example, increasing job performance and adapt upward self-perceptions (Gilliland, 1993). Promotion context can be more salient in this case than entry level context (Ford et al., 2009).

Despite the clear importance of distributive justice, empirical research examining the effects of distributive justice on applicant reactions received little attention and produced equivocal results. An early study by Smither et al. (1993) found no relationships between distributive justice and organizational attractiveness. On the other hand, Hausknecht et al. (2004) found that perceptions of distributive justice was correlated with organizational attractiveness ($r = .34$). Therefore, future research should examine the effects of distributive justice on variety individual and organizational outcomes - especially in the promotion context - to draw more definite conclusion of its impact.

Additional Theoretical Framework Related to Applicant Fairness Reactions

Justice expectations. Further theoretical approaches related to selection fairness, which explore *Justice Expectations*, have been initiated. Bell, Ryan and Wiechmann (2004) proposed a model of justice expectations and theorized that expectations derived from direct experience, indirect influences (e.g., through recruiting material or second-hand stories) and other beliefs (e.g., cultural values or belief in tests) will identify the likely antecedents of justice expectations and how they influence applicants' attitudes, cognitions and behaviors in a selection context. Then, Bell et al. (2006) empirically assessed some consequences of applicants' justice expectations at multiple stages in a selection process, which provided initial support to the model. They found that justice expectations were positively associated with applicant justice perceptions during the selection process, and applicants with higher justice expectations had higher levels of pre-test motivation, test-taking self-efficacy and more positive justice perceptions during the testing process, recommendation intentions, and job acceptance intentions. In addition, Derous, Born, and De Witte (2004) further tested some of the assumptions from Bell et al.'s model (2004) and found that applicant warmth/respect perceptions mediated the relationship between justice expectations and organizational attraction and intentions to pursue the job. More recently, Geenen et al. (2012a) examined the impact of applicants' justice beliefs on justice expectations and found that belief in tests and belief in a just world influenced applicants' procedural and distributive justice expectations. As pointed out by Geenen et al. (2012a, p.67), although this justice expectations framework seems promising, "its theoretical underpinning is rather weak and not well-understood" and far more work is needed.

Fairness heuristic theory. Beyond Gilliland's (1993) traditional approach using organizational justice theory, some refinements have been introduced while still using

organizational justice theory. For example, Lind (2001) focused on the fairness heuristic theory, which implied that attitudes and behaviors related to social and organizational identity and trust will be greatly affected by perceptions of fairness. More specifically, fairness heuristic theory argues that individuals usually perceive some risk in giving authority to others and hence, attempt to understand where they fit in the situation. In a selection context, this authority is that of the selection decision (i.e., acceptance or rejection). People, in such a situation, instantly begin to evaluate whether or not the organization is fair, respectful and trustworthy. In later events, this judgment (developed early during the selection process) remains as the lens through which the individual perceives and views the organization subsequently. Moreover, these fairness judgments are most prominent at the beginning of interactions (i.e., during the selection process), as individuals have known the least amount of information at that point. According to this theory, applicants develop their fairness perceptions as a type of sense-making about how the organization treats individuals (e.g., fairly or unfairly) and how they will potentially treat them in the future (e.g., in case they get hired). However, fairness heuristic theory has only received limited attention in the applicant reactions research. As highlighted by Ford et al. (2009), fairness heuristic theory needs substantial identification and interaction in a group to be activated, which makes this theory largely inapplicable for an entry-level selection setting as external applicants often have no identification, limited interactions and only slight knowledge about the organization and its selection procedures. On the other hand, it might be well poised in a promotional-level context as internal applicants have considerable identification, interaction and historical relationship with the organization, all of which are essential to activate the fairness heuristic theory. This may explain the scarce empirical support of this theory in applicant reactions research where most of it is on an entry-level selection.

Development of Justice-Based Applicant Reactions Models

Although organizational justice theory has been invaluable for enhancing our understanding of the consequences of applicant perceptions and reactions and has a strong theoretical foundation, it gives little indication as to how and why people form justice judgments (although more recent research is starting to address this question) and is insufficient for providing a strong psychological explanation of how applicant perceptions are formed, and why they produce various affective, behavioral, and cognitive consequences (Ployhart & Harold, 2004). Thus, there has been further refinement to Gilliland's (1993) Justice-based model. Ployhart and Ryan (2000) provided a comprehensive and narrative review of applicant reactions research, key future directions, and implications for practice. They proposed an updated model of applicant reactions, which extended Gilliland's (1993) model by adding additional antecedent and moderator variables of applicant perceptions. Besides considering applicant justice perceptions, their model included perceptions of the selection process and procedure itself and in general, perceptions of the procedure's outcomes, and perceptions of the individual's cognitive and affective state during the selection procedure as potential determinants of many individual and organizational outcomes. They also considered some antecedents of applicant perceptions besides the procedural characteristics, including organizational context, person and job characteristics.

Later, Hausknecht et al. (2004) proposed an updated model of applicant reactions to selection procedures in preparation of a comprehensive meta-analysis based on Gilliland's (1993) and Ryan and Ployhart (2000) models and empirically tested parts of the model. They extended these models by further differentiating antecedents and outcomes and adding test-taking attitudes variables (e.g., test-taking motivation and anxiety) to applicant perceptions categories (Arvey et al.'s (1990) attitudinal framework of test-taking).

More recently, a surge of applicant reactions research extended and developed context-specific models to provide specific theoretical grounding for future research in new contexts, such as online selection context, promotion and in discrimination settings. Bauer et al. (2006) developed a model of applicant reactions in an online selection context, which focused on the invasion of privacy. They found that information privacy concerns affected applicants' intentions and attractions toward the organization and their test-taking motivation through the mediation of procedural justice in an online screening context. This research suggested applicants' privacy concerns as antecedents of procedural justice of selection procedures. Thus, as highlighted by Nikolaou et al. (2015) and by Gilliland and Steiner (2012), more research is needed to explore and assess the role of applicant privacy concerns in determining applicant reactions to diverse types of new high-tech selection procedures.

Furthermore, Ford et al. (2009) posited a model of promotional applicant reactions, extending Gilliland's (1993) model and related frameworks (e.g., fairness heuristic theory), suggesting that some contextual variables related to promotion, as antecedents of procedural and distributive justice perceptions, in turn may affect four sets of outcomes - occupational health outcomes (e.g., stress), self-perceptions, affective outcomes (e.g., job satisfaction, organizational commitment) and behavior outcomes (e.g., turnover) mostly related to internal applicants (i.e., employees). Such affective and behavior outcomes are typically ignored in the applicant reactions research, yet can result in detrimental consequences for organizations. Thus, internal applicant reactions to promotion could be a crucial line of inquiry. Nevertheless, the numbers of studies that have been conducted in a promotion context (e.g., Ambrose & Cropanzano; 2002; Truxillo & Bauer, 1999) remain scant, deeming this area is ripe for further study (McCarthy et al., forthcoming; Truxillo et al., 2015; Truxillo et al., in press).

Shifting applicant reactions to other contexts, Anderson (2011) proposed a conceptual model of applicant propensity to case initiation (APCI) that was based upon, but also extended and specialized in earlier models (i.e., Gilliland, 1993; Ryan & Ployhart, 2000; Hausknecht et al., 2004). He first developed a novel concept of perceived job discrimination (PJD), emphasizing on the perceptions of unfair treatment and violation of pre-employment psychological contract, and distinguished this concept from actual job discriminations. The importance of PJD can be seen from the rising costs of litigation in recruitment and selection. These costs associated either with losing good applicants during the selection process or with negative job-related attitudes and behaviors (e.g., reducing commitment and motivation and lowered job performance) for accepted job applicants that perceived discrimination but survived, which can subsequently be damaging for the reputation and with possible loss of revenue for the organization (Anderson, 2011). Then, the PJD construct was modeled in a detailed framework of APCI that specifies and distinguishes different categories of factors at three key stages: (1) inputs - legal context for selection, person, and perceived procedural characteristics, (2) process - selection procedure characteristics, and (3) outcomes - perceived job discrimination, which in turn might lead to complain initiation and/or legal case initiation (Anderson, 2011). This framework seems to have a valuable potential to advance our understanding of how and why applicant reactions as perceptions of psychological contract violations and pre-employment violations arise from the applicant perspectives, which is as yet a particularly under-examined perspective and empirical studies that can be considered for job applicant's viewpoints of fair treatment and procedural justice in selection contexts (Anderson, 2011).

Meta-Analytic Findings in Applicant Reactions Research

Several meta-analyses have been published providing support for the importance and effects of selection fairness. Hausknecht et al. (2004) assessed the relationships between applicant perceptions, including procedural and distributive justice perceptions and several outcomes. They found that applicants who had higher justice perceptions were more likely to perceive the organizations favorably and had stronger intentions to recommend the organization to other applicants and to accept job offers. Also, they found that justice perceptions were positively related to applicants' self-perceptions, as well as perceived and actual test performance. Regarding favorability, interviews and work sample tests were perceived more favorably, followed by cognitive ability tests and personality tests, while the least favorable included honesty tests, biodata and graphology. However, they illustrated that very few studies examined the effects of applicant perceptions on hard organizational outcomes. Also, a meta-analysis by Chapman et al. (2005) integrated data from 71 studies examining the relations between commonly used predictors of applicant attraction, including applicant justice perceptions, and several important organizational outcomes, including acceptance intentions, job–organization attraction, job pursuit intentions, and job choice. They found that applicant attraction outcomes were predicted by applicant justice perceptions of the hiring process and expectancies, as well as fit perceptions, recruiter behaviors, and job–organization characteristics. More recently, Truxillo and colleagues (2009) meta-analytically examined the impact of providing explanations to applicants on their reactions using 26 independent samples. They found that explanations affected applicant fairness perceptions, organizational attractiveness, test performance, and test motivation, and that the relation between explanations and test performance was moderated by test motivation. They also found that the effects on fairness were larger in the field (authentic) settings than that of the lab. However, no differences were found on the effects of different types of explanations

(justification versus excuses) on applicant reactions. Ultimately, Anderson et al. (2010) meta-analyzed 38 distinct samples from 17 different countries (mostly from North America and Europe) covering 10 traditional selection procedures. They found that the rating of process favorability was structurally similar across countries, with a three-tier clustering: (1) the most preferred (work sample tests and interviews), (2) favorably evaluated procedures (personality inventories, biodata, cognitive ability tests, references, and résumés), and (3) the least preferred methods (personal contacts, graphology, and honesty tests). Yet, some differences in some perceptions of procedural justice dimensions were found.

Critically reviewing applicant reactions literature, including the frameworks and models which assisted the integration of theories and research in applicant reactions to enable the researcher to advance updated frameworks that serve as strong foundations for the studies conducted in this thesis. Table 2.2 provides a summary of these major theoretical approaches, models, meta-analyses and narrative reviews.

Table 2.2: Different Theoretical Frameworks, Models, and Meta-Analyses in Applicant Reactions Literature

Author(s)	Year	Source	Cited by	Notes
1. Earlier Theory/conceptual papers				
Arvey et al.	1990	Book chapter	313	Conceptual model of <i>Test-Taking Motivation</i>
Herriot	2004	<i>International Journal of Selection and Assessment</i>	35	<i>Social identity</i> theory was proposed as a theoretical framework for better understanding applicant reactions to selection methods
Ployhart and Harold	2004	<i>International Journal of Selection and Assessment</i>	51	Proposition regarding <i>applicant attribution-reaction theory (AART)</i>
Schuler	1993	Book chapter	151	Social validity theory, explaining applicant perceptions
Arvey and Sackett	1993	Book chapter	180	Proposed a set of factors possibly affecting applicant fairness perceptions of selection system
2. Theory/conceptual papers using organizational justice approach				
Gilliland	1993	<i>Academy of Management Reviews</i>	908	Foundational justice-based theoretical framework of applicant reactions to selection system
Bell et al.	2004	<i>International Journal of Selection and Assessment</i>	76	Conceptual model of <i>Justice Expectations</i>
Lind	2001	Book chapter	718	<i>Fairness heuristic theory</i> (but was mostly used out of applicant reactions literature)
3. Updated Models of Applicant Fairness Reactions to Selection				
Ployhart and Ryan	2000	<i>Journal of Management</i>	363	Narrative review , concluding with an <i>update model of applicant reactions</i>
Hausknecht et al.	2004	<i>Personnel Psychology</i>	436	Meta-analysis and extending previous model by adding more antecedents and outcomes of applicant reactions
Bauer et al.	2006	<i>Journal of Management</i>	53	Applicant reactions in online screening context
Ford et al.	2009	<i>International Journal of Selection and Assessment</i>	21	Applicant reactions in promotion contexts
Anderson	2011	<i>International Journal of Selection and Assessment</i>	19	Conceptual model of <i>applicant propensity to case initiation</i>

Table 2.2 continued

4. Meta-analysis papers				
Hausknecht et al.	2004	<i>Personnel Psychology</i>	436	Meta-analysis and extending previous model by adding more antecedents and outcomes of applicant reactions
Chapman et al.	2005	<i>Journal of Applied Psychology</i>	536	Meta-analytic review of the impact of recruiting outcomes on applicant attraction to organizations, job pursuit and acceptance intentions, and job choice
Truxillo et al.	2009	<i>International Journal of Selection and Assessment</i>	36	Meta-analytic review of the effects of explanations on applicant reactions
Anderson et al.	2010	<i>International Journal of Selection and Assessment</i>	60	A comprehensive meta-analysis into applicant reactions to 10 popular traditional selection procedures (assessing reactions generalization versus situational specificity)
5. Narrative reviews and commentaries				
Ployhart and Ryan	2000	<i>Journal of Management</i>	363	Narrative review, concluding with an <i>update model of applicant reactions</i>
Anderson	2003	<i>International Journal of Selection and Assessment</i>	195	Narrative and critical review of research into recruiter and applicant reactions to new technology in selection procedures, and agenda for future research
Chan and Schmitt	2004	<i>International Journal of Selection and Assessment</i>	107	Detailed agenda for future directions in applicant reactions research: A construct-oriented approach
Truxillo et al.	2004	<i>International Journal of Selection and Assessment</i>	106	Reviewing research into applicant fairness reactions, discussing boundary conditions, defining when selection fairness really matter, and providing directions for future research
Ryan and Huth	2008	<i>Human Resource Management Review</i>	39	Review on applicant reactions research with a focus on the practical implications
Truxillo, Bauer, McCarthy, Anderson, and Ahmed	In press	<i>Book Chapter</i>		Critically review the literature, implications for organizations and applicants as well as recommendations for future research
McCarthy, Truxillo, Bauer, Anderson, Costa, and Ahmed	Forth-coming	<i>Journal of Management</i>		Critical review of applicant reactions research since 2000, focusing on: “so what?”, “what’s new?” and “where to next?”

The Effects of Selection Fairness on Individual and Organizational Outcomes

As mentioned earlier, research has illustrated that applicant reactions to personnel selection procedures can impact a variety of individual and organizational outcomes (Gilliland, 1993; Hausknecht et al., 2004; Ryan & Ployhart, 2000), with selection fairness being at the center of applicant reactions research (Truxillo & Bauer, 2011). Organizations have to consider assessing the fairness of their selection procedures because they have rather little control over what selection decisions applicants receive. Put simply, when an organization receives a large number of applicants for a job post, this can lead to a higher rate of rejection of applicants, which is out of the organization's control. Yet, organizations have some control over the selection procedures used, such that using more procedurally fair selection methods and providing explanations about the process and performance feedback can amend any negative perceptions and outcomes. Indeed, recent comprehensive reviews on applicant reactions with more focus on selection fairness (e.g., Truxillo et al., 2004; Truxillo & Bauer, 2011; Truxillo et al., in press) have demonstrated that applicant justice perceptions influence a range of individual as well as soft and hard organizational outcomes, several of which are of considerable importance.

The empirical studies relating to selection justice to individual and “soft” and “hard” organizational outcomes are reviewed and summarized in the following section to provide an overview of this field. As shown in Table 2.3, most research has examined soft organizational outcomes and comparatively limited empirical research has focused on hard organizational outcomes. (Also see appendix D (Table 7.20) for a comprehensive and detailed table of the empirical studies into applicant reactions from 2000-2016).

Individual Outcomes

Previous research and models of applicant reactions suggested that applicant perceptions have a great influence on applicants' self-perceptions in many ways. More specifically, fairness perceptions were positively related to self-esteem (Bauer et al., 2001; Fletcher, 1991), self-efficacy (Hausknecht et al., 2004) and core-self evaluations (Anderson et al., 2012; Nikolaou & Judge, 2007; Oostrom et al., 2010). Also, Truxillo et al.'s (2009) meta-analysis showed that explanations given to applicants influenced their self-perceptions and fairness reactions. On the other hand, several studies (Gilliland, 1994; Ployhart & Ryan, 1997) revealed that fairness perceptions interacted with selection outcomes on self-efficacy perceptions, in which fairness perceptions had an adverse effect on the self-efficacy of rejected applicants and positive effect on the self-efficacy of accepted applicants.

More recently, several studies have explored the positive and negative psychological effects of selection methods. Schinkel et al. (2004) showed that affective well-being as well as core self-evaluation of rejected candidates who received feedback of their test performance was significantly reduced, compared to those receiving a mere rejection message with no performance feedback and that selection perceptions interacted with feedback on well-being and core self-evaluations. More recently, Schinkel, van Dierendonck, van Vianen, and Ryan (2011) found that distributive fairness and attributional style interactively influenced well-being of rejected individuals. Schinkel et al. (2013) also found that distributive justice moderated the effect of selection outcomes on affective well-being. Bell et al. (2006) found that perceptions of justice had a great impact on applicants' negative affect and psychologically withdraw when justice expectations were high. On the other hand, Anderson and Goltsi (2006) found no evidence of negative psychological effects for rejected applicants, while interestingly, positive affect and well-being of accepted applicants decreased over time.

Furthermore, research has found that selection fairness influenced test-taker motivation and test-taker self-efficacy (e.g., Bauer et al., 2006; Bell et al., 2006; Hausknecht et al., 2004). For example, Bauer et al. (1998) found that procedural fairness perceptions predicted applicants' test-taker self-efficacy. Another study by Truxillo et al. (2002) found that selection fairness information moderated the relation between selection decision and test-taker self-efficacy among African Americans, but not among White Americans. On the other hand, Oostrom et al. (2010) found no effect of applicant perceptions on their test-taking self-efficacy.

Soft Organizational Outcomes

“Soft organizational outcomes” refers to applicants' perceptual outcomes (e.g., attraction toward hiring organizations and process satisfaction) and behavioral intentions (e.g., recommendation intentions and litigation intentions). To date, most of the studies conducted showed that applicant's justice perceptions were related to process satisfaction (e.g., Hausknecht et al., 2004; Giumetti & Sinar, 2012; Macan et al., 1994; Truxillo et al., 2001), organizational attractiveness (e.g., Bauer et al., 1998; Bauer et al., 2001; Hausknecht et al., 2004; Schreurs, Derous, Proost and Witte, 2010), litigation intentions (e.g., Ababneh et al., 2014; Bauer et al., 2001 only in lab settings), recommendation intentions (e.g., Bell et al., 2006; Geenen, Proost, van Dijke, de Witte, & von Grumbkow, 2012b), purchase intentions (e.g., Maertz et al., 2004), and job acceptance intentions (e.g., LaHuis, 2005; Ryan, Boyce, Ghumman, Boyce, & Ghumman, 2009).

On the other hand, the relation between applicants' justice perceptions and litigation intentions has been examined in only few studies, mostly that of lab settings with student samples (Ababneh et al., 2014; Bauer et al., 2001; Bauer, Truxillo, Paronto, Weekley, & Campion, 2004), with only one field study (Geenen et al., 2012b) on the effect of distributive

justice expectation on litigation intentions. More studies need to examine this relationship using an actual job applicant sample to examine the effect of procedural justice perceptions of different types of selection procedures on litigation intentions. Also, the relationship between justice perceptions and recommending the organization to others, purchase intentions, and job acceptance intentions remains equivocal. While some studies supported these effects (e.g., Maertz et al., 2004; Bell et al., 2006; Hausknecht et al., 2004), others did not (Carless, 2003; Macan et al., 1994; Truxillo et al., 2001).

Hard Organizational Outcomes

“Hard organizational outcomes” are concerned with tangible behaviors and actions, such as legal challenge, job acceptance decision, and, for those being hired, later job satisfaction and work performance. Besides the effect of selection justice perceptions on soft organizational outcomes, Gilliland’s (1993) model and the following updated models also posited that hard organizational outcomes are also affected. However, very few studies tend to focus on these outcomes. Table 2.3 shows studies examining the effects of selection justice perceptions on hard organizational outcomes. It is clear that these effects have been tested in only a handful of studies, such as on job performance (Gilliland, 1994; Konradt et al., 2015; McCarthy et al., 2013), reapplication intentions (Gilliland, Groth, Baker, Dew, Polly, & Langdon, 2001; LaHuis, MacLane, & Schlessman, 2007; Ryan et al., 2009), organizational commitment (Ambrose & Cropanzano, 2003; Bauer et al., 2001), job satisfaction (e.g., Ambrose & Cropanzano, 2003; García-Izquierdo et al., 2012), withdrawal (Ployhart & Ryan, 1998; Ryan, Sacco, McFarland, & Kriska, 2000; Schmit & Ryan, 1997), turnover intentions (Oostrom et al., 2010), actual turnover (Truxillo et al., 2002) and actual job acceptance (Carless, 2003; Walsh, Tuller, Barnes-Farrell, & Matthews, 2010).

Existing studies have produced some equivocal results. For example, consistent relationships have not been found between selection justice perceptions and withdrawal from the selection process (e.g., Ployhart & Ryan, 1998; Ryan et al., 2000), later job satisfaction and organizational commitment (e.g., Ambrose & Cropanzano, 2003), and actual job acceptance (e.g., Walsh et al., 2010; Carless, 2003) and no relationship was found with later withdrawal or turnover for those employed (Truxillo et al., 2002) and job performance (Gilliland, 1994; McCarthy et al., 2013). McCarthy et al. (2013) attempts to examine the influence of applicant reactions on job performance using data from 4 studies, 6 selection methods, 2 contexts, 3 continents, 5 key applicant reactions including procedural justice, 2 study designs and 4 occupational areas. Some evidence was found that applicant reactions affected job performance indirectly via their influence on test performance, yet, procedural justice perceptions had no direct effect on job performance in any case. As noted in McCarthy et al.'s study, job performance is one of the most important outcomes for organizations, thus, it would be valuable for future research to conduct longitudinal studies that examine the effect of applicant reactions on job performance over time and explore the broader range of possibilities, especially in a promotion context. Konradt, Garbers, Weber, Erdogan, and Bauer (2015) recently examined the effects of procedural fairness longitudinally using a sample of applicants to an apprenticeship program, and found that it had positive effects on job acceptance as well as job performance 18 months later, yet this effect disappeared after 36 months.

In summary, limited research has been conducted on hard organizational outcomes, in which one cannot draw definitive conclusions about the effects of applicants' justice perceptions on hard organizational outcomes. Further, other key outcomes (e.g., LMX and trust in organization) remain unexamined.

Unexplored Outcomes of Selection Fairness

Another core problem in applicant reactions research is that researchers have not often considered the essence of what selection fairness really is in light of organizational justice literature and what its other potential outcomes are likely to be (Truxillo et al., 2004). In addition, some hard organizational outcomes may not be applicable in an entry-level selection setting.

Thus, several relevant organizational outcomes remain unexplored. Specifically, applicant reactions research should focus on more accurately defined outcomes that are theoretically, conceptually, and logically aligned to selection justice perceptions. Therefore, a comprehensive analysis of the potential effects of justice perceptions must direct future research on possible outcomes of applicant justice perceptions. For instance, Lind (2001) argued that judgments regarding just treatment are closely associated with trust and consequently, just treatment leads individuals to collaborate with other individuals. Thus, future research must explore and examine the effects of selection justice perceptions on trust in organizations.

Another important perceptual outcome that may be related to justice perceptions is P-O fit perceptions. It is very important to consider the perceptions of P-O fit as these perceptions are associated with applicants' organizational attractions (Dineen et al., 2002), job acceptance, and later work attitudes for those being hired (Cable & Judge, 1996). For instance, if applicants feel that the selection procedure is not fair and the organization is using this unfair selection procedure, they may conclude that they may not fit within the organization and its values, thus may not make the effort to take the test or interview, continue in the selection process, or accept the job offer if the organization offered it.

Moreover, some outcomes are more salient in promotional settings with internal applicants, such as leader-member exchange (LMX) and job performance. In organizational

justice research, employee perceptions of procedural and distributive justice has been empirically linked to LMX (e.g., Pillai, Scandura, & Williams, 1999; Rockstuhl, Dulebohn, Ang, & Shore, 2012). According to LMX theory, high-quality social exchanges evolve and build upon trust (Sparrowe & Liden, 1997). In turn, trust is believed to develop from perceptions of fair treatment, which has been associated with applicant perceptions (Lind, 2001). Thus, LMX is proposed to be a notable outcome of justice perceptions of promotion (Ford et al., 2009). In addition, to the best of the researcher's knowledge, job performance has not been examined as an outcome of justice perceptions in a promotional context.

Lind's (2001) argument that justice judgments should be associated with precise types of outcomes related to the group (e.g., trust in organization, P-O fit perceptions and LMX), lead to suggestions that these outcomes may be more salient in internal applicant settings where applicants are current employees (largely identify as a group within organization), whereas external applicants have no group identity and little exposure. Thus, one could suggest that the results of injustice perceptions might be stronger in a promotional setting compared to an entry-level setting.

In conclusion, although the effects of applicant justice perceptions on some soft organizational outcomes seem clear, other important organizational outcomes remain under-explored or even unexplored. Moreover, some of the hard organizational outcomes (e.g., LMX and turnover) are mainly applicable to internal applicants (i.e., promotional context) where emotions can run high and where effects on hard organizational outcomes can be greater. In the next section, our review of literature identifies a number of areas for further research and examination, followed by highlighting some methodological and research design issues in applicant reactions research.

Table 2.3: Summary of Empirical Studies Examining the Relation Between Selection Justice Perceptions and Individual, and Soft and Hard Organizational Outcomes

Individual Outcomes	Empirical studies	Relationship Supported?	Key findings
Self-esteem, self-efficacy, and core self-evaluation	Anderson et al. (2012); Bauer et al (2001); Fletcher (1991); Gilliland (1994); Hausknecht et al. (2004); Ployhart and Ryan (1997); Nikolaou and Judge (2008); Schinkel et al. (2004); Truxillo et al. (2009)	Yes	<ul style="list-style-type: none"> Fairness perceptions were positively associated with applicants self-perceptions
Well-being, negative and positive affect	Bell et al. (2006); Schinkel et al. (2004); Schinkel et al. (2011); Schinkel et al. (2013); Ostrom et al. (2010)	Yes	<ul style="list-style-type: none"> Selection justice and decision were associated with applicants' well-being and negative affect
	Anderson and Goltsi (2006)	No	<ul style="list-style-type: none"> No negative psychological effects were found for rejected applicants, whereas positive affect and well-being decreased overtime for accepted applicants.
Test taking self-efficacy, anxiety and motivation	Bauer et al. (1998); Bauer et al. (2006); Bell et al. (2006); Hausknecht et al. (2004); Truxillo et al. (2001); Truxillo et al. (2002), McCarthy et al. (2013); Wiechmann and Ryan (2003)	Yes	<ul style="list-style-type: none"> Selection fairness affected applicant's test-taking attitudes.
	Ostrom et al. (2010)	No	<ul style="list-style-type: none"> Applicant perceptions was not related to their test-taking self-efficacy and anxiety

Table 2.3 continued

“Soft” Outcomes	Empirical studies	Relationship Supported?	Key findings
Satisfaction with the selection process	Hausknecht et al. (2004); Giumetti and Sinar (2012); Macan et al. (1994); Truxillo et al. (2001).	Yes	<ul style="list-style-type: none"> Fairness reactions were positively associated with process satisfactions and perceptions of selection process
Organizational attractiveness	Ababneh et al. (2014); Anderson et al. (2012); Bauer et al. (1998); Bauer et al. (2001); Hausknecht et al. (2004); Macan et al. (1994); Ployhart, Ryan, and Bennett (1999); Schinkel et al. (2011); Schinkel et al. (2013); Schreurs et al. (2010); Walsh et al. (2010), Bruk-Lee et al. (2016)	Yes	<ul style="list-style-type: none"> Selection justice were positively associated with organizational attractiveness
	Truxillo et al. (2002), Thibodeaux and Kudisch (2003)	No	<ul style="list-style-type: none"> Selection fairness might not influence applicant’s attractiveness toward the organization when they are highly attracted to it.

Table 2.3 continued

“Soft” Outcomes	Empirical studies	Relationship Supported?	Key findings
Recommendation intentions	Ababneh et al. (2014); Bauer et al. (1998); Bell et al. (2006); Geenen et al. (2012b); Giumetti and Sinar (2012); Hausknecht et al. (2004); McCarthy, Hrabluik, and Jelly (2009); Ployhart and Ryan (1997); Schreurs et al. (2010)	Yes	<ul style="list-style-type: none"> • Applicant fairness reactions were positively related to intentions to recommend the organization to others as a potential employer. • This relationship might weaken over time.
	Truxillo et al. (2002)	No	<ul style="list-style-type: none"> • Information fairness was not related to recommendation intentions
Customer purchase intentions of company product and service	Maertz et al. (2004)	Relationship is unclear	<ul style="list-style-type: none"> • Maertz et al. (2004) found that procedural justice modestly predicted intentions to use services prior to receiving selection outcome. However, these effects were diminished after controlling for selection outcome.
	Macan et al. (1994)		<ul style="list-style-type: none"> • Macan et al. (1994) found weak relationship between applicants' products' purchasing intentions and their test perceptions.

Table 2.3 continued

“Soft” Outcomes	Empirical studies	Relationship Supported?	Key findings
Job acceptance intentions	Bell et al. (2006); LaHuis (2005); Ryan et al. (2009); Schreurs et al. (2010); Macan et al. (1994)	Yes	<ul style="list-style-type: none"> • Selection fairness and selection expectations are positively related to job acceptance intentions
	Truxillo et al. (2002); Ployhart and Ryan (1997), Carless (2003)	No	<ul style="list-style-type: none"> • Information fairness (Truxillo et al., 2002) and process and outcome fairness (Ployhart & Ryan, 1997) were not related to job pursuit intentions
Litigation intentions	In a laboratory settings: Ababneh et al. (2014); Bauer et al. (2001; 2004); In a field setting: Geenen et al. (2012b)	Yes	<ul style="list-style-type: none"> • Selection fairness were found to be negatively related to litigation intentions, but only in lab setting • Distributive justice expectations showed to be related to litigation intentions in a field setting.

Table 2.3 continued

“Hard” Outcomes	Empirical studies	Relationship Supported?	Key findings
Job performance and Criterion-related validity	McCarthy et al. (2013); Gilliland (1994)	No	<ul style="list-style-type: none"> Justice perceptions were not related to job performance or criterion-related validity of test score
	Konradt et al. (2015)	Equivocal	<ul style="list-style-type: none"> Procedural justice was related to job performance after 18 months, but was not after 36 months in entry-level setting
Reapplication intentions	Gilliland et al. (2001); LaHuis et al. (2007); Ryan et al. (2009)	Yes	<ul style="list-style-type: none"> Fairness explanation and perceptions appeared to improve reapplication behavior intentions
Organizational commitment and job satisfaction	Commitment: Ambrose and Cropanzano (2003); Bauer et al. (2001). Job satisfactions: Ambrose and Cropanzano (2003); García-Izquierdo et al. (2012)	Yes	<ul style="list-style-type: none"> Selection fairness is positively related to organizational commitment and job satisfaction

Table 2.3 continued

“Hard” Outcomes	Empirical studies	Relationship Supported?	Key findings
Turnover intentions	Ambrose and Cropanzano (2003)	Yes	<ul style="list-style-type: none"> Procedural and distributive justice perceptions predicted turnover intentions over time.
Actual turnover	Truxillo et al. (2002)	No equivocal	<ul style="list-style-type: none"> No relationship were found between providing fairness information and later turnover; however, the (police applicants) were highly attracted to the organization, limiting the generalizability of these results
Withdrawal	Schmit and Ryan (1997); Ployhart and Ryan (1998)	Yes	<ul style="list-style-type: none"> Process fairness perceptions were associated with withdrawal from the selection process. These effects might be moderated by characteristic of candidate pool.
	Ryan et al. (2000)	No	
Actual job acceptance	Carless (2003); Walsh et al. (2010), Harold et al. (2015)	Yes	Fairness perceptions were positively related to actual job acceptance.
Actual legal challenge	Non	?	

New and Under-Examined Areas

Recent reviews of applicant reactions research (Anderson, 2003; McCarthy et al., forthcoming; Truxillo & Bauer, 2011, Truxillo et al., 2004; Truxillo et al., 2015; Truxillo et al., in press) have identified a number of areas for future research: (1) applicant reactions to the revolutionary context of IBSPs, (2) examining the cross-country differences in applicant privacy and fairness reactions to IBSPs, and (3) the systematic expansion of applicant reactions research into the domain of promotions (e.g., the role of justice in promotion), and the exploration of the dynamic nature of applicant reactions to promotion procedure. Research in these areas will contribute to fill the gaps in literature. The integration of theory and research across these areas will enable us to advance a general conceptual model or framework for each area, which can serve as a foundation for the three studies conducted in this thesis. It also enables us to advance a series of specific research hypotheses that can be explicitly tested in this thesis.

Applicant Reactions to IBSPs

The most innovative development in the personnel selection in recent years has been the adoption of IBSPs to assess and hire job applicants. These procedures provide both the job applicants and organizations with many advantages over equivalent traditional procedures, including quick feedback, larger pool of applicants that can be managed in a faster way, round the clock access for job applicants, all leading to significant time and cost savings (Bauer et al., 2006; Konradt et al., 2013). IBSPs span across pre-selection processes in which applicants are screened and selected to enter the next stage, using for example, online applications and also in later stages of selection processes through performing online

tests and online job interviews (Reynolds & Dickter, 2013; Oostrom, Linden, Born, & Molen, 2013).

Understanding applicant perceptions of IBSPs and consequent reactions toward organizations is very important (Truxillo et al., in press) as the Internet/online settings may impact applicant reactions for many reasons. These new e-settings offer applicants less human interactions (i.e., with the HR or the organizational representative) and less possibility for self-presentation due to the high standardization nature of IBSPs, which can negatively affect their reactions to these procedures and to the hiring organizations. Recent reviews of applicant reactions to technology-based selection suggested that despite this sweeping change in selection practices toward high-tech selection, there is very little empirical evidence on applicant perceptions and reactions to technology and Internet-based selection (Bauer et al., 2011; Nikolaou et al., 2015; Truxillo & Bauer, 2011, Truxillo et al., in press; Truxillo et al., 2004). Thus, the time is ripe for further research in this topic, guided by organizational justice theory (Bauer et al., 2011). As highlighted by these reviews, the little empirical work has investigated either Web-based screening procedures that are presented and performed via organizations' 'careers' websites (e.g., Dineen et al., 2004; Konradt et al., 2013) and/or examined by the overall perceptions of privacy and overall justice of online screening without considering the dimensionality of privacy and justice constructs (e.g., Bauer et al., 2006). Although these studies provide a useful starting point, they do not inform us how applicants perceive and react to other different types of commonly used IBSPs and how the technology-related factors affect their reactions. Also, they examined only applicant reactions to Web-based/online screening which were performed via the organization website, while reactions to other common IBSPs being sent to the applicant via the Internet (i.e., not through the organization website), such as sending the test online or doing online/video-conference interviews via Skype or any other software via the Internet are not yet assessed and compared

simultaneously. Considering applicant reactions to different types of IBSPs is very important, as their reaction may vary due to the test type (Ryan & Ployhart, 2000). For instance, online applications can be accessed by job applicants anywhere and anytime in their own speed, as long as they have Internet access and may provide them with more information and explanation about the job and the organization. On the other hand, online tests are often timed; therefore, some applicants may be disadvantaged due to their slow response time (Bauer et al., 2006). In the case of online interviews, applicants often have face-to-face communication with the interviewer[s], which in turn can be perceived differently by the applicants as they are interacting with a person, not with a system, such as online applications and online tests. These differences may lead to differences in perceptions and reactions across IBSPs. Indeed, there are at least three meaningful distinctions between online interviews and face-to-face interviews that are likely to influence applicant reactions. Firstly, media richness theory highlights differences across selection techniques' modes in that communication technologies differ in their capability to transmit information (Daft & Lengal, 1986). For instance, although both online interviews and face-to-face interviews transmit visual and aural data, communication is less rich in the former resulting in lost opportunities to observe applicants' nonverbal behaviours, such as eye contact and body language. This is an essential difference as nonverbal cues impact interviewer's evaluations in face-to-face interviews. Nevertheless, these cues are likely to be less pronounced in online interviews (Sears, Zhang, Wiesner, Hackett, & Yuan, 2013).

Moreover, online interviews often display a noticeable delay or lack of synchronization between audio and video signals due to signal compression (Mayer-Patel, 2007), which can results in changes to the surface conversations structure, such as increased a lengthening of the time an applicant speaks in any one exchange, fewer interruptions, and turn taking (Sellen, 1995). Consequently, conversations come to be less fluid, with

participants reporting difficulty in both regulating and understanding them (Straus, Miles, & Levesque, 2001).

Finally, only the head and torso of both the applicant and interviewer are usually visible in online interviews. As physical appearance could noticeably impact interpersonal judgments from the interview (Barrick et al., 2009; Hosoda et al., 2003) it is likely that the transmission of restricted images in online interviews changes the evaluation process relative to a face-to-face context (e.g. Straus et al., 2001).

Therefore, this gap can be addressed by developing an updated model that extends Gilliland's (1993) selection fairness model in the context of IBSPs and adds technological factors related to IBSPs, as well as some of the unexplored outcomes discussed in the previous section and examine it across different types of IBSPs, which is addressed in Study 1 (*Chapter 3*). However, this will need some fine-tuning and more augmentation of current research and models in applicant reactions. For example, considering privacy issues, applicants' Internet knowledge, and computer anxiety can serve in advance our understanding regarding the determinants of applicant reactions to IBSPs. These considerations are developed and discussed as follows.

Privacy issues. One of the ultimate issues with several types of IBSPs is information privacy concerns. Some organizations keep employment-related data for a number of job applicants. In the US, some criticism of Internet screening methods has arisen due to the risk of sharing candidates' information across organizations, increasing the risk of personal information falling into the wrong hands, something that is almost impossible with paper-based and traditional procedures screening (Bauer et al., 2006; Truxillo et al., 2004). Due to the potential to easily access a large amount of employment data and to proficiently integrate it with other data, many researchers have argued for further research to examine privacy

issues in applicant reactions, especially in the case of IBSPs (Bauer et al., 2006, Black, Stone, & Johnson, 2015; Harris et al., 2003; Truxillo et al., 2015; Truxillo et al., in press). As empirical research on perceptions of privacy concerns and applicant fairness reactions to IBSPs is scant, many researchers have called for further research in this area (Anderson, 2003; Harris et al., 2003; Selden & Orenstein, 2011; Sylva & Mol, 2009; Truxillo & Bauer, 2011, Truxillo et al., in press).

Further, many researchers have argued that perceptions of privacy and fairness are separate constructs (Arvey & Sackett, 1993; Black et al., 2015; Eddy, Stone, & Stone, 1999; Gilliland, 1993) and have called for future research to examine the proposition that privacy concern is an antecedent of procedural justice perceptions. On this basis, we can develop a better understanding of the mechanisms associated with individual reactions to the characteristics of IBSPs and draw on this theory from the organizational privacy and organizational justice theories to provide a comprehensive theoretical framework (Eddy et al., 1999). Lievens and Harris (2003) have previously reviewed the literature on IBSPs and found that few studies were grounded on a solid theoretical framework. They proposed integrating organizational justice theory (e.g., Gilliland, 1993) and organizational privacy theory (Stone & Stone, 1990) as a solid theoretical framework that can be used fruitfully in research on IBSPs.

Internet knowledge and computer anxiety. Individual differences in Internet knowledge may also affect applicant perceptions to IBSPs. For instance, applicants who lack Internet knowledge may perceive IBSPs to be less fair and in turn may have less favorable reactions toward the hiring organization. This is especially true for individuals who have limited Internet access and have higher computer anxiety, such as those with lesser

socioeconomic positions, might have negative reactions to IBSPs and might use such procedures less (Truxillo et al., 2004).

The salience of justice dimensions of IBSPs. In IBSPs, certain justice dimensions can be more salient than others. For instance, applicants may perceive some types of IBSPs as inferior in terms of interpersonal warmth. Indeed, Chapman, Uggerslev and Webster (2003) illustrated that face-to-face interviews were related to greater applicant intentions to accept a job and were perceived as more fair than online interviews (i.e., video-conferencing) and telephone interviews. On the other hand, the lack of interpersonal treatment with test administrators in certain types of IBSPs might be perceived as a great advantage in terms of consistency of treatment and administration thus assuring objectivity across applicants. Indeed, certain types of IBSPs might be perceived as having greater simulation fidelity when the procedures are closed to the job situation, which in turn can have greater perceptions of face validity and job-relatedness (e.g., Richman-Hirsch, Olson-Buchanan, & Drasgow, 2000). Considering the above discussion, it can be argued that lots of job applicants may be willing to trade the “personal touch” for faster feedback offered by IBSPs and greater fidelity (Truxillo et al., 2004). Therefore, it is important to examine perceptions procedural justice dimensions in detail across IBSPs.

Cross-Country Differences in Applicant Reactions to IBSPs

Globalization of business has led many companies to consider how to recruit and select applicants across the globe, and IBSPs have made this task easier. Yet, IBSPs have been extensively used in many Western countries for more than a decade, while in some other Eastern and Middle Eastern countries IBSPs have only recently been introduced, and thus applicants from such countries are much less familiar with IBSPs. Examining cross-country

differences is important especially between Western and Eastern applicants, where exposure to IBSPs, skills in using the Internet and computer, HR practices and cultural and contextual factors can vary considerably. Indeed, cross-country differences can occur when examined at a more nuanced level, especially when cultural diversity (e.g., uncertainty avoidance and individualism; Hofstede, 2001) and contextual factors (e.g., HR practices and privacy law) are considered between the countries (Steiner & Gilliland, 2001; Truxillo et al., 2015). For example, a study by Ryan et al. (2000) surveyed 959 organizations across 20 countries demonstrated that cultural differences in uncertainty avoidance and, to a lesser extent, power distance, explained some of the cross-country differences found in the extensiveness of using a selection procedure. They found that countries high in uncertainty avoidance conducted more interviews, used more selection procedures, and were more likely to audit their procedures. Another recent study by Ryan et al. (2009) using data from 1,199 individuals across 21 countries found that applicants high in independence, which corresponds to individualistic cultural value, tend to perceive personality tests and biodata as more job-related than situational judgment tests, possibly because those individuals forming this culture see themselves as autonomous and unique, and personality test and biodata procedures provide a means to express that uniqueness (Ryan et al., 2009). Further, Hoang, Truxillo, Erdogan, and Bauer (2012) compared applicant fairness reactions to traditional selection procedures in the US and Vietnam, where both countries differ in terms of two important cultural dimensions: power distance and individualism/collectivism. These two cultural dimensions have been found to influence several forms of organizational justice (e.g., procedural and distributive justice) and their consequences (Gelfand, Erez, & Aycan, 2007). Hoang et al. (2012) also found that some cross-country differences, such as interviews, personal contact and references, which involve human interactions, were perceived more favorably in the US, whereas personality tests, written ability tests, and work sample tests

were perceived more favorably in Vietnam; they suggested that these differences might be because American applicants (individualistic culture) were more concerned with the employer's right to obtain information, and judgment was based upon this justice dimension, while Vietnamese applicants (high power distance) preferred more objective selection procedures that do not allow for favoritism and the use of biased judgment in selection decisions, as corruption and ineffectiveness in the hiring practices are widespread in Vietnamese organizations.

As noted in Chapter 1, several studies have examined applicant reactions to different types of selection methods across several countries internationally using a well-established framework first developed by Steiner and Gilliland (1996). This methodology takes an organizational justice approach (i.e., Gilliland, 1993) to compare applicant reactions to ten popular traditional selection procedures. Overall, applicants in general prefer certain types of selection methods (e.g., interviews and work sample tests) over others (e.g., personal contacts, graphology) across countries (e.g., Anderson & Witvliet, 2008; Anderson et al., 2010; Steiner & Gilliland, 1996; Moscoso & Salgado, 2004). Anderson et al.'s meta-analysis (2010) across 17 countries found great similarity in applicant reaction to 10 traditional selection procedures, supporting reaction generalizability across those countries and methods. However, those studies have been mostly conducted in Western Countries (i.e., North America and Europe) and focused only on traditional selection methods. Therefore, one cannot draw a definite conclusion regarding reaction generalizability as opposed to situational specificity of applicant reactions internationally, especially in case of IBSPs. Indeed, one of the main challenges in IBSPs research and practice is the lack of evidence concerning whether applicant perceptions and reactions to various IBSPs are generalizable (universal) or country-situational specific, which is considered as an on-going debate among applicant reactions researchers (Truxillo et al., in press).

Moreover, the few existing studies on applicant reactions to new IBSPs have been conducted mainly in Western countries (US and Europe) with no studies conducted in many major European countries such as the UK, and no studies in any Eastern or Middle Eastern countries (e.g., Saudi Arabia) where many multinational organizations, as well as domestic organizations, are operating from and using IBSPs to assess and select job applicants. Comparing applicant reactions to new IBSPs between Eastern/Middle Eastern and Western countries can provide useful solid empirical evidence for the implantations and design of IBSPs internationally, especially for international and expatriate selection, as well as theory development and to improve our understanding to applicant reactions to IBSPs internationally.

Unfortunately, very little research has examined the cross-country differences in applicant reactions using a rigorous cultural framework, which has led to various calls for future research to develop an updated framework that uses cross-cultural research as a guide for the relationship between applicant reactions and cultural dimensions (Truxillo et al., 2015). As highlighted by Truxillo et al. (2015), *“future research that considers this model in the context of applicant reactions is likely to prove invaluable to understanding the subtle differences in applicant fairness perceptions across countries and cultures”* (p.630). Thus, differences in the country cultural value, as well as employment-privacy related policies and laws and selection practices between countries might yield great variances on how applicants perceive and react to IBSPs. In response to these calls, Study 2 (*Chapter 4*) in this thesis attempts to address this shortcoming by examining and comparing applicant privacy and fairness reactions to three types of IBSPs between Saudi and UK job applicants and assesses whether generalizability hypothesis will be supported in this context. The researcher developed an updated framework of the relationship between national cultural value (Hofstede, 1980; 1991) and procedural justice and used it to hypothesize some likely cross-

country differences in Saudi and UK applicant privacy and fairness reactions to IBSPs according to their country cultural values.

Applicant Reactions in a Promotion Context

Applicant reactions in the context of promotion are another potential fruitful area of research. Most studies in applicant reactions tend to focus only on external applicants and ignore that internal applicants also display reactions to promotion procedures. Applicant reactions to promotion may arguably have far greater influence on the organization than that of external applicants, as internal employees who are turned down for promotion are more likely to be disgruntled. Yet, they are most likely to remain members of the organization after the promotion procedure, which may result in detrimental consequences for the organization. For example, lower work motivation, job satisfaction, reduced commitment, and possibly lowered work performance and higher intentions to litigate or turnover as a result of potential injustice perceptions (Ambrose & Cropanzano, 2003; Ford et al., 2009; Truxillo et al., 2015). Indeed, a study by García-Izquierdo et al. (2012) found that organizational justice was strongly related to employee job satisfaction in a promotional setting. Thus, internal applicant reactions can have a direct impact upon hard organizational outcomes typically ignored in applicant reactions research (Ford et al., 2009; Truxillo et al., 2015; Truxillo et al., in press), such as organizational commitment, job satisfactions, LMX, work performance, and turnover. These outcomes are more proximal to promotion contexts than that of an entry-level selection (Ford et al., 2009; Truxillo et al., in press). This may explain the paucity of research looking at the impact of applicant reactions on hard organizational outcomes as most applicant reactions research has been conducted in entry-level contexts (Ford et al., 2009; Truxillo et al., 2004; Truxillo et al., 2015).

However, the few studies conducted within a promotion context show promising results. For example, in the context of academic promotions, Ambrose and Cropanzano (2003) found that procedural justice influenced organizational commitment, job satisfaction, and turnover intentions prior to and soon after allocation decisions were made; however, distributive justice influenced commitment and turnover intentions one year later. More recently, Bagdadli, Roberson, and Paoletti (2006) surveyed 156 managers and executives about their reactions to promotion decisions. They found that promotion decisions affected their organizational commitment via procedural justice perceptions. However, these few studies surveyed employees, not actual internal applicants. McCarthy et al. (2009) examined internal applicants and found that test-taking motivation was positively related to test performance, and justice perceptions were positively related to intentions to recommend the organization to others. These studies indicate that reactions of internal applicants for promotion can be critical for organizations and work-related outcomes. Yet, most studies have used cross-sectional survey design (except Ambrose & Cropanzano, 2003); thus, very little is known about whether internal applicant reactions change over time, especially after receiving the promotion decision. Timing of measurement for fairness reactions and outcomes is critical, particularly in promotional settings and is one of the most neglected, yet important topic in internal applicant reactions (Chan & Schmitt, 2004; Truxillo et al., 2015).

Thus, several researchers (e.g., Ford et al., 2009; Truxillo et al., 2004, Truxillo et al., 2015) demonstrated the potential importance of further research that examine the longitudinal effects of promotional justice perceptions of internal applicants on their job attitudes and behaviors (i.e., soft and hard organizational outcomes) using organizational justice theory (Ford et al., 2009; García-Izquierdo et al., 2012; Giumetti & Sinar, 2012; Truxillo et al., 2004; Truxillo et al., 2015; Truxillo et al., in press; Truxillo & Bauer, 2011). Gilliland's (1993) justice based model can be relevant in understanding applicant reactions to

promotions, specifically examining the effects of promotion justice perceptions on soft and hard outcomes organizational, and whether their reactions change over time as a result of promotion procedures by using a longitudinal design, which can be an invaluable addition to applicant reactions literature. Therefore, Study 3 (*Chapter 5*) of this thesis addresses these issues by providing a comprehensive model that is based upon, yet, extends and specializes earlier models of applicant reactions proposed by Gilliland (1993) and Ford et al. (2009) by adding several important yet unexamined outcomes (e.g., organizational trust, P-O fit, LMX, and job performance), testing them longitudinally in a promotion context, and assessing the changes in internal applicant reactions before and after the promotion procedure.

Methodological and Research Design Issues

Methodology and research design issues particularly related to applicant reactions research will be described according to “measurement and construct concerns”, “the importance of field research”, and “longitudinal design and effects on outcomes”. These issues will be discussed in terms of the current problems in applicant reactions literature and in terms of the design utilized in this thesis to avoid these issues.

Measurement and Construct Concerns

Early studies in applicant reactions research suffered from fragmented measurement, where many researchers have used new scales to measure the same variables, which result in serious challenges to have any direct comparisons (Truxillo & Bauer, 2011). Many studies in that period tended to examine selection fairness without a clear constructed definition of ‘selection fairness’ with specific dimensions to be measured. Only in the late 1990’s, Steiner and Gilliland (1996) developed a widely used measure of selection fairness based on

Gilliland's (1993) procedural justice rules and compared applicants' fairness reactions to ten popular selection procedures across two countries (US and France). They refined Gilliland's (1993) theoretical stance and proposed two overarching constructs constituting overall fairness of the selection process favorability and procedural justice. They sub-divided the procedural justice construct into seven dimensions and developed a scale item to measure each of these dimensions - scientific evidence-predictive validity, face validity, opportunity to perform, employer's right to obtain information, interpersonal warmth, respectful of privacy, and widely used. Since then, Steiner and Gilliland's methodology has been replicated in various countries to compare between different types of selection procedures in various countries (e.g., Anderson et al., 2012; Anderson & Witvliet, 2008; Hoang et al., 2012; Moscoso & Salgado, 2004; Phillips & Gully, 2002). Therefore, using a validated measure such as Steiner and Gilliland's (1996) scale to examine process favorability and procedural justice dimensions allows for a direct comparison between different types of selection procedures. Therefore, in this thesis Steiner and Gilliland's (1996) measure, as well as other validated scales to measure the studies' variables, are examined in each study conducted in this thesis.

The Importance of Field Research

Research into applicant reactions ranges from hypothetical selection settings (i.e., laboratory and experimental studies) using student samples, to field research examining the reactions of job applicants in actual selection situations. So far, many applicant reactions studies have used a laboratory design (e.g., Truxillo & Bauer, 2011) as experimental manipulations, i.e., assigning different selection procedures, conditions, or different treatments, since it would be difficult or even impossible to do that in a field setting due to the ethical or legal issues. Nevertheless, the ecological value of such lab studies has been

called into question (e.g., Anderson, 2003; Truxillo & Bauer, 2011) as even highly motivated participants in these hypothetical-lab settings might not react similarly to actual job applicant in a field setting. Actual job applicants might have a lot more at stake and more information and are attuned to many other factors related to the selection situation (e.g., perceptions of an employer's "brand", their own need for employment and career implications). In fact, it is unclear from meta-analytic studies (Hausknecht et al., 2004; Truxillo et al., 2009) whether the results of laboratory studies under-estimate the effects of applicant reactions or over-estimate them.

Because a rich context for being actual job applicants is lacking, and as certain hard organizational outcomes (job satisfaction and LMX) cannot be examined in a lab setting, several researchers (e.g., Hausknecht et al., 2004; Truxillo et al., 2004; Truxillo et al., 2009; Truxillo et al., 2015; Truxillo & Bauer, 2011) have called for future research to use actual job applicant samples in field settings as they offer greater ecological validity and greater generalizability to the real world (i.e., external validity), mainly because they mirror actual factors that could affect applicant perceptions. Nevertheless, field studies raise challenges in terms of requirements that baseline (pre-selection) perceptions (i.e., using a longitudinal design to measure pre and post perceptions) should be measured and statistically controlled. For those reasons, this thesis used only actual job applicant samples.

Longitudinal Study Designs and Effects on Outcomes

Earlier studies in applicant reactions have used cross-sectional designs while seeking to answer vital questions, such as the selection procedures preferred by applicants (e.g., Steiner & Gilliland, 1993). However, many researchers also suggest examining changes in applicant reactions pre- and post-selection (e.g., Chan, Schmitt, Sacco, & DeShon, 1998b; Truxillo & Bauer, 2011), and that the impact of procedural and distributive justice

perceptions on important outcomes might change over time (e.g., Ambrose & Cropanzano, 2003). Therefore, future research questions should also focus on whether the effects of justice perceptions on organizational outcomes last over time, which require using a longitudinal design. Therefore, the third study in this thesis used a longitudinal design to examine the effects of internal applicant perceptions on organizational outcomes over time, and whether the perceptions and reactions change after the promotion decision and one year later. Using longitudinal designs reduces the effects of common method variance and allows for assessing the lingering effects of selection justice perceptions. Also, longitudinal research designs along with advanced data analytic approaches, such as longitudinal structural equation modeling, allows researchers to explore the primacy effects of selection justice perceptions on organizational outcomes, applicants' justice trajectories and the explicit role of time in applicant reactions (cf. George & Jones, 2000).

Summary

Based on our review of applicant reactions literature, gaps in three main research areas in applicant reactions research were identified. This thesis covers these three main research areas and gaps and develops a framework/model for each area. In the next three chapters, three empirical field studies will be reported, addressing the three main research questions. Table 2.4 summarizes the structure of the three empirical chapters and highlights which of the field studies and research questions they address. As appearing from the literature review, research into applicant reactions to different types of IBSPs are scarce and more empirical evidence is needed in this area, which lead us to the first research question. Thus, the first field study in the next chapter aims to fill this gap in literature and address the first research question by examining the determinants and outcomes of applicant reactions to the three most common IBSPs.

Table 2.4: Overview of Empirical Chapters

Chapter	Study	Research question
Chapter 3	Study 1: Applicant Reactions to Internet-Based Selection Procedures in the UK	1. What are the determinants and outcomes of applicant reactions to the most common IBSPs?
Chapter 4	Study 2: Cross-Country Examination of Applicant Privacy and Fairness Reactions to IBSPs: Saudi Arabia and the UK	2. Are there cross-country differences between the UK and Saudi Arabia, concerning applicant privacy and fairness reactions to IBSPs? i.e., does the reactions generalizability hypothesis hold true in case of IBSPs in Saudi Arabia and the UK?
Chapter 5	Study 3: Longitudinal Assessment of Applicant Reactions in Promotion Context	3. What are the effects of promotional justice perceptions on soft and hard organizational outcomes overtime?

Chapter 3 : Applicant Reactions to Internet-Based Selection Procedures (IBSPs)

Study 1

Over the past decade, technological advances with the Internet emerging as a key medium in such developments have had a significant impact in how organizations select and assess job applicants (Konradt et al., 2013). IBSPs have had an increasing influence upon the design of personnel selection procedures (Bauer et al., 2011; Konradt et al., 2013; Oostrom et al., 2013). Compared to traditional selection procedures (e.g., paper-based applications, on-site tests, and face-to-face interviews), IBSPs (e.g., screening and selecting applicant pool using online applications, then using online tests and online interviews for later stages of selection processes) have the advantage to allow organizations to do considerable parts of the hiring processes online and also collect diagnostic employment-related information at a relatively early stage (Reynolds & Dickter, 2013; Oostrom et al., 2013). In addition, IBSPs enable organizations to process a larger pool of applicants in a faster and easier way and have also shown to be more effective in assuring objectivity in the handling of job applications (Konradt et al., 2013; Selden & Orenstein, 2011; Parry & Tyson, 2008; Viswesvaran & Ones, 2010; Viswesvaran, 2003). IBSPs have been expanded worldwide and many organizations have taken advantage of IBSPs to meet their recruitment and selection goals (Cober, Brown, Keeping & Levy, 2004). For example, many organizations have turned to requesting applicants to complete online job applications on their website (with some requiring applicants to upload their résumés/CV and covering letters) and/or use online tests (i.e., selection tests that are presented in an online format rather than a paper-and-pencil format) and online interviews (i.e., a videotaped interviews in which applicants are interviewed at a distance via Internet (e.g., Skype) as a way to size up the applicants visually before going to the expense of setting up face-to-face interviews). In the UK alone, IBSPs are considered as

one of the most popular methods for graduate recruitment and selection within the UK (Branine, 2008). Indeed, a recent report by CIPD (2015) on the UK selection practices showed that online applications via corporate websites ranked among the three most effective selection procedures for all employee groups, and an increasing number of organizations make use of online tests (2015: 24%; 2013: 22%) and online interviews (2015: 46%; 2013: 30%), while organizations that recruit from overseas are more likely to use online interviews than those who recruit nationally (2015: 71% vs. 36%; 2013: 42% vs. 30%) (p. 24).

However, and despite this growth in IBSPs' practices, empirical evidence has remained notably sparse and very little is known even now about applicant reactions to different types of IBSPs (Truxillo & Bauer, 2011; Truxillo et al., in press). As mentioned in the previous chapters, there is no research that examines and compares applicant reactions to different types of most common IBSPs simultaneously. However, as organizations typically use several IBSPs for each job applicant, it becomes imperative that researchers and practitioners understand applicant perceptions and reactions to different types of IBSPs simultaneously, what determines these perceptions, and subsequently how reactions affect the hiring organization.

The Importance of Examining Applicant Reactions to IBSPs

Studying applicant reactions to IBSPs is important for several reasons. First, previous research found that applicant reactions varied across different types of selection procedures (e.g., Anderson et al., 2010; Kluger & Rothstein, 1993; Gilliland, 1993). Meta-analytical evidence by Hausknecht et al. (2004) showed that applicant perceptions differed based on the selection/test type, which then affects the relations between applicant justice perceptions and organizational outcomes. While these results refer to traditional selection procedures, such differences might be more salient when changing the medium of the selection procedure (i.e.,

from paper-and-pencil to Internet-based settings) (Reynolds & Dickter, 2013). Straus et al. (2001) found that applicants had less favorable reactions in video-conference interviews performed via the Internet when compared with face-to-face interviews. On the other hand, Salgado and Moscoso (2003) compared applicant reactions to Internet-based personality tests with a paper-and-pencil version. They found that applicants perceived the Internet-based version as less intimidating and more favorable and comfortable than the paper-and-pencil version. While the first study showed that applicants have less favorable reactions to online interviews compared to face-to-face interviews, the second study showed that applicants have more favorable reactions to online tests than to paper-and pencil versions of the test. These findings provide equivocal evidence that changing the medium through which the selection procedures are conducted (from paper-and-pencil to online) will have an effect on applicant perceptions and reactions to different selection procedures.

Second, IBSPs have brought new determinants of applicant reactions that are unique in these Internet-based settings. As most IBSPs reduce or even discard the role of the human resource administrator, applicants may perceive greater security concerns in conducting IBSPs rather than in a physical environment as well as greater privacy and confidentiality concerns when submitting their information via IBSPs (Harris et al., 2003; Lievens & Harris, 2003). In addition, having the appropriate information technology (IT) tools to submit job applications or perform online tests or online interviews, differences in knowledge about the Internet and experience in using IT tools may influence applicant reactions to IBSPs (Sylva & Mol, 2009; Wiechmann & Ryan, 2003). Furthermore, computer anxiety is likely to affect applicant reactions to IBSPs, in which applicants can be worried about losing control over their work or looking stupid during the IBSPs (Giumetti & Sinar, 2012).

Third, how applicants perceived IBSPs as being fair can have a significant influence on organizational potency (i.e., diminishing applicants' attraction and trust in the organization

or their P-O fit perceptions within the organization). In turn, this can influence the applicants to terminate a selection procedure and apply to competitor organizations (Dineen, Noe, & Ash, 2002; Reynolds & Dickter, 2013). Although employment law also applies to how these new IBSPs are applied in organizations, this is not very well known. Thus, the litigation risks for organizations associated with malpractice in IBSPs are higher than the traditional selection methods (Reynolds & Dickter, 2013). Therefore, applicant justice perceptions of IBSPs may affect their organizational trust, P-O fit, organizational attractiveness, and litigation intentions.

Study Aims and Objectives

Taking into account these arguments, the aim of this study is to contribute to applicant reactions literature in three main ways. First, this study examines and compares applicant reactions to three different types of IBSPs: online applications, online tests, and online interviews. To the best of the researcher's knowledge, this is the first study to examine and compare applicant reactions to these different types of IBSPs that are becoming increasingly common. Second, this study adds to the growing body of applicant reactions to high-tech selection practices (e.g., Bauer et al., 2006; Konradt et al., 2013) by delineating and testing determinants that are unique to the context of IBSPs specifically (i.e., technology-related factors), including privacy concerns, Internet knowledge, and computer anxiety. Third, trust in organizations and P-O fit perceptions are important organizational outcomes as they have been found to have a critical impact on organizations, such as organizational commitment, (e.g., Dirks & Ferrin, 2001) and organizational performance (Costa et al., in press; Davis, Schoorman, Mayer & Tan, 2000; Dirks, 2000). However, the impact of procedural justice on organizational trust and P-O fit has not been assessed in an applicant reactions context. Therefore, we address this critical shortcoming by assessing the direct effect of applicants'

procedural justice perceptions on organizational trust and P-O fit, along with organizational attractiveness and litigation intentions in the context of IBSPs.

Research Framework and Hypotheses Development

Gilliland's (1993) applicant reactions model has pioneered this line of research for more than two decades (e.g., Bauer et al., 1998; Bauer et al., 2006; Hausknecht et al., 2004; Konradt et al., 2013; Konradt et al., 2015; Ryan & Ployhart, 2000). Further research has resulted in updated models building upon Gilliland's (1993) work. Gilliland's model was extended by adding more determinants and outcomes associated with reactions to selection procedures (e.g., Hausknecht et al., 2004; Ryan & Ployhart, 2000).

However, with the emergence of the Internet in selection practices, technology-related factors can be possible determinants to consider while studying applicant reactions to IBSPs (Truxillo & Bauer, 2011; Truxillo et al., in press). In the context of online screening, Bauer and colleagues (2006) presented an updated model of applicant reactions to online screening and added information to privacy concerns as an antecedent of procedural justice of online screening. Privacy concerns showed to have a negative effect on procedural justice of online screening procedures. However, privacy concerns and justice perceptions were only assessed in terms of overall perceptions in general without measuring the complex construct (i.e., dimensions) of privacy perceptions and procedural justice in detail. Therefore, the effects of privacy concerns on procedural justice of the different types of IBSPs have not been examined simultaneously along with other technology-related factors. Furthermore, the direct effects of procedural justice of IBSPs on important organizational outcomes, such as trust in organizations and P-O fit perceptions as well as litigation intentions and attractions toward organizations using IBSPs, have not yet been empirically tested.

This study develops a conceptual model that delineates new technology-related determinants of applicant reactions to IBSPs and their effect on important under-examined organizational outcomes and tests it among three types of IBSPs: online applications, online tests, and online interviews. This model integrates theories - privacy theory (Stone & Stone, 1990) and organizational justice theory (Gilliland, 1993) - and research and extends previous applicant reactions models (e.g., Anderson, 2011; Gilliland, 1993; Ryan & Ployhart, 2000; Hausknecht et al., 2004; Bauer et al., 2006) to include several new factors in the new context of IBSPs. The full model is presented in Figure 3.1. This model posits that applicant's privacy concerns, knowledge about the Internet, and computer anxiety will have a direct effect on procedural justice perceptions across three IBSPs. Perceptions of procedural justice of each IBSP will in turn be related to applicant reactions, such as trust in the organization, person-organization fit perceptions, attraction toward the organization, and litigation intentions. Finally, applicant reactions to online interviews will be compared to reactions to online applications and online tests. The next section outlines each of these possibilities.

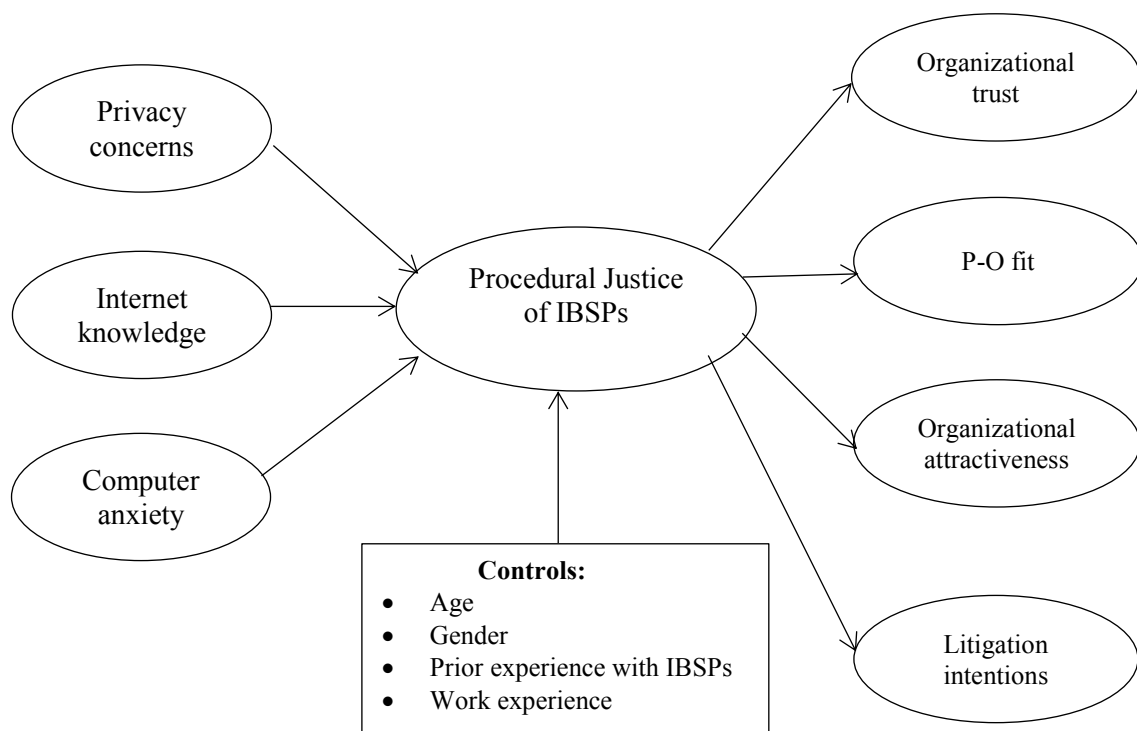


Figure 3.1: Conceptual Model of Applicant Reactions to IBSP, Based upon Gilliland (1993), Ryan and Ployhart (2000), Hausknecht et al. (2004), Bauer et al. (2006), and Anderson (2011).

Determinants of Procedural Justice Perceptions of IBSPs

Information privacy concerns. Information privacy can be defined as “perceived control over the conditions of release, use, retention, and disposal of personal data” (Cho & LaRose, 1999, p. 425). Furthermore, many researchers have called for future research to consider applicant privacy perceptions in new technology/Internet-related selection contexts (Black et al., 2015; Roth, Bobko, Van Iddekinge, & Thatcher, in press; Truxillo et al., in press; Harris et al., 2003; Lievens & Harris, 2003). The privacy literature has distinguished several dimensions of privacy (Cho & La Rosa, 1999; Lee & LaRose, 1994; Stone & Stone, 1990). Cho and La Rosa (1999) and Lee and LaRose (1994) have distinguished between “a) ‘*solitude, or physical privacy*’, the state of privacy in which persons are free from unwanted intrusion or observation, b) ‘*anonymity, or informational privacy*’, which is the desire to have control over the conditions under which personal data are released, c) ‘*reserve, or psychological privacy*’, which refers to the control over release or retention of personal information to guard one’s cognitions and affects, and d) ‘*intimacy, or interactional privacy*’, which is relevant to relationships in social units as it preserves meaningful communication between individuals and among group members” (Cho & LaRose, 1999; p. 422). The issue of privacy has been examined before the diffusion of Internet use (Stone & Stone, 1990).

The Internet has revolutionized the computer and communications world and organizational practices like nothing before, and concerns over information privacy have reached an all-time high (Bauer et al., 2006; Black et al., 2015), as one of the most important ethical issues of the information age. Indeed, online information privacy concerns are at the center of an ongoing debate and interest of business leaders, privacy activists, government officials and private organizations (e.g., Culnan & Bies, 2003; Gurau, Ranchhod, & Gauzente, 2003).

In the context of IBSPs, information privacy concerns are possibly the most related issue in applicant perceptions and reactions (Bauer et al., 2006). However, limited empirical research has been conducted on privacy and fairness perceptions in an online context. For example, Alge (2001) examined the impact of computer surveillance “i.e., *electronic performance monitoring and control systems ... that enable employers to observe the activities of their employees*” on procedural justice and privacy perceptions using a sample of workers performing computer/web-based tasks and found that invasion of privacy was negatively associated with procedural justice perceptions (p.797). In an online selection context, Bauer and colleagues (2006) have examined applicant reactions to online screening and found that privacy concerns had a direct negative effect on the overall perceptions of procedural justice. Also, Harris and colleagues (2003) examined information privacy perceptions of Internet-based selection systems in hypothetical scenarios among US and Belgian students. They found that privacy concerns might influence reluctance to use Internet-based selection system. More recently, Stoughton, Thompson, and Meade (2015) found that using applicants’ information on social media websites as a screening tool caused high invasion of privacy perceptions leading to lower procedural justice perceptions, in turn, resulting in higher litigation intentions and lower attractions toward the organization among job applicants. Thus, we hypothesize that:

Hypothesis 1: Information privacy concerns will be negatively related to procedural justice of (a) online applications, (b) online tests, and (c) online interviews.

Knowledge about the Internet. Knowledge about the Internet can be particularly relevant since greater knowledge and experience with the Internet could lead to greater confidence in dealing with IBSPs, which may result in more favorable reactions toward IBSPs. Indeed, a study by Harris et al. (2003) found that greater Internet knowledge of the

US respondents was associated with less resistance to submit employment-related data via the Internet, and less concerns that it would fall into the wrong hands. Moreover, several researchers suggested that future studies should focus on the direct effects of Internet knowledge on applicant reactions to various types of IBSPs (Bauer et al., 2006, Lievens & Harris, 2003). Thus, we hypothesize that:

Hypothesis 2: Internet knowledge will be positively related to procedural justice of (a) online applications, (b) online tests, and (c) online interviews.

Computer anxiety. As IBSPs are operated through the computer, applicant's computer anxiety may influence their reactions to IBSPs (Oostrom et al., 2010). Computer anxiety is an affective response such that being concerned about losing control over their work or making mistakes during computerized tasks, which could bring out anxiety and fear in some individuals (Abdelhamid, 2002; Bloom & Hautaluoma, 1990; Oostrom et al., 2010; Wiechmann & Ryan, 2003), which might be the same case in the Internet-based selection settings. Indeed, Wiechmann and Ryan (2003) found that computer anxiety provide unique variance in predicting perceptions of computerized in-basket testing. Also, Oostrom et al. (2010) showed that computer anxiety was negatively correlated with face validity of the computerized multimedia situational judgment test. Thus, we hypothesize that:

Hypothesis 3: Computer anxiety will be negatively related to procedural justice of (a) online applications, (b) online tests, and (c) online interviews.

Outcomes of Procedural Justice Perceptions of IBSPs

Organizational trust. Trust in organizations results in critical benefits for subsequent organizational outcomes, such as organizational citizenship behavior, organizational commitment (Costa et al., in press), as well as team and organizational performance (Davis et

al., 2000; Dirks, 2000). Previous studies found that organizations that established trust could reduce the negative effects of future unfavorable outcomes (Robinson, 1996). In the organizational justice literature, a number of empirical studies showed trust as an outcome of organizational justice (e.g., Aryee, Budhwar, & Chen, 2002; Brockner & Siegel, 1996; Lewicki, Wiethoff, & Tomlinson, 2005). In earlier studies, procedural justice was positively related to trust in supervisors (Folger & Konovsky, 1989), trust in management (Alexander & Ruderman, 1987), and trust in organization (Aryee et al., 2002). Also, meta-analytic reviews in organizational justice literature have shown a positive relationship between procedural justice and trust in organizations (Colquitt et al., 2013).

Individuals use their perceptions of justice to direct their investment in relationships (Lind, 2001). Their trust in other individuals and organizations is thought to occur as a result of perceptions of just treatment (Lind, 2001). In their review, Lewicki et al. (2005) demonstrated that the majority of studies examining the relation between organizational justice and trust come under this category. Justice perceptions, in turn, have been linked to applicant reactions (Gilliland, 1993). Thus, it is expected to be a remarkable outcome of applicant justice perceptions to IBSPs. However, to date very little attention has been given to the effects of justice perceptions on organizational trust in the applicant reactions/selection context. Recently, Celani, Deutsch-Salamon, and Singh (2008) suggested that applicant justice perceptions would have an impact on subsequent trust in organizations and thus have called future research to examine this relationship. Thus, we predict that procedural justice of IBSPs will have a positive effect on organizational trust.

Person-Organization fit. Researchers in the USA and Europe have strongly argued that the assessment of applicants' future fit within an organization based on perceptions of P-O fit should be considered in any selection process (Anderson et al., 2001; Cooper-Thomas,

van Vianen, & Anderson, 2004; Ryan & Ployhart, 2000). Indeed, empirical studies have shown that P-O fit perceptions were an influential organizational outcome as they were associated with other vital organizational outcomes. In non-selection contexts, meta-analytical evidence demonstrated that P-O fit was positively related to employees' organizational attractiveness, recommendation intentions, organizational commitment, and job satisfaction (e.g., meta-analysis: Kristof-Brown, Zimmerman, & Johnson, 2005; Verquer, Beehr, & Wagner, 2003; empirical studies: Andrews, Baker, & Hunt, 2011; Cooper-Thomas et al., 2004; Valentine, Godkin, & Lucero, 2002). In selection contexts, previous research has shown that applicant's P-O fit perceptions influenced their job choice intentions and later, work attitudes for those being hired (Cable & Judge, 1996). Also, P-O fit was positively related to organizational attraction in a web-based selection context (Braddy et al., 2009; Dineen et al., 2002). As these organizational outcomes were consistently related to procedural justice in applicant reactions research (e.g., Bauer et al., 2006), it seems reasonable to suggest that P-O fit perceptions will also act as an outcome of procedural justice of IBSPs. In a non-selection context, a study by Michel, Stegmaier, Meiser, and Sonntag (2009) found significant positive relationships between procedural justice and P-O fit in the context of change processes in higher education. Thus, we can assume that if the applicants perceive the selection procedure positively and as a fair process, this may increase their P-O fit perceptions toward the hiring organization.

Organizational attractiveness. Several studies on applicant reactions have demonstrated that procedural justice has an impact on individual perceptions toward organizations as potential employers (Anderson et al., 2012; Bauer et al., 2001), which can in turn influence organizations' ability to attract and retain qualified applicants. Also, utilizing selection procedures that decrease organizational attractiveness can cause major losses for

organizations as it can ‘turn off’ qualified applicants or make them reject the job offer because of the selection method and what they have gone through during the hiring process (Murphy, 1986; Murphy & Davidshofer, 1988). Thus, understanding how applicants’ justice perceptions of IBSPs affect organizational attraction is very important since this will consequently be associated with applicants’ willingness to accept any following job offer by the organization (Bauer et al., 2001; Hausknecht et al., 2004). A critical analysis of existing literature on applicant reactions showed clearly that procedural justice in relation to traditional selection methods have been positively related to organizational attractiveness (e.g., Ababneh et al., 2014; Anderson et al., 2012; Bauer et al., 2001; Bauer et al., 2006; Carless, 2006; Macan et al., 1994; Maertz et al., 2004; Reeve & Schultz, 2004; Schreurs et al., 2010; Walsh et al., 2010) and the effects last over time (Bauer et al., 1998). In their meta-analysis, Hausknecht et al. (2004) found that perceptions of procedural justice were positively associated with organizational attractiveness. In an online screening context, Bauer and colleagues (2006) found that applicants with positive procedural justice perceptions had higher organizational attraction in an online screening context. Thus, we replicate these findings and hypothesize that procedural justice of IBSPs will have a direct positive effect on organizational attractiveness.

Litigation intentions. Finally, feelings of justice violations may lead to negative perceptions about actions (Goldman, 2001). The legal ramifications of applicant reactions might be the most important reasons that many organizations are interested in applicant reactions to selection procedures. Indeed, Gilliland (1993) proposed legal battles as an outcome of perceived fairness. In addition, Anderson (2011) proposed a rich conceptual model describing the factors that might affect applicant propensity of complaint and case initiation in employee selection. He suggested that perceived procedural characteristic,

including procedural justice violation, can affect applicant reactions to selection methods, including their intentions to complain and pursue a legal case.

However, few empirical studies found that fairness reactions were negatively related to litigation intentions (e.g., Bauer et al., 2001; Geenen et al., 2012b). In lab settings (using student samples), previous research showed that process fairness (Ababneh et al., 2014) and procedural justice (Bauer et al., 2001) were negatively related to litigation intentions. However, most of these studies were in laboratory settings, which might not have captured the complex set of factors that influence litigation intentions in actual selection settings (Truxillo & Bauer, 2011). Based on the above evidence, we hypothesize that:

Hypothesis 4: Applicants with positive perceptions of procedural justice of (a) online applications, (b) online tests, and (c) online interviews will have more favorable reactions toward the organizations. Specifically, they will have higher organizational trust, P-O fit, and organizational attractiveness and lower litigation intentions.

The Role of Type of IBSPs

Previous applicant reactions research has illustrated that different types of selection procedures affect applicant perceptions and reactions differently (Gilliland, 1993; Rolland & Steiner, 2007). Most favorable and fair selection procedures have been selection interviews. Anderson and colleagues' (2010) meta-analysis found that traditional interviews were the most favorable and fair selection process across 17 countries internationally, followed by résumés, references, and personality and cognitive tests. Given that the most favorable reactions were found for interviews, this study predicts that online interviews will receive more favorable reactions than online applications and online tests. Thus, we propose that:

Hypothesis 5: Applicants will have more favorable reactions to online interviews than to online applications and online tests.

Methods

Sample and Procedures

The data was collected from job applicants in the UK applying for different types of jobs (e.g., administration, HR, customer services, marketing, engineering, teaching, accounting, finance, and healthcare) in job center settings. A total of 800 questionnaires were distributed among job applicants, of which 506 responded to the survey in the UK. The total response rate was 63.25%. Participants were notified that their participation was voluntary, assured of confidentiality of their responses and that the data would be held securely and be used for the research purposes only. All participants responded to the survey voluntarily and on an anonymous basis.

Of this sample, 262 (51.8%) were male, with a mean age of 22.91 years ($SD = 3.84$). The educational level comprised of 29 (5.7%) with A-level/Diploma, 315 (62.3%) with a Bachelor degree, 150 (29.6%) with a Master degree, and 12 (2.4%) with a PhD degree. In terms of employment and work experience at the time of this the survey, 42.7% claimed to be employed, with an average work experience of 1.36 ($SD = 2.04$). Regarding ethnicity, 146 (28.9%) were white, 35 (6.9%) were Mixed/Multiple ethnic group, 211 (41.7%) Asian/Asian British, 76 (15%) were Black/African/Caribbean British, 38 (7.5%) were form other ethnic group.

Measures

Privacy concerns. This construct was measured with a seven-item scale by Harris et al. (2003). The scale focuses on perceptions of privacy in the context of the Internet-based selection system (e.g., “Employment-related information that I submit over the Internet via IBSPs may fall into the wrong hands of people I would rather not have see it”). The items were answered using a seven-point Likert scale ranging from 1 (completely disagree) to 7

(completely agree). After performing confirmatory factor analysis (CFA), item 7 was deleted and Cronbach's alpha for the six-item scale was .71.

Knowledge about the Internet. A fourteen-item scale adopted from Potosky (2007) was used to measure Internet knowledge (e.g., "I can usually fix any problems I encounter when using the Internet"). Subjects were asked to indicate their agreement using a five-point Likert type scale ranging from 1 (strongly disagree) to 5 (strongly agree). The Cronbach's alpha was .90.

Computer anxiety. This construct was measured using a five-item scale adopted from Oostrom et al. (2010) in a five-point Likert type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Cronbach's alpha in the present study was .88.

Procedural justice. Procedural justice was measured with a seven-item scale for each IBSPs developed by Steiner and Gilliland (1996). The scale measures seven procedural justice dimensions: scientific evidence (predictive validity), employers' right to obtain information, interpersonal warmth, logical/face validity, widely used, and respectful of privacy. The original wording "method" was replaced by "online applications", "online tests" and "online interviews" (e.g., "Employers have the right to obtain information from applicants by using" online applications). Participants responded to these items using a seven-point Likert-type scale ranging from 1 (totally disagree) to 7 (totally agree) or procedural justice dimensions. Cronbach's alpha was .75 for online applications, .74 for online tests, and .77 for online interviews.

Participants were asked to indicate their perceptions of the organization they were applying for using IBSPs in relation to the following outcomes using a five-point Likert type scale ranging from 1 (strongly disagree) to 5 (strongly agree); (See appendix A for the scales).

Organizational trust. Organizational trust was measured using a seven-item scale by Robinson (1996) (e.g., “I believe this organization has high integrity”). Cronbach’s alpha in the present study was .91.

Person-organization fit. P-O fit was measured with a two-item scale from Braddy et al. (2009) (e.g., “This organization’s values reflect my own values”). Cronbach’s alpha was .82.

Organizational attractiveness. A five-item scale developed by Highhouse, Lievens, and Sinar (2003) was used to measure organizational attractiveness (e.g., “This organization is attractive to me as a place for employment”). Cronbach’s alpha was .89.

Litigation intentions. This construct was measured with a four-item scale from Bauer et al. (2001) (e.g., “I think applicants might sue an organization that used Internet-based selection procedure”). Cronbach’s alpha was .88.

Control variables. We also acknowledge the potential roles of other factors that could influence applicant reactions. We gathered information about age, gender, educational level, ethnicity, prior experience with the IBSPs, and working experience. Age, gender, prior experience with the IBSPs, and working experience were significantly correlated with some of our study constructs, except for ethnicity. Therefore, they were included - except ethnicity as no effect of ethnicity was found on our variables - as potential control variables. Table 3.1 shows the means, standard deviations, and correlation matrix for all the study variables.

Analysis Strategy

The normality of these measured variables were assessed by using the following criteria: (a) mean and median similar, (b) skewness and kurtosis values between -1.96 and +1.96, and (c) shape of histogram normal probability plot (curve) (Hair, Black, Babin, &

Anderson, 2010), and all the variables met these criteria, concluding that the data were normally distributed.

Data were analyzed using SPSS's AMOS version 21, a maximum likelihood-based structural equation modelling (SEM) software. Specifically, we utilized AMOS because it has the ability to test a series of separate multiple independent and dependent relations between variables simultaneously with measurement error at the item level extracted from the structural parameter estimates between these multiple variables. AMOS estimated both the measurement and structural models using the full information maximum likelihood estimator (Hung, Chang, & Kuo, 2013).

A two-stage process for SEM analyses recommended by Anderson and Gerbing (1988) was utilized. The first stage included testing the measurement model for each IBSP (e.g., online applications, online tests, and online interviews models) to ensure unidimensionality of the measures, in which all indicator variables loaded on their respective latent variables and all latent variables were allowed to correlate with each other. The three measurement models were also tested for composite reliability, convergent and discriminant validity, and common method bias. The second stage consisted of testing the structural model (the path) for each of IBSP. The fit statistics were utilized to assess the goodness-of-fit for both measurement and structural models, including the Chi-square (χ^2) statistics, Chi square/degree of freedom (CMIN/DF), the Tucker-Lewis Index (TLI), the Comparative Fit Index (CFI), and the root mean square error of approximation (RMSEA) were used to test the fit of the models. Conventionally (e.g., Hair et al., 2010), CMIN/DF less than .3 is considered acceptable and any goodness-of-fit index (TLI and CFI) less than .90 is an indication of unacceptable fit, as is any RMSEA larger than .08.

Convergent validity of the three measurement models was assessed by: (1) the significance (p value <0.001) and the loading of each observed indicators on its latent

construct, with a standardized loading estimate of .50 for the loading, (2) the construct composite reliability of .70 or higher (as recommended by the social science research), and (3) the average variance extracted (AVE) of .50 or higher as a good rule of thumb to indicate a good convergent validity (Anderson & Gerbing, 1988; Hair et al., 2010).

Discriminate validity was assessed in two ways: (1) indicators load more highly on their theoretical construct than on the other construct (i.e., none of the indicators load more highly on another construct and loading should be higher than cross-loading), and (2) the square root of the AVE are larger than the inter-construct correlations (Chin, 1998; Fornell, & Larcker, 1981).

Finally, multicollinearity effects were assessed by using the variance inflation factor (VIF). Each value of VIF indicators lower than 3 indicates that there is no threat of multicollinearity (Hair, Ringle, & Sarstedt, 2011). Note that the error terms of the four organizational outcomes were allowed to correlate with each other because different reactions might share the antecedents, and this technique has been suggested and used in previous applicant reactions research (See also Ababneh et al., 2014; Bauer et al., 2006).

Since this study is cross-sectional in nature, i.e., predictor and criterion variables were measured using applicants' perceptions, we examined the presence of common method variance (CMV) using two methods. First, Harmon's one-factor test was applied in SPSS to test common method bias. If CMV is a serious issue, a factor analysis would generate a single factor account for most of the variance (MacKenzie, Podsakoff, & Jarvis, 2005; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Second, common latent factor method (CLF) was included in each measurement model of IBSPs to capture the common variance among all observed variables in the models, which partials out the potential of CMV. Then, we compared the standardized regression weights from the CLF model for each IBSPs to the

standardized regression weights of the measurement model for each IBSPs without the CLF and if there are no large differences (greater than 0.2), then CMV is not an issue.

Then, to test hypothesis 5, two tests were used: (1) paired sample *t*-test to compare the mean differences in procedural justice perceptions between IBSPs as the data collected from each participant of all procedural justice perceptions of IBSPs simultaneously, and Cohen's *d* to examine effect size differences (*d*-values are indicative of borderline effect-size differences between the three IBSPs), where effect sizes of about .20 in magnitude are small, around .50 are moderate, and .80 are large (Cohen, 1988), and (2) comparing the fit indices (Δ CFI) to tests for structural model invariance between IBSPs' models, where a value of Δ CFI smaller than or equal to .01 indicates invariance (Byrne, 2010; Cheung & Rensvold, 2002).

Table 3.1: Means, Standard Deviations, and Inter-Correlations Among Study Variables

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Gender	1.48	.50	-															
2. Age	22.91	3.84	-.07	-														
3. Working experience	1.36	2.04	-.06	.53***	-													
4. Prior experience -online application	1.20	.40	.01	-.10*	-.06	-												
5. Prior experience - online tests	1.61	.49	.00	.01	.04	.38**	-											
6. Prior experience - online interviews	1.86	.35	.01	-.08	.04	.11*	.27**	-										
7. Privacy concerns	4.77	.94	.04	-.10*	-.09*	-.07	.09*	.03	(.71)									
8. Internet Knowledge	3.72	.80	-.22**	.02	.07	-.01	-.04	.02	-.00	(.90)								
9. Computer Anxiety	1.90	.80	.08	.00	-.01	.00	.07	-.00	.01	-.47**	(.88)							
10. PJ Online applications	4.20	.90	-.03	.13**	.02	-.08	-.14**	-.09*	-.25***	.27***	-.20***	(.75)						
11. PJ online tests	4.19	.90	-.03	.09*	-.02	-.07	-.15**	-.14**	-.18***	.25**	-.15**	.72***	(.74)					
12. PJ online interviews	4.07	.96	-.08	.08	-.05	-.07	-.10*	-.13*	-.22***	.21***	-.08	.56***	.59***	(.77)				
13. Organizational trust	3.30	.62	-.03	.20***	.12*	-.02	-.09*	-.05	-.18***	.29***	-.20***	.48***	.37***	.31***	(.91)			
14. P-O fit	3.14	.75	-.01	.22***	.08	-.04	-.10*	-.06	-.15**	.22***	-.10*	.42***	.34***	.28***	.59***	(.82)		
15. Organizational attractiveness	3.46	.69	-.04	.19***	.09	-.06	-.18***	-.08	-.17***	.27***	-.19***	.44***	.37***	.38***	.56***	.51***	(.84)	
16. Litigation intentions	2.51	.78	.02	-.09	-.06	.06	.14**	.07	.11**	-.12**	.25***	-.27***	-.26***	-.27***	-.26***	-.10**	-.26***	(.88)

Note: * $p < .05$, ** $p < .01$, *** $p < .001$

Results

Measurement Models

Confirmatory factor analysis (CFA) was conducted to test the adequacy of the measurement model for each IBSP by assessing the unidimensionality, convergent validity, discriminant validity, and common method bias (Hair et al., 2010). All the items were used as indicators in an eight-factor CFA model for each IBSP. Closer examination revealed that one item from privacy concerns measured with factor loading less than .50 for each IBSP model. This item was removed, which resulted in a six-item measure for privacy concerns. The eight factor model was tested again after deleting the items and resulted in a satisfactory and better model fit for each IBSP ($\chi^2 = 2237.26$; $df = 1295$; $p < 0.001$; $\chi^2/df = 1.73$; TLI = .919; CFI = .927; RMSEA = 0.038 for online application; $\chi^2 = 2216.25$; $df = 1295$; $p < 0.001$; $\chi^2/df = 1.71$; TLI = 0.921; CFI = .928; RMSEA = 0.038 for online tests; $\chi^2 = 2276.76$; $df = 1295$; $p < 0.001$; $\chi^2/df = 1.76$; TLI = .917; CFI = .925; RMSEA = 0.039 for online interviews).

Convergent and discriminate validity. The results of the CFA showed that all the loading were significant (p value < 0.001), with almost all loading above the threshold of .50. Therefore, strong evidence demonstrates satisfactory convergent validity for each CFA models of each IBSP. In addition, the values of Cronbach's Alpha (α) ranged from .71 to .91, and construct composite reliability (CR) of all the constructs exceed the recommended value of 0.70 for social science research (Hair et al, 2010, p.125), demonstrating a good internal consistency of each composite construct. Also, an average variance extract (AVE) measure was computed for each latent construct for each IBSPs measurement model. All constructs demonstrated adequate convergent validity for the latent constructs in each IBSPs measurement model.

With regard to discriminant validity, the square roots of AVE for each construct were higher than their inter-construct correlations for each IBSP model, which satisfied the condition of discriminant validity. With regard to the multicollinearity test, all of the indicators' of VIF values were below 3, indicating no threat of multicollinearity. The results suggest the unidimensionality, reliability, convergent, and discriminant validity of the measures for each IBSP (See Appendix B for the results of these tests).

Common method bias. Harmon's one-factor test showed that the first extracted factor explained about 20.89%, 20.21% and 19.99% of the total variance for online applications, online tests, and online interviews models respectively. Thus, no factor was found to account for the majority of the covariance in the variables, suggesting that common method bias is an unlikely concern in the data. Second, we compared the standardized regression weights from the CLF model for each IBSPs to the standardized regression weights of the measurement model for each IBSPs without the CLF and found no large differences (greater than 0.2), confirming that CMV is not an issue in this study.

Therefore, it can be concluded that the measurement model for each IBSPs fitted the data well and are unidimensional.

Structural Models and Hypotheses Testing

The fit indices of the structural models provide acceptable fit for the structural models of online applications ($\chi^2 = 2294.87$; $df = 1323$; $p < 0.001$; $\chi^2/df = 1.74$; TLI = .919; CFI = .925; RMSEA = 0.038), online tests ($\chi^2 = 2317.80$; $df = 1323$; $p < 0.001$; $\chi^2/df = 1.74$; TLI = .916; CFI = .923; RMSEA = 0.039), and online interviews ($\chi^2 = 2384.70$; $df = 1323$; $p < 0.001$; $\chi^2/df = 1.80$; TLI = .919; CFI = .913; RMSEA = 0.04). Since the models showed

satisfactory fit indices, the path coefficients of the three structural models can be assessed to test our hypotheses.

Determinants of procedural justice of IBSPs. The path-coefficient results for each IBSP model are shown in Figures 3.2, 3.3, and 3.4. With regard to the determinants of procedural justice to IBSPs, hypothesis 1a-c predicted a negative relationship between privacy concerns and procedural justice of IBSPs. The results showed that privacy concerns were negatively related to procedural justice of online applications ($\beta = -.34$), online tests ($\beta = -.22$), and online interviews ($\beta = -.24$) all at $p < .001$. Therefore, hypothesis 1a-c was fully supported. As suggested in hypothesis 2a-c, knowledge about the Internet held a positive relationship to procedural justice for online applications, online tests and online interviews ($\beta = .38$, $\beta = .34$, and $\beta = .31$, $p < .001$, respectively). Therefore hypothesis 2a-c was fully supported. In relation to computer anxiety, our results showed that computer anxiety was not related to procedural justice of any of IBSPs, and thus hypothesis 3a-c was not supported.

Outcomes of procedural justice of IBSPs. Regarding the outcomes of procedural justice, the results showed that procedural justice was positively related to organizational trust ($\beta = .62$ (online applications), $\beta = .49$ (online tests), and $\beta = .38$ (online interviews), $p < .001$), P-O fit ($\beta = .58$ (online applications), $\beta = .48$ (online tests), and $\beta = .39$ (online interviews), $p < .001$), organizational attractiveness ($\beta = .56$ (online applications), $\beta = .48$ (online tests), and $\beta = .44$ (online interviews), $p < .001$). Procedural justice was also negatively related to litigation intentions ($\beta = -.30$ (online applications), $\beta = -.30$ (online tests), and $\beta = -.26$ (online interviews), $p < .001$). Thus, hypothesis 4a-c, was fully supported.

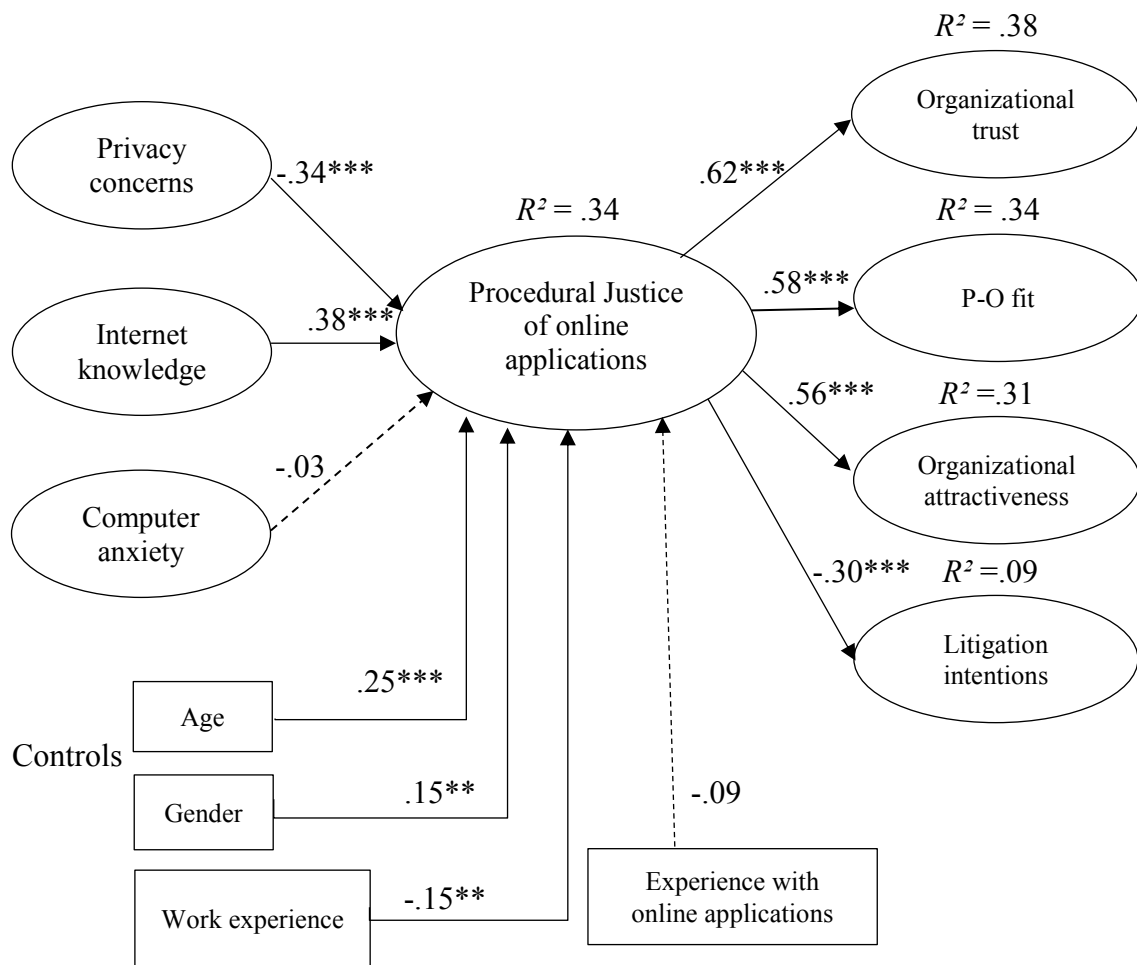


Figure 3.2: Results of SEM Analyses for Online Applications Model

Footnote: * $p < .05$, ** $p < .01$, *** $p < .001$.

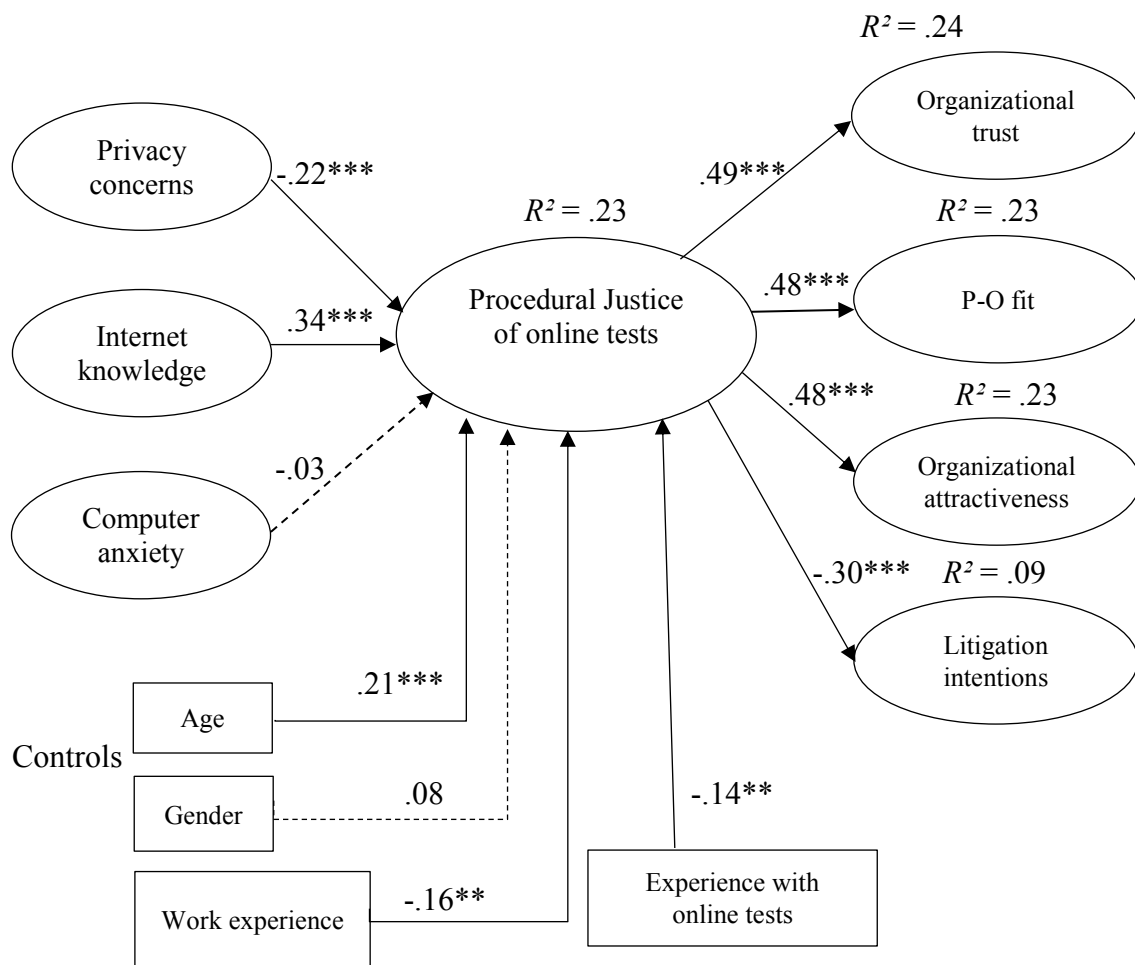


Figure 3.3: Results of SEM Analyses for Online Tests Model

Footnote: * $p < .05$, ** $p < .01$, *** $p < .001$.

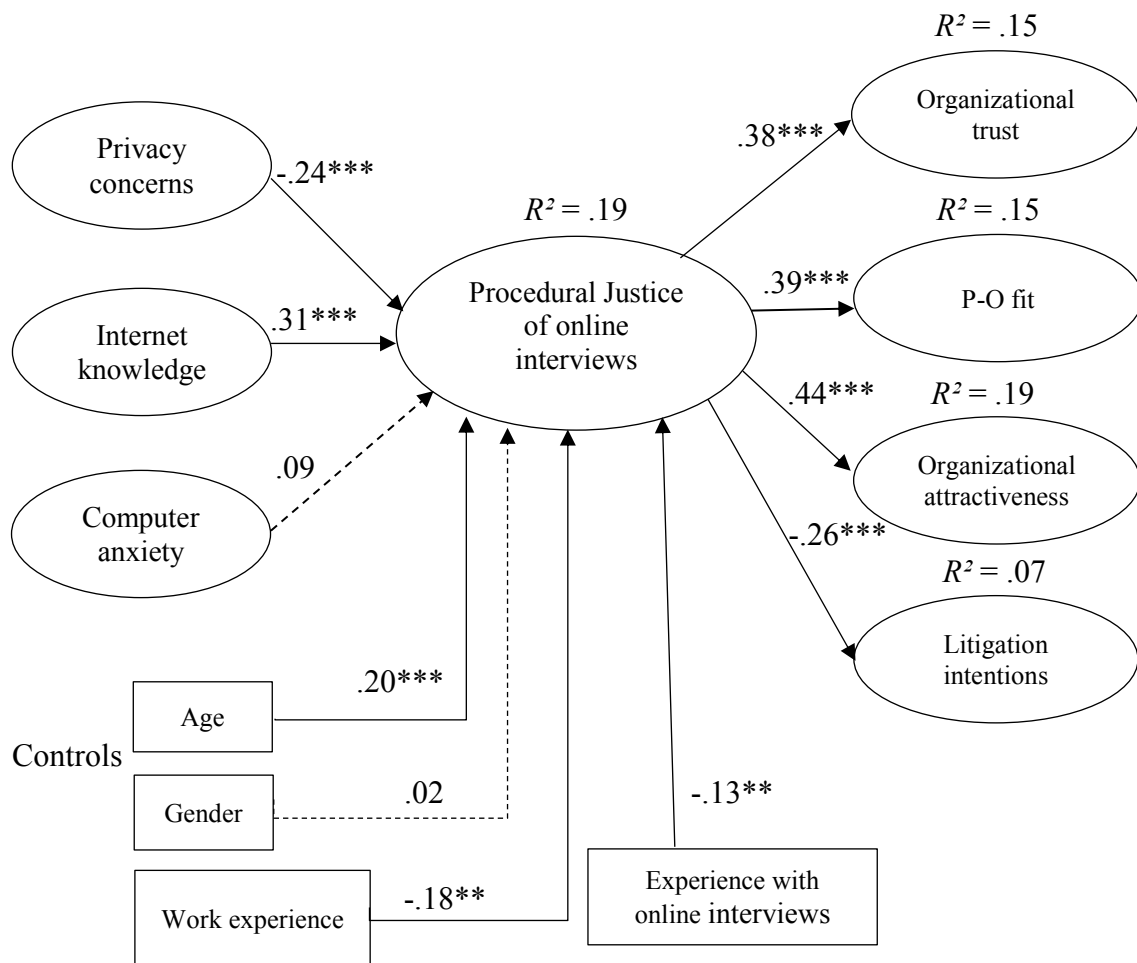


Figure 3.4: Results of SEM Analyses for Online Interviews Model

Footnote: * $p < .05$, ** $p < .01$, *** $p < .001$.

Comparing the procedural justice perceptions between the IBSPs. The results of paired samples *t*-test showed significant mean differences in which procedural justice of online applications was higher than procedural justice of online interviews ($t = 3.43, p < .01, d = .14$), and procedural justice of online tests was higher than procedural justice of online interviews ($t = 3.14, p < .01, d = .13$), but no significant mean differences were found between procedural justice of online applications and online tests (see Table 3.2). These results showed that the rating of procedural justice of online applications and online tests were significantly higher than procedural justice of online interviews. However, in terms of the effect size, these differences are relatively negligible-to-small as Cohen's *d* (1988) suggested, indicating thus that these differences may not be practically meaningful. These results suggest that applicants have similar procedural justice perceptions across the three types of IBSPs. Therefore, hypothesis 5 is not confirmed.

The fit indices (ΔCFI) of IBSPs' models were also compared to tests for measurement and structural model invariance between the three models. As shown in Table 3.3, the ΔCFI between online interviews and online applications measurement model (.002) and structural models (.012) and between online interviews and online tests measurement model (.003) and structural models (.010) were smaller than or equal to .01, indicating invariance between the models. These results showed that there was no variance between online applications, online tests, and online interviews models, suggesting that applicants reacted similarly to the three types of IBSPs.

Table 3.2: Descriptive and Paired Samples T-Tests for Procedural Justice of IBSPs

Variables	Online interviews vs. Online applications						Online tests vs. Online interviews						Online applications vs. Online tests					
	Online			Online			Online			Online tests			Online			Online		
	interviews		applications		t	d	interviews				t	d	applications		tests		t	d
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Procedural justice	4.07	.96	4.20	.90	-3.43**	-.14	4.07	.96	4.19	.89	-3.14**	-.13	4.20	.90	4.19	.89	.50	.01

Footnote: * $p < .05$, ** $p < .01$, *** $p < .001$

Table 3.3: Evaluation of Goodness-of-Fit Statistics for Testing Invariance Between IBSP's Models

Model fit indices	ΔCFI
Online applications CFI – Online interviews CFI measurement model	.002
Online tests CFI – Online interviews CFI measurement model	.003
Online applications CFI – Online test CFI measurement model	-.001
Online applications CFI – Online interviews CFI structural model	.012
Online tests CFI – Online interviews CFI structural model	.010
Online applications CFI – Online tests CFI structural model	.002

Discussion

This study makes important theoretical contributions to applicant reactions research, where very limited studies have been conducted in authentic Internet-based selection situations, with actual job applicants to better understand responses to IBSPs. First, this study extends applicant reactions research to the new under-examined context of IBSPs and assesses and compares reactions to three most common types of IBSPs. Second, this study examines several new technology-related determinants of justice perceptions of IBSPs. Knowledge about the Internet appears to be the strongest determinant. Finally, it examines four important new outcomes of their perceptions across the three IBSPs. Our comprehensive model integrates theories (privacy theory and organizational justice theory) and previous applicant reactions models (Anderson, 2011; Bauer et al., 2006; Gilliland, 1993; Hausknecht et al., 2004; Ryan & Ployhart, 2000) and extends them across three types of IBSPs, providing a further theory development to explain the determinants and outcomes of applicant reactions to IBSPs, as well as a fruitful groundwork for future research and theory dedicated to understanding the determinants and outcomes to similar contexts of new high-tech selection procedures.

Our findings provide essential empirical grounding for researchers and HR practitioners to understand expected applicant reactions across different IBSPs, while designing, implementing, and operating these popular procedures. As shown in Table 3.4, the five main findings from this research were:

- 1- Information privacy concerns were negatively related to procedural justice of IBSPs, such that lower privacy concerns were related to higher procedural justice of IBSPs: online applications, online tests, and online interviews (hypothesis 1a-c).

- 2- Internet knowledge was positively related to procedural justice of all IBSPs, in which those with higher Internet knowledge reported higher procedural justice of the three types of IBSPs (hypothesis 2a-c).
- 3- Computer anxiety was not significantly related to procedural justice of IBSPs (hypothesis 3a-c).
- 4- Procedural justice had a positive effect on applicants' reactions toward the hiring organization (hypothesis 4a-c), such that higher procedural justice perceptions were related to higher organizational trust, P-O fit, organizational attractiveness perceptions, and lower litigation intentions.
- 5- Contrary to hypothesis 5, procedural justice perceptions of online applications and online tests were rated significantly higher (i.e., more positive) than online interviews, however, the effect size of the mean differences was negligible-to-small. Also, the three models' comparisons were found to be invariant. In general, these results indicate that applicants had relatively similar reactions to all IBSPs. These findings confirm the importance of extending prior models of applicant reactions, in light of the new development of personnel selection procedures.

Table 3.4: Summary of Findings – Study 1

Hypothesis	Findings
Hypothesis 1: Information privacy concerns will be negatively related to procedural justice of (a) online applications, (b) online tests, and (c) online interviews.	Supported
Hypothesis 2: Internet knowledge will be positively related to procedural justice of (a) online applications, (b) online tests, and (c) online interviews.	Supported
Hypothesis 3: Computer anxiety will be negatively related to procedural justice of (a) online applications, (b) online tests, and (c) online interviews.	Rejected
Hypothesis 4: Applicants with positive perceptions of procedural justice of (a) online applications, (b) online tests, and (c) online interviews will have more favorable reactions toward the organizations. Specifically, they will have higher organizational trust, P-O fit, and organizational attractiveness, and lower litigation intentions.	Supported
Hypothesis 5: Applicants will have more favorable reactions to online interviews than to online applications and online tests.	Rejected

Determinants of Applicant Reactions

While limited research has examined the determinants of procedural justice in Internet-based selection context (only Bauer et al., 2006 in only online screening context), this study specifically examined the effects of three technology-related factors on procedural justice of three types of IBSPs. As expected, the study findings showed that applicants' privacy concerns and Internet knowledge can be more salient as determinants of applicant reactions to IBSPs, suggesting an additional set of factors that should be considered when assessing and implementing IBSPs. The findings also indicate that having clear privacy policies regarding employment data submitted via IBSPs can lead to more positive reactions. This is consistent with privacy theory (Stone & Stone, 1990), which argued that perceived lack of control influence individuals' perceptions of invasion of personal information, resulting in negative outcomes. It seems that when employment-related information is collected with applicants' permission, they should perceive more control over their information and less concerns about the privacy and protections of it during IBSPs, which lead to positive perceptions of IBSPs. Also, it is reasonable to suggest that when applicants have higher Internet knowledge, they will have less concern about the Internet as a new medium for the selection procedures, reflecting in positive justice perceptions of IBSPs. Therefore, organizations should consider sufficient ways to boost applicant perceptions that their IBSPs are secure and safe to use. For example, organizations can clarify their privacy and data protections policy on their websites, showing that they have security controls to reinforce the idea that they are taking precautions to protect applicants' data.

Moreover, applicants' computer anxiety did not determine their procedural justice perceptions of IBSPs. The lack of support for computer anxiety might be due to the sample characteristics. Nowadays, UK applicants are more familiar with computers as most of the UK population are using the Internet (e.g., 91.6 % in 2015: Internet World Stats, 2015a) and

individuals are using computers in numerous daily activities (e.g., school, university, governmental services, and work), which can result in less computer anxiety. Although previous research (e.g., Wiechmann & Ryan, 2003) showed that computer anxiety is related to applicant perceptions, a more recent study by Oostrom et al. (2010) found weak support for this relationship, in which computer anxiety was negatively associated with only face validity of multimedia situational judgment tests but was not related to face validity of cognitive ability tests or perceived predictive validity of both the multimedia and cognitive ability tests. These findings indicate that computer anxiety may become a lesser issue than before; however, it may continue to be an issue in countries where computer literacy is low.

Outcomes of Applicant Reactions to IBSPs

Previous studies (Hausknecht et al., 2004; Ryan & Ployhart, 2000) found that the feeling of injustice can lead to negative organizational outcomes, such as lower attraction to the hiring organization and higher litigation intentions. In the case of IBSPs, the findings indicate that procedural justice perceptions largely drive applicant reactions toward the hiring organizations. A significant contribution of this study was to be the first to support the effects of procedural justice on organizational trust and P-O fit in applicant fairness reactions research and on litigation intentions in an Internet-based selection context. These findings contribute to a more comprehensive and specialized model of applicant reactions to IBSPs.

The relationships found between procedural justice and both trust and P-O fit is in line with social exchange theory, arguing that trust develops during an exchange between two parties (Whitener, Brodt, Korsgaard, & Werner, 1998). According to social exchange theory, organizations are forums for transactions (e.g., exchanging work for money) and people form perceptions based on the fairness of these transactions (Cropanzano, Prehar, & Chen, 2002). Given that selection procedures are usually established by the organization, justice

perceptions in selection are related to reactions toward the organization. When applicants perceive selection procedures to be fair, they “repay” the organization by forming more positive attitudes such as trust and P-O fit toward the organization. Justice perceptions can evolve as an exchange of the fair treatment of the selection process provided by the organization. This can be an explanation as to why we have found a close relationship between IBSP’s justice and organizational trust and P-O fit perceptions.

With regard to organizational attractiveness, the results are similar with previous models and past empirical studies in applicant reactions. These findings confirm the strong influence applicant reactions have on organizations’ image and attraction as prospective employers. The implication of these findings for practice is obvious - organizations should take into consideration applicant’s justice perceptions with their IBSPs in order to have a better image as a potential employer in the market, thus be able to attract higher quality job applicants.

Another vital finding is the direct effect of applicant justice perceptions of IBSPs on their litigation intentions. From a research point of view, this is the first study confirming the negative impact of procedural justice on litigation intentions using actual job applicants (field sample) in a real selection context. This study provides support for the effects of procedural justice on litigation intentions across three types of IBSPs, confirming thus the importance of applicant perceptions of selection procedures to undermine litigation. Apparently, when an applicant is being treated fairly during the IBSP[s], they will perceive it fairly and consequently be less likely to litigate or complain, whereas disgruntled applicants might consider litigation.

Our findings indicate that applicants can develop trust in organizations and P-O fit perceptions as well as attractions perceptions and litigation intentions based on their justice perceptions of the IBSPs that organizations use to hire applicants. The pattern of these

findings further reinforce the relation between applicant perceptions and organizational outcomes and can thus advance our understanding of the possible effects of such perceptions on hiring organizations as potential employers.

Applicant Reactions across Different IBSPs

The results showed that applicants perceived procedural justice of online applications and online test more favorably than online interviews. However, these differences were very small. Overall, our findings suggest that applicants perceive and react similarly across different IBSPs. This is an important finding, given that previous studies of applicant reactions in traditional selection contexts clearly showed differences in terms of process favorability and perceived fairness. This suggests that, contrary to the evidence found in traditional selection methods, applicants do not discriminate between IBSPs and tend to view them as one whole selection procedure (Anderson et al., 2010). One explanation of this result is that traditional face-to-face interviews are different than online interviews, and that online interviews might offer less chance to perform (Sears et al., 2013). In a traditional interview setting, non-verbal behavior plays a stronger role than in online interviews settings. Also, applicants and interviewers may face some auditory and/or visual difficulties in online interviews due to some technological issues, which could affect their reactions. In fact, a study by Straus et al. (2001) found that applicant reactions were more negative in online/video-conference interviews compared with face-to-face interviews, in which they reported more difficulty regulating and understanding conversations, feeling less comfortable in online/video-conference interviews compared with face-to-face interviews, and that conversations were easier to understand and flowed more smoothly in face-to-face interviews compared with online interviews.

The expansion of the Internet into selection practices and more specifically the emergence of IBSPs, has introduced a unique medium to the selection procedures. Our results indicate that applying online via online applications and doing the tests online appeared to be perceived positively by job applicants followed by conducting the interviews online. However, the effect size of these differences in procedural justice perceptions across the three IBSPs was negligible-to-small and the three models of IBSPs were invariant. Therefore, these results indicate that applicants perceived the three types of IBSPs similarly and favorably. These findings suggest a new cluster of applicant reactions, an Internet-based cluster, suggesting that overall IBSPs are favorably evaluated by applicants in the medium range. However, until future research extends this study and examines applicant reactions to IBSPs in diverse countries, the generalizability of these results to other cultures, countries and other types of online selection procedures is limited. Indeed, given the highly specific context of IBSPs noted earlier, differences in applicant reactions would be expected to emerge in other non-Western countries where Internet and computer usage and knowledge are lower.

Implications for Practice

This study also has practical implications for managers and HR practitioners given the growing number of organizations using IBSPs. The results suggest that organizations will benefit more from their IBSPs if the applicants perceived them as being secure and safe to use. Privacy concerns and limited Internet knowledge might lead to some qualified job applicants not applying for a job and going elsewhere. Therefore, organizations should provide applicants with more information and explanation about their privacy and data protections policies and assure them that their information will be kept safe. Also, questions that interfere with their privacy should be avoided, where possible, or organizations should provide clear explanations for the purpose of these questions. This may help in reducing their

privacy concerns, which may in turn help increase their justice perceptions of IBSPs and applicants positive reactions toward the organization.

Furthermore, increasing the confidence of applicants of the ease-usability associated with IBSPs may also benefit the organization, as the findings showed that applicants with higher Internet knowledge had more positive justice perceptions to IBSPs and consequently more positive reactions toward the organizational outcomes (i.e., higher organizational trust, P-O fit, and organizational attractiveness, and lower litigation intentions). This might include making IBSPs simple, providing online support to applicants to raise their confidence and giving them the opportunity to contact the recruitment staff directly. However, in some cases organizations may not want to offer support for applicants that have less knowledge and experience in Internet use, especially when the job requires computer and Internet experience.

The practical ramifications of using fair IBSPs are obvious. First, organizations as employers need to be concerned with procedural justice of their IBSPs when designing and implementing IBSPs as it is an important determinant of the status within which they might be held by prospective candidates, in terms of trust in organization, P-O fit, and attraction perceptions. Second, the legal ramifications of applicant reactions may be one of the most important factors that motivate organizations to be highly concerned about applicant fairness reactions to their selection procedures. It takes litigation by one applicant to tarnish an organization's reputation beside the monetary cost. For any applicant to think of initiating or commencing a legal claim, it is obvious that their feelings of being unfairly treated during the selection process are associated with a feeling that legal action is their only remedy (Anderson, 2011). Therefore, organizations should be able to identify any initial unfairness perceptions of their IBSPs and accordingly be able to take corrective moves before these develop into litigation intentions or even potentially costly litigations.

Study Strengths and Limitations

This study had the strength of obtaining a large sample of job applicants, applying for different types of jobs in different industries; thus, it is highly likely that the findings of this study would be representative of applicants within the UK. However, several potential limitations to the current study warrant acknowledgement. The researcher argues that caution is required when assuming that these findings generalize the entire context of Europe, which includes many and varied cultures, countries and contexts that might affect reactions. Therefore, research should be carried out in different countries and cultures to verify applicant reactions to IBSPs locally and globally. Thus, the next study in Chapter 4 tries to overcome this limitation by employing two samples of actual job applicants from two culturally different countries (Saudi Arabia and the UK). Also, this study used a cross-sectional survey design, thus, the reactions' causality cannot be ascertained. However, an examination of the presence of common method variance (CMV) suggests that it is not an issue in this study. However, some of these relationships have been found longitudinally (e.g., Study 3 in Chapter 5; Bauer et al., Bauer et al., 2006; 2004; Truxillo et al., 2002), which helps to mitigate some of these concerns. Also, as this was not a longitudinal study, we do not know how applicant reactions changed over time, or what applicant initial reactions were.

Also, the data was collected from job applicants ranging in age from their 20's to 30's, which may be due to the fact that most of the applicants that use the job center services fall into young groups. Thus, we could not examine the effects of different age groups and assess whether there are differences between younger and older applicants. However, as most of the UK population are using the Internet for their everyday activities (e.g., e-banking, e-shopping, and e-government services), we don't expect a huge difference between the age group in the UK. In 2011, a survey designed to measure basic life skills amongst people aged between 16 and 65 (inclusive) in England by the UK government found a striking increase in

computer and Internet usage, and people who fell into this category were more likely to be in work (88 per cent, compared with 69 per cent of those not in work) (Department for Business, Innovation and Skills, 2011, p.189). Thus, most of the UK job applicants are more likely to have Internet and computer literacy which, as shown in the findings, leads to more positive reactions to IBSPs. Therefore, in this instance, age may not be a major issue among UK job applicants.

Future Directions

This study also has several implications for research. First, as previous research showed that personality explained substantial variance in applicant reactions (e.g., Truxillo et al., 2006), different types of personality (e.g., openness to experience and agreeableness) should be considered in future applicant reactions research. In doing so, research can gain a broader understanding of the factors that may affect applicant reactions. Second, because this study was not longitudinal, we do not know what applicant initial reactions were and how their reactions changed over time. Thus, future research is needed to replicate these findings longitudinally in a field sample to be able to determine whether their reactions are stable or can vary over time. Third, due to the lack of interpersonal contact in IBSPs, future research should examine the role of selection administrator (i.e., reduced or even discard the role of administrator) on applicant reactions across different types of IBSPs. Although many user interfaces of IBSPs are increasingly interactive and personalized, applicants may miss the role of administrator in providing help and direction when needed, especially the interpersonal side (i.e., one of procedural justice dimensions). Therefore, we believe that the role of administrator is particularly relevant to IBSPs and may account for some variance in reactions to IBSPs.

Further, applicant reactions to IBSPs should be conducted in a range of countries with different cultures using Steiner and Gilliland's (1996) scale to allow direct cross-country comparison of applicant reactions, especially between Eastern and Western countries where the computer literacy and Internet usage can considerably vary (Hausknecht et al., 2004; Steiner & Gilliland, 1993) and to examine the role of outcome favorability (pass versus fail), computer anxiety, and computer experience in reactions to IBSPs.

Conclusion

To conclude, the major contribution of the current study was to develop and test an updated model of applicant reactions to IBSPs to help understand some of the under-examined determinants and outcomes of applicant reactions to IBSPs, and to be the first study, to the knowledge of the author, to empirically examine and compare their reactions across three types of IBSPs using a large sample of actual applicants. The findings indicate that applicants' privacy concerns and Internet knowledge can directly affect applicant justice perceptions of IBSPs. In turn, their justice perceptions of IBSPs can directly affect their reactions toward the hiring organizations that use IBSPs, particularly showing higher organizational trust, P-O fit perceptions, and organizational attraction, and lower litigation intentions. Also, similar positive reactions across the three IBSPs were found, indicating that online applications, online tests, and online interviews can be considered as one cluster of IBSPs. Thus, this study contributes to an in-depth understanding (theoretically and empirically) of the antecedents and outcomes of applicant justice perceptions to IBSPs.

As using advanced technology in HR practices continue to grow, applicants reactions to these new selection techniques are important areas of research that deserve research attention. Applicant reactions models should be adapted and extended to accommodate the

key factors in new selection procedures. We hope that the model presented in this study will provide a solid framework for additional work in this important area of research. However, as this study examined applicant reactions to IBSPs only in the UK, we do not know about applicant reactions to IBSPs in non-Western countries and whether applicant reactions can be generalized across countries or whether reactions are country-situationally specific. Many organizations nowadays are using IBSPs internationally and operating in non-Western countries such as Middle Eastern countries (e.g., Saudi Arabia). Also, this study did not explore perceptions of process favorability of IBSPs or to the seven procedural justice dimensions in detail, akin to most applicant reactions research that follows Steiner and Gilliland's (1996) methodology. Thus, Study 2 complements Study 1 by focusing on the cross-country differences in applicant privacy and fairness reactions to IBSPs in more detail, where process favorability and the seven procedural justice dimensions according to Steiner and Gilliland's (1996) methodology as well as privacy perceptions will be investigated between the two samples of Saudi and UK graduate and postgraduate applicants.

Chapter 4 : Cross-Country Examination of Applicant Privacy and Fairness Reactions to IBSPs: Saudi Arabia and the UK – Study 2

Globalization has resulted in organizations having to rethink their recruitment and selection practices on an international scale. The widespread adoption of IBSPs across different organizations, sectors and around the globe has facilitated this process. However, while IBSPs have been used for more than a decade in some countries (e.g., the UK), IBSPs have only been recently implemented and used in many Middle Eastern countries, such as Saudi Arabia (Ministry of Labor of Saudi Arabia, 2015), and consequently applicants may be less familiar, and thus react differently to those procedures. Also, the privacy concerns related to IBSPs is a controversial issue that has been perceived differently in practice globally, especially between Western and Middle Eastern countries.

Although many applicant reactions studies span across several countries internationally, most of these studies have been limited only to traditional selection procedures (i.e., without any consideration for IBSPs), and the great majority have been conducted in Western countries (i.e., the US and Europe) (e.g., Anderson & Witvliet, 2008; Anderson et al., 2010; Hoang et al., 2012; Moscoso & Salgado, 2004). Only one study examining applicant reactions in Saudi Arabia, a Middle Eastern country (Anderson et al., 2012), suggests that job applicants in Saudi Arabia have similar reactions to other studies conducted in Western countries on four traditional selection methods (i.e., work sample tests, interviews, résumés, and references). However, this study did not consider any IBSPs where Saudi applicants may have the disadvantage of being less familiar with them, since these procedures have only recently been introduced. Thus, the generalizability of the findings beyond Western countries and beyond traditional procedures needs further investigation.

Cross-country differences in applicant reactions are relevant to examine since country culture can be a cause of variability in justice perceptions (Anderson et al., 2010; Ryan et al., 2009; Truxillo et al., 2015; Truxillo et al., in press). Steiner and Gilliland (2001) proposed a framework that demonstrated the potential influence of country culture on procedural justice perceptions in a selection context, providing some theoretical basis for understanding applicant reactions across countries based on their national cultural values, but has not been sufficiently tested. As pointed out by Ryan et al. (2009, p. 522), *“theory on culture and justice suggests that procedural justice perceptions may vary in relation to cultural values but there is considerably less known about those relations”*. The issue of whether country culture is a cause of variability in justice perceptions of selection procedures has not been sufficiently assessed and the literature in this area is quite sparse (Ryan & Ployhart, 2014; Ryan et al., 2009, Truxillo et al., 2015).

Study Aims and Objectives

This study's aims and objectives are: (1) to examine and compare differences in applicant privacy perceptions and fairness reactions (i.e., process favorability and procedural justice dimensions) to three popular IBSPs (online applications, online tests, and online interviews) between Saudi and UK job applicants, which to the knowledge of the researcher, is the first study to have done so, and (2) to evaluate and provide further clarification on whether the reaction generalizability hypothesis holds true in the case of reactions to IBSPs in Saudi Arabia and the UK. In order to do that, this study develops an updated framework that integrates theory and research based on Hofstede's (1980; 1991) cultural dimensions and Steiner and Gilliland's (2001) framework as well as related research (i.e., Bertolino & Steiner, 2007; Phillips & Gully, 2002; McFarlin & Sweeney, 2001; Walsh et al., 2010) to

explain and hypothesize some of the likely differences in reactions between UK and Saudi job applicants.

Literature on Cross-Country Differences in Applicant Reactions

Researchers have examined applicant reactions to several types of traditional selection procedures across various countries (e.g., Anderson et al., 2012; Anderson & Witvliet, 2008; Hoang et al., 2012). Steiner and Gilliland (1996) pioneered this line of research by comparing process favorability and procedural justice dimensions of ten popular traditional selection procedures between France and the US. They refined Gilliland's (1993) theoretical stance by positing two overarching constructs comprising of overall fairness reactions: process favorability (overall perceptions of selection process favorability) and procedural justice. They sub-divided procedural justice construct into seven dimensions and developed a scale to measure process favorability and each of these justice dimensions - scientific evidence (i.e., the degree to which selection procedure is grounded on scientific evidence), logical-face valid approach (i.e., justifiability of selection procedures based upon the job being hired for), opportunity to perform (i.e., the extent to which the selection procedure is differentiating applicant qualities), employer's right to obtain information (i.e., justifiability of employing the selection procedures on the basis of questions' propriety), interpersonal warmth (i.e., selection procedure personalness and warmth of treatment), respectful of privacy (i.e., the extent to which the selection is less invasive of applicant personal privacy), and widely used (i.e., selection procedure appropriateness based upon widespread usage) (Anderson et al., 2010; Steiner & Gilliland 1996).

Steiner and Gilliland's methodology and instrument have been replicated in several countries, such as the Netherlands, the US, France, Spain, Portugal and Singapore (Anderson

& Witvliet, 2008), the US and Singapore (Phillips & Gully, 2002), Portugal and Spain (Moscoso & Salgado, 2004), the US and Vietnam (Hoang et al., 2012), Saudi Arabia (Anderson et al., 2012), among others. One advantage of using Steiner and Gilliland's (1996) scale is that the findings from those studies can be compared globally. Of the traditional selection procedures studied, ratings of process favorability and procedural justice dimensions were similar across countries with only few small differences. For example, personality tests and written ability tests were rated relatively more positively in both Portugal and Spain than in the US (Anderson & Witvliet, 2008). Also, graphology was perceived more favorably in France than in the US (Steiner & Gilliland, 1996). Although this research contributed to the understanding of applicant reactions and has provided organizations with valuable information upon which traditional selection methods can be designed and used, they add very little to our understanding of IBSPs, and how applicants in different countries react to them.

As indicated previously in Chapter 3, UK applicants reacted favorably to IBSPs and applicants' overall privacy concerns were negatively related to their justice perceptions, which had indirect positive effect on organizational trust, P-O fit perceptions, and organizational attractiveness, and negative effect on litigation intentions. Yet, IBSPs have been considered as one of the most popular procedures for graduate recruitment and selection for more than a decade in the UK (Branine, 2008). In 2015, an examination of organizations' selection practices in the UK showed that online applications through organization websites ranked among one of the most effective selection methods, and that 24% of the organizations used online tests and 46% used online (video or Skype) interviews, while organizations that recruit from overseas are more likely to use online interviews than those who recruit nationally (71% vs. 36%) (CIPD, 2015, p. 24). Saudi Arabia, on the other hand, has only recently begun to implement and use IBSPs (Ministry of Labor of Saudi Arabia, 2015). Thus,

the reactions to IBSPs may vary between Saudi and UK applicants. In addition, earlier reviews (e.g., Steiner & Gilliland, 2001; Truxillo & Bauer, 2011; Truxillo et al., 2015) suggested that there might be far greater variances in applicant's fairness reactions across countries due to differences in their cultural values. Saudi Arabia indeed has a unique conservative national culture, which differs to that of UK national culture, leading us to the fundamental question over the likely reaction generalizability versus situational specificity of applicant reactions to IBSPs between Saudi Arabia and the UK.

Reactions Generalizability versus Situational Specificity

There is an on-going debate concerning the extent to which applicant reactions are primarily formulated based on proximal and local factors that vary considerably across countries or even jobs and organizations, so-called "*situational specificity*", or whether reactions are more constant and based on underlying factors related to the procedure and sufficiently similar as to be generalized across countries, so-called "*reaction generalizability*" (Anderson et al., 2010, p. 293). A recent meta-analysis by Anderson et al. (2010) revealed considerable similarity in reaction favorability across countries, supporting the reaction generalizability hypothesis. They found three-tier clustering of overall process favorability (1) most favorable (interviews and work samples tests), (2) favorably evaluated (cognitive ability tests, résumés, references, personality tests, and biodata) and (3) least favorable (graphology, personal contacts, and honesty tests). Several significant differences in reactions regarding favorability rating and procedural justice dimensions were also found. For example, some variances in the favorability rating of cognitive tests, work samples, and honesty tests across these countries suggested that these variances could be explained by cultural differences between those countries. However, as noted by Anderson and colleagues (2010), most of the country samples originated from North America and Europe, with one

from Asia (i.e., Singapore), and focused only on the traditional selection procedures, which limit the generalizability of these findings to other non-Western countries and to other high-tech procedures, such as IBSPs.

On this point, many researchers have stressed the necessity for research in applicant reactions to new high tech and IBSPs and to compare the reactions between Western and non-Western countries (Anderson, 2003; Bauer et al., 2006; Nikolaou et al., 2015; Truxillo & Bauer, 2011; Truxillo et al., 2015; Truxillo et al., in press). It is important to extend the range of selection procedures and the countries in which applicant reactions data has been collected in order to keep updated with the new trend in the personnel selection practices and the international reactions to them. In addition, it is important to consider the magnitude of the differences (effect size of the differences), and whether they are small with minimal effect or large which can lead to greater effects.

Cross-Country Influences on Procedural Justice

With the growth of international business, more organizations are recruiting and selecting applicants from various countries and are using IBSPs to get a larger pool of applicants from different geographical locations and to reduce their hiring cycle time and costs. Thus, knowledge about personnel selection, in particular IBSPs, in diverse countries and the potential reactions to these procedures can play a key role in selection objectivity, quality, and smooth operations. Therefore, many researchers suggest further work is needed to examine applicant reactions using a cross-cultural theory or framework. Without such a framework, it remains difficult to generalize beyond particular findings or particular countries. Indeed, Anderson et al. (2010) argued that *“any future studies that propose ‘situational specificity’ in applicant reactions should be theoretically grounded and hypothesis-driven, rather than merely stating general assumptions or expectations for finding*

cross-country differences” (p.300). Furthermore, selection fairness is concerned with what applicants perceive as fair and how they react when they think that the selection procedures or the distribution of selection outcomes are not fair. What is perceived as fair depends on what applicants expect should happen in a specific selection setting. Thus, country culture is likely to influence these fairness perceptions because it frames the expectation on what to expect and outlines suitable behaviors (Steiner, 2001; Steiner & Gilliland, 2001). Thus, cultural values can be used as a lens through which researchers and practitioners can interpret applicant justice perceptions of selection events (Steiner, 2001).

To date, much of the research assessing cultural differences has utilized Hofstede’s (1980; 1991; 2001) framework of cultural dimensions - power distance, uncertainty avoidance, individualism/collectivism and masculinity/femininity. Hofstede’s cultural dimensions are cited and used regularly in cross-country studies of organizational justice (e.g., Miles & Greenberg, 1993) and applicant reactions to selection procedures (e.g., Phillips & Gully, 2002; Steiner & Gilliland, 2001). “*Individualism-collectivism* refers to emphasis on personal choices/achievements or on groups to which one belongs. *Uncertainty avoidance* refers to tolerance for ambiguity. It characterizes cultures where predictability and clear instructions are preferred. *Power distance* refers to inequalities in societies and is represented by the perceived amount of power or influence a hierarchical superior has over a subordinate in an organization. *Masculinity-femininity* defines an emphasis on competition and success rather than on social relationships and quality of life” (Steiner & Gilliland, 2001, p.128).

As pointed out by Steiner and Gilliland (2001), Hofstede’s cultural dimensions can be potentially useful for understanding the basis of cross-country differences in applicant perceptions of process favorability and procedural justice dimensions. Yet, little research has identified the association between Hofstede’s cultural dimensions and selection justice perceptions. Thus, this study develops an updated framework (see Table 4.1) of relative

influence of cultural dimensions on justice perceptions in personnel selection based upon previous cross-cultural organizational research and selection fairness research (i.e., Bertolino & Steiner, 2007; Hofstede, 1980, 2001; McFarlin & Sweeney, 2001; Phillips & Gully, 2002; Steiner & Gilliland, 2001; Walsh et al., 2010), and uses it to generate study hypotheses of potential cross-country differences in the case of Saudi Arabia and the UK. Selection procedures can vary in the degree of addressing different procedural justice dimensions, and procedural justice dimensions can vary depending on country culture of the applicants; as result, cross-country differences in applicant reactions can occur between countries with great variance in their national cultural values as well as the importance of procedural justice dimensions (Steiner & Gilliland, 2001).

Table 4.1: Framework for Understanding Relation Between Country Cultural Values and Applicant Justice Perceptions

Cultural dimensions	Procedural justice dimensions	Key assumptions	
Uncertainty avoidance	<ul style="list-style-type: none"> • Opportunity to perform • Consistency of administration • Scientific evidence • Job relatedness 	<p>Due to the greater societal concern with avoiding ambiguous situations, candidates from cultures high in uncertainty avoidance might:</p> <ul style="list-style-type: none"> • Place greater value on the level of the scientific evidence, job relatedness • Prefer clearly defined selection processes, which give them the chance to ask questions, hence reducing ambiguity related to the selection procedures as much as possible • Prefer selection procedures that would offer them more control and opportunity to perform 	<p>Applicants from culture low in uncertainty avoidant may have less interest in receiving an explanation regarding the selection process due to their greater societal tolerance for ambiguity. Consequently, perceptions of information sharing selection fairness might be less important for applicants from this culture compare with applicants from cultures high in uncertainty avoidance.</p>
Power distance	<ul style="list-style-type: none"> • Employer's right • Opportunity to perform • Process information • Two-way communications • Decision justification • Interpersonal warmth • Respectful of privacy 	<p>Individuals from high in power distance often:</p> <ul style="list-style-type: none"> • Believe that some people are destined to be in leader position while others are not • Presume that managers and HR personnel have the right to attain applicants' information, which can allow them to make a more efficient decision despite its effect on applicants • Thus, they might be less likely to be influenced by the dimensions of procedural justice (interpersonal warmth , privacy, employer's right to attain information) in determining their selection favorability • But they are often more concerned about receiving fair treatment (distributed justice) 	<p>Individuals from low in power distance often:</p> <ul style="list-style-type: none"> • Concern about the potential misuses or abuses of their private employment-related information • Sensitive to whether employers have the right to attain information and whether the procedure respect (or violates) their privacy and provide them an opportunity to perform

Table 4.1 (Continue)

Cultural dimensions	Procedural justice dimensions	Key assumptions	Cultural dimensions
Masculinity/ Femininity	<ul style="list-style-type: none"> • Opportunity to perform • Reconsideration • Job relatedness • Two-way communications • Interpersonal sensitivity • Consistency of application • Accuracy 	<p>Individuals from a masculinity culture often:</p> <ul style="list-style-type: none"> • Emphasized appropriateness of criteria (i.e., accuracy and consistency of application), reconsideration, opportunity to perform, and job relatedness due to the achievement-oriented nature of masculinity culture 	<p>Individuals from a femininity culture often:</p> <ul style="list-style-type: none"> • Emphasize on social harmonies and consistency of treatment • May emphasize more on interpersonal sensitivity and two-way communication
Individualism/ Collectivism	<ul style="list-style-type: none"> • Opportunity to perform • Consistency of treatment Job relatedness 	<p>Individuals from an individualist culture often:</p> <ul style="list-style-type: none"> • Concerned with more on the job relatedness and opportunity to perform to demonstrate their skills and abilities that differentiate them from others • Emphasize on the equity to one's input to be fair (distributed justice) 	<p>Individuals from a collectivist culture often:</p> <ul style="list-style-type: none"> • Emphasize on the consistency of treatment (reflecting equal treatment), as they are willing to sacrifice personal initiative for group goals • Using explicit and individual comparison for hiring is expected to be avoided

Note: Adapted, extended, and updated from Bertolino and Steiner (2007), McFarlin & Sweeney (2001); Steiner and Gilliland (2001), Phillips and Gully (2002), and Walsh et al. (2010).

Study Context: Saudi Arabia versus the UK

Middle Eastern countries, such as Saudi Arabia, have become important contexts for the study of applicant reactions to selection procedures given the increasing number of businesses and multi-national corporations operating in that region (Ali, 2009). Saudi Arabia specifically is an important Middle Eastern country due to its prominent geographical location (making up to 80% of the Arabian Peninsula), strategic and natural resources. The country has the largest share of recognized petroleum reserves in the world. Further, Saudi Arabia plays a leading role in the “Organization of Petroleum Exporting Countries” (OPEC), which gave it further importance and relevance to the broader world (Ali, 2009, Anderson et al., 2012; Bowen, 2015). Nevertheless, Saudi Arabia does not only depend on its petroleum revenues, but rather it has undertaken great effort to expand its economic basis and to incorporate it more thoroughly into the global scheme. The country joined the “World Trade Organization” in 2005 and opened its market to more international organizations outside the energy and oil sector. Since then, many multinational organizations are operating from there and own majority stakes in the main economic sectors such as insurance, telecommunications, and banking (Bowen, 2015).

Yet, Saudi Arabia represents noticeably unique societal and cultural contexts that differ from the Western world (Anderson et al., 2012), within which to study applicant reactions to IBSPs. For example, HR and personnel selection practices are affected by many factors, such as personalism (personal relationships), nepotism, kinship and regional favoritism, lack of qualified applicants, rigid bureaucracy and political considerations. Saudi Arabia’s unique cultural and societal contexts are reflected in the society’s tribal nature and communal relationships, which most likely consolidate the dysfunctions of subjectivity and favoritism in personnel selection practices (Achoui, 2009; Ali, 2009; Anderson et al. 2012;

Mellahi, 2006). Managers often feel obliged to follow common societal expectation in which they give preferences in their selection decisions to friends, relatives and to applicants who have connections to those in powers, and there is no anti-discrimination law that protect applicants' right in Saudi Arabia (Ali, 2009, p. 150).

On the other hand, the UK is an important country within the European continent. Besides its remarkable history, it has a successful and open economy, with low levels of unemployment and steady growth. *“In the HRM in particular, the UK is seen as something of a bridge between the USA – the ‘inventor’ of the concept of HRM – and the rest of Europe”* (Brewster, Wilson, & Holley, 2008, p.939). Also, the UK recruiting and hiring laws as well as employment laws are very rigorous and provide job applicants with a great deal of protection for their information, as well as anti-discrimination and harassment policies, where favoritism and personalism is considered illegal (GOV.UK, 2016).

Cross-Cultural Perspective

With regards to cultural characteristics, some valuable indications were provided by Hofstede (2001; 2016a; 2016b), which show that Saudi Arabia is different from the UK in some of these dimensions (see Figure 4.1). As stated by Hofstede (2001), the key cultural dimensions in which Saudi Arabia differs from the UK include: (1) Saudi Arabia scores high on uncertainty avoidance and power distance, whereas the UK sits in the lower rankings of these dimensions, and (2) Saudi Arabia scores low in the individualism dimension which means that it is considered as a collectivistic society, whereas the UK scores among the highest of individualistic scores. In terms of masculinity/femininity, both Saudi Arabia and the UK have a high score on this dimension, indicating that they are masculine societies. These differences in the cultural values between Saudi Arabia and the UK may influence applicant perceptions and reactions to IBSPs.

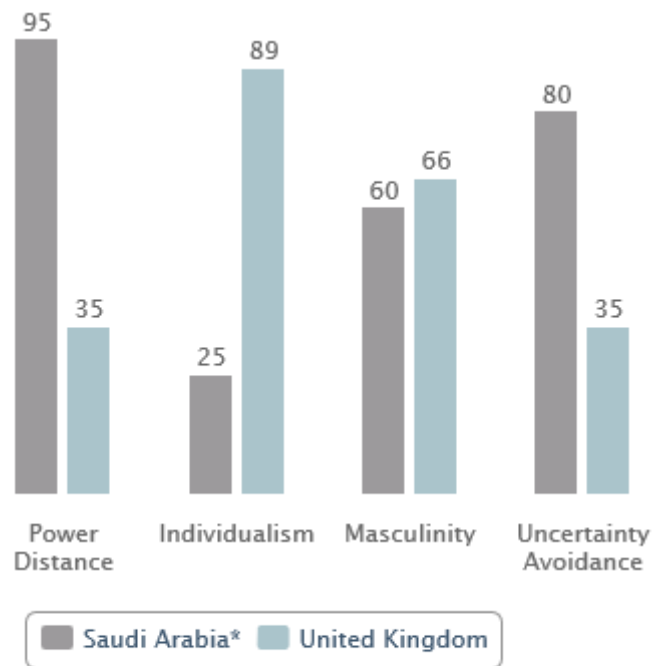


Figure 4.1: Comparison between Saudi Arabia and the UK in Hofstede's Cultural Dimensions adopted from Hofstede (2016a; 2016b)

Individualism/collectivism. In terms of this dimension, people higher in individualism (e.g., UK) “define themselves primarily as separate individuals and make their primary commitments to themselves” (Gully, Phillips, & Tarique, 2003, p. 1373), whereas those higher in collectivism (e.g., Saudi Arabia) generally center their attention on shared goals rather than individual objectives or the pursuing of self-interest. Steiner and Gilliland (2001) and McFarlin and Sweeney (2001) suggest that applicants from an individualistic culture (e.g., UK) might consider selection processes focused on equity (to one's input) to be more fair and focus more on the opportunity to perform and job relatedness to demonstrate their skills and abilities that differentiate them from others. Accordingly, a fairer way for selection might be to expect job applicants to show great effort in selling themselves during the hiring process by demonstrating their superior individual skills and abilities that

differentiate them from others. On the other hand, individuals from a collectivistic culture (e.g., Saudi Arabia), who place high emphasis on group relationships, might perceive processes that treat every applicant equally to be 'fairer' procedures, regardless of performance; they also speculate that willingness to sacrifice individual initiatives for group aims might be a vital hiring principle in collectivistic countries (Steiner & Gilliland, 2001; McFarlin & Sweeney, 2001). Thus, as IBSPs usually are standardized and consistent in treatment of applicants, collectivistic culture, such as the Saudi, may place a higher favorability to IBSPs than individualist cultures, such as the UK, which prefer selection procedures that offer a greater chance to reveal their credentials. Thus, this study hypothesizes that:

Hypothesis 1: There will be significant differences in (a) process favorability and (b) procedural justice of IBSPs between Saudi and UK applicants, such that Saudi applicants will perceive them more favorably than UK applicants.

Power distance and uncertainty avoidance. Power distance reflects the extent to which individuals can agree on great status variations between individuals or groups in organizations (Hofstede, 1980, 1991). Power distance concerns the relationship of the individual with the authorities; a system of hierarchical decision making appears to be more common and acceptable in countries high in power distance (Hofstede, 1991). Individuals in countries high in power distance often tend to consider that some people are destined to be leaders while others follow. On the other hand, individuals in countries low in power distance often tend to have greater concerns regarding concentration of power. In a selection context, applicants in low power distance cultures (e.g., UK applicants) are more likely to be: (1) worried about potential misuses and abuses of their private information, (2) concerns with the right of the hiring organization to obtain their information, and (3) whether a certain selection

tool respects (or violates) the applicant's personal privacy. In contrast, applicants in high power distance cultures (e.g., Saudi applicants) might presume that employers have a right to obtain their information in order to make right and efficient selection decisions, despite its effects on the applicants and less likely to be sensitive to privacy. As a result, applicants from high power distance (e.g., Saudi Arabia) are more likely to accept most of the selection procedures generally and are less likely to be influenced by respect of privacy, employer rights to obtain information, and interpersonal warmth in forming their favorability of selection procedures (Phillips & Gully, 2002).

With regard to uncertainty avoidance, i.e., "the degree to which individuals in an organization or society actively seeks to avoid uncertainty by utilizing accepted norms or beliefs to understand situations" (Walsh et al., 2010, p. 369). It can be expected that individuals in cultures with greater uncertainty avoidance may place greater importance on scientific evidence of selection procedures to minimize ambiguity associated with the selection procedures, while countries with less uncertainty avoidance will be less focused on this dimension as a result of social tolerance (Ryan et al., 1999; Walsh et al., 2010). Consequently, applicants from high uncertainty avoidance countries (e.g., Saudi Arabia) are more likely to place emphasis on the dimension of scientific evidence than those lower in uncertainty avoidance (the UK applicants).

Based on the above discussion, this study formulates the following hypothesis:

Hypothesis 2: Saudi applicants will place less weight on the dimensions of employers' rights to obtain information, respectful of privacy, and interpersonal warmth and will place more weight on scientific evidence than UK applicants in determining process favorability of IBSPs.

Privacy Perceptions of IBSPs and Trust in Organization

Bauer et al. (2006) found that general privacy concerns were negatively related to procedural justice of online screening among US applicants. Harris and colleagues (2003) found significant differences in privacy perceptions between US and Belgian respondents in relation to Internet-based selection systems in hypothetical scenarios using US and Belgian student samples. In light of these studies, it is important to assess privacy perceptions of IBSPs and to consider any cross-country differences in privacy and fairness perceptions of IBSPs between Saudi and UK applicants.

Saudi Arabia and the UK differ substantially on some privacy-related issues. For example, European countries consider privacy to be an essential human right (Hessler & Freerks, 1995; Kirtley, 1999) and have established all-encompassing privacy laws, which establishes a firm right to general privacy for individuals (Milberg, Smith & Burke, 2000). The European Union directive is structured on the premise of when and how an organization collects and uses individual information; *“first, a company should have a legitimate and clearly defined purpose to collect information. Second, that purpose must be disclosed to the person from whom the company is collecting information. Third, permission to use information is specific to the original purpose. Fourth, the company can keep the data only to satisfy that reason; if the company wants to use the information for another purpose, it needs to initiate a new information collection and use process”* (Caudill & Murphy, 2000, p. 12).

On the other hand, no specific or relevant provisions of employment information protection are set out in Saudi law generally. Although there are laws relating to the protection of personal information, such as anti-cyber-crime law and e-transaction crime law that has been recently legislated, and there are penalties related to data protection and privacy, which are reinforced by the Saudi Communications and IT Commission (CITC, 2014a; 2014b), currently there is no data protection act. This also reflects the high power

distance of the Saudi society, between individual applicants and the organizations they are applying for, which may lead applicants to place less importance on privacy perceptions. Moreover, the amount of interference from the government on privacy policies is higher in Europe (Harries et al., 2003), while in Saudi Arabia (or in the Middle East) no such interference exists nor does empirical evidence on privacy perceptions.

In addition, as mentioned above, UK applicants are from a country low in power distance. Thus, they may be more worried about the privacy and security of their employment-related information and potential abuses of such data during IBSPs (Phillips & Gully, 2002). Also, the Internet usage is very high in the UK (91.6% in 2015: Internet World Stats, 2015a). Thus, UK applicants are expected to have high Internet knowledge (as also shown in Study 1 findings), which might lead to greater awareness of the dangers related to submitting information via the Internet and consequently may lead to greater privacy concerns. The Internet usage in Saudi Arabia is much lower than in the UK (65.9 % in 2015: Internet World Stats, 2015b), which may reflect in less awareness of the Internet-related issues including information privacy, leading to less concerns about information privacy and data protection and security on the Internet. Thus, these differences in Internet usage might also contribute to differences in privacy perceptions of IBSPs among Saudi and UK job applicants. Thus this study hypothesizes that:

Hypothesis 3: There will be significant differences in privacy perceptions of IBSPs between Saudi and UK applicants, such that UK applicants will have higher privacy perceptions than Saudi applicants.

Further, privacy concerns may also influence individuals' trust in organizations, which becomes a more important issue in high-tech settings in many fields. In the Western marketing field, research posited that customers' information privacy concern is an important

factor in developing consumers trust in organizations (Caudill & Murphy, 2000; Liu, Marchewka, Lu, & Yu, 2005; Luo, 2002). For example, a study by Eastlick, Lotz, and Warrington (2006) found that privacy concerns of customers strongly and negatively influenced their trust in e-trailers. In the context of e-governments, a study by Colesca (2009) examined the factors affecting trust in e-governments and found that privacy concerns had the greatest negative impact on trust in e-governments.

With regard to the IBSPs' context, it is expected that the relationship between applicants' privacy concerns and trust in organizations using IBSPs will be similar to that observed in other high-tech field (e-marketing and e-governments). Given that UK applicants are from a culture low in power distance, concerns about inadequate security or breach of their information privacy during IBSPs may decrease their trust in organizations. Thus, this study predicts that privacy concerns of the UK applicants will be negatively related to trust in organizations using IBSPs.

Conversely, and because Saudi Arabia scores high in power distance (even higher than any other Arab country), it is expected that individuals will follow and do what they are told to do by management/organizations and expect high levels of inequality between them and their managers. Indeed, Saudi society put strong emphasis on respect and obedience to leaders and trusts in management (Mellahi, 2006). These, also, reflect the fact that Saudi applicants have no formal privacy, pre or post-employment or anti-discrimination laws (Ali, 2009; Anderson et al., 2012). Thus, Saudi applicants may presume that managers and HR personnel have the right to attain applicants' information - with less concern about their information privacy - in order to be able to make a more effective selection decisions and may have high trust in organizations. Therefore, it can be assumed that privacy concerns of Saudi applicants will be less, or even not at all, influential in determining trust in organizations using IBSPs.

Based on the above argument, this study hypothesizes that:

Hypothesis 4: There will be significant differences between Saudi and UK applicants in the relationship between privacy concerns and trust in organizations, such that this relationship will be stronger among UK applicants.

Method

Sample

The study's participants were graduate and postgraduate job applicants in Saudi Arabia (N= 328) and the UK (N= 283) applying for different jobs within similar job centers. The total response rate was 64.5%. Participants were notified that their participation was voluntary, assured of confidentiality of their responses and that the data would be held securely and would be used for research purposes only. All participants responded to the survey voluntarily and on an anonymous basis.

The Saudi sample consisted of 220 male applicants (67.1%) and 108 (32.9%) female, with a mean age of 26.32 ($SD = 3.82$). Regarding their education level, 277 (84.5%) had a Bachelor degree and 51 (15.5%) had a Master's degree. The UK sample included 146 (51.6%) male applicants and 137 (48.4%) female applicants with a mean age of 22.09 years ($SD = 2.96$). Their educational level comprised 201 (71%) applicants with a Bachelor degree and 82 (29%) applicants with a Master's degree. The average number of years of work experience was 3.68 ($SD = 3.36$) for the Saudi sample and 1.15 ($SD = 1.62$) for the UK sample.

Measures and Procedures

Fairness reactions measure. After a brief description of the IBSPs considered in this study i.e., online-applications, online tests, and online-interviews, the first section of the

survey included Steiner and Gilliland's (1996) scale to measure process favorability and procedural justice of each IBSP. Two items were used to assess process favorability for each IBSP studied. The first item asked "how would you rate the effectiveness of this 'selection method' for identifying qualified people for the job you indicated above?" The second item asked "If you did not get the job based on this 'selection method', what would you think of the fairness of this procedure?" The original wording "selection method" was replaced by "online applications", "online tests", and "online interviews". Participants responded to this process favorability measure using a seven-point Likert-type scale ranging from 1 (least favorable) to 7 (most favorable). Cronbach's alpha for process favorability ranged from .79 to .93 for the Saudi sample and from .81 to .89 for the UK sample across the three IBSPs.

After answering the two questions regarding process favorability, participants responded to seven items assessing seven dimensions of procedural justice for each IBSP on a seven-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree). These items deal with perceptions that: (1) "the method is based on solid scientific research" (scientific evidence); (2) "the approach is a logical one for identifying qualified candidates for the job in question" (logical face valid approach); (3) "the method will detect individuals' important qualities differentiating them from others" (opportunity to perform); (4) "employers have the right to obtain information from applicants by using the method" (employer's right to obtain information); (5) "the selection instrument is impersonal and cold" (interpersonal cold); (6) "the method invades personal privacy" (invasion of privacy); and (7) "the method is appropriate because it is widely used". Items 5 and 6 were reversed with the purpose of being consistent with previous studies that used this scale as well as keeping the positive meaning of the other items (i.e., interpersonal warmth and respectful of privacy). Cronbach's alpha ranged from .71 to .75 for the Saudi sample and from .74 to .77 for the UK sample across the IBSPs.

Personal information privacy perceptions. This construct was measured using a measurement developed by Harris et al. (2003). The authors developed seven items to measure privacy concerns (items 1 to 7), one item assessed applicant reluctance to submit their information using IBSPs (item 8), and four items assessed other possible issues related to using the Internet for selection: technical problems, lying, cheating and stealing (items 9-12), using a seven-point Likert-type scale (1= completely disagree, 4= neutral and 7= completely agree) (see Table 4.6). Cronbach's alpha in the present study for the 12 items was .79 for the Saudi sample and .78 for the UK sample. After performing CFA, item 7 in overall privacy concerns scale was deleted and the final overall privacy concerns scale contained 6 items (items 1 to 6), and Cronbach's alpha was .74 for the Saudi sample and .71 for the UK sample, all above of the internal consistency threshold of .70 (Brace, Kemp, & Snelgar, 2009; Field, 2009).

Organizational trust. A seven-item scale by Robinson (1996) (e.g., I believe this organization has high integrity) was used to measure organizational trust. Participants responded to outcome measurements using a five-point Likert type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Cronbach's alpha in the present study was .90 for the Saudi sample and .91 for the UK sample (See appendix A for the scales). Table 4.2 shows the mean, standard deviations and coefficient alpha for study variables for the two samples.

Table 4.2: Means, Standard Deviations, Coefficient Alpha Internal Consistency Estimates for Overall Process Favorability and Procedural Justice of IBSPs, Privacy in Saudi vs UK Samples

Description of items	Saudi (N= 328)			UK (N=283)		
	Mean	SD	Coefficient alpha	Mean	SD	Coefficient alpha
1. Process favorability of online applications	4.45	1.51	.79	3.99	1.24	.81
2. Process favorability of online tests	4.11	1.55	.86	3.94	1.35	.83
3. Process favorability of online interviews	3.83	1.61	.93	3.74	1.25	.89
4. Procedural justice of online applications	4.69	.95	.71	4.13	.92	.74
5. Procedural justice of online tests	4.44	.96	.72	4.11	.92	.74
6. Procedural justice of online interviews	4.25	1.07	.75	4.02	.99	.77
7. Privacy concerns overall	4.65	1.11	.74	4.79	.98	.75
8. Trust in organization	3.68	.72	.90	3.25	.61	.91

Translation of the Survey

Saudi participants completed an Arabic language version of the survey. Following guidelines (e.g., Weeks, Swerissen, & Belfrage, 2007), the survey was translated from English to Arabic and then back to English by experienced and qualified translators.

Analysis Strategy

The normality of these measured variables for each group (i.e., Saudi versus UK applicants) were also assessed by using the following criteria: (a) mean and median are similar, (b) skewness and kurtosis values between -1.96 and +1.96, and (c) shape of histogram normal probability plot (curve) (Hair et al., 2010); all the variables met these criteria, concluding that the data were normally distributed.

To examine the differences between the two samples with regard to process favorability and procedural justice of IBSPs (hypotheses 1a and 1b) and privacy perceptions (hypothesis 3), an independent sample *t*-test was used, and Cohen's *d* was computed to examine the effect size of these differences. The *d*-values are indicative of borderline moderate effect-size differences between two group, in our case the Saudi and UK applicants. Positive *d*-values indicate higher mean scores for the Saudi respondents, and negative *d* values indicate UK respondents scoring higher. According to Cohen (1988), effect sizes of about .20, in magnitude, are small, around .50 are moderate, and .80 are large.

To test hypotheses 2 and 4, the significance of the differences between the correlations of the Saudi and UK samples (process favorability and procedural justice dimensions across the three IBSPs) (hypothesis 2) and between overall privacy concerns and trust in organization (hypothesis 4) were calculated. In order to test the differences between two independent correlation coefficients, each correlation coefficient was converted into a *z* score using Fisher's (1921) *r*-to-*z* transformation, where $z'_r = \ln \left(\frac{1+r}{1-r} \right)$ and the resulting

z'_r has a standard error of $SE_r = \frac{1}{\sqrt{\frac{1}{n_1-3}}}$ (Field, 2009, p.171). Using the sample size employed

to obtain each coefficient, these z-scores were then compared using the following formula:

$$Z = \frac{z_{r1} - z_{r2}}{\sqrt{\frac{1}{n_1-3} + \frac{1}{n_2-3}}}$$

from Field (2009, p. 191) - also available from Cohen et al. (2003, p. 49) - where r_1 and r_2 are the correlation coefficients for the two samples and n_1 and n_2 were the sample sizes associated with the two correlation values of the Saudi and the UK samples.

Additional correlation analyses were also conducted as the following: (1) between process favorability and procedural justice dimensions were performed for each IBSP in Saudi Arabia and the UK, following Steiner and Gilliland (1996), to investigate which of the seven procedural justice dimensions were most predictive of process favorability of IBSPs, (2) between reluctance to use IBSPs and applicant privacy perceptions in Saudi Arabia and the UK, following Harris et al (2003), and (3) between overall privacy concerns and both process favorability and overall procedural justice of each IBSPs to assess the relationship between the variables among the Saudi and UK applicants. Cohen (1988) suggested that correlation coefficient values of .10 to .29 are considered weak, .30 to .49 are moderate and .50 to 1 are strong.

Results

Table 4.3 shows means, standard deviations, *t*- test and Cohen's *d* results for each IBSP on process favorability and procedural justice dimensions in both countries. Regarding both process favorability and overall procedural justice, online applications are rated the most favorably, followed by online tests and online interviews respectively in both countries. Regarding country differences, significant differences were found only for process

favorability of online applications ($d = .33$), where Saudi respondents perceive them more favorably than UK respondents. Thus, hypothesis 1 was only partially supported.

Hypothesis 1b predicted significant differences concerning procedural justice perceptions of IBSPs between Saudi and UK applicants. The results showed significant differences in procedural justice perceptions regarding online applications ($d = .60$), online tests ($d = .35$), and online interviews ($d = .22$), where the Saudi respondents rated the procedural justice of all the IBSPs more favorably than the UK respondent. Therefore, hypothesis 1b was supported. However, in terms of the effect size, these differences are relatively medium for online applications and small for online tests and online interviews, according to Cohen (1988).

To compare Saudi and UK applicants in relation to each procedural dimension of IBSPs, the rating on the seven procedural justice dimensions of each IBSP were assessed. For online applications, significant differences between samples were found regarding scientific evidence ($d = .61$), employer's right to obtain information ($d = .66$), respectful of privacy ($d = .53$), and widely used ($d = .47$), with medium effect size differences. Saudi applicants rated the above dimensions higher than UK applicants. For online tests, significant differences between samples were found on scientific evidence ($d = .34$), employer's right to obtain information ($d = .46$), respectful of privacy ($d = .27$), and widely used ($d = .30$), with relatively small effect size differences. Overall Saudi applicants scored higher than UK applicants on those dimensions. For online interviews, significant country differences were found on scientific evidence ($d = .29$), employer's right to obtain information ($d = .36$), respectful of privacy ($d = .25$) and widely used ($d = .28$), with small effect size differences (see Table 4.3). These findings also provide general support to hypothesis 1b. Among these differences, the Saudi applicants rated these procedural dimensions higher than UK applicants. Despite these differences, applicants in both samples ranked them similarly, and

in the same direction on these dimensions. Therefore, these findings indicate that Saudi and UK applicants differed in terms of magnitude of the effects rather than in the quality of the procedural dimensions.

Following Steiner and Gilliland's (1996) methodology, we examined which of the seven procedural justice dimensions were most predictive of process favorability for each IBSP by assessing the correlation between the variables. As shown in Table 4.4, significant correlations were found in both countries across the majority of process favorability and procedural justice dimensions of IBSPs. The largest correlations were found between process favorability and overall procedural justice ranging from .56 to .64 in the Saudi sample and from .64 to .69 in the UK sample and for face validity with large correlations, ranging from .53 to .62 in the Saudi sample and from .58 to .64 in the UK sample across the three IBSPs. The second largest set of correlation found between process favorability and both opportunity to perform ranging from .47 to .57 in the Saudi sample and from .57 to .59 in the UK sample and scientific evidence, ranging from .51 to .53 in the Saudi sample and .41 to .47 for the UK sample across IBSPs. Moreover, medium size correlations were also found for the dimensions of widely used, ranging from .37 to .46 in the Saudi sample and .40 to .52 for the UK sample and employer's right, ranging from .36 to .48 in the Saudi sample and .37 to .46 for the UK sample. These results indicate that face validity, opportunity to perform, and scientific evidence followed by widely used and employer's right respectively are the most predictive dimensions of process favorability of IBSPs across the two samples.

Small correlations were found between process favorability and both interpersonal warmth and respectful privacy. For Saudi applicants, small correlations were found between process favorability and interpersonal warmth for online applications ($r = .11$) and online interviews ($r = .16$), and between process favorability and respectful of privacy for online applications ($r = .13$) and online interviews ($r = .11$), whereas no significant correlations were

found in the case of online tests. For UK applicants, small correlations were found between process favorability and interpersonal warmth (ranged from $r = .25$ to $r = .29$) and respectful of privacy (ranged from $r = .17$ to $r = .21$) across all IBSPs.

Hypothesis 2 predicted that the dimensions of employer rights to obtain information, respectful of privacy, and interpersonal warmth will be given less weight by Saudi applicants than UK applicants and scientific evidence will be given higher weight by Saudi applicants in determining process favorability of IBSPs. The significance of the differences between the Saudi and UK correlation coefficients were assessed. As shown in Table 4.5, the interpersonal warmth dimension was given significantly less weight by the Saudi applicants in determining process favorability of online applications ($Z = -2.31, p < .05$) and online tests ($Z = -2.15, p < .05$). However, no significant differences were found between the Saudi and UK applicants with regard to the relationship between process favorability and scientific evidence, employer's right and respectful of privacy dimensions across the IBSPs. Thus, hypothesis 2 was partially supported.

Table 4.3: Mean, Standard Deviations, *t*- Test and Cohen's *d* on Process Favorability and Procedural Justice Dimensions for each IBSP and Country

Selection Methods and country	Process favorability	Scientific evidence	Logic, face valid approach	Opportunity to perform	Employer's right	Interpersonal warmth	Respectful of privacy	Widely used	Overall procedural justice dimensions
Online applications									
Saudi	4.45 (1.51)	4.60 (1.58)	4.36 (1.58)	4.04 (1.63)	5.41 (1.42)	4.00 (1.70)	5.47 (1.49)	4.96 (1.61)	4.69 (.95)
UK	3.99 (1.24)	3.70 (1.39)	4.18 (1.40)	3.88 (1.52)	4.44 (1.50)	3.76 (1.62)	4.69 (1.45)	4.24 (1.43)	4.13 (.92)
<i>t</i> - test	4.17***	7.51***	1.44	1.25	8.23***	1.83	6.60***	5.79***	7.46***
Cohen's <i>d</i>	.33	.61	.12	.10	.66	.15	.53	.47	.60
Online tests									
Saudi	4.11 (1.55)	4.45 (1.47)	4.17 (1.52)	3.98 (1.53)	4.92 (1.55)	3.94 (1.68)	5.11 (1.51)	4.54 (1.68)	4.44 (.96)
UK	3.94 (1.35)	3.96 (1.44)	4.11 (1.43)	3.94 (1.47)	4.23 (1.47)	3.73 (1.57)	4.71 (1.42)	4.08 (1.42)	4.11 (.92)
<i>t</i> - test	1.45	4.12***	.46	.34	5.65***	1.58	3.35**	3.63***	4.39***
Cohen's <i>d</i>	.12	.34	.04	.03	.46	.13	.27	.30	.35
Online interviews									
Saudi	3.83 (1.61)	3.97 (1.60)	3.94 (1.63)	3.88 (1.66)	4.81 (1.61)	3.90 (1.86)	5.03 (1.67)	4.26 (1.73)	4.25 (1.07)
UK	3.74 (1.25)	3.53 (1.40)	3.95 (1.55)	3.92 (1.59)	4.23 (1.54)	4.03 (1.69)	4.64 (1.45)	3.82 (1.42)	4.02 (.99)
<i>t</i> - test	.79	3.59***	-.14	-.29	4.52***	-.90	3.10**	3.40**	2.83**
Cohen's <i>d</i>	.06	.29	-.01	.02	.36	-.07	.25	.28	.22

Footnote: Cohen's *d* difference between Saudi and UK means in standard deviation units (standard deviation are in parentheses).

Positive *d* values indicate Saudi respondents scoring higher, and negative *d* values indicate UK respondents scoring higher.

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 4.4: Correlations Between Process Favorability and Procedural Justice Dimensions for each IBSP in Saudi Arabia and the UK

Selection Methods and country	Overall procedural justice dimensions	Scientific evidence	Logic, face valid approach	Opportunity to perform	Employer's right	Interpersonal warmth	Respectful privacy	Widely used
Online applications								
Saudi	.64 ^{***}	.51 ^{***}	.62 ^{***}	.53 ^{***}	.36 ^{***}	.11 [*]	.13 [*]	.46 ^{***}
UK	.69 ^{***}	.47 ^{***}	.61 ^{***}	.57 ^{***}	.37 ^{***}	.29 ^{***}	.21 ^{***}	.52 ^{***}
Online tests								
Saudi	.56 ^{***}	.51 ^{***}	.53 ^{***}	.47 ^{***}	.40 ^{***}	.08	.07	.37 ^{***}
UK	.64 ^{***}	.41 ^{***}	.58 ^{***}	.58 ^{***}	.39 ^{***}	.25 ^{***}	.17 ^{**}	.46 ^{***}
Online interviews								
Saudi	.63 ^{***}	.53 ^{***}	.60 ^{***}	.57 ^{***}	.48 ^{***}	.16 ^{**}	.11 [*]	.38 ^{***}
UK	.66 ^{***}	.45 ^{***}	.64 ^{***}	.59 ^{***}	.46 ^{***}	.26 ^{***}	.18 ^{**}	.40 ^{***}

Footnote: * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 4.5: The Significance of the Differences between Saudi and UK Correlations for Process Favorability and Procedural Justice Dimensions of IBSPs

Selection Methods and country	Overall procedural justice dimensions	Scientific evidence	Logic, face valid approach	Opportunity to perform	Employer's right	Interpersonal warmth	Respectful privacy	Widely used
Online applications								
<i>Z – score</i>	-1.10	.65	.20	-.70	-.14	-2.31*	-1.01	-.97
Online tests								
<i>Z – score</i>	-1.53	1.56	-.89	-1.87	.15	-2.15*	-1.25	-1.33
Online interviews								
<i>Z – score</i>	-.63	1.29	-.80	-.37	.32	-1.28	-1.00	.29

Footnote: * $p < .05$, ** $p < .01$, *** $p < .001$.

Hypothesis 3 predicted significant differences in privacy perceptions of IBSPs between UK and Saudi respondents, in which UK applicants will have higher privacy perceptions. As shown in Table 4.6, *t-test* results showed significant mean differences between the Saudi and the UK applicants on five of the twelve privacy items. Thus, hypothesis 3 was only partially supported. Compared to the Saudi applicants, UK applicants reported significantly higher privacy perceptions in terms of: (1) their information administered through IBSPs might fall into the wrong hands ($d = -.18$), (2) organizations may sell their information gathered via IBSPs ($d = -.18$), (3) even the protected Internet connection can be easily penetrated ($d = -.54$), (4) strict laws can protect applicants' confidentiality and information privacy related to the IBSPs ($d = -.43$), but lower perceptions in terms of (5) submitting their information only to a website that has guaranteed privacy ($d = .21$). However, in terms of the effect size, most of these differences were negligible-to-small according to Cohen (1988). Only a medium effect size regarding broken secure Internet connections was found between Saudi and UK applicants. UK applicants seem to be more aware and concerned about the possible penetrations of Internet connections than Saudi applicants. Furthermore, there were no significant differences between Saudi and UK applicants in terms of their reluctance to submit their information through IBSPs and perceived technical problems, lying, cheating, and stealing of IBSPs.

Hypothesis 4 predicted significant differences between Saudi and UK applicants in the negative relationship between overall privacy concerns and trust in organizations, in which the relationship will be stronger among UK applicants. As shown in Table 4.7, overall privacy concerns were significantly and negatively correlated with trust in organizations ($r = -.23, p < .001$) in the UK sample, whereas no significant correlations were found in the Saudi sample. Also, the two correlation coefficients are significantly different from each other ($t =$

2.87, $p < .01$), indicating that the negative relationship between privacy concerns and trust in organization are stronger among the UK applicants. Thus, hypothesis 4 was supported.

Additional Analyses

An additional analysis was run, following Harris et al. (2003), to quantify the relationship between privacy perceptions of IBSPs and the reluctance to submit their information via IBSPs (item 8) in Saudi Arabia and the UK. As illustrated in Table 4.6, the correlation between their privacy perceptions items and their reluctance was positively significant in both the Saudi sample (ranging from $r = .14$, $p < .05$, to $r = .27$, $p < .001$) and the UK (ranging from $r = .13$, $p < .05$ to $r = .35$, $p < .01$), with the exception of item 5 which dealt with organizations needing permission before releasing applicants information and item 7 that dealt with data protection laws in the Saudi sample, and item 4 relating to broken Internet security connections in the UK sample. Also, overall privacy concerns were significantly and positively correlated with reluctance to use IBSPs in Saudi Arabia ($r = .31$, $p < .001$) and the UK ($r = .30$, $p < .001$).

In addition, as shown in Table 4.7, process favorability and overall procedural justice perceptions of the three IBSPs were significantly and negatively correlated with overall privacy concerns in the UK sample only, whereas no significant relationships were found in the Saudi sample. The differences between the two sets of the correlations between privacy concerns and process favorability of online applications ($t = 2.72$, $p < .01$), online test ($t = 3.72$, $p < .001$), and online interviews ($t = 2.48$, $p < .05$), and between privacy concerns and procedural justice of online applications ($t = 3.81$, $p < .001$), online tests ($t = 3.99$, $p < .001$), and online interviews ($t = 2.76$, $p < .01$) were significantly higher for UK applicants. These results indicate that overall privacy concerns are higher among UK applicants in determining the fairness of IBSPs, whereas privacy concerns did not appear to be influential in forming the fairness of IBSPs among Saudi applicants.

Table 4.6: Privacy Perceptions Items, Mean, t-test Results, and Correlations for Saudi versus UK Ratings

Description of items	Means and SD		<i>t</i> -value	Cohen's <i>d</i>	Correlation with item 8	
	Saudi (<i>N</i> = 328)	UK (<i>N</i> = 283)			Saudi (<i>N</i> = 328)	UK (<i>N</i> = 283)
1. "Employment-related information (e.g., application and answer to a test) that I submit over the Internet via IBSPs may fall into the wrong hands of people I would rather not have see it	3.95 (1.88)	4.26 (1.57)	-2.24*	-.18	.21***	.24***
2. It is easy for a 'hacker' to break into databases containing employment-related information obtained over the Internet via IBSPs	4.65 (1.67)	4.59 (1.36)	.51	.04	.27***	.20**
3. Companies sell employment-related information that they collect from unsuspecting applicants over the Internet via IBSPs.	3.96 (1.73)	4.25 (1.41)	-2.24*	-.18	.15**	.28***
4. Even the most secure Internet connection can be broken into if someone wants to.	4.48 (1.63)	5.31 (1.44)	-6.73***	-.54	.24***	.07
5. Before they release employment-related information gathered over the Internet via IBSPs to other parties, most companies must have approval from the applicant who provided this information.	5.36 (1.65)	5.14 (1.52)	1.71	.14	.10	.24***
6. It is important to submit employment-related information only to an organization that has guaranteed privacy.	5.48 (1.53)	5.16 (1.50)	2.55*	.21	.26***	.15*
7. There are strict laws protecting the confidentiality of employment-related information submitted over the Internet via IBSPs.	4.20 (1.73)	4.89 (1.47)	-5.35***	-.43	.05	.13*
8. I would avoid submitting employment-related information over the Internet via IBSPs	4.09 (1.80)	3.99 (1.65)	.75	.06	-	-
9. Taking an Internet-based employment test or application or interviews can put one in a major disadvantage because of technical problems (e.g., crashes, software problems, slow speed, Internet connection)	4.46 (1.67)	4.61 (1.57)	-1.12	-.09	.23**	.35***
10. It is probably easier to lie when giving employment-related information over the Internet via IBSPs than on a paper-and-pencil form.	4.34 (1.85)	4.42 (1.67)	-.53	-.05	.14*	.18**
11. It is probably easier to cheat on a psychological test given over the Internet via IBSPs than one given on a paper-and-pencil form.	4.79 (1.73)	4.95 (1.71)	-1.15	-.09	.19***	.18**
12. People more often steal employment-related information that is administered over the Internet via IBSPs than paper-and-pencil form."	4.49 (1.57)	4.40 (1.42)	.73	.06	.17**	.22***
13. Over all privacy concerns (items 1-6)	4.65 (1.11)	4.79 (.98)	-1.64	-.13	.31***	.30***
14. Trust in organization	3.68 (.72)	3.25 (.61)	8.09***	.65	-.33***	-.14***

Note: **p* < .05, ***p* < .01, ****p* < .001.

Table 4.7: Correlations Between Overall Privacy Concerns and Process Favorability, Procedural Justice of IBSPs, and Trust in Organizations in Saudi vs UK Samples, and the Significance of the Differences between Saudi and UK Samples' Correlations

Description of items	Correlation with overall privacy concerns (items 1-6)		<i>Z – score</i>
	Saudi (<i>N</i> =328)	UK (<i>N</i> =283)	
1. Process favorability of online applications	.05	-.17**	2.72**
2. Process favorability of online tests	.09	-.21***	3.72***
3. Process favorability of online interviews	.02	-.18**	2.48*
4. Procedural justice of online applications	-.01	-.31***	3.81***
5. Procedural justice of online tests	.08	-.24***	3.99***
6. Procedural justice of online interviews	-.03	-.25***	2.76**
7. Trust in organization	-.003	-.23***	2.87**

Note: * $p < .05$, ** $p < .01$, *** $p < .001$.

Discussion

The present study contributes to applicant reactions literature by being the first to expand and inform our understanding of applicant privacy and fairness reactions to the under-examined context of IBSPs from an international perspective and the underlying factors that might guide these reactions. This study examined the reaction generalizability hypothesis, using two samples of actual applicants from two diverse countries where reactions to IBSPs have not been studied previously. Specifically, this study examined privacy perceptions, process favorability and seven procedural justice dimensions across three IBSPs, and tested possible cross-country differences in applicant perspectives between the UK and Saudi Arabia, where the national cultural values, employment and HR practices, Internet usage and privacy laws are very different. It also contributes to theory by advancing a framework that explains the potential influences between country cultural values and applicant justice perceptions by extending Hofstede's (1981; 1991; 2001) cultural dimensions and Steiner and Gilliland's (1996, 2001) frameworks with previous research, and it helps to answer calls to integrate the variety of new under examined perceptions and reactions in a new selection (IBSPs) and country (Saudi versus UK) contexts. The findings also have practical implications as it provides useful empirical evidence and guidance for multinational organizations operating in the UK and Saudi Arabia, and using IBSPs as a selection tool. Table 4.8 summarizes the hypotheses of this study and the relevant results.

Table 4.8: Summary of Findings – Study 2

Hypothesis	Findings
Hypothesis 1: There will be significant differences in:	
(a) process favorability and	H1a: partially supported
(b) procedural justice of IBSPs between Saudi and UK applicants, such that Saudi applicants will perceive them more favorably than UK applicants.	H2b: supported
Hypothesis 2: Saudi applicants will place less weight on the dimensions of employers' rights to obtain information, respectful of privacy, and interpersonal warmth and will place more weight on scientific evidence than UK applicants in determining process favorability of IBSPs.	Partially supported
Hypothesis 3: There will be significant differences in privacy perceptions of IBSPs between UK and Saudi applicants, such that UK applicants will have higher privacy perceptions than Saudi applicants.	Partially supported
Hypothesis 4: There will be significant differences between Saudi and UK applicants in the relationship between privacy concerns and trust in organizations, in which the relationship will be stronger among UK applicants	Supported

With regard to cross-country differences, some significant differences emerged between the Saudi and UK applicants. With regard to process favorability, Saudi applicants favored online applications higher than UK applicants, whereas no significant differences were found for online tests and online interviews (hypothesis 1a). In terms of overall procedural justice perceptions, Saudi applicants had higher procedural justice perceptions on all IBSPs than UK applicants (hypothesis 1b). The results obtained on procedural justice suggest that Saudi applicants consider the dimensions of scientific evidence, employer's right to obtain information, respectful of privacy, and widely used more important than UK applicants. These differences were medium for online applications and only small on the other IBSPs. Thus, the results, to some extent, found evidence for some of the cross-country differences between Saudi and UK applicants.

Additional contextual factors, beside the country cultural value differences, might have played a role in these findings. For example, the favoritism and absence of anti-discrimination law within the personnel selection in Saudi Arabia are widespread; Saudi managers often feel obliged to pursue common societal expectations and give preferences to friends, relatives, and those with the right connections to those in authority (Anderson et al., 2012). Therefore, Saudi applicants may prefer objective measures and standardized selection procedures that decrease the effect of favoritism within the selection process. This may explain why Saudi applicants had higher favorability and fairness ratings of IBSPs than UK applicants, as they offer an objective and standardized process across all the applicants. Medium size differences between Saudi and UK applicants in relation to procedural justice in online applications reflects bigger differences between the two samples, where UK applicants perceived them as less fair. This may be due to the nature of online applications as applicants usually need to provide more personal information during online applications than for online tests and online interviews (where typically less submitted information via the Internet are

needed), which can raise more concerns and reduce fairness toward online applications among UK applicants. This can also be supported by the higher correlation between UK applicants' privacy concerns and procedural justice of online applications than for the other two online procedures, and it is the only online procedures where the two countries have differences in process favorability.

Saudi applicants relied less on the dimension of interpersonal warmth of online applications and online tests in making their process favorability judgements compared to UK applicants, whereas no differences were found between Saudi and UK applicants for the other dimensions (Hypothesis 2). This might be explained by the cultural value differences between Saudi Arabia and the UK. That is, the Saudi applicants are expected to have less interest in challenging the organization due to the high power distance culture, and usually they tend to obey, and listen and do not question the leaders/organizations (Mellahi, 2006), reflecting in less interest in interpersonal warmth during the IBSPs in forming their favorability to the procedures.

However, a noticeable similarity was observed between Saudi and UK applicants in how they used their perceptions of procedural justice in making their judgment of process favorability of IBSPs. Consistent with previous research, face validity, scientific evidence, and opportunity to perform were the strongest predictors of process favorability respectively in both countries (e.g., Hoang et al., 2012; Hausknecht et al., 2004; Moscoso & Salgado, 2004; Truxillo & Bauer, 2011) followed by, widely used and employer's right respectively. Organizations can certainly use these findings to improve positive applicant reactions to their IBSPs by representing their IBSPs as high in these justice dimensions. The relationship between process favorability and procedural justice was further supported by higher procedural justice dimensions ratings associated with higher process favorability ratings across the IBSPs in both countries. These findings reiterate the significance of fairness

perceptions of selection techniques in applicant reactions literature (Harries et al., 2003; Steiner & Gilliland, 1996; Truxillo et al., in press). Another interesting finding is that the rating order of process favorability and procedural justice dimensions across IBSPs in both countries was quite similar in terms of most and least favorable, in that online applications were rated most favorably, followed by online tests and online interviews respectively, all in the medium range. Thus, organizations can use IBSPs across the UK and Saudi with high levels of confidence that job applicants will perceive them as favorable, fair and valid selection methods.

With regard to cross-country differences in applicant privacy perceptions, significant differences were found in five out of twelve privacy perceptions between Saudi Arabia and the UK (Hypothesis 3). UK applicants were significantly more concerned that their data submitted via IBSPs would fall into the wrong hands, that organizations may sell their information collected via IBSPs, and had more concerns about the Internet connection penetration and privacy laws that protect the confidentiality of their data, and less concerns about website guaranteeing privacy compared to Saudi applicants. In terms of reluctance to use IBSPs, Saudi and UK applicants showed an equal amount of reluctance to submit their information via IBSPs (around 4.0), indicating that they were rather neutral. Furthermore, UK applicants' privacy concerns were negatively associated with their organizational trust judgements, whereas no such relations were found for the Saudi applicants (Hypothesis 4).

Further results showed that only UK applicants demonstrated privacy concerns in relation to process favorability and procedural justice of the three IBSPs. These results might be due to the differences in power distance and privacy laws between Saudi Arabia and the UK. In low power distance cultures, such as the UK, UK applicants will have more concerns about the concentration of power and violations of privacy and private information than Saudi applicants. In turn, these privacy concerns in turn may influence fairness perceptions of

IBSPs in the UK as well as trust in organizations using IBSPs. On the other hand, Saudi applicants are from a country high in power distance, suggesting that they may believe that the hiring organizations have the right to take their information in order to make informed selection decisions and they tend to obey and trust their leaders. Thus, Saudi applicants may have fewer concerns about the usage of their employment-related data by the hiring organization and about privacy laws protecting them, as the additional findings showed that the reluctance to use IBSPs was not related to organizations needing permission before releasing applicant information or to the availability of strict data protection law among Saudi applicants.

Another explanation is the fact that UK applicants have high Internet usage and Internet knowledge (as shown in Study 1), which can lead to greater awareness of the dangers related to submitting information via the Internet and reflecting in greater privacy concerns as supported by the findings of this study. Indeed, our findings showed that UK applicants had greater concerns than Saudi applicants (with medium effect size of the differences) regarding the possibility of broken Internet security and more aware of the laws protecting their privacy, which may be a result of their higher usage and experience with the Internet and awareness of its related issues. This study highlights the importance of considering cross-cultural and contextual factors when studying applicant reactions. Gelfand et al. (2007), in his review of cross-cultural research in organizational behavior, argues that powerful contextual factors can “*exacerbate, reduce, and/or radically change the nature of baseline cultural tendencies*” (pp.496-497). Future research should, therefore, examine the contextual factors, such as Internet knowledge, computer experience and anxiety, especially in developing countries.

Besides these differences, there are also commonalities between Saudi and UK applicants on process favorability of online tests and online interviews and on some

procedural justice dimensions, as well as on seven items of privacy perceptions. Saudi and UK applicants showed an equal (neutral) amount of reluctance to submit their information via IBSPs. Therefore, on average, applicants were surely not against providing their information through IBSPs. Also, Saudi and UK applicants have similar perceptions on several potential privacy issues: the technical problems, cheating, lying, and stealing the results of IBSPs, all in the medium range. These findings were in line with the findings of Harris et al. (2003). Both US and Belgian respondents also showed similar average ratings of reluctance to use IBSPs. US applicants had somewhat neutral ratings to the technical problems, cheating, lying, and stealing issues, which were similar to Saudi and UK applicant ratings. Again, these findings provide additional support to “reaction generalizability” notion. These results indicate that job applicants are more willing to use IBSPs in these countries.

Reaction Generalization versus Situational Specificity

It is very important to note that the ratings of privacy and fairness perceptions were quite similar and in the same direction. The detailed comparison between Saudi and UK applicants revealed that on process favorability and procedural justice (dimensions and overall) of IBSPs and privacy perceptions, effect size differences were negligible-to-small in magnitude, except for medium magnitude on procedural justice of online applications as well as on one item of privacy perceptions (Internet connections penetration). These results indicate that these differences may not have a great impact, suggesting that reaction generalizability was found across Saudi and UK applicants’ privacy and fairness perceptions to IBSPs. The results also revealed that certain procedural justice dimensions determined the process favorability across the three IBSPs: face validity, opportunity to perform, and scientific evidence in both Saudi and UK samples, followed by employer’s right and widely used. Similar findings in applicant reactions to tradition selection methods across various

countries showed similar findings (e.g., Anderson et al., 2012; Anderson et al., 2010; Hoang et al., 2012; Moscoso & Salgado, 2004; Nikolaou & Judge, 2007). Overall, these findings suggest that applicants largely rely on certain justice dimensions in forming their favorability perceptions of selection procedures, thus, their reactions are more likely to be generalized across countries and contexts as it is determined by those underlying justice dimensions. The findings of this study somewhat counter previous suggestions that applicant reactions are more likely to vary across different cultures (i.e., situationally specific) (Steiner & Gilliland, 1996; 2001; Moscoso & Salgado, 2004). Indeed, these findings give further support and credibility for the position of “*reaction generalizability*” across countries and culture (supporting Anderson et al.’s, 2010 meta-analytic findings) as opposed to arguments for the “*situational specificity*” of applicant reactions globally. For international IBSPs’ practices, these findings are positive for multinational organizations using IBSPs and concerns that applicants may react differently to their IBSPs across countries.

It may well be that despite the fact that applicants across countries having various levels of experience with -or even exposure to IBSPs, there remains primary structural differences in perceptions and reactions that are determined by universal characteristics inherent in various selection procedures. For example, there might be some underlying set of procedural justice dimensions of any selection procedures that underlie applicant perceptions and reactions, which can derive their perceptions and reactions, regardless of the characteristics of the selection procedure. This explanation can be further supported by the relationships between process favorability and procedural justice dimensions. It is possible that face validity, scientific evidence, and opportunity to perform dimensions were the most predictive dimensions of applicants’ process favorability followed by employer’s right and widely used, in which applicants build their reactions upon them. These findings were consistent with the findings from previous studies (e.g., Anderson et al., 2012; Hoang et al.,

2012; Moscoso & Salgado, 2004) and meta-analyses (Anderson et al., 2010; Hausknecht et al., 2004) of applicant reactions to traditional selection procedures across several countries, suggesting that applicants may base their fairness perceptions of selection procedures on these five procedural justice dimensions.

The findings support the position that there is a common rank order of privacy and fairness perceptions across countries. Therefore, even though there might be some scale differences in particular ratings of privacy and fairness perceptions and reactions between Saudi Arabia and the UK, it is likely that this general pattern will still prevail. As suggested by Anderson et al. (2010), applicant reactions may have a core component that is generalizable across different cultures and countries, in which their reactions' pattern might be, to some extent, similar across countries. For example, a study by Anderson et al. (2012) showed that Saudi applicant fairness reactions (to interviews, work sample tests, résumés, and references – i.e., traditional procedures) were similar to applicant reactions found in published studies in Western countries. These possible explanations appear plausible, yet need to be addressed in future research regarding the underlying motives of applicant reactions to new selection procedures

However, caution must be exercised in presuming that the findings of this study can be generalized to other Arab-speaking or European countries, or oversimplifying these results to assume that reactions to IBSPs will remain constant despite country and varied international differences in utilizing IBSPs to reach the selection decisions by the hiring organizations and across other type of IBSPs. Indeed, it is likely that other factors can play a significant role in applicant reactions, such as selection situation in different countries, at different job and entry levels (e.g., external versus internal applicants). Further research needs to extend and replicate this study across different types of IBSPs to other countries, as this is the first study to examine and compare applicant reactions to several types of IBSPs across

two culturally different countries Saudi Arabia (a Middle Eastern country) and the UK (a Western country). Given the wide differences in cultural dimension, HR practices, selection practices, privacy law, and Internet usage, one could initially argue that situational specificity would be more likely to emerge and that great cross-country differences in applicant reactions to IBSPs would be highly expected. Organizations thus can use all these IBSPs with confidence in Saudi Arabia and the UK.

Study Strengths and Limitations

This study had the strength of obtaining two quite large samples of actual job applicants applying for various types of white-collar jobs from two countries (i.e., Saudi Arabia and the UK), whose cultures are notably different, enhancing the generalizability and the representativeness of the findings. Although the two samples did not have older aged applicants (i.e., above 40 years old) and included relatively young applicants (aged 20s-30s), this can still be strength. As both of the two samples are homogeneous, having young job applicants applying for white-collar jobs in both samples across the two countries (i.e., the sample members are similar), this enables study of this group in great depth, eliminating the effect of age, education and allowing for direct and more accurate comparisons. Also, Steiner and Gilliland (1996) and Harries et al. (2003) scales were purposely used to allow future comparisons with other studies that have also used (or will use) them. However, as it is common with other research that utilized the same design and questionnaire, a cross-sectional survey of reactions was used; thus, the reactions' causality should be draw with extra caution. Another limitation of this study is that only one Middle Eastern country (Saudi Arabia) and one European country (the UK) were assessed and these two countries cannot represent the whole of the Middle East and Europe. Therefore, applicant reactions to IBSPs must be researched in other nations (e.g., Far Eastern countries and North European countries), as

there is an entire cultural diversity that co-exists (e.g., the European Union has individualist cultures, such as Germany and UK, as well as collectivistic cultures, such as Italy, Portugal and Spain).

Implications for Research

This study sheds light on several important implications for future applicant reactions research. Future research should investigate applicant reactions in other countries (e.g., comparing other Arab and Middle Eastern countries with Western countries) using the same scales to allow direct comparisons, especially in countries where no research has been undertaken in applicant reactions. Until then, the generalizability hypothesis regarding reactions to IBSPs cannot be applied to non-Western countries. Moreover, Hofstede (1980) measured the cultural dimensions more than three decades ago. It may well be that the relative national cultures' rankings for these two countries may have changed in previous decades. Many applicants in Saudi Arabia are, nowadays, highly educated, with a relatively good number of Saudi students granted foreign scholarships by the Saudi government, sending them to the best universities in various countries around the world (Ministry of Education of Saudi Arabia, 2015). This can have a great effect on the national cultural value of the Saudi people, which may well have changed. Further research is therefore called for to incorporate the cultural value measurement of the countries and examine the direct relationship between country cultural value and fairness reactions.

Also, our samples included relatively young participants of external applicants. Therefore, future research is needed to include an older sample and compare between younger and older applicant reactions, as well as between internal (promotion) and external applicants (entry-level), and include some other technological-related factors such as Internet knowledge, computer experience, and computer anxiety. These technological factors may

significantly vary across different countries (i.e., developed versus developing countries where Internet and computer literacy greatly vary) and age group (i.e., younger versus older applicants).

Implications for Practice

The findings of this study have several important practical implications for organizations based both in the UK and Saudi Arabia as well as international organizations operating in Arab countries or seeking to hire applicants from within Saudi Arabia and the UK. The findings indicate that designing IBSPs for Saudi Arabia would be best based on research conducted in a Western context, at least regarding the three types of IBSPs examined in this study. These three IBSPs were intentionally examined as being the most commonly used online procedures by local and international organizations in the UK. Organizations intending to operate or undertake expatriate or international selection in Saudi Arabia can at least be certain that applicant privacy and fairness perceptions and reactions to IBSPs are most likely similar to the UK or to those found in earlier studies in Western countries. Also, organizations can improve applicant favorability to their IBSPs by promoting to their applicants (e.g., in their website) that their IBSPs are face valid and logical procedures to be used for the post, provide a good opportunity to perform and are based on a solid scientific evidence. In addition, organizations should look for ways to enhance applicant perceptions that online applications, online tests, and online interviews are secure, and there is no fraud or data sharing between organizations in order to reduce their privacy concerns and enhance their trust in them.

Conclusion

In conclusion, this study contributes to applicant reactions research by being the first study to examine the differences in applicant reactions to IBSPs (new medium) in the UK and Saudi Arabia (new contexts). By using and extending an established methodology and theoretical framework, the findings append incremental value to our growing understanding of applicant reactions to IBSPs globally. Even though cross-country differences in fairness and privacy perceptions and reactions were smaller than may have been anticipated in this study and were in terms of magnitude of the effects rather than in the quality of the perceptions and reactions, these findings warrant further exploration in other cultures and countries, yet most importantly, measuring cultural values along with applicant reactions to IBSPs to allow examinations of their direct effects. Overall, the findings support the reaction generalizability hypothesis and confirm the importance of reactions for applicants' trust in organization using IBSPs, especially in the UK. These findings cumulatively have obvious ramifications, suggesting similarity in applicant reactions to IBSPs and thus providing directly relevant evidence for IBSPs' design in an international base and the use of different types of IBSPs (online applications, online tests, and online interviews) from an actual applicants' viewpoint of organizational entry.

However, the present study, as well as Study 1 in the previous chapter, looked only to external applicant reactions as well as focusing only on IBSPs. Yet, another category of applicants and selection procedure have not received much research attention: *internal applicant* reactions to *promotion procedure*. Further, Study 1 and Study 2 examined the relationship between justice perceptions and organizational outcomes using a cross-sectional design, thus, we cannot draw a definite conclusion regarding the causality of reactions, and it is not known whether applicant reactions change over time. Also, some hard organizational

outcomes are not applicable to external applicant contexts and it is not yet known the effect of justice perceptions on those important hard organizational outcomes.

For these reasons, a final third study presented in the following chapter addresses these gaps and examines the effect of internal applicants' justice perceptions on soft and hard organizational outcomes over time in a promotion context, via a longitudinal design. Promotional context is one often overlooked, yet a strategically vital area in the applicant reactions field, where research is scarce and reactions can be exaggerated. Thus, the third study makes a contribution to this area in the literature.

Chapter 5 : Longitudinal Assessment of Applicant Reactions in a Promotion Context-

Study 3

Applicant reactions research has grown from a desire to contrast studies concentrated on selection processes from recruiter and organizational perspectives (Bauer et al., 2006; Steiner & Gilliland, 2001) to examine theoretical, empirical, and practical questions from the perspective of the applicants. As the context of applicant reactions has proliferated across different selection procedures, including the recent IBSPs, to comparing cross-country differences across several countries worldwide, the field is still highly active today. However, and despite the research revealing important findings, the vast majority of studies focus solely on external applicants attempting to enter the organization. A unique category of applicants, i.e., internal applicants/employees, looking to advance their career have been often overlooked in applicant reactions research. Yet, internal job applicants are important to applicant reactions research as they provide further evidence of how selection and promotion methods can greatly impact future job performance, work attitudes and behaviors, as “the stakes are sometimes much higher for applicants and the organization in promotional contexts” (Hausknecht et al., 2004, p.674). This shortage persists in the applicant reactions literature and has been cited in recent reviews as a key limitation in applicant reactions research (e.g., Hausknecht, 2013; Truxillo & Bauer, 2011; Truxillo et al., 2015; Truxillo et al., in press).

Understanding how internal applicants react in promotion contexts is critical for both researchers and organizations. Applicants’ reactions to promotion procedures can have a lasting impact on both successful and unsuccessful applicants. For unsuccessful internal applicants, reactions may concern the development of negative job attitudes and work behaviors, leading to lower job performance (Ford et al., 2009). Particularly, under conditions

of internal competition, the results often lead to an equally high number of rejected applicants, leading to de-motivation or even violation of psychological contract (Anderson, 2011). As a result, employees may lose trust in the organization, relationships with managers may be damaged and in worst case scenarios, some employees may take legal action, leave the organization or both; it may even lead to reluctance to accept the instructions from a promoted co-worker if it is suspected that he/she got the new position as part of an unfair procedure (Anderson, 2011; García-Izquierdo et al., 2012; Ford et al., 2009). Also, unsuccessful applicants may feel overwhelmed with emotion, embarrassment or even anger from being rejected for promotion and/or treated unfairly during promotion procedures, to the extent that they may feel not fit within the organization and its values anymore and consequently may consider leaving – or actually do leave the organization (i.e., turnover). For the successful applicants, fairness perceptions of promotion procedures and outcomes may encourage healthy competition between the employees, whilst simultaneously maintaining the necessary co-operation that is essential within the growing, highly interdependent and team oriented work environment, leading to enhanced corporate performance (Lawler, Mohrman, & Ledford, 1995). Fair selection strategies for promotion may positively influence employees' trust in the organization, job attitudes, and behaviors (McCarthy et al., 2009). Therefore, more attention should be given to examine reactions to promotional processes and to ensure that these processes do not inadvertently deter qualified internal applicants from applying for higher posts, or generate resentment amongst unsuccessful applicants (McCarthy et al., 2009).

Understanding how internal applicants perceive and react to promotion procedures and outcomes enables organizations to improve their hiring processes as well as mitigate negative outcomes, such as the costs associated with employee turnover and filling vacant positions (Cropanzano, Bowen, & Gilliland, 2007; Ford et al., 2009).

Due to their vast knowledge over the organization, internal applicants can be more affected by the selection processes than external applicants. Internal applicants are often familiar with the promotion procedures within their organization, as well as with the talent of their fellow employees, allowing for easier comparisons over equity (Carless, 2006; Truxillo et al., 2004). Indeed, a study by Giumetti and Sinar (2012) showed that internal applicants have stronger reactions than external applicants, leading to higher overall fairness perceptions and recommendation intentions. In addition, Truxillo and Bauer (1999) found that applicant reactions to test score banding were stronger in the promotional setting compared to the entry-level setting.

Applicant reactions to promotion can have long-lasting effects on the organization, especially on later job performance and turnover, which may also change after receiving the decision outcomes. Since internal applicants (both promoted and rejected), remain employed in the organization, they acquire different types of information and experience at different times (i.e., pre- and post-promotion) during the unfolding promotion process. Prior to the promotion decision outcomes, procedural justice is the only information available to internal applicants on which they can base their justice perceptions as well as their reactions toward the organization, even though it is mostly based on indirect experience (Ambrose & Cropanzano, 2003). After receiving the promotion decisions, applicants obtain additional information about the full promotion process and the promoted applicants, thus forming their perceptions based upon direct experience about the promotion procedure, decision outcomes, and their perceptions of distributive justice. At this point, the internal applicant perceptions may significantly change toward the organization and reactions may vary between the promoted and rejected internal applicants. While promoted applicants may have more positive justice perceptions and reactions toward the organization and over time, these perceptions may lead to increase job performance and decrease turnover, justice perceptions

may be more negative among rejected applicants, and reactions over time may lead to decrease job performance and increase intentions to leave. This also reiterates the importance of examining internal applicant reactions longitudinally, i.e., before the promotion and after the promotion. However, very few studies empirically examine the longitudinal effect of justice perceptions of internal applicants on organizational outcomes and the changes in those reactions over time (Ford et al, 2009; Truxillo et al, 2015; Truxillo et al, in press). Prior longitudinal studies have mainly focused on entry-level applicants (Ford et al., 2009), thus, very little is known about how internal applicant reactions change over time.

Finally, examining internal applicant reactions in promotion contexts over time opens up the possibility of studying the effects on several unexamined hard organizational outcomes, such as turnover, leader-member exchange (LMX), and job performance, with some outcomes (e.g., LMX) being unique to a promotional setting (Colquitt et al., 2001; Colquitt et al., 2013; Ford et al., 2009; Truxillo & Bauer, 2011), and provide a more detailed understanding of the dynamics between promotional justice and organizational outcomes.

Study Aims and Objectives

This study advances knowledge and understanding on applicant reactions in three main ways. First, this study extends applicant reactions research by examining internal applicant (i.e., employee) reactions in the context of promotions. While past studies tended to use laboratory experiments, scenarios, and students' samples to examine applicant reactions, raising concerns about generalizability of the findings to any real-world organizational context, this research was conducted in a field setting using a sample of actual internal applicants actively applying for a promotion. Thus, this study offers greater ecological validity and generalizability to the real world, mainly because it mirrors the actual factors that could affect applicant perceptions. Second, this study contributes to wider the understanding

of the impact of applicant reactions on hard organizational outcomes, i.e., LMX, job satisfaction, turnover, and job performance, which are not possible to investigate in cases of external applicants. Third, this study takes a longitudinal approach to the study of applicant reactions, which contributes to examining the lingering effects of promotional justice on organizational outcomes, and whether reactions change over time. The few existing studies examining internal applicant reactions have mostly used cross-sectional designs (except Ambrose & Cropanzano, 2003), where causality and changes in reactions over time cannot be ascertained.

To summarize, this study builds on and integrates theoretical justice-based models of applicant reactions (i.e., Gilliland, 1993; Ford et al., 2009) and social exchange theory to further develop an understanding of applicant reactions to promotion, and develop an updated model of internal applicant reactions to promotion. This study has been conducted using actual internal applicants working in a large public sector organization in Saudi Arabia.

Conceptual Model and Hypotheses Development

According to Gilliland (1993), justice violations during the selection and promotion processes can negatively affect job attitudes, behaviors, and eventually, job performance. As highlighted by Ford et al. (2009), the rule of procedural and distributive justice is particularly relevant to promotion contexts, as they are “*well poised to explain the mechanisms within the emotionally charged promotional selection setting*” (p. 408); promotion contexts can inevitably raise applicants’ sensitivity to procedural and distributive justice, which form their reactions to promotion. Thus, Gilliland’s (1993) justice-based model of applicant reactions to selection systems can also be applied to promotion.

Ford and colleagues (2009) proposed a specialized model of internal applicant reactions to promotion built on Gilliland's (1993) model and on fairness heuristic theory, the group engagement model (Tyler & Blader, 2003), and the relational model (Lind & Tyler, 1992). They added some new contextual antecedents, including organizational culture, socialization and perceived organizational support, and also new outcomes such as occupational health outcomes (e.g., stress and strain), affective outcomes (e.g., LMX), and behavioral outcomes (e.g., counterproductive work behavior), which have specific salience and relevance for internal applicants. Based on fairness heuristic theory, both the group engagement model and the relational model assist in evaluating promotion settings by their emphasis on the employees' identification with the organization and its influence on how they interpret the justice process. Because employees have a tendency to emphasize justice more in close group contexts (Folger & Cropanzano, 2001) and react more strongly to injustice in a group within which they identify (e.g., Huo, Smith, Tyler, & Lind, 1996), internal applicants will primarily identify with the organization.

Social exchange theory (SET) provides a complementary pathway through which fair procedures lead to favorable outcomes. Several organizational justice scholars have applied social exchange theory to assess the fairness-outcomes relationship in organizational settings (e.g., Cropanzano et al., 2002; Cropanzano & Rupp, 2003, 2008; Cropanzano, Rupp, Mohler, Schminke, & Ferris, 2001). Blau (1964) distinguished between two types of exchange: economic exchange and social exchange as a basis for work relationships. While economic exchange is based on monetary, concrete benefits, or quid pro quo exchanges, social exchanges are based on unspecified exchanges of resources without the necessity of immediate payback, such as emotional attachments, abstract benefits or open-ended commitments.

Taking into account the initiation of social exchange relations, many scholars have emphasized discretionary organizational actions (e.g., organizational justice) as being of high importance to employees, such as organizational justice (Cropanzano & Rupp, 2008). Organizational justice, in the form of procedural and distributive justice, is expected to create social exchange relationships between employees and their organizations. A number of studies have integrated SET with organizational justice theory to explain justice outcomes in the workplace, such as trust, job satisfaction, LMX, and job performance (e.g., Aryee, Walumbwa, Mondejar, & Chu, 2015; Cropanzano et al., 2002; Cropanzano & Mitchell, 2005; Walumbwa, Cropanzano, & Hartnell, 2009). SET is thus well poised for the promotional context, as internal applicants are already employees and have established relationships and interactions with the organization. This social relationship allows internal applicants to make associations between their justice perceptions and reactions toward the organization in terms of work-related outcomes, which makes SET particularly relevant within the high-stakes context of promotion. In addition, internal applicants exist as current employees in the organization so reactions to justice (or injustice) can immediately be manifested within the organization.

This study integrates Gilliland (1993) and the Ford et al. (2009) justice-based models and social exchange theory to provide more insights into the effects of promotional justice on soft and hard organizational outcomes and presents an updated model of applicant reactions to promotion that takes into consideration the factors relevant to promotional selection contexts (i.e., hard organizational outcomes that are more applicable to internal applicants), along with soft outcomes. Some of these organizational hard outcomes are distal outcomes of fairness which can be observed in the long term (i.e., well after the decision outcomes), such as actual turnover and job performance, while the other outcomes are more proximal in which its effects can appear immediately after receiving the promotional decisions. This model is

presented in Figure 5.1. This model extends previous work by adding new soft organizational outcomes, i.e., organizational trust and P-O fit, and unexamined hard organizational outcomes, i.e., LMX, job performance and actual turnover.

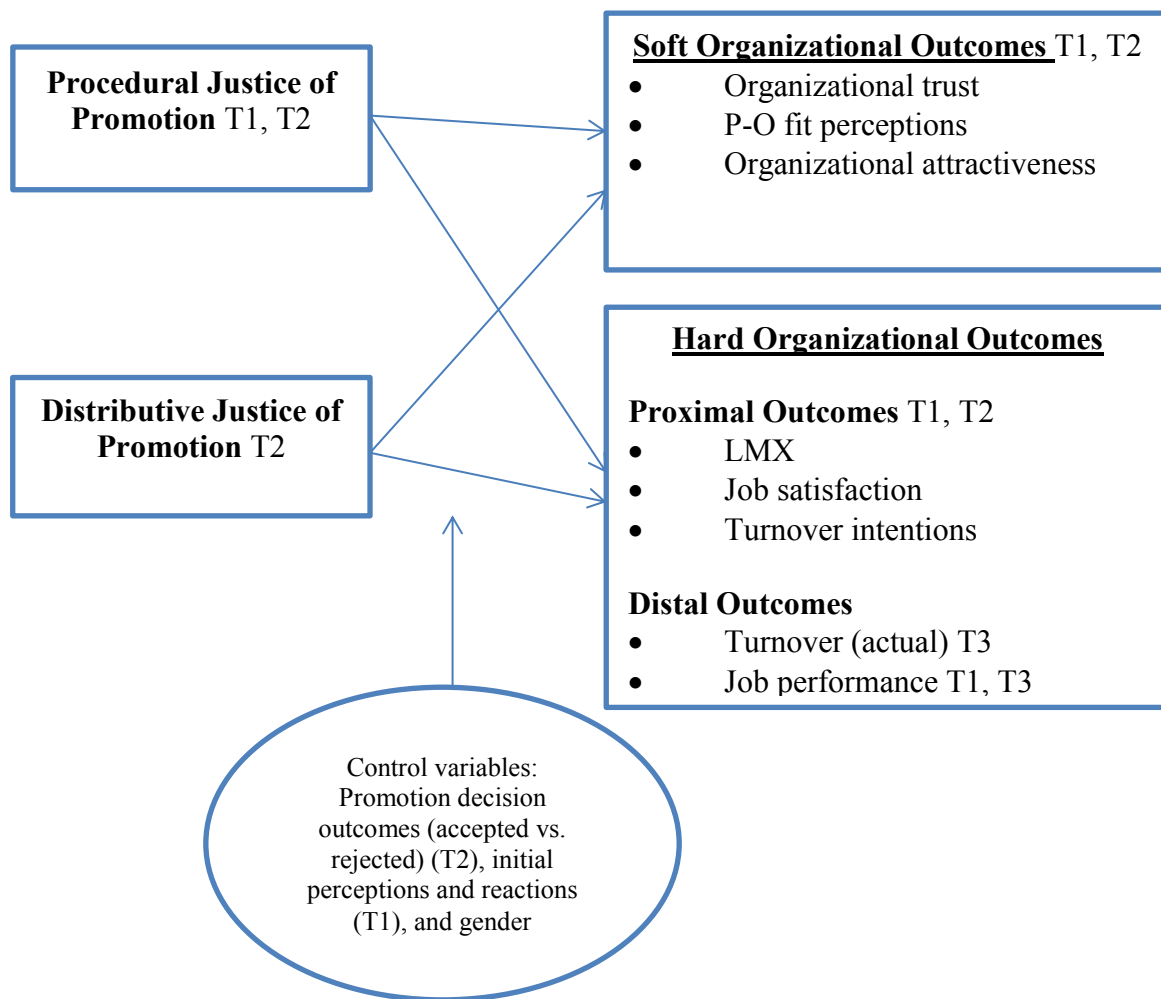


Figure 5.1: Conceptual Model of Applicant Reactions to Promotion

Note: T1 = Time 1 – pre-promotion; T2 = Time 2 – Post-promotion; T 3 = Time 3 – long-term post-promotion

Justice Effects on Soft Organizational Outcomes

Organizational trust. According to SET, organizations are forums for transactions and individuals form their fairness perceptions of these transactions. Formal promotion procedures and outcomes are established by the organization, or are generally developed by upper management on behalf of the organization, and are more likely to be related to the organization as a whole. Generally, when employees perceive procedures and decision outcomes, such as promotion decisions, as being fair, they “repay” the organization by reacting more positively toward the organization (Cropanzano, Howes, Grandey, & Tuth, 1997; Masterson Lewis, Goldman, & Taylor, 2000). Holmes (1981) and Blau (1964) identified trust as a noticeable outcome of favorable social exchanges. Therefore, organizational trust is seemingly fundamental to understanding exchanges between internal applicants (employees) and their organization. Unfortunately, even though the evidence to date has been promising, it has also been sparse.

In the organizational justice literature, organizational trust has been found to be an outcome of procedural and distributive justice (Aryee et al, 2002). A recent meta-analysis by Colquitt et al. (2013) showed that procedural and distributive justices were positively related to organizational trust. A study by Aryee et al. (2015) integrated SET and organizational justice and found that overall justice predicted employee trust in the organization. Thus, based on previous research and the social exchange perspective, this study hypothesizes that internal applicants perceptions of procedural and distributive justice will predict their trust in the organization.

P-O fit perceptions. Perceptions of fit between the employee and the organization are important and often reflect positive organizational outcomes including performance in the long run (Anderson et al., 2001; Cooper-Thomas et al., 2004; Ryan & Ployhart, 2000).

Several studies have shown that P-O fit was positively related to employees' attractions toward organizations, and to their intentions to recommend the organization to others, to be committed to the organization, and to be satisfied in their job (e.g., meta-analysis: Kristof-Brown et al., 2005; Verquer et al., 2003; empirical studies: Andrews et al., 2011; Cooper-Thomas et al., 2004; Valentine et al., 2002). These outcomes were found to be related to selection justice perceptions in applicant reactions research (e.g., Ambrose & Cropanzano, 2003; Bauer et al., 2006), indicating that P-O fit might be an outcome of promotional justice. Also Study 1 in this thesis confirms that procedural justice of IBSPs positively related to P-O fit perceptions. This relationship might be more salient in promotion contexts due to the pre-existing relationship between internal applicants (i.e., employees) and their organizations. Therefore, this study hypothesizes that promotional justice can predict P-O fit perceptions over time.

Organizational attractiveness. Previous research showed a strong positive relationships between both procedural and distributive justice and organizational attractiveness in external applicants contexts (Anderson et al., 2012; Bauer et al., 2001; Bauer et al., 2006; Carless, 2006; Maertz et al., 2004; Reeve & Schultz, 2004; Schreurs et al., 2010; Walsh et al., 2010). Meta-analytical evidence by Hausknecht et al. (2004) showed that perceptions of procedural and distributive justice were positively correlated with organizational attractiveness. Thus, it is predicted that procedural and distributive justice in a promotion context will impact organizational attractiveness.

Therefore, this study replicates the above findings in this promotional context, and hypothesizes that:

Hypothesis 1a: Prior to the promotion decision outcomes (i.e., Time 1), procedural justice will be positively related to soft organization outcomes (organizational trust, P-O fit perceptions, and organizational attractiveness).

Hypothesis 1b: Following the promotion decision outcomes, procedural justice will be positively related to soft organizational outcomes.

Hypothesis 1c: Following the promotion decision outcomes, distributive justice will be positively related to soft organizational outcomes.

Justice Effects on Hard Organizational Outcomes

Leader member-exchange. Despite the logical association with promotional fairness, this relationship is not yet supported by any empirical evidence. High-quality social exchanges, such as LMX, are established on trust which is developed from perceptions of just treatment (Sparrowe & Liden, 1997; Lind, 2001), thus, “it is expected to be a noteworthy outcome from applicant reactions to promotional procedures” (Ford et al., 2009, p. 411).

LMX refers to the exchange relationship that takes place between employees and their supervisor-managers (e.g., Settoon, Bennett, & Liden, 1996; Wayne, Shore, & Liden, 1997). When employees attribute justice to their line-managers, it influences the exchange relationship between them (Cropanzano et al., 2002). Thus, the extent to which employees see their manager/supervisor as being responsible for their promotion might directly affect subsequent exchanges between them (Ford et al., 2009). In organizational justice research, procedural and distributive justices have been empirically linked to LMX (e.g., Pillai et al., 1999; Rockstuhl et al., 2012).

Job satisfaction. One of the outcomes of selection fairness in Gilliland’s (1993) model was job satisfaction, which can be defined as “*a pleasurable or positive emotional*

state resulting from the appraisal of one's job or job experiences" (Locke, 1976, p. 1300). However, scant attention has been given to it in the context of a promotional setting. Organizational justice research demonstrates consistent and positive relationships between procedural and distributive justice and job satisfaction (e.g., meta-analysis: Cohen-Charash & Spector, 2001; Colquitt et al, 2001; Viswesvaran & Ones, 2002). In promotion contexts, the limited empirical evidence also supports this relationship. García-Izquierdo et al. (2012) showed that organizational procedural justice was positively associated with job satisfaction. Also, Ambrose and Cropanzano (2003) showed that procedural justice in the promotional process was related to job satisfaction. Researchers (e.g., Truxillo et al., in press) suggested that it is best to examine job satisfaction longitudinally as an outcome of justice perceptions in a promotional setting. Thus, this study proposes that internal applicant perceptions of procedural and distributive justice in promotions will affect job satisfaction over time.

Turnover intentions and actual turnover. According to Lind (2001), fairness is related to investment in the organization, such as turnover, while Gilliland (1993) posited that justice perceptions are negatively related to turnover. However, very limited studies have examined the relationship between selection fairness and turnover (actual and intentions) and produced equivocal results. On one hand, Ambrose and Cropanzano (2003) found that procedural and distributive justice perceptions negatively predicted turnover intentions over time in a promotion context. On the other hand, a study by Truxillo et al. (2002) showed that there was no relationship between providing selection fairness information and later turnover amongst those hired in an entry-level context. However, this is not surprising when considering the fact that rejected applicants do not enter the organization and those hired were already attracted to the organization. In organizational justice literature, a meta-analysis by Colquitt et al. (2001) found a moderate negative relationship between procedural justice

and withdrawal, and a strong negative relationship between distributive justice and withdrawal. However, actual turnover is a more distal outcome that can occur well after receiving the promotional decisions, as applicants may need longer time to evaluate their position and decide whether they want to leave the organization or not as a result of their perceptions of promotional fairness/unfairness and to search for alternative jobs. Thus, this study proposes that perceptions of procedural and distributive justice will be related to turnover intentions over time and to actual turnover well after promotional decision outcomes.

Job performance. Gilliland's (1993) model proposed job performance as a potential outcome of selection justice perceptions. Perhaps one of the most unclear of all relationships in selection fairness literature is the relationship between selection justice and job performance, with scarce and equivocal empirical evidence. For example, Gilliland (1994) found that fairness perceptions were not related to job performance. On the other hand, Konovsky and Cropanzano (1991) reported a consistent positive correlation between the procedural justice of drug testing and employee performance, indicating that procedural justice, but not the outcome of fairness, can predicts employee performance. A more recent study by McCarthy et al. (2013) revealed that fairness perceptions across three samples of external applicants in two continents were not related to job performance. On the other hand, Konradt et al. (2015) examined the longitudinal effect of fairness perceptions in entry-level selection settings and found that pre-test procedural fairness was related to job performance after 18 months for those hired applicants, but that this effect diminished after 36 months. These existing studies provide inconclusive findings, and the generalizability of these results to internal applicants needs to be further explored. Indeed, the relationship between applicant reactions and job performance may become clearer in the promotional selection context (cf.

Ford et al., 2009; Schaubroecka & Lam, 2004; Truxillo & Bauer, 2011), as the relationship between reactions and later job performance are likely to be stronger among internal applicants than external applicants in the long term.

Based on the research and aforementioned arguments, given that the employee-organization/social exchange relationship has been already well established, this study predicts the following:

Hypothesis 2a: Prior to the promotion decision outcomes (i.e., Time 1), procedural justice will be positively related to LMX, job satisfaction, and job performance, and negatively related to turnover intentions (i.e., hard outcomes).

Hypothesis 2b: Following the promotion decision outcomes, procedural justice will be positively related to LMX, job satisfaction, and job performance, and negatively related to turnover intentions and actual turnover.

Hypothesis 2c: Following the promotion decision outcomes, distributive justice will be positively related to LMX, job satisfaction, and job performance, and negatively related to turnover intentions and actual turnover.

Procedural Justice versus Distributive Justice

Although procedural justice and distributive justice are both predictors of organizational outcomes, procedural justice may play a more influential role in internal applicant reactions due to potency (Ambrose & Cropanzano, 2003). As the decision outcomes come after the whole promotion procedure and while internal applicants might be aware of their promotional decision outcomes, they will have already experienced the promotion process, which resulted in better perceptions of procedural justice, while just begun to directly experience the promotion decision outcomes and form their distributive justice perceptions. Based on research by Petty and Cacioppo (1986) on the impact of direct

experience on the potency of the relationship between attitude and outcome, this study expects that the procedural justice will be more effective than distributive justice perceptions in the promotional context. A study by Ambrose and Cropanzano (2003) on faculty fairness perceptions of tenure and promotion decisions found that perceptions of procedural justice were a stronger predictor of attitudes (organizational commitment, job satisfaction and turnover intentions) compared to distributive justice after receiving the promotional decisions. Furthermore, cross-sectional research shows that procedural justice was more strongly associated with global attitudes than that of distributive justice (Folger & Konovsky, 1989; Sweeney & McFarlin, 1993). Therefore, this study predicts the following:

Hypothesis 3: Perceptions of procedural justice will be more strongly related to organizational outcomes than that of perceptions of distributive justice.

Changes in Reactions among Accepted and Rejected Applicants over Time

There are two types of change to consider in applicant reactions research. First, changes and differences in reactions between accepted and rejected candidates after receiving the promotion decision outcomes, and second, changes in perceptions and reactions over time as a result of the promotion procedure. Applicant reactions research has clearly demonstrated that selection outcomes received by applicants can influence their reactions toward the organization and themselves (Anseel & Lievens, 2009; Bernerth, 2005; Burns, Siers, & Christiansen, 2008; Hausknecht et al., 2004; Schinkel et al., 2004; Van Vianen et al., 2004; Wiechmann & Ryan, 2003). Applicant reactions may change after receiving the decision outcomes and those reactions may differ between the accepted and rejected applicants, such that it might be more favorable among accepted applicants. Anderson and Goltsi (2006) found that well-being and the positive effects of accepted applicants changed after receiving the selection decisions compared to their initial reactions. They also found that rejected

applicants rated feedback far less favorably than accepted applicants after receiving the selection decisions. Another study by Burns et al. (2008) found that testing outcomes had an impact on applicant reactions, such that their reactions were much more favorable for those who passed the test compared to those who had failed the test. Bauer et al. (2004) showed that screening outcomes seemed to be the only factor affecting job pursuit intentions, as participants who passed the screening were more interested in pursuing a job. Thus, this study replicates these findings in the promotional context and further hypothesizes the following:

Hypothesis 4: There will be significant differences in fairness perceptions and reactions (i.e., organizational outcomes) between accepted and rejected internal applicants after receiving promotion decision outcomes, such that accepted applicants will have higher perceptions and more positive reactions compared to those of rejected applicants.

Second, many researchers suggest that applicant perceptions and reactions may change pre- and post-selection based on the decision outcomes (e.g., Ambrose & Cropanzano, 2003; Chan et al., 1998b; Truxillo & Bauer, 2011). Therefore, this study hypothesizes the following:

Hypothesis 5: Applicant perceptions and reactions will change after receiving promotion decision outcomes, such that accepted applicants will have more positive perceptions and reactions after receiving the decision outcomes, whilst rejected applicants will have less positive perceptions and reactions after receiving the decision outcomes.

Methods

Design and Procedure

Participants were internal applicants who applied for a promotion in a large public sector organization in Saudi Arabia. Every year, this public organization in Saudi Arabia offer its employees the chance to be promoted to a higher grade in their current roles or move to a higher level position based on several criteria (e.g., high job performance and working for at least four years). The move to a higher grade or job position is important given the differences in total compensation, retirement privileges, organizational package, status, and the ability to make important decisions. This study took place between March 2013 and April 2014 and employed a longitudinal design to examine justice perceptions and organizational outcomes of internal applicants (see Table 5.1). Data was collected at three points of time over a period of one year. Time 1 was the pre-promotion allocation phase, applicants responded to a survey immediately after applying for the promotion, i.e., prior to any decision on their promotion application. Internal applicants applied directly (manually) to the HR department for a promotion. This survey was designed to assess their perceptions of procedural justice, organizational trust, P-O fit, organizational attractiveness, LMX, job satisfaction, and turnover intentions. In addition, job performance ratings for each applicant were collected from the organization. Time 2 was the post-promotion allocation phase when the promotional decision outcomes were made and formal feedback was provided to all applicants, approximately 5 months after applying for promotion; participants were surveyed again on the same variables. In addition, applicants answered questions about distributive justice. At Time 3, the long-term post-promotion allocation phase, took place one year after Time 1, and job performance rating and actual turnover on the applicants were collected from the organization.

Sample

The HR department of this organization provided the list of internal applicants (513 in total) seeking promotion in March 2013. Those applicants were working in different job categories, such as professional (e.g., managers, officers, engineers and accountants), clerical (e.g., assistants and administrators), and technical (lab technicians and IT technicians). At Time 1, 531 questionnaires were distributed and 362 (68.17%) of applicants provided data at Time 1. Of this sample, 248 (68.5%) were male and 114 were female (31.5%). The mean age was 40.52 years (standard deviation [*SD*] = 7.06). On average, working experience at the current job was 7.72 years (*SD* = 5.77) and mean tenure in the present job function was 15.45 years (*SD* = 7.54).

Of 362 applicants in Time 1, 253 (69.88%) also provided data at Time 2. Of the 253, 153 (60.5%) were male and 100 were female (39.5%). The mean age was 40.95 years (*SD* = 7.81). On average, working experience at the current job was 7.74 years (*SD* = 6.27) and mean tenure in the present job function was 15.24 years (*SD* = 7.78). The number of internal applicants receiving promotion was 118 (46.6%) and 135 (53.4%) were rejected. At Time 3, data on 253 internal applicants were collected concerning job performance and actual turnover.

The response rate in this study from Time 1 to Time 2 (69.88%) - and to Time 3 - is in the moderate to upper range for this type of research (e.g., Paul & Bracken, 1995). Prior studies of this type reported response rates from the first to the second survey of 46% to 84% (e.g., Gopinath & Becker, 2000; Ambrose & Cropanzano, 2003). A comparison was conducted between applicants that completed the survey at Time 1 and Time 2 and the applicants that only complete the survey at Time 1 on their demographic variables and promotion decision outcomes. Both samples did not differ significantly in terms of age,

working experience at the current job, mean tenure in the present job function, and promotion decisions. In terms of promotion decisions 47 (43.1%) of the applicants who responded to the survey only in Time 1 were promoted compared to 118 (46.6%) who responded to the surveys at Time 1 and Time 2. However, both samples differed significantly in terms of gender ($F= 26.86, p < .001$); 95 (87.2%) of applicants who only responded to the survey at Time 1 were male and 14 (12.8%) were female.

Control Variables

Several control variables were conducted. First, the researcher controlled for Time 1 perceptions and reactions regarding procedural justice and organizational outcomes. Second, following Truxillo and Bauer (2011) on the importance of controlling for outcome favorability (i.e., decision outcomes) in examining applicant reactions and attitudes after feedback, and because being rejected for a promotion is likely to affect organizational outcomes independently of the perceived justice of the procedure and outcome, promotional decision outcomes were included as a control variable for the Time 2 analyses. Although age and gender were considered, age was not correlated with our dependent variable, thus, age was excluded from the analyses report. The mean, standard deviations and correlation of all variables in this study are shown in Table 5.2.

Table 5.1: Longitudinal Design and Data Collection Schedule

Items/subscale	Time 1	Time 2	Time 3
	Pre-promotion	Post-promotion	Long-term post-promotion
<div> <div>5 months</div> <div>1 year</div> </div>			
Demographic variables	X		
Justice Perceptions:			
• Procedural justice	X	X	
• Distributive justice		X	
Promotional decisions (accepted/rejecter)		X	
Soft Organizational Outcomes:			
• Organizational trust	X	X	
• P-O fit	X	X	
• Organizational attractiveness	X	X	
Hard Organizational Outcomes:			
• LMX	X	X	
• Job satisfaction	X	X	
• Turnover intentions	X	X	
• Actual turnover			X
• Work performance	X		X

Measures

Promotional justice. Procedural justice was measured with a seven-item scale developed by Steiner and Gilliland (1996). Participants responded to these items using a seven-point Likert-type scale ranging from 1 (totally disagree) to 7 (totally agree). Cronbach's alpha was .91 in Time 1 and .92 in Time 2. *Distributive justice* (Time 2) was measured with a four-item scale adapted from research by Elkins and Phillips (2000). The Cronbach alpha was .93. Participants responded to those justice measurements using a seven-point Likert type scale ranging from 1 (strongly disagree) to 7 (strongly agree). *Promotional decision outcomes* (Time 2) (0 = promotion denied, 1 = promotion granted) were obtained from the respondents' organizational records.

Soft organizational outcomes. *Organizational trust* was measured with a seven-item scale adopted from Robinson (1996); Cronbach's alpha was .92 in Time 1 and .94 in Time 2. *Person-Organization fit* was measured with a two-item scale from Braddy et al. (2009); Cronbach's alpha was .85 at Time 1 and .83 at Time 2. *Organizational attractiveness* was measured with a five-item scale by Highhouse et al. (2003); Cronbach's alpha was .88 at Time 1 and .89 at Time 2. Participants responded to a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Hard organizational outcomes. *Job satisfaction* was measured with a five-item scale from Ambrose and Cropanzano (2002); Cronbach's alpha was .89 in Time 1 and .88 in Time 2. Participants responded to those outcome measurements using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). *Leader-Member Exchange (LMX)* was measured with a seven-item scale from Wayne, Shore, William, Bommer and Tetrick (2002); Cronbach's alpha was .93 in Time 1 and .92 in Time 2. *Turnover intentions* was measured with a three-item scale used by Ambrose and Cropanzano (2002); Cronbach's alpha was .88 in Time 1 and .81 in Time 2. Items for *LMX* and *turnover intentions* were

measured on a seven-point Likert-type scale range from 1 (strongly disagree) to 7 (strongly agree). *Job performance* was measured using archival data from the organization. The organization HR contact person provided the overall applicants' job performance rating at Time 1 and also at Time 3. The rating had a scale ranging between 1 = very poor, 2 = needs improvement, 3 = satisfactory, 4 = very good and 5 = outstanding; (See appendix A for the scales). Also, actual turnover (no = 0, yes = 1) was obtained from the respondents' organizational records.

Translation of the Survey

The same procedures in Study 2 in Chapter 4 were used to translate the survey. Following guidelines (e.g., Weeks, Swerissen, & Belfrage, 2007), the survey was translated from English to Arabic and then back to English by experienced and qualified translators.

Analysis Strategy

The normality of these measured variables were also assessed by using the following criteria: (a) mean and median similarity, (b) skewness and kurtosis values between -1.96 and +1.96, and (c) shape of histogram normal probability plot (curve) (Hair et al., 2010), and all the variables met these criteria, concluding that the data were normally distributed.

The data was analyzed using SPSS/AMOS version 21. Table 5.2 shows the means, standard deviations and correlation matrix for all of the study variables. Following this, structural equation modelling (SEM), via AMOS a maximum likelihood-based software, was used to test the effect of Time 1 procedural justice on Time 1 organizational outcomes (hypotheses 1a and 2a) and the Time 2 procedural and distributive justice on organizational outcomes (hypotheses 1b-c and 2b-c). A two-stage process for SEM analyses recommended by Anderson and Gerbing (1988) was utilized. First, the measurement model was tested to

ensure the unidimensionality of the measures, in which all indicator variables loaded on their respective latent variables and all latent variables were allowed to correlate with each other. We followed the same procedures in Study 1 (p.83) to assess composite reliability, convergent and discriminants validity for the measurement models, and the influence of multicollinearity. This study has two models, one for the justice-soft organizational outcomes model and another for the justice-hard organizational outcomes model. In the second stage, the two structural models (the path) were tested. Note that we also allowed the error terms of the organizational outcomes to correlate with each other in both models because different reactions might share the antecedents and this technique has been suggested and used in previous applicant reactions research (See also Ababneh et al., 2014; Bauer et al., 2006). Additionally, following the procedures outlined by Cohen et al. (2003, p.640) we assessed whether the difference between the procedural justice and distributive justice beta coefficients (hypothesis 3) was statistically significant, using this formula $t = \frac{\beta_1 - \beta_2}{SE_{\beta_1 - \beta_2}}$.

Finally, an independent sample *t*-test in SPSS and Cohen's *d* (for effect size) was used to assess any significant differences between accepted and rejected applicants (to test hypothesis 4), and a pair sample *t*-test was used to examine the differences between both Time 2 and 3 and perceptions and reactions of Time 1 (to test hypothesis 5). Cohen (1988) outlined criteria for assessing small, medium and large effect sizes, in which effect size of about .20 in magnitude is small, around .50 is medium and around .80 is large; *d*-values are an extremely conservative statistic, unaffected by different subgroup sample sizes.

Table 5.2: Means, Standard Deviations, and Correlations for all Variables

	M	SD	1	2	3	4	5	6	7	8	9
1. Gender	1.40	.49	-								
2. T1 PJ	4.59	1.21	.20**	-							
3. T1 org. trust	3.79	.86	.12	.57***	-						
4. T1 P-O fit	3.73	.93	.06	.37***	.52***	-					
5. T1 org. attractiveness	4.28	.76	.17**	.39***	.52***	.51***	-				
6. T1 LMX	4.92	1.10	.12	.31***	.40***	.29***	.43***	-			
7. T1 job satisfaction	4.22	.85	.06	.38***	.49***	.48***	.67***	.44***	-		
8. T1 turnover intentions	2.18	1.47	-.23***	-.32***	-.42***	-.40***	-.59***	-.38***	-.61***	-	
9. T1 job performance	4.79	.50	.20**	.26***	.30***	.13***	.17**	.09	.13*	-.06	-
10.T2 PJ	4.52	1.17	.04	.61***	.53***	.27***	.31***	.25***	.30***	-.25***	.25***
11.T2 DJ	4.64	1.30	-.06	.40***	.41***	.24***	.25***	.17**	.23***	-.14*	.17**
12.T2 promotional decision	.47	.50	-.22***	-.07	-.10	-.06	-.06	.02	-.02	.12*	.11
13.T2 org. trust	3.72	.84	.09	.42***	.77***	.41***	.45***	.27***	.36***	-.32***	.26***
14.T2 P-O fit	3.61	.88	.09	.27***	.44***	.62***	.41***	.20***	.34***	-.23***	.16*
15.T2 org. attractiveness	4.16	.70	.11	.34***	.53***	.34***	.63***	.33***	.43***	-.42***	.23***
16.T2 LMX	5.51	1.24	.06	.22***	.34**	.16*	.34***	.72***	.32***	-.28***	.13***
17.T2 job satisfaction	4.09	.78	.09	.27***	.42***	.34***	.54***	.28***	.66***	-.48***	.13*
18.T2 turnover intentions	2.43	1.43	-.19**	-.24***	-.35***	-.25***	-.42***	-.30***	-.45***	.65***	-.09
19.T3 actual turnover	.01	.09	.02	-.10	.01	.00	.03	.05	.02	-.05	-.05
20.T3 job performance	4.76	.65	.15*	.35***	.33***	.14*	.18**	.11	.15*	-.15*	.49***

Footnote: * $p < .05$, ** $p < .01$, *** $p < .001$. Note: T = time; org = organizational

Table 5.2: (continued)

10	11	12	13	14	15	16	17	18	19	20
-										
.69***	-									
.30***	.50***	-								
.67***	.60***	.29***	-							
.43***	.36***	.18***	.58***	-						
.50***	.50***	.28***	.67***	.49***	-					
.33***	.24***	.11	.37***	.35***	.41***	-				
.39***	.32***	.15*	.52***	.50***	.57***	.35***	-			
-.34***	-.23***	-.05	-.40***	-.32***	-.50***	-.33***	-.55***	-		
-.01	-.03	.01	.05	.07	.03	.07	.02	-.08	-	
.41***	.26***	.09	.31	.14	.26***	.13*	.17**	-.11	-.65***	-

Results

Measurement Models

In the first step, SEM methods (implemented in AMOS version 21) were used to run a confirmatory factor analyses (CFA) for the two measurement models. CFA confirmed the goodness of the fit for the justice-soft organizational outcome measurement model: χ^2 was 1805.16 ($df = 1007$, $p < .001$); the chi square/degree of freedom (CMIN/DF) was 1.79, an appropriate value well below the benchmark of 3.0, the root mean square error of approximation (RMSEA) showed a value of .05, which is well below the 0.08 cut-off level, the Comparative Fit Index (CFI) = .92 and the Tucker-Lewis Index (TLI) = .91, which are greater than the required value of .90 (Hair et al., 2010). The justice-hard organizational outcomes measurement model fit also showed an acceptable model fit ($\chi^2 = 2041.07$, $df = 1177$, $p < .001$; CMIN/DF = 1.73, RMSEA = .05, CFI = .92, and TLI = .91).

Convergent and discriminate validity. The results of the CFA showed that all the loadings were significant (p value < 0.001), with almost all loading above the threshold of .50. Therefore, there is strong evidence for satisfactory convergent validity for both models. In addition, the values of Cronbach's Alpha (α) and construct composite reliability (CR) of all the constructs exceed the recommended value of .70 for social science research (Hair et al, 2010, p.125), thus demonstrating a good internal consistency of each composite construct. Also, an average variance extract (AVE) measure was computed for each latent construct for the two models. All constructs demonstrated adequate convergent validity for latent constructs for both justice-soft organizational outcomes and justice-hard organizational outcomes models.

With regard to discriminant validity, the square roots of AVE for each construct are higher than their inter-construct correlations for the two models, which satisfied the condition

of discriminant validity. The two measurement models were clean, with evidence for unidimensionality, reliability, convergent validity and discriminant validity. Also, each value of VIF indicators was lower than 3, indicating no threat of multicollinearity; thus, allowing us to proceed to the structural models and hypotheses testing (See appendix C for the results of these tests). These two models are fit to use for subsequent analysis and hypothesis-testing.

However, high intercorrelations ($r > .50$) between procedural and distributive justice at Time 2 and between Time 1 and Time 2 for the same outcome measures (e.g., $r = .77$ between Time 1 organizational trust and Time 2 organizational trust), which can be a limitation. Thus, additional analyses were performed to compare the default measurement models for both the justice-soft outcomes and justice-hard outcomes models with models that collapsed across those variables. Models combining Time 2 procedural and distributive justice into a single factor provided a significantly worse fit to the data (CFI = .89, $\Delta\text{CFI} = .03$; $\Delta\chi^2 = 302.49$; $\Delta df = 10$, $p < 0.001$ for the justice-soft outcomes model; CFI = .89, $\Delta\text{CFI} = .03$, RMSEA = .06, $\Delta\chi^2 = 229.81$; $\Delta df = 12$, $p < 0.001$ for the justice-hard outcomes model); also, models combining Time 1 and Time 2 measures into a single factor for each measure provided significantly worse fit to the data (CFI = .74, $\Delta\text{CFI} = .18$, $\Delta\chi^2 = 1788.30$, $\Delta df = 34$, $p < 0.001$ for the justice-soft outcomes model; CFI = .73, $\Delta\text{CFI} = .19$, $\Delta\chi^2 = 2001.11$, $\Delta df = 42$, $p < 0.001$ for the justice-hard outcomes model). Finally, we examined the presence of common method variance (CMV) using two methods (as explained in Study 1, p. 83). The standardized regression weights from the CLF model was compared to the standardized regression weights of the measurement model for both justice-soft outcomes and justice-hard outcomes models without the CLF and found no large differences (greater than 0.2), confirming that CMV is not an issue in this study. Additional procedure used CFA to compare the fit of the measurement model against one factor model (i.e., influential common method factor) (See Bell et al., 2006) for both justice-soft outcomes and justice-hard

outcomes measurement models that would suggest common variance. The one factor model provided a significantly worse and unacceptable fit to the data than that of our justice-soft outcomes measurement model (CFI= .59, RMSEA= .12, Δ CFI = .33, $\Delta\chi^2 = 3942.58$, Δ df= 53, $p < 0.001$) and justice-hard outcomes measurement model (CFI= .46, RMSEA= .13, Δ CFI = .46, $\Delta\chi^2 = 4953.41$, Δ df= 31, $p < 0.001$). Combining these results, as well as utilizing the longitudinal design and two sources for the data, provides further evidence that CMB did not have a substantial influence on the relationships examined in this study.

Structural Models and Hypotheses Testing

Promotional justice and soft organizational outcomes. For hypotheses 1a - 1c, a regression analysis was used via structural equation modelling (SEM) to examine the effect of procedural and distributive justice on soft organizational outcomes. The hypothesized structural models resulted in an acceptable fit for the justice-soft organizational outcomes model ($\chi^2 = 1841.92$, $df = 1022$, $p < .001$; CMIN/DF = 1.80, RMSEA = .05, CFI = .92, and TLI = .91). Hypothesis 1a predicted that perceptions of procedural justice would be significantly and positively related to soft organizational outcomes (organizational trust, P-O fit, and organizational attractiveness) during the pre-promotion allocation phase (Time 1). As shown in Table 5.3, Time 1 procedural justice was positively related to organizational trust ($\beta = .64$), for P-O fit perceptions ($\beta = .45$), and organizational attractiveness ($\beta = .39$) all at $p < .001$. Thus, hypothesis 1a was supported.

To test hypotheses 1b and 1c, the variables gender, Time 1 procedural justice perceptions, Time 1 soft organizational outcomes and promotion decisions were used as control variables. As shown in Table 5.4, Time 2 procedural justice was positively related to organizational trust ($\beta = .48$, $p < .001$), P-O fit ($\beta = .49$, $p < .001$), and organizational attractiveness ($\beta = .29$, $p < .01$), thus supporting hypothesis 1b. Time 2 distributive justice

was positively related only to organizational trust ($\beta = .17, p < .05$), but was not related to P-O fit and organizational attractiveness. Thus, hypothesis 1c was only partially supported.

Table 5.3: Results of Structural Equation Modelling for Time 1 Promotional Justice-Soft Organizational Outcomes

Independent variables	Dependent variables					
	T1 Organizational trust		T1 P-O fit		T1 Organizational attractiveness	
	<i>B</i>	β	<i>B</i>	β	<i>B</i>	β
Gender	-.02 (.10)	-.01	-.04 (.12)	-.02	.21 (.11)	.12
Time 1 procedural justice	.34*** (.03)	.64***	.24*** (.04)	.45***	.21*** (.03)	.39***
<i>R</i> ²	.41		.20		.19	

Note. *B* = unstandardized regression coefficients (standard errors are in parentheses); β = standardized coefficients.

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 5.4: Results of Structural Equation Modelling for Time 2 Promotional Justice-Soft Organizational Outcomes

Independent variables	Dependent variables					
	T2 Organizational trust		T2 P-O fit		T2 Organizational attractiveness	
	<i>B</i>	β	<i>B</i>	β	<i>B</i>	β
Time 1 organizational outcomes' measure	.62*** (.06)	.67***	.62*** (.06)	.67***	.46*** (.04)	.55***
Gender	.12 (.06)	.07	.18* (.09)	.11*	.12 (.07)	.08
Promotional decisions	.05 (.08)	.03	.26* (.11)	.16*	.23** (.09)	.16**
Time 1 procedural justice	-.13** (.03)	-.31**	-.15*** (.04)	-.27***	-.04 (.03)	-.09
Time 2 procedural justice	.26*** (.04)	.48***	.27*** (.06)	.49***	.14** (.05)	.29**
Time 2 distributive justice	.10* (.04)	.17*	-.06 (.06)	-.09	.09 (.05)	.15
<i>R</i> ²	.76		.62		.59	

Note. *B* = unstandardized regression coefficients (standard errors are in parentheses); β = standardized coefficients.

* $p < .05$; ** $p < .01$; *** $p < .001$

Promotional justice and organizational hard outcomes. To test hypotheses 2a - 2c, another regression analysis was run using SEM via AMOS. The fit indices for the structural model revealed an acceptable fit ($\chi^2 = 2146.58$, $df = 1246$, $p < .001$; CMIN/DF = 1.72, RMSEA = .05, CFI = .92, and TLI = .91). Hypothesis 2a predicted that Time 1 procedural justice would be significantly related to Time 1 organizational hard outcomes. As shown in Table 5.5, procedural justice was significantly and positively related to LMX ($\beta = .32$), job satisfaction ($\beta = .38$), and job performance ($\beta = .26$), and negatively related to turnover intentions ($\beta = -.37$) all at $p < .001$. This supports hypothesis 2a.

To test the effect of Time 2 promotional justice on Time 2 and 3 organizational hard outcomes (hypotheses 2b and 2c), Time 1 procedural justice, Time 1 hard organizational outcomes, gender and promotion decisions were used as control variables. As shown in Table 5.6, Time 2 procedural justice was positively related to Time 2, LMX ($\beta = .35$, $p < .001$), job satisfaction ($\beta = .28$, $p < .01$) and Time 3 job performance ($\beta = .31$, $p < .01$) and negatively related to turnover intentions ($\beta = -.29$, $p < .001$), but was not significantly related to actual turnover. Thus, hypothesis 2b was partially supported. Time 2 distributive justice was not significantly related to any Time 2 and Time 3 organizational hard outcomes, thus, hypothesis 2c was not supported.

Additional analysis was used to assess the influence of promotional decisions as a control variable in the two models. With regard to the justice-soft organizational outcomes model, promotional decision outcome is significant predictor of procedural justice ($\beta = .33$, $p < .001$) and of distributive justice ($\beta = .53$, $p < .001$) and P-O fit and organizational attractiveness (both at $\beta = .16$, $p < .05$) at Time 2. Regarding justice-hard outcomes model, promotional decision outcome is a significant predictor of procedural justice ($\beta = .32$, $p < .001$) and of distributive justice ($\beta = .56$, $p < .001$) at Time 2, but it is not a significant predictor of hard organizational outcomes at Time 2.

Additional examination of R^2 for soft and hard outcomes models revealed that procedural justice of promotion accounted for more variance in Time 2 than in Time 1 for all the variables: 41% at Time 1 versus 76% at Time 2 for organizational trust, 20% versus 62% for P-O fit, 19% versus 59% for organizational attractiveness, 11% versus 56% for LMX, 14% versus 52% for job satisfaction, 20% versus 56% for turnover intentions and 11% versus 37% for job performance (See Table 5.3 and 5.5 for Time 1 results and 5.4 and 5.6 for Time 2 results from the SEM analyses).

Table 5.5: Results of Structural Equation Modelling for Time 1 Promotional Justice-Hard Organizational Outcomes

Independent variables	Dependent variables							
	T1 LMX		T1 Job satisfaction		T1 Turnover intentions		T1 Job performance	
	<i>B</i>	β	<i>B</i>	β	<i>B</i>	β	<i>B</i>	β
Gender	.18 (.19)	.06	-.04 (.13)	-.02	-.61** (.20)	-.19**	.16* (.06)	.15*
Time 1 procedural justice	.28*** (.06)	.32***	.23*** (.04)	.38***	-.34*** (.06)	-.37***	.08*** (.02)	.26***
<i>R</i> ²	.11		.14		.20		.11	

Note. *B* = unstandardized regression coefficients (standard errors are in parentheses); β = standardized coefficients. * $p < .05$; ** $p < .01$; *** $p < .001$

Table 5.6: Results of Structural Equation Modelling for Time 2 Promotional Justice-Hard Organizational Outcomes

Independent variables	Dependent variables									
	T2 LMX		T2 Job satisfaction		T2 Turnover intentions		T3 actual turnover		T3 Job performance	
	<i>B</i>	β	<i>B</i>	β	<i>B</i>	β	<i>B</i>	β	<i>B</i>	β
Time 1 organizational outcomes' measure	.62*** (.05)	.71***	.54*** (.05)	.66***	.68*** (.07)	.68***	-	-	.49*** (.05)	.41***
Gender	-.03 (.12)	-.01	.16 (.09)	.09	-.24 (.17)	-.08	.01 (.01)	.03	.05 (.06)	.05
Promotional decisions	.09 (.16)	.04	.16 (.11)	.10	-.24 (.21)	-.08	.00 (.02)	.01	-.01 (.08)	-.01
Time 1 procedural justice	-.14* (.06)	-.18*	-.09* (.04)	-.19*	.14 (.08)	.15	-.01 (.01)	-.13	.03 (.03)	.08
Time 2 procedural justice	.30*** (.09)	.35***	.16** (.06)	.28**	-.30** (.12)	-.29***	.01 (.01)	.15	.12* (.05)	.31**
Time 2 distributive justice	-.06 (.09)	-.07	.01 (.07)	.02	.04 (.13)	.04	-.01 (.01)	-.09	-.01 (.05)	-.03
<i>R</i> ²	.56		.52		.56		.01		.37	

Note. *B* = unstandardized regression coefficients (standard errors are in parentheses); β = standardized coefficients.

* $p < .05$; ** $p < .01$; *** $p < .001$

Procedural justice vs. distributive justice. To test hypothesis 3, an examination of the significance level and the beta showed that procedural justice at Time 2 was a relatively stronger predictor of soft and hard organizational outcomes than distributive justice. Distributive justice was only significant in one of eight regression equations for organizational outcomes. Further analysis indicate that Time 2 procedural justice is a significantly stronger predictor of organizational trust at Time 2 than distributive justice ($t = -2.10, p < .05$) following the procedure outline by Cohen et al. (2003, p.640). Thus, hypothesis 3 was supported.

Accepted versus rejected internal applicant reactions over time. Hypothesis 4 was tested using t -test and Cohen's d . The results in Table 5.7 showed significant and large effect size differences in distributive justice ($t = 9.10, d = 1.16$) at Time 2 between accepted and rejected applicants, significant and medium effect size differences regarding procedural justice perceptions ($t = 4.95, d = .63$), organizational trust ($t = 4.79, d = .60$) and organizational attractiveness ($t = 4.59, d = .58$) all at $p < .001$, and small effect size differences in P-O fit perceptions ($t = 2.69, p < .01, d = .37$) and job satisfaction ($t = 2.44, p < .05, d = .30$), where the accepted applicants had significantly higher ratings at Time 2 in these variables. The effect size of these differences was large for distributive justice, which strongly suggests that rejected internal applicants attributed promotional decision outcomes to distributive justice of promotional procedure, and medium for procedural justice and perceptions of the organization with regard to trust and attractions, and small for P-O fit and job satisfaction.

Not surprisingly, no significant differences were found in Time 1 procedural justice and Time 1 organizational outcomes, indicating that applicants changed their reactions after receiving the selection decision, as the significant differences between the accepted and

rejected applicants occurred only after receiving the promotional decisions. Also, the non-significant differences in Time 2 LMX and turnover intentions and in Time 3 job performance and actual turnover indicate that promotional decision outcomes have greater influence on applicants' fairness and organizational perceptions than on work attitudes and behaviors. Thus, hypothesis 4 was only partially supported.

Table 5.7: Sub-Group Differences in Perceptions and Reactions over Time: Accepted vs. Rejected Applicants

	Accepted (<i>N</i> = 118)		Rejected (<i>N</i> = 135)		<i>t</i> -value	Significant	<i>d</i>
	Mean	SD	Mean	SD			
1. T1 procedural justice	4.50	1.05	4.67	1.34	-1.12	NS	-.14
2. T1 organizational trust	3.89	.70	3.71	.97	1.65	NS	.21
3. T1 P-O fit	3.67	.91	3.79	.94	-1.02	NS	-.13
4. T1 organizational attractiveness	4.23	.82	4.32	.71	-.89	NS	-.11
5. T1 LMX	4.94	1.14	4.90	1.08	.35	NS	.04
6. T1 job satisfaction	4.20	.88	4.23	.83	-.32	NS	-.04
7. T1 turnover intentions	2.37	1.61	2.00	1.32	1.95	NS	.25
8. T1 job performance	4.85	.38	4.73	.58	1.88	NS	.24
9. T2 procedural justice	4.89	1.00	4.19	1.22	4.95***	.000	.63
10. T2 distributive justice	5.33	.93	4.03	1.28	9.10***	.000	1.16
11. T2 organizational trust	3.97	.71	3.49	.88	4.79***	.000	.60
12. T2 P-O fit	3.78	.86	3.46	.88	2.96**	.003	.37
13. T2 organizational attractiveness	4.37	.64	3.98	.70	4.59***	.000	.58
14. T2 LMX	5.66	1.32	5.38	1.15	1.82	NS	.23
15. T2 job satisfaction	4.21	.76	3.98	.79	2.44*	.015	.30
16. T2 turnover intentions	2.35	1.43	2.50	1.43	-.84	NS	-.10
17. T3 actual turnover	.01	.09	.01	.09	1.37	NS	.00
18. T3 job performance	4.82	.56	4.71	.72	.10	NS	.18

Footnote: * $p < .05$; ** $p < .01$; *** $p < .001$. *d* = difference between accepted and rejected and applicants' means in standard deviation units (effect size). *d* values computed by expressing the differences between the means of accepted and rejected groups in pooled standard deviation units. $d = (\text{mean of the accepted group} - \text{mean of the rejected group}) / \text{SD pooled}$. Positive *d* values indicate accepted applicants score higher, and negative that rejected applicants score higher.

Hypothesis 5 was tested with paired sample t-test to determine significant differences and compare later Time 2 (and Time 3 job performance) to the initial Time 1 perceptions and outcome reactions. Positive d values indicate that Time 2 and Time 3 means were higher than Time 1 means and negative d values indicate that Time 2 means were lower than Time 1. For the accepted applicants, Table 5.8 shows significant differences between Time 2 and Time 1 procedural justice ($t = 4.99, p < .001, d = .38$), organizational trust ($t = 2.15, p < .05, d = .11$), organizational attractiveness ($t = 2.27, p < .05, d = .19$), and LMX ($t = 8.39, p < .001, d = .58$). The accepted applicant thus had higher perceptions and reactions in Time 2 than in Time 1 after receiving the promotion outcome decisions, indicating that they had more positive reactions after being promoted. However, in terms of the effect size, these differences were negligible-to-small, except for medium effect size difference for LMX.

For the rejected applicants, Table 5.8 shows significant differences between Time 2 and Time 1 in all of their perceptions and reactions, except for job performance. Rejected applicants had significantly lower perceptions at Time 2 compared to Time 1 regarding procedural justice perceptions ($t = -5.25, d = -.38$), organizational trust ($t = -3.94, d = -.24$), P-O fit ($t = -5.05, d = -.36$), organizational attractiveness ($t = -.735, d = -.48$), job satisfaction ($t = -4.75, d = -.31$), and higher turnover intentions ($t = 5.07, d = .36$) and interestingly, higher LMX ($t = 6.44, d = .42$), all at $p < .001$. However, the effect size of these differences was relatively small, but two effect sizes approaching .50 (i.e., medium size) were found for organizational attractiveness and LMX.

In general, negligible-to-small effect size differences for both accepted and rejected applicants between Time 2 and Time 1 procedural justice and outcomes, except for medium effect size difference for organizational attractiveness among rejected applicants and LMX for both accepted and rejected applicants. Interestingly, both accepted and rejected applicants reported higher LMX after receiving the promotional decision, which may reflect a positive

support and relation between the internal applicants (employees) and their line-manager/supervisor, especially among rejected internal applicants after receiving the negative outcomes.

Additional Analyses

An additional analysis was run to examine the moderating effect of Time 1 job performance on the relationship between Time 1 procedural justice and Time 1 soft and hard organizational outcomes to assess its role as a moderator and proxy for expectation. As illustrated in Table 5.9, Job performance did not moderate the relationship between Time 1 procedural justice and Soft and hard organizational outcomes.

Table 5.8: Differences Between Time 2 (Time 3 for Job Performance) and Time 1 Perceptions and Reactions for Accepted and Rejected Applicants

	Accepted (N = 118)						Rejected (135)					
	Time 1		Time 2 (Time 3 for performance)		<i>t</i> -value	<i>d</i>	Time 1		Time 2 (Time 3 for performance)		<i>t</i> -value	<i>d</i>
	Mean	SD	Mean	SD			<i>Mean</i>	SD	Mean	SD		
1. Procedural justice	4.50	1.05	4.89	1.00	4.99***	.38	4.67	1.34	4.19	1.22	-5.25***	-.38
2. Organizational trust	3.89	.70	3.97	.71	2.15*	.11	3.71	.97	3.49	.88	-3.94***	-.24
3. P-O fit	3.67	.91	3.78	.86	1.63	.12	3.79	.94	3.46	.88	-5.05***	-.36
4. Organizational attractiveness	4.23	.82	4.37	.64	2.27*	.19	4.32	.71	3.98	.70	-7.35***	-.48
5. LMX	4.95	1.14	5.66	1.32	8.39***	.58	4.90	1.08	5.37	1.15	6.44***	.42
6. Job satisfaction	4.20	.88	4.22	.76	.23	.02	4.23	.83	3.98	.79	-4.75***	-.31
7. Turnover intentions	2.37	1.62	2.35	1.43	-.17	-.01	2.00	1.32	2.50	1.43	5.07***	.36
8. Job performance	4.85	.38	4.82	.65	-.44	-.06	4.73	.58	4.71	.72	-.46	-.03

Footnote: *d* = difference between Time 2 and Time 1 means in standard deviation units (effect size). *d* values computed by expressing the differences between the means of Time 2 and Time 1 for each variable in pooled standard deviation units for both accepted and rejected applicants. $d = (\text{mean of the Time 2} - \text{mean of Time 1 for the same variable}) / \text{SD pooled}$. Positive *d* values indicate Time 2 mean was higher, and negative that Time 1 mean was higher. * $p < .05$; ** $p < .01$; *** $p < .001$.

Table 5.9: Moderating Effects of Job Performance on the Time 1 Procedural Justice-Soft organizational outcomes relationship

Predictors	T1 Organizational trust			T1 P-O fit			T1 Organizational attractiveness		
	<i>B</i>	β	<i>SE</i>	<i>B</i>	β	<i>SE</i>	<i>B</i>	β	<i>SE</i>
Step 1: T1 PJ	.31***	.59***	.03	.23***	.43***	.04	.19***	.36***	.03
Step 2: T1 Job performance	.06	.07	.05	-.03	-.04	.06	.03	.04	.06
Step 3: T1 PJ x Job performance	-.09	-.11	.05	-.10	-.12	.05	-.07	-.09	.05

Note. *B* = unstandardized regression coefficients; *SE* = standard errors; β = standardized coefficients.

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 5.10: Moderating Effects of Job Performance on the Time 1 Procedural Justice-Hard organizational outcomes relationship

Predictors	T1 LMX			T1 Job satisfaction			T1 Turnover intentions		
	<i>B</i>	β	<i>SE</i>	<i>B</i>	β	<i>SE</i>	<i>B</i>	β	<i>SE</i>
Step 1: T1 PJ	.29***	.33***	.06	.22***	.36***	.04	-.35***	.36***	.06
Step 2: T1 Job performance	-.01	-.01	.01	-.02	-.02	.06	-.18	.12	.11
Step 3: T1 PJ x Job performance	.04	.03	.05	-.04	-.05	.05	.09	.07	.05

Note. *B* = unstandardized regression coefficients; *SE* = standard errors; β = standardized coefficients.

* $p < .05$; ** $p < .01$; *** $p < .001$

Discussion

This study makes four important contributions to the existing literature on applicant reactions in promotion contexts. First, because the respondents were actual internal applicants who applied for a promotion for different types of jobs within the organization and for whom, therefore, presumably a great deal was at stake, the results obtained in this study have a strong ecological validity. Also, internal applicants often have inside knowledge on promotion procedures and the organization, all of which provide a realistic context for exploring the longitudinal effect of promotional justice on real-world outcomes. Second, the justice-organizational outcomes relationship is highly relevant during personnel selection, and promotion as a specific context for selection has barely been explored (Ford et al., 2009; García-Izquierdo et al., 2012). Third, this study is the first to support the longitudinal effects of promotional justice on organizational trust, P-O fit, LMX in both selection and promotion contexts and on job performance and actual turnover in a promotion context. Finally, employing a three-time-point longitudinal design increases our confidence in the causality of the relationships, and that our findings were not simply due to common method variance (Podsakoff et al., 2003); internal applicants' justice perceptions and organizational outcomes were gathered at different times, such that changes in reactions over time can be tested. Table 5.9 summarizes the hypotheses of this study and the relevant results.

Table 5.11: Summary of Findings – Study 3

Hypothesis	Findings
H1a: Prior to the promotional decision outcomes (i.e., Time 1), perceptions of procedural justice will be positively related to soft organizational outcomes (organizational trust, P-O fit, and organizational attractiveness).	Supported
H1b: Following the promotional decision outcomes, perceptions of procedural justice will be positively related to soft organizational outcomes.	Supported
H1c: Following the promotional decision outcomes, perceptions of distributive justice will be positively related to soft organizational outcomes.	Partially supported (related only to trust)
H2a: Prior to the promotion decision outcomes (i.e., Time 1), procedural justice will be positively related to LMX, job satisfaction, and job performance, and negatively related to turnover intentions (i.e., hard outcomes).	Supported
H2b: Following the promotion decision outcomes, procedural justice will be positively related to LMX, job satisfaction and job performance, and negatively related to turnover intentions and actual turnover.	Partially supported (related to all outcomes except actual turnover)
H2c: Following the promotion decision outcomes, distributive justice will be positively related to LMX, job satisfaction and job performance, and negatively related to turnover intentions and actual turnover.	Rejected
H 3: Procedural justice perceptions will be more strongly related to organizational outcomes than distributive justice perceptions	Supported
H4: There will be significant differences in fairness perceptions and reactions between accepted and rejected internal applicants after receiving promotion decision outcomes, such that accepted applicants will have higher perceptions and more positive reactions compared to those of rejected applicants.	Partially supported
H5: Applicant perceptions and reactions will change after receiving promotion decision outcomes, such that accepted applicants will have more positive perceptions and reactions after receiving the decision outcomes, whilst rejected applicants will have less positive perceptions and reactions after receiving the decision outcomes.	Partially Supported

Promotional Justice and Outcomes: Soft and Hard Organizational Outcomes

In the context of promotion, the results showed that procedural justice was significantly related to soft organizational outcomes (organizational trust, P-O fit, and organizational attractiveness) both before (hypothesis 1a) and after the promotion decision outcomes (hypothesis 1b), whereas distributive justice was positively related only to organizational trust after the promotion decision outcomes (hypothesis 1c). These findings cross-validate the findings in Study 1 by showing that procedural justice perceptions of IBSPs and of promotion procedures have a positive effect on organizational trust, P-O fit, and organizational attractiveness. With regards to hard organizational outcomes, perceptions of procedural justice significantly affect all hard organizational outcomes, including LMX, job satisfaction, turnover intentions, and job performance before the promotion decision outcomes (hypothesis 2a) and after the promotion decision outcomes with the exception of actual turnover (hypothesis 2b). Distributive justice did not have any effect on hard organizational outcomes (hypothesis 2c). These findings provide the first empirical support for the relationship between procedural justice of promotion and applicants' P-O fit perceptions, organizational trust, LMX, job performance, and turnover over time. The findings revealed procedural justice to be the primary source of organizational outcomes. However, the non-significant effect of procedural justice on actual turnover may be due to the high attraction to the organization, which can be seen from the high mean of organizational attractiveness variable among both accepted and rejected applicants both before (Time 1) and after receiving the promotional decision (Time 2). The public sector organization in Saudi Arabia, where this study took place, is a highly attractive place to work and most of the employees seem to be attracted to it. These findings are consistent with previous studies suggesting that procedural justice applies to exchanges between employees and their organizations and upper management, as well as with what has been theorized that selection

justice perceptions are related to job attitudes and behaviors and reactions toward the organizations (e.g., Aryee et al., 2002; Cropanzano et al., 2002; Folger & Konovsky, 1989; Ford et al., 2009; Gilliland, 1993; Lind, 2001; McFarlin & Sweeney, 1992; Ryan & Ployhart, 2000).

These findings reinforce the social exchange basis of internal applicants on work-related attitudes and behaviors as currency for reciprocating justice due to their treatment during promotion by their organization. Organizations that facilitate promotional justice for their employees engender greater reactions toward the organizations, stronger work attitudes and behaviors, and better job performance in the long run. That is, when organizations use fair promotional procedures, employees would exchange this fair treatment by trusting the organization, perceiving better fit within the organization, having stronger attraction to it, and being more motivated, all of which is reflected in their higher job satisfaction, quality of leader-member exchange, and job performance and lower intentions to leave the organization. Also, the findings indicate that these effects would last for a long period of time, which can greatly reflect on the organization's overall performance. Counter to our prediction, distributive justice had no impact on organizational outcomes except for organizational trust (providing additional evidence of the importance of trust in the organization as an outcome of selection and promotional justice). Although this finding is somewhat surprising, it might reflect the higher importance in relation to procedural justice relative to distributive justice. The failure to find the effect of distributive justice on organizational outcomes is, however, consistent with some of the few existing studies (Smither et al., 1993). One explanation, consistent with findings from organizational justice research, is that procedural justice appears to be a more important predictor of attitudes toward the organization (e.g., organizational commitment) and toward its representatives (e.g., relations with supervisors, LMX) than distributive justice, which seems to predict other

attitudes toward specific individual outcomes, such as pay satisfaction (Folger & Konovsky, 1989; McFarlin & Sweeney, 1992) and well-being (Schinkel et al., 2013). That is, the predictive role of procedural and distributive justice depends, at least in part, on the nature of the outcome in question. Future studies should identify and assess the conditions under which procedural justice takes precedence over distributive justice in selection situations. This finding also provides support to the next hypothesis.

Procedural Justice versus Distributive Justice

Following the promotion decision outcomes, procedural justice was significantly related to all of the soft and hard organizational outcomes, except actual turnover, whereas distributive justice was not related to any of the outcomes, except organizational trust. Again, this finding supports past suggestions that procedural justice might be a more important predictor of outcomes related to the organization and its representatives than that of distributive justice. Also, this result may be explained by the fact that as applicants have information about the procedures (on which they build on their procedural justice perceptions) before they receive information about the decision outcomes, procedural information and justice perceptions, in turn, will more heavily influence fairness reactions than distributive justice. Thus, this finding is in accordance with the early suggestion by Van den Bos, Vermunt and Wilke (1997) that “*what is fair depends more on what comes first than on what comes next*”. Therefore, organizations should focus more on improving the fairness of procedural justice of their promotion process.

Changes in Reactions among Accepted and Rejected Applicants over Time

The findings of this study showed that applicants accepted for promotion reacted far more positively to procedural and distributive justice perceptions of promotion,

organizational trust, P-O fit perceptions, and organizational attractiveness as well as job satisfaction after receiving the promotion decision outcomes than rejected applicants. Rejected applicants may have attributed their lower perceptions and reactions to the negative decision outcomes, which may also demotivate them from being satisfied with their job as before it or continue to perceive the organization as favorably as before. Not surprisingly, these changes in reactions appeared after receiving the promotion decision outcomes, i.e., from no such differences before the promotion decisions to significant differences after receiving the promotion decisions, between accepted and rejected applicants in their perceptions of promotional justice and toward the organizations. Interestingly, no differences were found on hard (work-related) organizational outcomes, except for the small effect size difference in job satisfaction. The largest effect size difference for distributive justice and the medium effect size difference for procedural justice perceptions and reactions to the organizations (i.e., soft organizational outcomes) in terms of trust and attractions indicate that the promotion decision outcomes (i.e., accepted versus rejected) would influence applicant perceptions of promotional justice and the organization but may be less far influential for the work attitudes and behaviors.

With regard to changes in applicant reactions after receiving the promotion decision outcomes, accepted applicants reported higher procedural justice perceptions, higher ratings for organizational trust and attraction, and a stronger LMX relationship (i.e., 3 out of the 7 examined organizational outcomes) than they did before receiving the promotion decision outcomes (i.e., Time 1). On the other hand, rejected applicants reported lower ratings for procedural justice and lower reactions toward most of the outcomes but, interestingly, higher rating for LMX (i.e., 6 out of 7 outcomes) compared to before receiving the promotion decision outcomes (hypothesis 5). Overall, the changes in reactions from the rejected applicants into more negative directions were more than the changes from the accepted

applicants into more positive directions. These results support, to some extent, the notion that applicant reactions change over time and these changes in reactions might appear more among rejected applicants than accepted applicants. That is, rejected applicants have negatively changed their evaluation of the organization as well as the procedure after receiving promotion decision (i.e., the rejection), while accepted applicants have positively changed their perceptions of the procedures as well as their trust and attraction toward the organization and their LMX relations after receiving the promotion decisions. One explanation for this is that the information that internal applicants have about promotion procedures and outcomes changes after receiving the decision outcomes, as they would have a full picture and experience with the promotion process and the applicants who got the promotion and whether the outcomes are fair or not, which in turn changes their perceptions and reactions either positively or negatively.

However, in terms of the effect size, these differences in applicant procedural justice and reactions after receiving the promotional decision for both accepted and rejected applicants were negligible-to-small, except for LMX with a medium effect size. Contrary to our prediction, rejected applicants reported higher LMX after receiving the rejection, which was the same case for the accepted applicants. These may reflect a great and supportive relationship between the employees and their managers/supervisors in our case. A closer examination of the means of justice perceptions and outcomes showed that all the ratings of these variables were favorable - in the medium range - for both accepted and rejected applicants across the three points of time, indicating favorable applicants perceptions and reactions; it seems that treating the internal applicants fairly during promotion procedures and providing great LMX relationship reflected in favorable organizational outcomes. The negligible-to-small effect sizes indicate that these changes in reactions are not large and once again, the promotion decisions did not have a large influence on these changes.

Theoretical Contributions

These findings offer several theoretical contributions to the applicant reactions literature. First, our findings showed that organizational justice theory (e.g., Gilliland, 1993) should not be the only theory used to explain the effects of selection and promotion justice on outcomes, especially on internal applicants, as they are organizational members (i.e., employees). A combination of the Gilliland's (1993) and Ford et al.'s (2009) theoretical models (based on organizational justice theory) with SET was needed to further fully explain why promotional justice perceptions of internal applicants (as a unique category of individuals) impact their attitudes, behaviors, and performance. Supplementing Gilliland's (1993) and Ford et al.'s (2009) justice-based models with social-exchange-based mechanisms could complement future research into selection and promotional justice at the workplace. The findings demonstrate the value derived from integrating multiple models and theories when assessing selection fairness phenomena. Indeed, the mechanisms in diverse theoretical approaches might complement each other by highlighting different sides of the psychological and social experience of selection justice that might uniquely explain consequent applicant reactions.

Second, the findings in this study reinforce past suggestions (e.g., Chan & Schmitt, 2004; Truxillo et al., 2004; Truxillo et al., 2011; Truxillo et al., 2015) that applicant reactions' scholars should adopt a more nuanced examination of work-related (hard) outcomes in their theorizing. It might be that the previous reliance on studying external applicants had obscured some possibly vital distinctions that can explain exactly why justice perceptions, regarding internal applicants, impact on work attitudes and behaviors (i.e., hard organizational outcomes). Thus, scholars should consider the distinguished theories and features applicable to promotional selection context and continue to assess other work-related

outcomes in order to further explore the importance of selection/promotional justice on both job applicants and hiring organizations.

Finally, assessing changes in reactions over time provides a further in-depth understanding of internal applicant reactions, the differences between accepted and rejected internal applicant reactions over time, the changes in reactions between pre-promotion and post-promotion phases, and when these differences and changes occur and whether they are small or large.

Study Strengths and Limitations

The current study is characterized by a number of notable strengths. First, it is a field study that used a sample of real internal applicants applying for promotions in diverse job functions and levels of seniority, which provides greater ecological validity and enhanced generalizability of the findings. Second, the data were collected longitudinally at three time points: before the promotion decisions, after the promotion decisions, and one year later. The longitudinal design allows the researcher to detect the developments or changes in internal applicant reactions, drawing stronger conclusions about causality between promotional justice and organizational outcomes. Third, this study collected data using self-reported measures from the internal applicants regarding their perceptions and reactions (which could not have been obtained from a source other than internal applicants themselves on these variables), as well as archival data from the organization regarding applicants' job performance and actual turnover.

As with all research, this study has limitations. The sample of internal applicants from one major public organization in Saudi Arabia may limit the findings' generalizability. Yet, there are some advantages related to using a single organization design: the timing of the survey was relatively manageable; perceptions and reactions to promotion methods at

different stages of the promotion process could be assessed; extraneous and non-recruitment aspects that might affect attraction were controlled. A disadvantage of a single organizational study is that there could have been little variation in promotion procedures and therefore, the influence of these might have been underestimated. In addition, public organizations in Saudi Arabia may constrain the generalizability of the results regarding not only private organizations in Saudi Arabia, but more generally those in other countries and cultures. However, although some country cultural differences may influence applicant reactions, these influences and differences may have a small effect, as suggested by Study 2 in Chapter 4, indicating that justice concerns are universal and important for both applicants and organizations. Also, common method variance and high intercorrelations are concerns in research on applicant perceptions. However, we conducted several analyses (see the results section under the measurement models section), and the results of those analyses provides further evidence that common method variance did not have a substantial influence on the relationships examined in this study.

Implications for Research

This study has several implications for future research as it demonstrates the importance of exploring internal applicants' reactions in actual promotional settings. Research needs to investigate factors that might moderate the effect of promotional justice on organizational outcomes, such as feedback accuracy, process information provisions, and explanations. Organizations need to be especially careful about how they position the promotion procedures with their internal applicants, as they might be more likely to engage in negative word of mouth or to pursue litigation than external applicants. Further research needs also to examine how feedback and explanations provided to applicants in a promotional context can affect or moderate their reactions. This can be particularly

significant for internal applicants, given their ongoing relationship with the organization as employees and their increased investment in the promotion processes. The challenge for researchers – as well as for practitioners - is to find the best techniques to minimize the likely drawbacks of rejection.

Also, as our results revealed an increase in LMX after the promotion decisions for both accepted and rejected applicants, future research may also examine whether LMX can moderate the effect of promotional justice on organizational outcomes, especially that of how a positive LMX relation can improve the influence of promotional justice on work-related outcomes and organizational perceptions and compare it among rejected and accepted applicants.

In addition, we suggest that researchers replicate this study using several private organizations and investigate the different levels of organizational size, type, ranks and sectors. It is possible that certain particularities of the private organizations might produce different findings when compared with public organizations, as well as considering the differences between their promotional policies. Also, as internal employees remain organizational members, they are aware of the skills of recently promoted employees and whether the promotion procedures were transparent or not. Therefore, one can expect that their justice/injustice perceptions would influence their work motivation, counterproductive work behaviors, and potential pursuit of litigation, all of which should be considered in future research. In addition, as employees' experiences of promotional injustice is considered a source of stress and may have detrimental effects on employees' health, further research is needed to also examine the impact of promotional justice on employees individual outcomes from a psychological perspective, such as their affective well-being, occupational health, and stress (see Ford et al., 2009), and how applicant personality or attributional style can moderate these effects. Extending the theoretical lens by integrating other applicable

psychological theories with organizational justice theory (e.g., attribution-reaction theory: Ployhart & Harold, 2004) can provide a new insight on the relationship between justice perceptions and psychological related outcomes.

Implications for Practice

These findings also have implications for human resource practitioners. The results strongly indicate that organizations will benefit more when they adopt promotion and selection practices that promote fairness procedures and outcomes. Procedural justice in promotions has been stated as a significant determinant of employee job attitudes and behaviors (organizational outcomes). These findings are of great relevance and practical implications. Organizations must ensure that their promotional procedures and outcomes are fair and unbiased as a way to improve employees' job attitudes and behaviors, as well as job performance. Thus, an organization that seeks to enhance its employees' reactions toward the organization, work attitudes and behaviors, and eventually job performance, should design and implement fairness-enhancing selection and promotion procedures. As these procedures are enacted by HR managers and supervisors, their implementation should be supplemented by training them to be sensitive to justice concerns among the employees who are internal applicants (Colquitt, LePine, Piccolo, Zapata, & Rich, 2012). In return, employees will be more likely be involved in profitable organizational attitudes and behaviors, or at least not in counterproductive ones when treated fairly according to SET (Blau, 1964). Also, as many organizations often conduct an annual attitudes survey among their employees, they can add some questions asking them to evaluate the promotion procedures. Such survey efforts would allow organizations, especially in the case of large or international organizations with many subsidiaries, to identify the branch or departments in which promotional justice and/or

outcomes are particularly low, making it possible to improve procedural justice and subsequent outcomes.

Furthermore, providing more information and explanations about the process for internal applicants are relatively inexpensive and simple ways to buffer or reduce the effects that negative reactions might have in more realistic settings, such as promotions where decision outcomes have a great impact on people's career development. One way is to provide the applicants with balanced feedback, making it possible for applicants to accept responsibility for inferior performance during the selection process without simultaneously lowering their self-perceptions, all of which may improve reactions and performance (Ilgen & Davis, 2000). Indeed, providing applicants with information and preparation materials before the selection (e.g., pass rates and reactions to the procedures used) has recently been revealed to decrease negative reactions among rejected applicants and has improved their fairness perceptions and process satisfaction (Burns et al., 2008).

Also, our findings revealed that the greater differences (medium effect size) between accepted and rejected applicants were mainly in perceptions of promotional justice and perceptions toward the organization, in terms of trust and attractiveness, but not on the work-related outcomes. Also, the changes in their reactions after receiving the promotion decision outcomes were negligible-to-small and mostly in procedural justice and soft organizational outcomes, except medium effect size differences in LMX indicating more positive relations with their leaders/managers for both accepted and rejected applicants. These are promising findings for the organizations, indicating that, being accepted for promotion or rejected (i.e., promotion decisions), did not directly influence applicants' work-related outcomes, but rather influenced, to some extent, their fairness and how they perceived the organization; the organization has less control over the promotion decisions, especially when a great number of internal employees apply for promotion, leading to a greater rejection rate, but organizations

can control and improve their promotional procedures to minimize any negative perceptions toward the organization, especially among rejected applicants. Also, providing more support to the applicants from their direct manager/supervisor appears to be important during the promotion process.

The key implication is that being accepted or rejected won't necessarily directly affect work-related outcomes, but the procedural justice of promotion can affect the organizational perceptions as well as work-related outcomes and most importantly, job performance over time (i.e., soft and hard organizational outcomes). Also, although applicant reactions can change after receiving the promotion decisions, organization can enhance the direction of these changes to more positive reactions or at least to more stable favorable reactions by implementing and using fair promotion procedures and providing more information and support during the promotion process to enhance their fairness perceptions.

Conclusion

The current study used a longitudinal approach to examine the impact of promotional justice perceptions on internal applicants' soft and hard organizational outcomes. Indeed, the findings indicate that the relationships between promotional justice, decision outcomes, and organizational soft and hard outcomes are strong and dynamic and depend, to some extent, on when they are assessed. Also, the information applicants have regarding the promotion process and decision outcomes change over time and this change can, to some extent, influence the relative justice perceptions and their subsequent reactions toward the organizations. This study adds to our understanding of how internal applicants form their justice judgments regarding promotion and, in turn, develop their reactions toward the organizations.

As the three studies in the last three chapters provide a better picture of applicant reactions in terms of IBSPs, cross-country differences in privacy and fairness reactions to IBSPs, and internal applicant reactions to promotion, the next chapter will provide an overall discussion of the findings and the theoretical and empirical contributions across the three studies of this thesis, and provide directions for future research. Then, it will present the implications for practice.

Chapter 6 : Overall Discussion and Conclusion

Globalization of businesses has led to the widespread adoption of new technologies in selection across the world, as well as to an increase in job mobility either internally or externally. This thesis addressed these issues by conducting three studies: Study 1 examined the determinants and outcomes of applicant perceptions of three common IBSPs in the UK; Study 2 assessed the cross-country differences in applicant privacy attitudes and fairness reactions toward these IBSPs in Saudi Arabia and the UK; and finally, Study 3 examined the longitudinal effects of internal applicant justice perceptions on soft and hard organizational outcomes in promotional context.

The findings of these three studies contribute to applicant reactions literatures by identifying six new themes. This chapter discusses the overall theoretical, empirical, and practical contributions of this thesis. First, an explanation and integration of the main overriding themes of contributions across the thesis will be discussed, followed by the recommendations for future research. Then, the practical implications of this thesis will be presented.

Integration and Explanation of the Main Contributions

Theme 1: Selection Types - IBSPs and Promotion Procedures

Perhaps the most explored determinants of applicant reactions have been selection types. Many studies have examined and compared applicant reactions across different types of traditional selection procedures. However, one main criticism of this body of work is that it focused exclusively on traditional selection procedures (e.g., Anderson et al., 2010) or compared the same type of selection method in different medium such as comparing face-to-face interviews with video-conference interviews and phone interviews (e.g., Bauer et al.,

2004; Straus et al., 2001). As we live in the information age, technological revolution changes many selection practices toward using more innovative online selection practices. Most of the organizations nowadays are using IBSPs, with online applications, online tests, and online interviews being among the most widely used in practice in many Western countries, as well as some non-Western countries. IBSPs' implementation and operation have moved at a faster pace compared to empirical research, creating a science–practice gap. To date, there is no empirical study that examines and compares applicant reactions to different types of common IBSPs simultaneously.

Using actual job applicants in the UK, Study 1 readdresses this gap by examining and comparing determinants and outcomes of their justice perceptions to three types of IBSPs: online applications, online tests, and online interviews, which readdresses the sub research question 1c “Do applicant reactions vary between the three IBSPs, i.e., online applications, online tests, and online interviews?” Our findings showed that UK applicants reacted similarly to all three types of IBSPs, and those three IBSPs shared the same determinants and outcomes (as explained under Themes 2 and 4), indicating that IBSPs can be perceived as one cluster of selection methods. The extensive use of those IBSPs in the UK may lead the UK job applicants to perceive them as one cluster and may explain why UK applicants reacted favorably to them.

However, with globalization comes the need to understand applicant reactions across many countries and cultures. Cross-country and cultural studies have an instrumental importance for justice theory development in general, and for applicant fairness reactions specifically. As argued by Leung and Stephan (2001), organizational justice researchers, including selection justice, must go beyond the Western (American-European) cultural boundaries in order to develop more universal and generalizable theories in justice in the workplace. Thus, the next step is to examine whether applicants from different countries with

different profiles (i.e., societal and cultural value, Internet usage, privacy law, HR, and selection practice) would react differently to IBSPs. Study 2 furthers applicant reactions research by looking at IBSPs from an international perspective, comparing those three types of IBSPs in Saudi Arabia (Middle Eastern country) and the UK (Western country), which readdresses research question 2 “Are there cross-country differences between the UK and Saudi Arabia concerning applicants’ privacy and fairness reactions to IBSPs?”. Overall, both Saudi and UK applicants rated process favorability and procedural justice dimensions of online applications favorably, followed by online tests, and online interviews respectively, all in the medium range. Some negligible-to-small effect size differences were found between the Saudi and UK applicants, with only few medium size differences in few (four out of seven) procedural justice dimensions of online applications, with Saudi applicants reporting higher ratings in some procedural justice dimensions and overall procedural justice ratings across IBSPs. The medium effect size differences for the four procedural justice of online applications may be due to the nature of online applications; applicants often need to submit more information (e.g., name, education, social security numbers, previous experience, contact details for themselves, and the references) and sometimes they might be asked to attach electronic copies of important documents, which may trigger more privacy concerns and be perceived as less fair among the UK applicants compared to the Saudi applicants who may have fewer concerns in this regard.

Most of these differences between Saudi and UK applicants were in terms of magnitude of the effects (mostly negligible to small magnitudes) rather than in the quality of the privacy and procedural dimensions, suggesting that applicant reactions to IBSPs are more likely to be similar across Saudi Arabia and the UK, providing a further development toward a more universal and generalizable perspective in understanding applicant reactions in the

new context of IBSPs (more details are provided in Theme 3 - reaction generalizability across countries).

Promotional procedure that has been largely neglected in the literature, despite the fact that it is considered as a high-stake and risky selection context (Ford et al., 2009; Truxillo & Bauer, 2011; Truxillo et al., in press) is addressed in Study 3 and aimed to answer the third research question “what are the effects of promotional justice perceptions on soft and hard organizational outcomes over time?”. It is different from most of the studies in the literature, which focus mostly on student samples or external applicants in entry-level contexts, and soft organizational outcomes, and ignores internal applicant reactions to promotion and the hard organizational outcomes. Using a real promotional context in Study 3 fills a theoretical gap by integrating theories (social exchange theory and justice theory) and extending previous applicant reactions models to include both under-examined soft as well as hard (proximal and distal) organizational outcomes, and test them among internal applicants throughout their actual promotion process at three points of time over a one-year period. Our findings add instrumental values and provide a new conceptual insight and empirical evidence to advance our understanding on how promotional justice of internal applicants can affect those vital organizational outcomes in the short and long terms, and how reactions can change (among accepted and rejected applicants) over time. The findings demonstrate that internal applicants’ justice perceptions of promotion can strongly predict their reactions toward the organization and their work-related outcomes overtime (those outcomes and changes in reactions are discussed in details in Themes 4 and 5).

Theme 2: Determinants of Applicant Reactions in IBSPs’ Context

One of the objectives of this thesis was to examine the determinants of applicant reactions to IBSPs. Many researchers have called for more exploration of what determines

applicant reactions to the new high-tech selection procedures, especially in terms of technological-related factors (Bauer et al., 2011; 2006, Truxillo et al., 2015; Truxillo et al., in press). Thus, the present thesis has made a significant contribution to applicant reactions literature by examining a number of key technological factors: privacy concerns, Internet knowledge, and computer anxiety, which readdresses research question 1a “What is the relation between applicants’ privacy concerns, Internet knowledge, computer anxiety and their justice perceptions of IBSPs?”

Study 1 and Study 2 showed that privacy concerns can determine justice perceptions of IBSPs in the UK. The reasons behind this strong link between privacy concerns and justice perceptions may be due to the significant importance that European countries - including the UK – place on information privacy protection, as they treat it as a fundamental human right, with relatively high governmental interference (Smith, 2001). Indeed, they are providing their citizens with all-encompassing privacy laws by establishing a general right to privacy and installing centralization privacy agencies (Milberg et al., 2000). However, although Study 2 found that UK applicants’ privacy concerns were related to their process favorability and procedural justice of IBSPs, as well as their trust in organizations using IBSPs, Saudi applicants’ privacy perceptions did not seem to relate to their neither justice perceptions of IBSPs nor their trust in organizations.

Furthermore, an additional limitation that has been noted in the literature (e.g., Bauer et al., 2006; Truxillo & Bauer, 2011) is the need to explore the technology-related factors that could affect applicant reactions to IBSPs. We examined two more technological factors – applicants’ knowledge of the Internet, and their computer anxiety. Study 1 found that Internet knowledge is a determinant of applicant justice perceptions of IBSPs, whereas no such relationship has been found for computer anxiety. The non-significant effect of computer anxiety on procedural justice may be explained by the fact that our sample was drawn from

graduate and post-graduate job applicants holding university degrees and who surely have much experience with computers, which leads to lower computer anxiety. Indeed, several studies have shown that lack of experience with computers is a major determinant of computer anxiety (e.g., Beckers & Schmidt, 2003; Heinssen, Glass, & Knight, 1987). That means that our sample is more likely to have limited, or even no, computer anxiety as they have high computer skills, as do most of the job applicants in the UK (Department for Business, Innovation, & Skills, 2011). Rather, they have high Internet knowledge, which leads them to have better procedural justice perceptions of IBSPs. A similar trend was found by previous studies where applicants' Internet experience was related to their satisfaction with the online application system and its features (Sylva & Mol, 2009). Yet, we believe that computer anxiety, as well as computer and Internet knowledge, may determine applicant reactions in countries with lower levels of computer literacy and Internet use. These findings provide important contributions to theory development in applicant reactions literature by extending and integrating theories (privacy theory and justice theory) and previous applicant reactions models to the new context of IBSPs, and toward bridging the science–practice gap by providing in-depth insights into the factors determining applicant justice perceptions of IBSPs.

Theme 3: Applicant Reactions Generalizability across Countries

A major limitation in applicant reactions literature is that we do not know how applicants react to different types of IBSPs across countries and cultures. Do they prefer them and perceive them as fair procedures, do they have great privacy concerns when using IBSPs, and above all, are there major differences in applicant privacy and fairness reactions among Western and Eastern applicants? To date, there is no research examining and comparing applicants' privacy and fairness reactions to different types of IBSPs across Western and

Eastern countries. The scant research has been exclusively conducted in Western countries, examined only web-based/online screening, and mostly did not examine the complex construct of privacy and fairness in detail. Thus, following Steiner and Gilliland's (1996) methodology, Study 2 addresses this issue as well as research question 2 "Are there cross-country differences between the UK and Saudi Arabia concerning applicant privacy and fairness reactions to IBSPs? i.e., does the reactions generalizability hypothesis hold true in cases of IBSPs in Saudi Arabia and the UK?", by examining and comparing process favorability and seven procedural justice dimensions of three types of IBSPs as well as privacy perceptions (following Harris et al., 2003) among Saudi and UK job applicants. The Saudi and UK contexts provide further contribution as no empirical studies with regard to applicant reactions to IBSPs have ever been carried out in these two countries, where many domestic and multinational organizations are using IBSPs. Also, cultural and contextual factors, as well as the privacy law, differ between these two countries; thus, one can predict greater variability in reactions among Saudi and UK applicant reactions to IBSPs, which teased out important boundary conditions that would not have been evident in a single country data set. This can help in building cumulative knowledge on selection justice theory into the new context of IBSPs at an international level.

The findings showed that process favorability of online applications, and overall procedural justice of online applications, online tests, and online interviews were perceived more favorably among Saudi applicants. With regard to the dimensions of procedural justice, Saudi applicants reported higher ratings on four procedural justice dimensions across the three IBSPs – scientific evidence, employer's right to obtain information, respectful of privacy and widely used compared to UK applicants. Small effect sizes were found for the differences in reactions between Saudi and UK applicants in terms of process favorability of online applications, procedural justice of online tests and online interviews (overall and in

four out of seven dimensions), and in five out of twelve privacy perceptions' items, with few medium effect size differences in procedural justice of online applications (overall in four out of seven dimensions).

Yet, several similarities were found across three procedural justice dimensions – face validity, opportunity to perform, and interpersonal warmth. In addition, five procedural justice dimensions – face validity, opportunity to perform, and scientific evidence followed by employer's right and widely used – were major determinants of applicant process favorability across Saudi and UK applicants, which were consistent with previous research regarding reactions to 10 traditional selection procedures across various countries (e.g., Anderson et al., 2010; Hoang et al., 2012; Hausknecht et al., 2004; Moscoso & Salgado, 2004; Truxillo & Bauer, 2011). This indicates that there are a certain justice dimensions that determine the favorability of the selection procedures, which suggests that applicant reactions are determined largely by those underlying dimensions and thus are, to some extent, generalizable across different countries and contexts, providing further support to the reaction generalizability hypothesis. Also, Saudi and UK applicants reported similar privacy perceptions in terms of reluctance to use IBSPs (neutral- in the medium range) in which they were not against providing their data via IBSPs, as well as potential technical problems, cheating, lying and stealing when using IBSPs, all around the medium range. Again, those results were similar to what Harris et al. (2003) found among the US and Belgian respondents, providing more support to the 'reactions generalizability' notion. Thus, Study 2 has established further empirical evidence that applicant reactions across Saudi Arabia and the UK hold similar privacy and fairness reactions to three types of IBSPs, despite the great variation in their cultural and societal values, Internet usage, privacy laws, HR, and selection practices, proving useful evidence to selection practitioners for implementing IBSPs on an international selection scale.

In general, digitalizing the selection process in the format of IBSPs seems to be more convenient at the early stages of the selection process and perceived as favorable and fair in the medium range among both Saudi and UK applicants, with some small differences in their reactions. Although we expected larger differences between the two countries, we believe that applicant reactions are more likely to be generalizable across Saudi and UK applicants, and to some extent to applicants from countries with similar cultural and contextual profiles. It might be that applicants do appreciate the convenience that IBSPs give them (e.g., submitting their applications online to many organizations and doing the tests or the interviews from the comfort of their home, office, or their preferred place, saving time and the cost of travelling), and perceived favorably as fair, which may outweigh any disadvantages IBSPs may have.

Theme 4: Organizational Outcomes

This thesis was able to investigate the relations among external and internal applicant reactions to different types of selection (three types of IBSPs, promotion procedures) in two countries, and assess the unique contributions of their justice perceptions on reactions to several important yet under-examined organizational outcomes. The findings suggest that both procedural justice of external and internal applicants affected their reactions toward the organizations, such that applicants with higher procedural justice perceptions held higher organizational trust, P-O fit perceptions and organizational attractiveness (in Studies 1 and 3), and lower litigation intentions (in Study 1), providing the first empirical support for those new selection contexts (IBSPs and promotion procedures), from external and internal applicant perspectives and across two countries. These findings readdress research question 1b “What is the relation between external applicants’ justice perceptions of IBSPs and their reactions toward the hiring organizations (i.e., organizational trust, P-O fit perceptions,

organizational attractiveness, and litigation intentions)?”, and research question 3a “To what extent do internal applicant justice perceptions of promotion predict soft organizational outcomes (i.e., organizational trust, P-O fit perceptions, and organizational attractiveness)?”.

Furthermore, as mentioned in the literature review chapter, the hard (work-related) organizational outcomes have been rarely considered (e.g., turnover, job performance, and job satisfaction) with some not to be empirically examined (e.g., LMX and actual turnover), despite the frequent calls within applicant reactions research to do so (Ford et al., 2009; Truxillo & Bauer, 2011; Truxillo et al., 2004; Truxillo et al., in press). Also, the scarce studies that examine the relation between selection fairness and job performance (Gilliland, 1994; McCarthy et al., 2013) found no relationship in entry-level context despite the Gilliland (1993) proposition of this relationship in his model, providing inconclusive results; this has led several researchers (Truxillo & Bauer, 2011; Truxillo et al., in press) calling to examine this relationship in the high-stakes context of promotion. The findings of Study 3 showed that internal applicants’ perceptions of procedural justice predicted their reactions toward the organizations as well as their work attitudes and behaviors. More specifically, promotional procedural justice predicted LMX, job satisfaction, job performance, and turnover intentions overtime, both before and after the promotion. These findings readdress research question 3b “To what extent do internal applicant justice perceptions of promotion predict hard organizational outcomes (i.e., LMX, job satisfaction, job performance, and turnover)?”

This is an important theoretical and empirical contribution given that it provides the first evidence of the longitudinal effects of promotional justice on key soft (organizational trust and P-O fit) and hard/work-related organizational outcomes (i.e., LMX, job performance, and actual turnover) in those two contexts (i.e., IBSPs and promotion), which can potentially affect the overall organizational performance. Besides organizational justice theory, these findings can be explained by social exchange theory as applicants may

exchange the fairness that they received from the organization in the selection and promotion process with their reactions toward the organization as well as their work attitudes and behaviors for those working for the organization. That is, when an organization facilitates fair IBSPs and promotion procedures among their applicants, they repay the organization by trusting it, perceiving higher fit and attraction toward it, experiencing a more positive LMX relationship, higher job satisfaction and job performance, and have lower intentions to leave the organization; these may last for a long time.

Overall, the results help to advance our understanding of how selection and promotional justice affect organizational outcomes, both the perceptions toward the organization and the work attitudes and behaviors in the short and long run. This indicates that organizations should strive to ensure that their selection and promotion methods are perceived as fair procedures by job applicants, as it can reflect better on them.

Theme 5: Changes in Reactions over Time among Accepted and Rejected Internal Applicants

Another important limitation in applicant reactions research is examining the changes in reactions throughout the selection process. Thus, considering the dynamic nature of applicant reactions is very important to show differential reactions with proximal and distal variables over time. Study 3 contributes to applicant reactions literature by investigating whether internal applicant perceptions (among accepted and rejected applicants) and reactions change at three time points on promotional justice perceptions as well as on seven important organizational outcomes: organizational trust, P-O fit perceptions, organizational attractiveness, LMX, job satisfactions, job performance, and turnover intentions. In addition, the longitudinal design to measure the constructs before and after the promotion enhance the methodological strength, as does the use of two sources of data, the self-reported

measurement from the applicants and the performance rating, the promotion outcome decisions, and actual turnover measured from the organization's record for the data of this study. Measuring perceptions and outcomes at different points of time allowed us to directly examine changes in applicant reactions over time, which addresses the sub research questions 3c "Are there any significant differences in reactions between the accepted and rejected internal applicant after receiving the promotional decisions?" and 3d "Do internal applicant reactions change overtime as a result of the promotional procedure?"

We assessed these changes using two approaches. First, we compared accepted and rejected applicant reactions at the three time points (Time 1 – pre-promotion; Time 2 – short-term post-promotion; Time 3 – long-term post-promotion) to detect when the changes occur between them, as we predicted that those differences would appear after receiving the promotion decision outcomes. Our findings showed that while there were no differences between accepted and rejected applicants' perceptions and reactions before the promotion decision outcomes (Time 1), there were significant differences after receiving the promotion decision outcomes, in which accepted applicants had more positive perceptions of promotional justice and toward the organizations than rejected applicants. These differences were large only for distributive justice, medium size for procedural justice perceptions, organizational trust and organizational attractiveness, while only small size differences were found for P-O fit and job satisfactions, but no such difference were found for the other work-related hard organizational outcomes. These results indicate that applicant perceptions of promotional justice and toward the organization (mostly on soft organizational outcomes), but not their work attitudes and behaviors, can change after receiving the selection decision outcomes; those perceptions are associated with favorability of the decision outcomes, such that accepted applicants may have higher perceptions and reactions compared to rejected applicants.

Second, we compared Time 2 and Time 3 reactions to Time 1 reactions among both accepted and rejected applicants, and expected that reactions would change after receiving the promotion decision outcomes, in that the accepted applicants would report more positive reactions, while the rejected applicants would report lower reactions. The findings showed some significant changes in both accepted and rejected applicant reactions. Accepted applicant justice perceptions, trust and attraction toward the organization and LXM changed positively toward more favorable reactions after receiving the promotional decision outcomes. On the other hand, rejected applicant justice perceptions, as well as trust, P-O fit and attractions perceptions and turnover intentions changed toward less favorable reactions than before receiving the promotion decision outcomes; yet, they reported higher rating for LMX. In terms of the effect sizes, these differences were relatively small, except for LMX for both accepted and rejected applicants, and for attractiveness among rejected applicants. Interestingly, LMX significantly increased amongst rejected applicants after receiving the rejection, as well as among the accepted applicants, which was surprising. This may indicate that rejected applicants may have received additional support from their direct supervisors and managers, which may help mitigate severe negative outcomes. Indeed, almost all the changes of perceptions and reactions of rejected applicants were small sized changes compared to their base-line perceptions and reactions, indicating a lesser effect of rejection. Overall, the results support, to some extent, our prediction that accepted and rejected applicant reactions change over time.

These empirical findings provide invaluable insight to inform our understanding of the dynamic nature of applicant reactions throughout the promotional process. To the best of our knowledge, this is the first study that provides empirical evidence on changes on (accepted and rejected) internal applicant reactions to those organizational outcomes in high-stake promotion context. Applicant reactions can, to some extent, change over time and

selection decisions seems to influence the directions of these changes, in which these changes are mostly in their justice perceptions as well as perceptions toward the organizations (soft organizational outcomes).

Theme 6: Recommendations for Future Research

This thesis highlights the importance of applicant reactions in the real world as it shows that their reactions can affect organizations. As shown in Study 1, applicants' privacy concerns and Internet knowledge affected their perceptions of procedural justice of IBSPs. These findings suggest that considering individual differences in terms of technology-related factors are very important in determining justice perceptions of IBSPs and any high-tech selection procedures. Thus, future research should consider examining and comparing older applicants with younger ones as well as blue-collar job applicants with white-collar job applicants, and the usefulness of IBSPs for causing less qualified applicants to self-select out of the hiring process. In addition, past research has demonstrated that test anxiety and applicants' openness to experiences can predict selection justice perceptions; thus it will be worth examining their effects on fairness perceptions of IBSPs.

Another important point is the role of two-way interaction and decision outcomes in cases of IBSPs. As IBSPs usually are standardized with less human interactions, future research should examine the effects of outcome favorability (pass vs. fail), and the role of test administrator in fairness reactions among different types of IBSPs, as well as including more dispositional reactions such as test motivation and test performance. Using a longitudinal design and following applicants throughout the online selection process step by step (e.g., from online applications, to online test and online interviews, and then following the accepted applicants and their organizational outcomes) would provide invaluable insight into applicant perceptions and reactions, and detect the changes over time.

Moreover, some innovative and new high-tech selection methods have become available, and they deserve more research attention. For example, using mobile devices for assessment and testing gives the applicants the opportunity to complete those tests remotely on the go (e.g., King, Ryan, Kantrowitz, Grelle, & Dainis, 2015). A recent Society for Industrial and Organizational Psychology (SIOP) conference in 2015 showed that many specialized organizations have developed advance types of online situational judgment tests that claim to be job-related (SIOP, 2015). Thus, the time is ripe to move toward examining applicant reactions to these new innovation tools in selection practices.

Study 2 demonstrates that privacy perceptions and fairness reactions to IBSPs can be generalized among Saudi and UK applicants, where their cultural and contextual characteristics differed, in which they perceived them favorably in the medium range. This is a promising result for multinational organizations as well as domestic organizations operating in those two countries, or even in countries with similar cultural and contextual backgrounds. Yet, future research should replicate this study in other countries with different cultural and contextual factors and assess the national cultural values by including measurement of these values. Depending on Hofstede's (1980; 2001) findings of countries' cultural values may limit the credibility of the assumptions of the country's cultural differences nowadays as people's cultural values may already significantly change with time toward more global culture and convergent perceptions. Also, future research should examine the effects of language proficiency when using IBSPs on an international scale. Multinational organizations may mainly use English in their IBSPs as English usually is required for most of their posts, but it is important to understand whether language proficiency would affect the test performance, test anxiety, and fairness perceptions, and whether providing more time for those applicants would help them.

Study 3 also has important implications for research. Promotional justice can become even more important after receiving the decision outcomes and applicant reactions may change over time, as our results showed that procedural justice of promotion accounted for more variance in organizational outcomes after receiving the promotional decision than before it. Another implication is related to the importance of including the stages of selection or promotional process in future applicant reactions research, as our findings showed that promotional procedural justice may be more or less important depending on the stages of the selection and promotion process and outcomes. Thus, future research should use longitudinal design and measure applicants' perceptions and reactions throughout the selection and promotion process, and include decision outcomes. In addition, future research should also assess the effects of promotion procedures and outcomes on internal applicants' self-perceptions and occupational health outcomes, such as self-esteem, self-efficacy, well-being, stress, and strain, as well as considering different types of organizations (multinational vs. domestic and private vs. public). This would provide valuable scientific evidence on the effects of selection justice on employees in real workplace settings across different organizations and industries. Recent feedback research (Anseel & Lievens, 2009) suggested that feedback acceptance may fit in nicely with the applicant justice-based model (i.e., Gilliland, 1993); thus, future research is needed in this area to reveal whether feedback acceptance can moderate and interact with procedural justice in determining organizational and individual outcomes or not.

Also, as our findings showed strong relation between promotional procedural justice and work-related hard organizational outcomes, procedural justice of internal applicant perceptions are likely to demonstrate the strong relations with applicant counterproductive work behaviors, organizational citizenship behaviors, and complain and litigation behaviors, especially among rejected applicants. Future research should consider these important

outcomes when examining internal applicant reactions, which can provide valuable theoretical, empirical support and further evidence for practice.

Finally, we think that time is ripe to integrate with other areas of psychology and information technology (IT) to take a broader theoretical perspective. As noted in Chapter 2, most applicant reactions research has used the organizational justice approach (Gilliland, 1993), with few attempts to use the social psychological theories to examine other types of applicant perceptions and reactions. Although this approach is highly important and has informed our understanding of applicant reactions and outcomes, it might be necessary to expand the theoretical scope and consider other applicable theories (e.g., attribution theories, signaling theory) to better understand how applicants perceive and react to the selection process and outcomes, and the underlying psychological mechanism of why these perceptions and reactions occur. Despite the importance of fairness perceptions, other perceptions should be considered since applicants are more likely to view selection processes from other points beside the justice lens. Thus, future research should consider the psychological mechanisms (e.g., McCarthy et al., 2009, which used affective events theory, cognitive load theory, and fairness heuristic theory) that underlies applicant reactions to personnel selection processes and understands how these operate. For example, future research can use attribution theory to explore applicants' attributions in the context of selection fairness from different angles, including the use of Ployhart and Harold's (2004) applicant attribution-reaction theory (AART) to explain applicants' affective, behavioral, and cognitive reactions (e.g., motivation, fairness, test performance and perceptions) from the attributional theory perspective. Also, future research should: (1) consider the selection process in terms of its underlying attributional dimensions of locus, stability, and controllability, (2) explore applicants' attributions with regard to their test performance during the hiring process, (3) examine attributions at an individual level post-outcome, or even (4) integrate both attribution and

fairness theory for an in-depth understanding of applicant reactions and outcomes from both perspectives (e.g., Ababneh et al., 2014, McLarty & Whitman, 2016).

With regard to applicant reactions to new high-tech selection procedures, a better understanding of the determinants of applicant reactions to such high-tech selection procedures would benefit from integrating theories and models in applicant reactions (e.g., signaling theory, Spence, 1973; 1974; applicant reactions to selection model, Gilliland, 1993) with IT theories to identify those factors influencing applicant reactions and intentions toward new high-tech selection methods. Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh, Morris, Davis, & Davis, 2003), Technology Acceptance Model (TAM) (perceived usefulness and ease of use) (Davis, 1989), and privacy theory (Stone & Stone, 1990) can be fruitful theories in this area. For example, UTAUT is a synthesis of eight existing models of technology acceptance and has eight factors – effort expectancy, performance expectancy, social influence, anxiety, attitude toward using technology, self-efficacy, facilitating conditions, and behavioral intentions to use the system – which can identify applicant reactions and behavior to selection technology. One of the few studies that has attempted to integrate signaling theory with TAM (Kashi & Zheng, 2013), to examine applicant reactions to online recruitment, found that perceived usefulness influences applicants' behavioral intentions to apply for a job online (based on TAM), and that impression of the organizational website appeared to create interest in the organization, which in turn encouraged applicants to apply for jobs.

Perhaps the most controversial issue related to equivalent and predictive validity were between using un-proctor compared to proctor internet testing as well as between online selection assessments delivered on mobile and non-mobile devices. Both un-proctor and proctors Internet testing seems to have similar predictive validity (Beaty, Nye, Borneman, Kantrowitz, Drasgow, Grauer, 2011) cheating levels (Arthur, Glaze, Villado, & Taylor,

2010). Surprisingly, little has been published in applicant reactions to these emerging practices (Ryan & Ployhart, 2014). A recent study showed that using remote proctoring testing technology (real-time webcam and screening sharing, archival biometric verifications) was related to more negative applicant reactions, decreased cheating, had no direct effect on applicants' test performance, and did not interact with individual differences to predict applicants' reactions or performance on the test (Karim, Kaminsky, & Behrend, 2014). The next generation of technology delivery is mobile testing (Ryan & Ployhart, 2014). Also, mobile versions tests were found to be equivalent to non-mobile versions across different types of test, such as biodata, cognitive ability test, SJT, and a multimedia work simulation (Morelli, Mahan, & Illingworth, 2014), and personality and general mental ability tests (Arthur, Doverspike, Muñoz, Taylor, & Carr, 2014). However, it is just being used recently, and more research is needed in this area. Arthur et al. (2014) found that among a sample of 3,575,207 job applicants who completed an un-proctored Internet-based assessment, only 69,000 applicants (1.93%) completed the test on mobile devices. They also found small demographic differences, in which women, Hispanics and African-American and younger applicants were slightly more likely to use mobile devices. Recently, increasing numbers of U.S. organizations are using credit checks as a pre-employment assessment and selection technique, which raises some concerns as most people are not certain about their credit report information and the reasons behind requesting it. In terms of their reactions, research has shown (Kuhn & Nielsen, 2008; Nielsen & Kuhn, 2009) that applicants perceive credit checks as unfair and invasive procedures and reacted negatively to it, in which they had great skepticism about its accuracy, and that their invasiveness of privacy was related to intentions to withdraw from selection process. These are fruitful areas for future applicant reactions research.

Finally, a novel trend of technological advances in selection and assessment arrived on the scene. Recruiters can take advantage of the many new paths Big Data offers, such as using applicant's "digital footprint" as a potential assessment and selection tool. Indeed, many fast-growing organizations are mining applicant's social media and networking websites (e.g. Facebook (non-professionally) and LinkedIn (professionally oriented) profiles), as well as blogs and perform Internet searches on them (e.g., via Google) (Van Iddekinge, Lanivich, Roth, & Junco, 2013). To give them remarkable new sources of information that can be used for recruiting active and passive job applicants and making the selection decision. Social networks (SNWs) allow recruiters to evaluate the job applicants by gathering information about their interest, political views, activities, relationship status or religious belief, and ensure that they are trustworthy (Brandenburg, 2007) as well as assessing applicants' personality (Kluemper, Rosen, & Mossholder, 2012). Also, many SNWs offer new Big Data tools that help organizations to purchase targeted advertising in SNWs (e.g. in Facebook, LinkedIn, Google, and Twitter) and to find distinctive applicants in specialized markets or with very specific characteristics (Bersin, 2013). However, a recent report of Society of Human Resource Management (SHRM, 2013) showed that 20% of the participating organizations used social media for screening their applicants, and another 12% planning to use it; some organizations are asking the applicants for their username and password of their social media during the interviews as part of the selection process. This introduce unique legal and ethical implications and challenges, as it can also lead to illegal discrimination against protected groups, allow individual biases to influence the selection decisions, questioning the standardization, validity (job relevance), and reliability of such information, and raise fairness and privacy concerns (Broughton, Foley, Ledermaier, & Cox, 2013; Brown, & Vaughn, 2011; Clark, & Roberts, 2010). Some countries have responded by introducing a law that foster organizations to obtain written consents from the applicants

before proceeding to social media background check (e.g., in some Canadian provinces, Pickell, 2011), while other countries ban employers from using it, (e.g., in Germany: Leggatt, 2010; and in 18 states in the US- and another 28 states are considering such law: Wright, 2014); yet no such law exist in many countries with this regard. This is a vital area for future research as no such empirical evidence available to date, and it is a wealthy area for future applicant reactions research.

Implications for Practice

This thesis offers valuable contributions to applicant reactions literature by offering findings from three field studies that have valuable managerial implications for the growing number of organizations using IBSPs and the design and implementation of IBSPs for expatriate or international selection practices, as well as the promotion procedures. With regard to external applicants in the context of IBSPs, the first study shows that applicants' information privacy concerns and knowledge about the Internet seem to have an important influence in how applicants perceive the justice of IBSPs in the UK. Therefore, organizations should look for ways to improve their IBSPs' privacy protection policies and inform the applicants that their information privacy will be kept secured, confidential and safe, and assure them that their data will not be shared with any other third party. Providing such information and explanations about their privacy policy and data security may reduce applicant privacy concerns, reflecting in higher IBSPs' justice perceptions, and in turn more favorable reactions toward the organization.

Also, as applicants' Internet knowledge was found to affect applicants' justice perceptions of IBSPs, organizations should try to simplify their IBSPs and provide online help-line and technical support as well as providing information and explanations about the steps of the process for each IBSP. IBSPs may be perceived favorably among Internet-savvy

applicants, and organizations can use IBSPs for selecting for white-collar jobs where Internet knowledge is usually an essential requirement for the post. However, organizations should be careful when using IBSPs for blue-collar jobs, where familiarity with the Internet is not required at that level of job. Using IBSPs may deter those types of applicants from applying to the organization. In addition, because justice perceptions had a direct effect on organizational soft outcomes, organizations can improve their image, attraction, trust and fit perceptions among job applicants as well as reducing the risk of intentions to litigate by using fair IBSPs, and explaining the justice of their procedures for their applicants (e.g., in their web site or sending information online before the start of the procedure). The second study provided in depth insight regarding the dimensions of procedural justice of IBSPs, process favorability, and more details regarding the privacy perceptions from an international perspective. The results revealed more support to the generalizability of applicant reactions to IBSPs in Saudi Arabia and the UK, in which underlying sets of procedural justice dimensions are shared between those two countries, and improve the fairness of IBSPs among job applicants in both countries. Thus, organizations can improve the favorability of their IBSPs by ensuring that their IBSPs have high face validity, with proven scientific evidence, and provide the opportunity for applicants to perform and show their skills and abilities. For example, when designing the IBSPs, organizations can use a mixture of optimizing automation via standardization approved and validated scientifically, but at the same time leaving freedom to enter additional information during IBSPs to give a chance to distinguish themselves and their relative skills and abilities. Also, they should consider high logical and job-related IBSPs in which information required or questions asked during data entry in online applications, tests, or interviews are relevant to the job and do not interfere with applicants' privacy, possibly with clear explanations for the purpose of sensitive questions, if any. Also, as the interpersonal contact in IBSPs is limited, organizations should improve the

interactional perspective for their IBSPs, by making sure that applicants can go back to their online applications to edit it before the deadline, provide online help for any problems that can occur during online submission, tests, or even interviews, and addressing the applicants in a polite and friendly way in emails as well as providing email contact information when they would like to address any questions to the organizations.

In terms of privacy perceptions, it seems that privacy concerns are higher among UK applicants, which influence their trust in organizations using IBSPs, while less concerns and no such influence were found among Saudi applicants. Thus, organizations should be more careful about the privacy policies of their IBSPs in Europe than in Arab countries. However, the key implications for organizations are that organizations operating in the UK and Saudi Arabia, and to some extent to countries with similar cultural and contextual characteristics, or seeking to select applicants from those countries for international or expatriate posts can be sure that using IBSPs would be perceived favorably and fairly by those applicants, and that applicants from those countries will not be reluctant to use these procedures. However, organizations should always look for ways to assure and boost applicant perceptions regarding their employment-related information privacy protections and security of IBSPs.

Nevertheless, organizations should consider applicants' language proficiency when operating across countries, and accommodation should be considered for non-native speakers when IBSPs are using different languages to the country's mother tongue. This opens up another avenue for research to examine the effects of language proficiency on perceptions of IBSPs and the possible remedies, such as extended testing time, and translations.

With regard to internal applicants in the context of promotion, Study 3 provides valuable managerial information. First, the effect of procedural justice of promotion on organizational outcomes is of great relevance, especially that internal applicants remain employees, whether promoted or not. Organizations must make sure that promotion

procedures and decision outcomes are fair and unbiased in order to enhance internal applicant perceptions of them – in terms of trust, attractions and fit perceptions – and relationships with their managers and supervisors, job satisfaction, and intentions to leave the organizations over time. As a result, employees will more likely to be engaged in more productive work-related attitudes and behaviors, which can reflect in better overall organizational performance in the long term.

The differences in reactions among accepted and rejected applicants appeared after receiving the promotional decision and were mainly in promotional justice perceptions and perceptions toward the organizations. No differences were found in the work-related outcomes. The changes in reactions at Time 2 compared to Time 1 were mostly on procedural justice and soft organizational outcomes, with mostly small effect size differences. This is highly valuable scientific evidence (i.e., the limited differences and changes in hard organizational outcomes) for the organizations as they can have more control over the use of fair promotional procedures, but cannot really control the decision outcomes (i.e., accepted vs. rejected). Nonetheless, organizations can reduce the negative influence of the rejection by providing the applicants with more information and explanations about the fairness of their promotion procedures and the decision process and criteria, as well as providing feedback to the applicants explaining the reason for rejection in a polite manner and in such a way that they are more inclined to accept it. Also, the finding that LMX increased after receiving the promotional decision outcomes among accepted, as well as rejected, applicants may open up a new opportunity for the organizations to mitigate the negative influence of receiving a negative decision (i.e., rejection) in practice. It seems that the organization can reap great benefits if it tries to enhance the relationship between employees and their leader (i.e., line-managers and supervisors), and use them to explain the promotion process and its fairness to

the employee, which may help in more positive fairness perceptions and reactions to the organization in the long-run.

Conclusion

In summary, this thesis has successfully readdressed three main gaps in applicant reactions literature. The three studies reported in this thesis were developed to advance our understanding of external applicant reactions to common IBSPs, the possible cross-country differences in privacy and fairness reactions to those IBSPs, and internal applicant reactions to promotion over time, and the effects of applicant justice perceptions on important, yet overlooked, organizational outcomes. This has resulted in greater conceptual clarity on the determinants and outcomes of applicant reactions to IBSPs, and that reactions are more likely to be generalized between Saudi and UK applicants, internal applicant justice perceptions can predict their reactions toward the organizations as well as their work attitudes and behaviours over time, and that accepted and rejected internal applicants perceptions and reactions can change over time. These findings can be invaluable to researchers, practitioners and organizations as it showed that it is in their interest to pay great attention to external and internal applicants' fairness perceptions of their selection and promotion procedures as their perceptions can affect the organization and its image, outcomes, and performance in the short and long run. After all, we are bound by a code of ethics to promote fairness and justice in selection procedures in organizations for the sake of applicants, and researchers have an ethical obligation to do so.

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Chapter 7 Appendices

Appendix A: Measures

Privacy Concerns (Study 1 and 2)

1. “Employment-related information (e.g., application and answer to a test) that I submit over the Internet may fall into the hands of people I would rather not have see it.
2. It is easy for a ‘hacker’ to break into databases containing employment-related information obtained over the Internet via IBSPs.
3. Companies sell employment-related information that they collect from unsuspecting applicants over the Internet via IBSPs.
4. Even the most secure Internet connection can be broken into if someone wants to.
5. Before they release employment-related information gathered over the Internet via IBSPs to other parties, most companies must have approval from the applicant who provided this information.
6. It is important to submit employment-related information via IBSPs only to an organization that has guaranteed privacy.
7. There are strict laws protecting the confidentiality of employment-related information submitted over the Internet via IBSPs.” (ITEM WAS DELETED AFTER CFA)

Then, **Study 2** measured reluctant to use IBSPs, technical issues, lying, cheating, and staling perceptions of IBSPs with the following items:

1. “I would avoid submitting employment-related information over the Internet via IBSPs. (**Reluctance**)

2. Taking an Internet-based employment test or application or interviews can put one in a major disadvantage because of technical problems (e.g., crashes, software problems, slow speed, and Internet connection). **(Technical issues)**
3. It is probably easier to lie when giving employment-related information over the Internet via IBSPs than on a paper-and-pencil form. **(lying)**
4. It is probably easier to cheat on a psychological test given over the Internet via IBSPs than one given on a paper-and-pencil form. **(cheating)**
5. People more often steal employment-related information that is administered over the Internet via IBSPs than paper-and-pencil form.” **(stealing)** (Harris et al., 2003).

Internet Knowledge (Study 1)

1. “If a computer problem occurs while I am using the Internet, I usually know how to fix the problem.
2. I know how to create a website.
3. I know some good ways to avoid computer viruses.
4. I am familiar with html.
5. I know how to enable and disable cookies on my computer.
6. I am able to download a “plug-in” when one is recommended in order to view or access something on the Internet.
7. I understand most computer terms that have to do with the Internet.
8. I can usually fix any problems I encounter when using the Internet.
9. I help others who are learning to use the Internet.
10. I download and install software updates from the Internet when necessary.
11. I regularly update my virus protection software.

12. I can design a nice background and/or signature for the e-mail messages I send.

13. I know what a browser is.

14. I have changed the settings or preferences on my computer that pertain to my Internet access.” (Potosky, 2007)

Computer Anxiety (Study 1)

1. “I feel apprehensive about using computers.
2. It scares me to think that I could cause the computer to destroy a large amount of information by hitting the wrong key.
3. I hesitate to use a computer for fear of making mistakes that I cannot correct.
4. I have avoided computers because they are unfamiliar and somewhat intimidating to me.
5. I feel anxious when using computers.” (Oostrom et al., 2010)

Procedural Justice (Study 1, 2 and 3)

1. “(The method) is based on solid scientific research.
2. (The method) is a logical one for identifying qualified candidates for the job in question.
3. (The method) will detect individuals’ important qualities differentiating them from others.
4. Employers have the right to obtain information from applicants by using (the method).
5. (The method) is impersonal and cold. (reverse scored)
6. (The method) invade personal privacy. (reverse scored)
7. (The method) is appropriate because it is widely used.” (Steiner & Gilliland, 1996)

The original wording “method” was replaced by “online applications”, “online tests” and “online interviews” in **Study 1 and 2**; and by “promotional selection procedures” in **Study 3**.

Process Favorability (Study 2)

1. “How would you rate the effectiveness of (the method) for identifying qualified people for the job you indicated above?
2. If you did not get the job based (the method), what would you think of the fairness of this procedure?” (Steiner & Gilliland, 1996)

The original wording “method” was replaced by “online applications”, “online tests” and “online interviews” in **Study 2**.

Distributive Justice (Study 3)

1. “I feel that the organization made the wrong promotional selection decision.
(reverse scored)
2. Overall, I feel the result of the promotional selection decision was unfair. (reverse scored)
3. I am dissatisfied with the organization's promotional selection decision about whether or not to advance me to the next stage. (reverse scored)
4. Overall, I am satisfied with the promotional selection decision.” (Elkins & Phillips, 2000).

Organizational Trust (Study 1, 2 and 3)

1. “I believe this organization has high integrity.
2. I can expect this organization to treat me in a consistent and predictable fashion.
3. This organization is not always honest and truthful. (reverse scored)
4. In general, I believe this organization’s motives and intentions are good.
5. I do not think this organization treat me fairly. (reverse scored)

6. This organization is open and upfront with me.
7. I am not sure I fully trust this organization.” (reverse scored) (Robinson, 1996)

Person-Organizational Fit (Study 1 and 3)

1. “This organization’s values reflect my own values.
2. My values match or fit this organization and the current employee in this organization.” (Braddy et al., 2009)

Organizational Attractiveness (Study 1 and 3)

8. “For me, this organization would be a good place to work.
9. I would not be interested in this organization except as a last resort. (reverse scored)
10. This organization is attractive to me as a place for employment.
11. I am interested in learning more about this organization.
12. A job at this organization is very appealing to me.” (Highhouse et al., 2003).

Litigation Intentions (Study 1 and 2)

1. “An organization that uses on-line selection procedures (like on-line application, test and interview) would likely be sued by applicants.
2. I think applicants might sue an organization that used on-line selection procedure.
3. If on-line selection procedures become more widely used with job applicants, there will be an increase in the number of lawsuits against employers.
4. I would be more likely to sue organization that used on-line selection procedures than one that did not.” (Bauer et al., 2001)

Leader-Member Exchange (Study 3)

1. “I usually know where I stand with my supervisor.
2. My supervisor has enough confidence in me to defend and justify my decisions if I was not present to do so.

3. My working relationship with my supervisor is effective.
4. My supervisor understands my problems and needs.
5. I can count on my supervisor to “bail me out,” even at his or her own expense, when I really need it.
6. My supervisor recognizes my potential.
7. Regardless of how much power my manager has built into his or her position, my supervisor would be personally inclined to use his/her power to help me solve problems in my work.” (Wayne et al., 2002)

Job satisfaction (Study 3)

1. “Most days I am enthusiastic about my work.
2. I consider my job rather unpleasant. (reverse scored)
3. My job is pretty uninteresting. (reverse scored)
4. I am disappointed I ever took this job. (reverse scored)
5. I find real enjoyment in my work.” (Ambrose & Cropanzano, 2002).

Turnover intentions (Study 3)

1. “I intend to leave this organization within the next year.
2. I would leave my job if a position were available in another organization.
3. I intend to remain in this organization indefinitely (reverse scored).” (Ambrose & Cropanzano, 2002).

Appendix B

Appendix D

Table 7.20: Empirical Studies into Applicant Reactions form 2000-2016

<i>Study</i>	<i>Fairness Perceptions/ Reactions</i>	<i>Selection procedures</i>	<i>Type of Participants</i>	<i>Design/ Timing of measurement</i>	<i>Determinants/ Moderators/ Mediators</i>	<i>Outcomes</i>
Brockner, Chen, Mannix, Leung, & Skarlicki (2000)	Procedural fairness, Outcome favorability	Hypothetical selection battery	Students	Cross-sectional Post-test	National culture/ Self-construal	Willingness to protest the selection decision
Elkins & Phillips (2000)	Procedural justice, Distributive justice, Job relatedness	Biodata	Students	Time-lagged Post-test &	Job context (nonspecific, local, entry-level international manager), Decision outcome	-
Horvath, Ryan, & Stierwalt (2000)	Face validity, Predictive validity, Procedural fairness, Outcome fairness	Cognitive ability test	Students	Time-lagged Pre-test & Post-test	Type of explanation (causal, ideological, referential), Outcome favorability, Test-taking self-efficacy	-
Richman-Hirsch et al. (2000)	Procedural justice, Distributive justice, Content validity, Predictive validity, Relevant information Attitudes, Test performance	Conflict resolution skills assessment	Managers	Cross-sectional Post-test	Medium of Administration (paper-and-pencil form, a written form administered by computer, and a multimedia assessment)	-
Ryan et al. (2000)	Fairness, Predictive validity, Selection information, Interpersonal treatment, Face validity orals, Organizational attractiveness, Job commitment, Employment alternatives, Relocation, Social influence	Multiple hurdle hiring process	Police applicants	Longitudinal At time of application, & Post-test	Race, Gender, Selection Status	-

Sanchez, Truxillo, & Bauer (2000)	Valence, Instrumentality, Expectancy, Test-taking motivation	Written knowledge test	Study 1: students Study 2 & 3: police job applicants	Study 1: Cross-sectional Post-test Study 2: Longitudinal Pre-test & post-test	Ethnicity, Outcome favorability	Test performance
Tonidandel, & Quiñones (2000)	Procedural Justice, Test Attitudes, Expected performance	Hypothetical adaptive testing	Students	Cross-sectional Pre-test	Test characteristics (ability to skip questions, Scoring methods, number of questions, and set of questions presented to each examinees)	-
Truxillo & Bauer (2000)	Process fairness, Organizational attractiveness	Three test score use hypothetical (TSU) methods (top-down selection, banding with preferences, and banding with random selection)	Students	Cross-sectional Post-test	Affirmative action attitude, Gender	-
Waung & Brice (2000)	Contact person existed, Time interval between application and rejection letter, Explicit statement of rejection decision	Rejection letters	Students	Cross-sectional Post-test	-	Impression of the organization, Likelihood of reapplying, Patronizing the organization
Bauer et al. (2001)	Distributive justice, Procedural justice factors (i.e., structural factors, social factors, & job-relatedness content), Overall procedural justice	Physical ability test, Interview, Written cognitive ability test	Applicants and trainees of court officer job, Students	Time-lagged Pre-test & Post-test	-	Self-esteem, Organizational commitment, Recommendation intentions, Litigation likelihood, Organizational attractiveness

Gilliland et al. (2001)	Procedural fairness, Outcome fairness, Interpersonal treatment, Recommendation intentions, Reapplication intentions	Hypothetical selection process	Study (1): Volunteers from superior court jury pool; Study (2): Tenure-track faculty position applicants for large university. Study (3): Students	Time-lagged Post-test	Would, could and should reducing explanation in rejection letters	-
Kaplan & Ferris (2001)	Perceived fairness, Perceived opportunity to advance	Promotion system	Students	Cross-sectional Post-test	Organizational factors, Environmental factors, Job factors /employee Characteristics, Perceptions of promotion characteristics	-
Lemons & Jones (2001)	Procedural fairness	Promotion	Employed students	Cross-sectional	-	Organizational commitment
Seijts & Jackson (2001)	Perceived fairness, Perceived qualifications of an aboriginal job applicant	Hypothetical interviews (Situational vs. unstructured face- to-face interview),	Students	Cross-sectional Post-test	Employment equity (absence vs. presence), Interview structure, Race	-
Straus et al. (2001)	Conversation fluency, Communication understanding, Comfortableness, Self-consciousness, Likability	Interviews: Face-to-Face, videoconference, and telephone interviews.	Students	Cross-sectional Pre-test	Communication medium among the three types of interviews	-
Truxillo et al. (2001)	Job relatedness (content and predictive), Opportunity to perform, Consistency of administration, Reconsideration opportunity, 2-Way communications, Propriety of questions, Treatment at the test site	Content valid video based test, and multiple- choice written test	Police applicants	Longitudinal at five points of time Pre-test & Post-tests	Test type	Test-taking self-efficacy, Overall selection system fairness

Phillips & Gully (2002)	Process favorability, Procedural dimensions: Face validity, Scientific evidence, Employer's right, Opportunity to perform, Widely used, Respectful of privacy, Interpersonal warmth,	Interviews, Résumés, Work sample tests, Personality tests, Biodata, Ability tests, References, Personal contacts, Honesty test, Graphology	Employees	Cross-sectional	Country/cultural differences (the US vs. Singapore)	-
Ployhart & Ehrhart (2002)	Test-taking motivation	Cognitive ability tests	Monte Carlo simulation study	Cross-sectional	Ethnicity (Black-White sub-group differences)	Test performance, Adverse impact
Ployhart, McFarland, & Ryan (2002)	Applicants' attributions for withdrawal (perceived stability, controllability, & locus of control)	Battery of tests	Police applicants who withdraw from police officer selection procedures	Longitudinal Pre-test & Post-test	Hiring practices, Study time, Took another job, Sick/injured, Had to work or attend class, Changed mind about the job, Other things to do, Forgot/overslept/lost registration card, Family emergency, Not qualified/capable, Family/location issues, Others. Race, Gender, Attributions	Specific & general reapplication expectancy
Schmitt (2002)	Predictive validity, Face validity, Fairness	Video and reading comprehension test	Police applicants	Cross-sectional Post-test	Race, Test type	Testlets

Slaughter, Sinar, & Bachiochi (2002)	Perceived fairness, Job pursuit intentions	Affirmative action plans	Students	Cross-sectional	Plan content, Previous experience with discrimination	-
Tonidandel, Quiñones, & Adams (2002)	Test-taking motivation, Test anxiety, Process satisfaction, Fairness, Attribution of performance, Post-feedback satisfaction, Post-feedback fairness perceptions	Computer-adaptive test	Students	Longitudinal Pre-test & Post-test	Objective test difficulty, Actual performance, Perceived test performance, Self-efficacy, Feedback, Feedback acceptance	-
Truxillo et al. (2002)	Job-relatedness, Feedback timeliness, Structure (process) fairness, Self-efficacy, Recommendation intentions, Organizational attractiveness, Job pursuit intentions, Turnover	Video and written tests	Police applicants	Longitudinal Four stages: (1) Pre-written test, (2) pre-video, (3) post-video, & (4) post-result	Selection information, Gender, Ethnicity, Outcome favorability, Test-taking experience	-
Ambrose & Cropanzano (2003)	Procedural justice, Distributive justice	Promotion procedure tenure	Internal applicants	Longitudinal Pre-allocation, Short-term post allocation, & Long-term post-allocation	-	Commitment, Job satisfaction, Turnover intentions
Ambrose & Rosse (2003)	Satisfaction with the MBA program, Testing reactions,	Personality testing	Students	Cross-sectional Post-test	Social comparison information (typical vs. experimental testing), Interpersonal treatment, (i.e., concern for applicants' feeling vs. no concern)	-

Carless (2003)	Job and organizational characteristics, Ability to influence, Job relatedness	Interviews, Psychological tests	Graduate applicants for an Australian national company for a range of positions	Longitudinal Four stages: Pre-test, After an external interview, After psychological tests and internal interviews, & After actual job acceptance	-	Process fairness, Job acceptance intentions, Job acceptance decisions, Organizational attractiveness
Chapman et al. (2003)	Perceived fairness, Interview difficulty, Expectancy of a favorable outcome, Pre and post job acceptance intentions	Face-to-face, videoconferencing vs. telephone Interviews	Applicants	Time-lagged Pre-test & Post-test	Interviews medium/modality, Self-Monitoring, Number of offers received by applicants	-
Day & Carroll (2003)	Ability to predict performance, Procedural justice,	Situational interview vs. patterned behavior description interview	Students	Time-lagged Post-test	Advance knowledge of interview questions	General cognitive ability, Academic experience
Farmer, Beehr, & Love (2003)	Procedural justice, Distributive justice, Satisfaction with the selection outcome	Undercover officer selection process	Police applicants	Time-lagged Post-test	Perceptions of organizational decision	Organizational commitment, Job satisfaction, Job Performance
Goldberg (2003)	Evaluations of the recruiters, jobs and organizations	Interviews	Applicants and recruiters	Pre-test	Demographic similarity in terms of age, sex and race between applicants and recruiters	-
Harris et al. (2003)	Privacy perceptions	Internet-based selection systems	Students	Cross-sectional Post-test	Internet knowledge, Country (US vs. Belgian)	-

LaHuis, Perreault, & Ferguson (2003)	Fairness perceptions, Predictive validity, Content validity, Opportunity to perform	Cognitive ability, Personality assessment	Students	Cross-sectional Post-test	General and specificity explanation, Perceived performance	-
Lievens, De Corte, & Brysse (2003)	Over all fairness, Scientific value, Job relatedness	Structured & unstructured interviews, References, Biodata, Graphology, Personality, Cognitive ability tests, Work sample tests	Applicants	Cross-sectional Pre-test	Provision of information regarding reliability and validity of selection process, Belief in tests, Comparative anxiety	-
Marcus (2003)	Process favorability	Battery of selection procedures	Students	Time-lagged Pre-test & Post-test	Test performance/score, Test type, Country (German, US, & France), Gender	-
McCarthy & Goffin (2003)	Test-taking motivation, Test anxiety, Belief in tests	Personality tests	Students	Cross-sectional Post-test	Personality traits (i.e., anxiety, organization, self-Depreciation, hypochondriasis, achievement, endurance, & desirability)	-
McFarland (2003)	Process fairness, Predictive validity, Face validity, Question impropriety, Opportunity to perform, Selection information, Personality traits, Social desirability responding	Personality tests	Students	Cross-sectional Pre-test	Warning against faking (warned and un-warned)	Job acceptance intentions, Recommendation intentions

Nguyen, O'Neal, & Ryan (2003)	Test motivation, Test anxiety, Test-taking self-efficacy, Test-taking metacognitive strategies, Test-taking strategies	Simulated personnel selection tests	Students	Cross-sectional Post-test	Race, Stereotype threat, Test attitudes, Race	Test performance
Ployhart, Ziegert, & McFarland (2003)	Test motivation, Test anxiety, Face validity	Simulated cognitive ability tests	Students	Cross-sectional Post-test	Race, Stereotype, Domain identity, Racial identity	Test performance
Ployhart, Weekley, Holtz, & Kemp (2003)	Equivalence of proctored web-based tests and paper-and-pencil tests in a selection context in terms of: (a) distributions and means, (b) variance and covariance, & (c) internal consistency reliabilities.	Personality test, Biodata, Situational judgment tests	Applicants vs. incumbents	Cross-sectional Post-test	-	-
Salgado & Moscoso (2003)	Perceptions and reactions to Internet-based Test: comfortable, scientific, examine better, fairer, respect to intimacy, accuracy, effective, harder to fake, better for organization, exigent, intimidating, require help, confidential, anxiety & prefer Internet-based.	Paper-and-pencil version of Big Five personality questionnaire vs. Internet-based test	Students and managers	Time-lagged Post-test	Individuals' personality characteristics	-
Silvester & Anderson (2003)	Questioning strategy of Interviewers, Casual attributions (positive & negative)	Semi structured face-to-face and telephone interviews	Job applicants	Cross-sectional Post-test	Interview modes	-

Sinar, Reynolds, & Paquet (2003)	System speed, User friendliness, Job-relatedness	Non-proctored web-based procedures, including biographical data & background information	Job applicants	Cross-sectional Post-test	Age, Gender, Race, Prior work experience, Internet experience	Internet selection image
Thibodeaux & Kudisch (2003)	Perceived job-relatedness, Invasiveness	Integrity test, Math test, Test battery	Applicants	Cross-sectional Post-test	-	Likelihood of complaints, Organizational attractiveness
Wiechmann & Ryan (2003)	Process fairness, Test ease, Liking, Self-assessed performance, Face validity, Predictive validity, Favorability and fairness, Motivation check, Test performance	In-basket test called Priority Management Exercise (computerized and paper-and-pencil version of the test)	Students	Time-lagged Pre-test, Post-test/pre- feedback, & Post-test/post feed-back	Test-taking experience, Test-taking self-efficacy, Test-taking anxiety, Computer experience (basic and technical), Computer self-efficacy, Computer anxiety, Openness to experience, Mode of administration, Selection decision outcome, Technological level of the job	Job acceptance intentions, Recommendation intentions, Purchase intentions
Bauer et al. (2004)	Procedural justice (SPJS): Job-relatedness content, Structural fairness, Social fairness, Organizational attractiveness, Job acceptance intentions, Litigation intentions, Perceptions of organizational technological sophistication	Face-to-face, Interactive voice response, Computer-assisted telephone screening interviews	Students	Time-lagged Pre-screening, & Post-screening	Screening conditions, Conscientiousness, Cognitive ability, Screening outcome (pass/fail)	-
Derous, Born, & De Witte (2004)	General selection treatment beliefs (i.e., transparency, objectivity, feedback, information, treatment)	-	Students with no prior experience, applicants with prior selection experience	Cross-sectional Pre-test	Prior selection experience, Gender, Education level, Work status	Motivation to apply

Dineen, Neo, & Wang (2004)	Characteristics of procedural justice (i.e., provision of additional information, consistency, ability to appeal a decision, feedback timeliness), Decision-making agent, Comfort with the WWW	Web-based screening procedures	Students	Time-lagged Pre-test & Post-test	Gender, Conscientiousness, Prior job application experience	Overall fairness perceptions
Hausknecht et al. (2004)	Procedural justice, Distributive justice, Attitudes towards selection, Attitudes towards test, Test motivation, Test anxiety	Work sample tests, Interviews, References, Résumés, Cognitive ability, Biodata, Personality tests, Honesty tests, Personal contacts, Graphology	53.3% not actual applicants, 36% actual applicants, 10.5% job incumbents	Meta-analysis	Person characteristic (i.e., age, gender, ethnicity, conscientiousness, personality, demographics, work & test experience), Perceived procedural characteristic (job relatedness, consistency, perceived predictive validity, face validity, explanations/accounts, transparency, opportunity to perform, actual outcome favorability, information known, interpersonal treatment, & propriety of questions), Selection context (authentic vs. Hypothetical), Stage of the selection process	Selection performance (actual and self-assessed), Self-efficacy, Self-esteem, Recommendation intentions, Litigation intentions, Product purchase intentions, Offer acceptance intentions, Organizational attractiveness
Maertz et al. (2004)	Procedural justice perceptions (information known, treatment, consistency of test administration, chance to perform, & job relatedness).	Cognitive ability test	Job applicants	Longitudinal Pre-test, Post-test/Pre-feedback, & Post-test/post-feedback	-	Intention toward the organization, Intention to use services, Intention to accept job offer, Organizational attractiveness

McCarthy & Goffin (2004)	Interview anxiety: Performance, Communication, Social, Appearance, Behavioral	Interviews	Job applicants	Cross-sectional Post-test	-	Interviews performance
Moscoso & Salgado (2004)	Process favorability, Procedural justice dimensions: Face validity, Scientific evidence, Opportunity to perform, Widely used, Employer's right, Respectful of privacy, Interpersonal warmth	Work sample tests, Interviews, Résumés, Cognitive tests, Personality inventories, References, Biodata, Personal contacts, Honesty tests, graphology	Students	Cross-sectional Post-test	Country (Spain and Portugal) and comparing the result with previous ones in the US & France	-
Potosky & Bobko (2004)	Test score, Individual characteristic Reactions to testing: Pressure, Enjoyment, Satisfaction, Felt monitored	Cognitive ability test, Situational judgement test	Students	Cross-sectional Post-test	Test administration mode (Internet-administered vs. paper-and-pencil administered), Computer & Internet self- efficacy beliefs	-
Reeve & Schultz (2004)	Selection process characteristic (SPC) information in job ads, Assessment accuracy	Interview, Cognitive ability test, Personality test, Job knowledge test, Transcript/GP, Work sample tests	Students	Cross-sectional Post-test	-	Job-pursuit intentions, Organizational attractiveness
Schaubroecka & Lam (2004)	Promotion Envy	Promotion	Bank tellers rejected for promotion	Longitudinal Pre-test & Post-test	Promotion expectation, Perceived self-similarity	Job performance, Reward Injustice, Likability

Schinkel et al. (2004)	Procedural justice, Distributive justice, Performance feedback after a rejection	General mental ability tests	Students	Experimental Post-feedback, Post-test	-	Core self-evaluations, Affective well-being
Schmitt et al. (2004)	Relevance perceptions, Fairness perceptions	ACT/SAT, Biodata, Situational Judgment measures	Students	Cross-sectional Post-test/pre-feedback	Performance beliefs (comparative and absolute), Actual test performance, Gender, Ethnicity	-
Van Vianen et al. (2004)	Pre-feedback fairness perceptions, Post feedback fairness perceptions	Cognitive tests, Personality tests, Situational judgment tests	Job applicants	Longitudinal Pre-test, Post-test/pre-feedback, & Post-feedback	(1) Determinants of pre-feedback fairness: Perceived performance, Job relatedness, Test beliefs, Openness to experience (2) Determinants of post-feedback fairness: Pre-feedback fairness perceptions, Feedback content, Perceived feedback treatment	Job attractiveness
Viswesvaran & Ones (2004)	Selection system fairness (content, developmental process, administration process, selection context, and outcomes)	Selection system in general	Individuals working in industries in the US	Cross-sectional	Demographic variables (ethnicity and gender), Individual differences characteristics (the Big Five & cognitive ability), Job characteristic (job complexity and domestic/expatriate assignment status).	-
Bernerth (2005)	Procedural justice, Distributive justice	Personality inventory test	Student job applicants	Time-lagged, Post-feedback & post-test	Gender, Selection outcome decision	-

Derous & Born (2005)	Test motivation, Test performance	Numeric reasoning test	Student job applicants	Cross-sectional Pre-test	Selection information, Face validity	-
Holtz, Ployhart, & Dominguez (2005)	Job relatedness	NEO-Five Factor Inventory	Students	Cross-sectional Post-test	Test format, Validity information, Process fairness	Recommendation intentions, Organizational attractiveness
LaHuis (2005)	Procedural fairness	Test assessment (general)	Applicants for entry-level clerical jobs	Time-lagged Pre-test & Post-test	Employment commitment, Job search, Self-efficacy, Motivational control	Job-pursuit intentions
Maertz, Bauer, Mosley, Posthuma, & Campion (2005)	Test self-efficacy	Battery of cognitive ability tests	Job applicants	Longitudinal Pre-test, Post-test, & Post-feedback	Race, Gender, Previous test experience, Perceived fairness, Perceived validity, General self-efficacy, Pass/fail performance	-
McCarthy & Goffin (2005)	Test anxiety	Battery of attitude and cognitive ability tests	Students	Cross-sectional Post-test	Gender	Test performance
Ployhart, Ehrhart, & Hayes (2005)	Process fairness perceptions, Locus of attribution, Self-perceptions, Organizational attractiveness	Hypothetical college applications, Graduate school application	Study (1): students; Study (2): rejected applicants for admission to graduate school	Experimental Post-test	Covariation information (Consensus, distinctiveness, and consistency), Hiring decision	-
Anderson & Goltsi (2006)	Psychological well-being, Self-esteem, Positive and negative affect, Career exploration behavior, Feedback perceptions	Assessment center	Applicants	Longitudinal Pre-test, Post-test/pre-feedback, & Post-feedback	Outcome decision	-
Bagdadli et al. (2006)	Procedural justice	Selection process for promotion	Mangers	Time-lagged Post-test	Promotion decision	Organizational commitment, Intent to leave

Bauer et al. (2006)	Procedural justice	On-line screening	Study (1): students	Time-lagged Pre-test & Post-test,	Personal information privacy concern	Test-taking motivation, Intentions toward the organization , Organizational attractiveness
			Study (2): job applicants	Cross-sectional Post-test		
Bell et al. (2006)	Test efficacy, Test motivation, Job acceptance intentions, Recommend job (pre-test), Procedural justice, Distributive justice, Interpersonal justice, Informational justice (post-test)	Written ability test	Fire fighter applicants	Time-lagged Pre-test & post-test	Justice expectations (pre- test) of procedural, distributive, interpersonal and informational justice	Psychological withdrawal, Negative affect (post-test)
Bernerth, Feild, Giles, & Cole (2006)	Procedural justice, Distributive justice	Personality testing	Students	Time-lagged Pre-test & Post-test/post- feedback	Applicant personality (agreeableness, openness to experience, neuroticism), Test-taking self-efficacy, Decision outcomes	-
Carless (2006)	Job relevant, Ability to influence, Initial beliefs	Physical agility tests, Psychological tests, Interviews	Police applicants	Longitudinal Pre-test & Post-test	Test type, Gender	Attractiveness-intentions, Fair procedural processes, Fair outcome processes
Chapman & Webster (2006)	Procedural justice, Intentions to accept a job offer, Organizational attractiveness, Expectancy of receiving a job offer	Interviews	Job applicants	Longitudinal Pre-interview, Post-interviews, & Post-outcome	Interviewer friendliness, Signals from interviewer friendliness, Applicant opportunities, Knowledge of the organization,	Actual job choice
Kanning, Grewe, Hollenberg, & Hadouch (2006)	Emotional reaction, Usefulness, Job-relatedness, Transparency, Fairness, Acceptance	Situational judgment items	Police officers	Cross-sectional Post-test	Modality of presentation (i.e., text vs. video), Interactivity	-

Saks & McCarthy (2006)	Reactions to the interview and interviewer, Perceptions of employee treatment, Organizational attractiveness, Job offer expectation, Pursue employment intentions, Intentions to recommend the organization , Intentions to accept a job offer	Simulated interviews	Students	Cross-sectional Post-test	Discriminatory questions, Gender	-
Schleicher, Venkataramani, Morgeson, & Campion (2006)	Overall procedural fairness	Battery of selection tests & interviews	Job applicants	Time-lagged, Post-test/pre-feedback & Post-test/post-feedback	Opportunity to perform, Job-relevance, Communications, Interpersonal treatment, Selection outcome, Test type	-
Truxillo et al. (2006)	Social fairness, Test-taking self-efficacy, Likelihood of getting a job, Perceived turnover, Perceived employee relations	Written test	Police recruit applicants	Time-lagged Pre-test: demographic & personality measure, Post-test	Big 5 Personality (Neuroticism, agreeableness, conscientiousness, extraversion, openness to experience)	-
Wallace, Page, & Lippstreu (2006)	Litigation intentions, Procedural justice perceptions: Information, Job-relatedness, Chance to perform, Feedback, Reconsider, Consistency, Treatment, Openness, Communication, Propriety	Application blank	Students	Time-lagged Post-test	Application type (a legally advisable application vs. a legally problematic application), Selection decision	-

Bertolino & Steiner (2007)	Process favorability, Procedural justice dimensions: Face validity, Scientific evidence, Opportunity to perform, Widely used, Employer's right, Respectful of privacy, Interpersonal warmth	Work sample tests, Interviews, Résumés, Cognitive tests, Personality inventories, References, Biodata, Personal contacts, Honesty tests, graphology	Students	Cross-sectional Pre-test	-	-
Carless & Imber (2007)	Applicant attraction, Job choice intentions, Applicant anxiety	Employment interview	Graduate applicants	Longitudinal Pre-interview & Post-interview	Perceived interviewer, job and organizational characteristics	-
Honer, Wright & Sablinski (2007)	Perceived predictive validity, Perceived face validity, Procedural justice	Puzzle interviews	Students	Cross-sectional Post-test	Actual test performance, Perceived test performance Cognitive ability	-
LaHuis, MacLane, & Schlessman (2007)	Opportunity to perform, Job-relatedness	Behavior consistency assessment	US federal government employees applying for a job with a US government agencies	Time-lagged Post-test	-	Reapplying
Lazer, Zinger, & Lachterman (2007)	Structural justice, Social justice, Content job-relatedness	Battery of selection procedures	Military applicants	Time-lagged Pre-test & Post-test	-	Overall procedural justice, Peer recommendation, Job attractiveness
Nikolaou & Judge (2007)	Process favorability, Procedural justice dimensions: Face validity, Scientific evidence, Opportunity to perform, Widely used, Employer's right, Respectful of privacy, Interpersonal warmth	Work sample tests, Interviews, Résumés, Cognitive tests, Personality inventories, References, Biodata, Personal contacts, Honesty tests, graphology	Students and white collar employees	Cross-sectional Pre-test	Country (Greece) then compared with US, France, Spain and Portugal, Core self-evaluation, Selection process outcome	-

Rolland & Steiner (2007)	Predictive validity, Face validity, Propriety of questions, Opportunity to perform, Perceived propriety of questions, Distributive justice, Ease of faking, Intentions to use the organization's service, Recommendation intentions	Cognitive ability test, Overt integrity test	Participants were enrolled in a training program	Cross-sectional Post-test	Explanation, Voice, Test type, Selection decision	-
Waung & Brice (2007)	Acceptance/rejection status, Notification, Organizational obligation fulfilment	Rejection letters	Students	Cross-sectional Post-test	-	Reapplication intentions, Purchase intentions, Likelihood of encouraging others to apply, Likelihood of speaking negatively about the organization
Anderson & Witvliet (2008)	Process favorability, Procedural justice dimensions: Face validity, Scientific evidence, Opportunity to perform, Widely used, Employer's right, Respectful of privacy, Interpersonal warmth	Work sample tests, Interviews, Résumés, Cognitive tests, Personality inventories, References, Biodata, Personal contacts, Honesty tests, graphology	Students	Cross-sectional	Country (the Netherlands, the US, France, Spain, Portugal, and Singapore)	-
Becton, Feild, Giles, & Jones-Farmer (2008)	Test motivation, Job-relatedness, Test performance	Written job knowledge test, Situational interview	Promotion applicants within police department	Cross-sectional Post-test	Race, Type of selection	-

Burns et al. (2008)	Test satisfaction, Perceived fairness, Perceived validity	Verbal ability, Quantitative reasoning, Mechanical ability	Applicants for an entry-level chemical-based manufacturing position	Cross-sectional Post-test/post-feedback (mailed surveys after the test),	Pre-test information & preparation materials, Selection outcome	-
Converse, Oswald, Imus, Hedricks, Roy, & Butera (2008)	Test taking expectancy, Perceived workload, Beliefs in test, Test anxiety, Positive & negative affect, Criterion-related validity	Personality test	Students	Experimental Pre-test & Post-test	Formats & Warnings of personality test: Forced-choice personality test items and warning against faking.	-
Kuhn & Nielsen (2008)	Perceived fairness, Privacy, Accuracy, Confidence in knowledge, Organizational attractiveness	Hypothetical credit check	Students	Cross-sectional	Type of explanation, Perceived credit report impact, Age, Previous experience	Intention to withdraw
Proost, Derous, Schreurs, Hagtvet, & De Witte (2008)	Self-referenced anxiety, Other-referenced anxiety	Cognitive ability test	Government job applicants	Cross-sectional Post-test	-	Test performance
Schreurs, Derous, Proost, Notelaers, & De Witte (2008)	Applicant expectations & perceptions of : Warmth/respect, Chance to demonstrate potential, Difficulty of faking, Unbiased assessment, Feedback	Military selection procedures	Military applicants	Time-lagged Pre-test & Post-test	-	Job pursuit intentions, Organizational prestige, P-O fit, Organizational attractiveness
Truxillo, Seitz, & Bauer (2008)	Perceived & actual test performance, Test-taking self-efficacy	Video-based situational judgment test	Students	Time-lagged Pre-test & Post-test	Applicants' cognitive ability	-
Anseel & Lievens (2009)	Feedback acceptance, Outcome feedback, Informative feedback	Personality test, In-basket exercise, Interviews	Students	Time-lagged Pre-test & Post-test	-	Organizational attraction, Recommendation intentions, Test performance

Brooks, Guidroz, & Chakrabarti (2009)	General reactions to the organization and selection policy	Decision making task, Web-based survey	Students	Cross-sectional Post-test	Diversity approach in selection procedures (holistic vs. mechanical), Mode of receiving information about this approach	-
Forsberg & Shultz (2009)	Procedural justice, Face validity	Background information form, Written job knowledge test	Applicants for the job of engineering aide & plumber	Cross-sectional Post-test	Test type, Job type	-
Gamliel & Peer (2009)	Procedural justice, Distributive justice	Grade point average (GPA) and interviews	Applicants	Experimental Post-test	Framing conditions: either positive framing (to accept) or negative framing (to reject)	-
McCarthy et al. (2009)	Procedural justice, Interactional justice, Motivation, Behavioral anxiety, Performance anxiety	Knowledge-based promotional exam	Police applicants	Time-lagged Post-test	Cognitive processing	Test performance, Recommendation intentions
Morgeson, Campion, & Levashina (2009)	Procedural justice/job-related perceptions, Performance interview, Job performance (self-rated & other-rated)	Interview, Job performance survey, Written job knowledge	Employees at an auto parts company	Cross-sectional Post-test	-	-
Nielsen & Kuhn (2009)	Fairness, Predictive validity, Face validity, Accuracy perceptions, Invasion of privacy, Job-relatedness	Credit check	Students	Cross-sectional	Job characteristic, Individual characteristic, Perceived knowledge about credit check, Perceived favorability	-
Ryan et al. (2009)	Familiarity, Job-relatedness, Perceived predictive validity, Opportunity to perform, Procedural fairness, Self-assessed performance	Battery of cognitive assessment tools and competency tools	Students from 21 countries representing six continents	Cross-sectional Post-test	Cultural values (independent & interdependent self-construal, achievement & ascription orientations), Gross domestic product GDP	Intentions to apply for a job, Accept a job offers

Sylva & Mol (2009)	Process satisfactions	On-line application system	Financial job applicants	Cross-sectional Post-test	Process characteristics: User-friendliness, Perceived efficiency, Information provision, Internet selection image, Fairness perceptions, Sub-group differences (i.e., prior experience, Internet familiarity, applicant source, country)	-
Truxillo et al. (2009)	Fairness perceptions, Test-taking motivation, Self-perceptions test score, Organizational perceptions	-	26 distinct samples of students and applicants	Meta-analysis	Explanations, Study context, Outcome favorability, Type of research participant, Test type	-
Anderson et al. (2010)	Process favorability, Procedural justice dimensions: Face validity, Scientific evidence, Opportunity to perform, Widely used, Employer's right, Respectful of privacy, Interpersonal warmth	Work sample tests, Interviews, Résumés, Cognitive tests, Personality inventories, References, Biodata, Personal contacts, Honesty tests, graphology	38 Samples across 17 Countries	Meta-analysis	Country Operational validity, Organizational use	-
Banki & Latham (2010)	Fairness, Test-taking anxiety, Test Motivation Job performance	Situational interview, Situational judgment test	Employees in sales department of an Iranian automobile organization	Cross-sectional Post-test	Test type	-

Bilgiç & Acarlar (2010)	Process favorability, Procedural justice dimensions: Face validity, Scientific evidence, Opportunity to perform, Widely used, Employer's right, Respectful of privacy, Interpersonal warmth	Interviews, Personality tests, Science achievement tests	Engineering students	Experimental Post-test	Goal orientation of individuals: Learning goal orientation, Performance proof orientation, Performance-avoid orientations	-
Furnham & Chamorro-Premuzic (2010)	Accuracy and fairness perceptions	17 different selection methods	Undergraduate students	Cross-sectional	Self-assessed intelligence, Gender, Age, Personality (extraversion, agreeableness, conscientiousness, neuroticism, openness).	-
Ispas, Ilie, Iliescu, Johnson, & Harris (2010)	Process favorability, Procedural justice dimensions: Face validity, Scientific evidence, Opportunity to perform, Widely used, Employer's right, Respectful of privacy, Interpersonal warmth	Work sample tests, Interviews, Written ability tests, Résumés, Reference, Biodata, Personality tests, Integrity tests, Personal contacts, Graphology, Ethnicity	Romanian employees from different Romanian cities	Cross-sectional	Country (Romania, then compared it with previous results from US, Singapore, and Greece)	-
König, Klehe, Berchtold, & Kleinmann (2010)	Applicant reactions, Cost, Diffusion in the field, Predictive validity, Usefulness for organizational, self-promotion, Perceived legality	Semi-structured interviews, Ability tests, Personality tests, Assessment centers, Graphology	HR managers	Cross-sectional Post-test	-	The use of selection procedures

Ostrom et al. (2010)	Job-relatedness (perceived predictive validity & face validity)	Cognitive ability test, Multimedia situational judgment test	Students	Time-lagged Pre-test & Post-test/pre-feedback	Test anxiety, Computer anxiety, Test-taking self-efficacy, Core self-evaluation, Subjective well-being, Personality (agreeableness, openness to experience, and emotional stability).	-
Schreurs et al. (2010)	Selection expectations & perceptions of: Warmth/respect, Unbiased assessment, Chance to demonstrate potential	Personality test, Cognitive test, Semi-structured interview, Role-play exercise	Applicants for entry-level in a large financial company	Time-lagged Pre-test & Post-test/pre-feedback	-	Job pursuit intentions, Recommendation intentions, Organizational attractiveness
Seijts & Kyei-Poku (2010)	Procedural Fairness	Situational interview, Unstructured interview	Students	Cross-sectional	Interview format, Employment equity (EE) program strength, Beneficiaries of EE Program	-
Walsh et al. (2010)	Structural fairness, Information sharing fairness	General selection procedures	Applicants to positions in global corporation	Cross-sectional Post-test	Moderating role of cultural practices: Performance orientation, Uncertainty avoidance	Job choice, Organizational attractiveness
Patterson, Zibarras, Carr, Irish, & Gregory (2011)	Job relevance, Overall fairness	Problem-solving test, Situational judgment test, Work sample test	Doctors applying for GP training	Cross-sectional Post-test	Low-fidelity/short-listing stage vs. high-fidelity/selection center	-
Janssen, Müller, & Greifeneder (2011)	Procedural justice	Online application procedure	Job applicants at aviation company	Cross-sectional Post-test	Ease-of-retrieval, Content information, Process uncertainty, Experience, Number of fair aspects recalled	-
Schinkel et al. (2011)	Distributive fairness, Attribution style, Performance feedback	General Mental Ability	Students	Time-lagged Pre-test & Post-outcome	-	Post-rejection affective well-being, Post-rejection Organizational attractiveness

Sumanth & Cable (2011)	Procedural justice, Perceived insult, Organizational attractiveness	Interviews and cognitive ability test	MBA alumni & working professionals who enrolled in an MBA program	Quasi-experimental Cross-sectional, Post-test	Individual status, Organizational status, Selection method type	-
Anderson et al. (2012)	Process favorability, Procedural justice dimensions: Face validity, Scientific evidence, Opportunity to perform, Widely used, Employer's right, Respectful of privacy, Interpersonal warmth	Interviews, Work sample tests, Résumés, References	Employees	Cross-sectional	Organizational attractiveness, Core self-evaluation	-
García-Izquierdo et al. (2012)	Procedural justice (PJ)	Promotion	Employees and supervisors from private sector organizations	Cross-sectional Post-test	Transparency, Promotion systems, Gender, Organizational rank	Job satisfaction
Geenen et al. (2012a)	Procedural justice expectations, Distributive justice expectations	Written examination	Job applicants of prison guard	Cross-sectional Pre-test	Belief in a just world, Belief in tests, Direct experiences	-
Geenen et al. (2012b)	Distributive justice expectations	Written examinations	Job applicants; 2 samples	Cross-sectional Post-test	Positive and negative affect	Recommendation intentions, Litigation intentions
Gillespie & Ryan (2012)	Procedural fairness, Pre-hire self-efficacy	Scheduling task	Undergraduate students	Experimental Pre-hire & Post-hire	Method of Selection (gender-based preferential vs. merit-based selection), Gender type of job (masculine vs. feminine), Gender	Post-hire self-evaluations of performance, Post-hire performance
Giumetti & Sinar (2012)	User-friendliness, Advance information, Adequacy of information, Opportunity to perform, Procedural justice/fairness, Job relatedness/content validity, Job relatedness/predictive validity	Online selection test	Internal and external job applicants for leader level job	Cross-sectional Post-test	Applicant status (internal vs. external applicants)	Satisfaction with process, Recommendation intentions

Hiemstra, Derous, Serlie, & Born (2012)	Fairness perceptions, Opportunity to perform, Face validity, Predictive validity	Video résumé, Paper résumé	Job applicants	Cross-sectional Post-test	Ethnicity, Ethnic identity strength, Language proficiency, Résumé type/medium (video vs. paper)	-
Hoang et al. (2012)	Process favorability, Procedural justice dimensions: Scientific evidence, Opportunity to perform, Face validity, Employer's right, Widely used, Respectful of privacy, Interpersonal warmth, Perceived legality	Interviews, Résumés, References, Personality tests, Personal contacts, Biodata, Work sample tests, Written ability tests, Honesty tests, Graphology,	Students	Cross-sectional	Country (US vs. Vietnam)	-
Iliescu, Ilie, Ispas, & Ion (2012)	Face validity, Fairness, Test task	Emotional intelligence test	Students	Cross-sectional Post-test	Test score/performance	-
Madera (2012)	Selection process fairness, Job pursuit intentions	Social networking websites	Students attending a career fair	Cross-sectional Experimental Post-test	The use of social networking websites, Selection purpose	-
Oostrom Bos-Broekema, Serlie, Born, & van der Molen (2012)	Predictive validity, Face validity, Fairness perceptions	An in-basket exercise	Job applicants	Longitudinal Pre-test & Post-test	Test medium (paper-and-pencil vs. computerized version), General beliefs in tests, Test-taking motivation, Self-assessed test performance, Test performance	-
Reeder, Powers, Ryan, & Gibby (2012)	Face validity, Predictive validity	Cognitive ability test	Students, Job applicants	Longitudinal Pre-test & Post-test	Implicit theories of ability, Locus of control, Test experience, Job-relevant experience, Job familiarity, Self-assessed performance, Prior success in selection contexts	-

Snyder & Shahani-Denning (2012)	Process favorability, Procedural justice dimensions: Scientific evidence, Face validity, Propriety of questions, Opportunity to perform, Widely used, Interpersonal warmth, Respectful of privacy, Outcome favorability	Interviews, Résumés, References, Personality tests, Personal contacts, Biodata, Work sample tests, Written ability tests, Honesty tests, Graphology, Assessment centers, Online information	Professionals at large multinational corporation	Cross-sectional	Experience with method	-
Wright, Sablynski, Manson, & Oshiro (2012)	Face validity, Predictive validity, Procedural justice, Expectancy, Transparency, Instrumentality	Puzzle interview & behavioral interview	Students	Cross-sectional Experimental Post-test	Interview type, Job type	-
Geenen, Proost, Schreurs, van Dam, & von Grumbkow (2013)	Interpersonal justice expectations, Distributive justice expectations	Intelligence test	Students	Cross-sectional Post-test	Peer communication about interpersonal justice, Peer communication about distributive justice	Test anxiety, Test motivation
Grand, Golubovich, Ryan, & Schmitt (2013)	Fairness, Chance to perform, Propriety of questions	Verbal ability test	Students	Cross-sectional Post-test	Individual differences: Gender, Race, Gender/ethnic identity, Gender/ethnic stigma, Consciousness, Social dominance orientation	-

Honkaniemi, Feldt, Metsäpelto, & Tolvanen (2013)	Fairness perceptions, Face validity, Predictive validity	Physical and psychological tests, Personality inventories, Group discussion, Cognitive ability tests, Interviews	Real-life applicants for admission to vocational school for fire and rescue personnel	Cross-sectional Post-tests	Personality types: Resilient, Over-controlled, Under-controlled, Bohemian	-
Konradt et al. (2013)	Process fairness, Procedural justice rules	Web-based Selection	Job applicants	Cross-sectional Post-tests	-	Pursuit intentions, Recommendation intentions, Reapplication intentions
McCarthy et al. (2013)	5 Applicant reactions: Test anxiety, Test motivation, Self-efficacy, Test beliefs, Procedural justice	Job knowledge tests, Personality tests, Situational judgment tests, Cognitive ability tests, Selection inventory, Work sample tests,	Students, Job applicants, Job incumbents	Time-lagged Post-test	Dispositional vs. situational reactions, Reactions- job performance are conceptually vs. not conceptually matched,	Test performance, Job performance
Oostrom et al. (2013)	Face validity, Predictive validity, Fairness perceptions, Usefulness perception, Ease of use	Battery of selection procedures	Recruiters	Cross-sectional	-	Intentions to use new technology in selection
Sears et al. (2013)	Procedural justice perceptions of: Selection information, Job-relatedness, Chance to perform Applicants' assessment of interviewer characteristics: Personableness, Trustworthiness, Competence, Physical appearance	Video interview, Face-to-face interview	Students	Cross-sectional Post-test	Interview medium	-

Schinkel et al. (2013)	Selection outcomes, Procedural justice, Distributive justice	Job interviews	Job applicants	Longitudinal Pre-interview & Post-outcome	-	Affective well-being, Organizational attractiveness
Ababneh et al. (2014)	Overall fairness perceptions, Selection outcome favorability, Satisfaction/violation of procedural justice rules	Interviews	Students	Cross-sectional Experimental post-test	Attribution: Stability, Personal control, External control	Organizational perceptions, Recommendation intentions, Litigation intentions
Guchait, Ruetzler, Taylor, & Toldi (2014)	Overall favorability, Procedural fairness	Online video interviews	Students	Cross-sectional Post-test	-	-
Jelley, & McCarthy (2014)	Face validity, Predictive validity, Intentions to recommend the test to others, Organizational reputation	Promotional examinations	Police officers	Cross-sectional Quasi-experimental, Post-test	Field vetting processes	-
Karim, Kaminsky, & Behrend (2014)	Privacy concerns, Pressure/tension, Chance to perform, Test performance	Online cognitive ability tests	Employed adults	Cross-sectional Experimental Post-test	The use of remote proctoring, 11 Individual difference variables	-
Merkulova, Melchers, Kleinmann, Annen, & Tresch (2014)	Face validity, Measurement quality, Controllability, Absence of strain, Quality of administration	Assessment Center Exercises	Applicants	Cross-sectional Post-test	Individual differences: Big Five, Core self-evaluations (locus of control, self-efficacy, & self-esteem), Trait (positive & negative) affectivity, General mental ability	-
Roch, Mishra, & Trombini (2014)	Procedural justice, Perceived influence, Self-assessed performance, Perceived objectivity	Cognitive ability test, Written role-play, Semi-structured interview	Students	Cross-sectional Experimental Post-test	Type of selection measures (scored objectively vs. using performance ratings)	Task motivation
Whitman, Kraus, & Van Rooy (2014)	Face validity, Predictive validity, Opportunity to perform, Propriety of questions	Emotional intelligence test	Job applicants	Cross-sectional Post-test	Ethnicity	Test performance

Brender-Ilan, & Sheaffer (2015)	Process favorability, Procedural justice dimensions, language proficiency	Interviews, Résumés, References, Personality tests, Personal contacts, Biodata, Work sample tests, Ability tests, Honesty tests, Graphology	Employees	Cross-sectional	Cultural differences among native Israelis vs. immigrants from the former Soviet Union	-
Bye & Sandal (2015)	Structural procedural justice, Social procedural justice	Group selection interviews for teacher positions	Job applicants	Time-lagged Pre-interview & Post-interview	Applicants' personality: Neuroticism, Extraversion, Agreeableness, Openness to experience, Conscientiousness	-
Feeney, McCarthy, & Goffin (2015)	Interview anxiety dimensions (social anxiety, communication anxiety, behavioral anxiety, performance anxiety, and appearance anxiety), Overall anxiety	Interview	Job applicants	Cross-sectional Post-test	Gender, Sex-linked anxiety coping style (problem, emotion & avoidance -oriented coping)	Interview performance
Harold et al. (2015)	Perceived process fairness, Procedural justice perceptions, Interactional justice perceptions, Organizational image, Familiarity, P-O fit perceptions, Recruiter behaviors	Military selection procedures	Military job applicants	Cross-sectional Post-test	-	Job acceptance decisions
King et al. (2015)	Chance to perform, Test performance/score, Test ease,	Customer service orientation, Cognitive ability, Supervisory Situational judgment test	Students	Cross-sectional Post-test	Administration mode differences (Mobile vs. computer internet testing), Attitudes towards mobile, Computer/mobile self-efficacy, Computer/mobile anxiety	-

Konradt et al. (2015)	Procedural fairness expectations, Procedural fairness, Procedural justice	Vocational training	Job applicants	Longitudinal 6-wives Pre-test, Post-test	-	Job acceptance, Job performance
Lievens, De Corte, & Westerveld (2015)	Media richness of test	Situational judgment test	Job applicants for police officer positions	Experimental Post-test	Response fidelity mode (i.e., written response vs. behavioral response mode)	-
Stoughton et al. (2015)	Privacy invasion, Procedural justice perceptions,	Social networking website screening as pre-employment screening	Job applicants & adults	Cross-sectional Experimental Post-test	Presence of social networking website screening, Agreeableness, Hiring decision	Litigation intentions, Organizational attractiveness
Zibarras & Patterson (2015)	Fairness perceptions	Job knowledge & Situational judgment test, Assessment center	Job applicants for GP posts	Time-lagged Post-test Post-feedback	Job relatedness, Self-efficacy	-
Brak-Lee et al. (2016)	Overall procedural justice, Job-relatedness, Opportunity to perform, Company impressions, Engagement, Preferences, Realism, Company impression	Situational judgment test (2D & 3D animation, text computer-based simulation, & video), Personality & cognitive ability test	Students; Participants were recruited through an open access convenience sampling website	Time-lagged Pre-test Post-test Cross-sectional Post-test	Media types	Company perceptions
McLarty & Whitman (2016)	Justice perceptions	High stakes (i.e., civil service) testing	Police officer applicants	Longitudinal 4 points in time Pre and post-test	-	Job acceptance intentions, Reapplication intentions, Recommendation intentions
Oostrom & De Soete (2016)	Fairness perceptions	Cognitive ability test	Job applicants	Time-lagged Pre-test & Post-test	Perceived test performance, Test experience, Attributional style, Ethnicity	-
Speer, King, & Grossenbacher (2016)	Procedural justice, Organizational attractiveness, Job acceptance intentions	Cognitive ability, Personality test	Students	Cross-sectional Experimental Post-test	Test length, Test type, Test performance/score	-