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Explaining the impact of work interference with family: The role of work-family psychological contract and cultural values

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Explaining the Impact of Work Interference with Family: The Role of Work-Family

Psychological Contract and Cultural Values

by

Xian Xu

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
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China, mediation, moderation

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*Love is but the discovery of ourselves in others, and the delight in
the recognition. ~Alexander Smith*

Dedication

I would like to dedicate this dissertation to a very special person in my life, who has made me who I am today, sacrificed all of his own needs, and provided all he had to me. He has supported and continues to support me with endless patience, encouragement, and love, whatever I chose to do, and wherever I chose to go. I would like to tell him that:

I am finally here! I would have gotten nowhere near here without you, and you deserve recognition for one hundred percent of what I have achieved and what I have written in the following pages to come.

Thank you, Dad!

This dissertation and degree is for YOU!

I can no other answer make, but, thanks, and thanks. ~William Shakespeare

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Explaining the Impact of Work Interference with Family: The Role of Work-Family
Psychological Contract and Cultural Values

Xian Xu

ABSTRACT

This study aims to further understand the mechanisms through which work interference with family (WIF) influences important attitudinal, behavioral, and well-being outcomes. First, the study expands the content of employees' psychological contract through creating a measure of Work-Family Psychological Contract Breach (WFPCB). The study also examines the mediating role of WFPCB in the relations between WIF and work-related outcomes. Finally, the study explores potential cultural influences by looking at the moderating role of individualism-collectivism on the relations between WIF and WFPCB as well as between WFPCB and the outcomes. Research was carried out in three stages: 1) telephone interviews were conducted to understand the content of work-family psychological contract; 2) the WFPCB measure was piloted; and 3) a final survey study was carried out to test the main hypotheses. Data were collected in both the U.S. and China, resulting in 20 participants each for the interview study, over 60 participants each for the pilot study and over 200 respondents each for the final stage. Support was found in both samples for the link between WIF and WFPCB, and some of the direct paths with the outcomes, especially the attitudinal variables. Full mediation effect of WFPCB was found for organizational commitment in the U.S. and for job satisfaction in China. Evidence for partial mediation was also found

for the other attitudinal variables. The moderating role of individualism-collectivism at the individual level was only found in the Chinese sample for organizational commitment, such that the negative relationship between WIF and commitment was stronger when individualism was high. A country comparison of the hypothesized direct effect was posed as research questions. The present study contributes to the psychological contract and work-family literature by introducing the psychological contract theory and shedding some light on the potential mechanism through which work interference with family affects important outcomes such as employee job attitudes and well-being.

Chapter One

Introduction

The interaction between the work and family domains has attracted a great amount of research attention over the past decades (e.g. Greenhaus & Beutell, 1985; Frone, Russell & Cooper, 1992a; Allen, Herst, Bruck & Sutton, 2000; Witt & Carlson, 2006). On the one hand, various socioeconomic changes and technological advancement (e.g. increase in the number of dual-earner couples and the Internet) have enabled deeper integration of organizational and personal lives; on the other hand, the boundaries between the two domains have been blurred further by expectations for employers to be more involved in employees' non-work activities (Morishima, 1996, cited in Giga & Cooper, 2005; Friedman, 1990; Zedeck & Mosier, 1990). Research has found that the work-and-family interaction can be both positive and negative, and that interference can flow from work to family or from family to work. Much effort has also been devoted to defining concepts such as work-family conflict and balance (e.g., Edwards & Rothbard, 2000; Marks & MacDermid, 1996; Greenhaus & Powell, 2006), to examining the antecedents and consequences of work-family conflict (e.g., Frone, Yardley & Markel, 1997; Greenhaus, Allen & Spector, 2006), and to finding ways such as adopting family-friendly policies to facilitate the work and family integration (e.g., Grover & Crooker, 1995; Hammer, Neal, Newsome, Brockwood & Colton, 2005).

Statement of the Problem

Although much is known about work-family issues, much more research needs to be conducted to be able to inform concerned individuals and organizations. Studies indicate that work interference with family (WIF) is related to important individual and organizational outcomes, such as job satisfaction, withdrawal, and employee health (Mesmer-Magnus & Viswesvaran, 2005). However, to be able to effectively reduce the negative influence of WIF, we need to further understand the mechanisms through which WIF influences these important attitudinal, behavioral, and well-being outcomes. Only a few studies have explored mediators of this relationship, and they examined variables such as coping (Burley, 1994), spousal social support (Burley, 1995), and psychological distress, which received support for partial mediation (DeMarr, 1996).

An interesting potential mediator that has received little attention so far in work-family literature is the concept of the psychological contract breach. The psychological contract concerns expectations of the obligations that the employee and employer hold of each other (Rousseau, 1995), and psychological contract breach is the perception that the other party fails to fulfill the obligations. On the employee side, the interference of work into the non-work domain, if perceived as broken promises, may lead to a breach of the employee's psychological contract. The perception of breach may in turn affect employees' job attitudes, their behaviors at work and their well-being. Although the psychological contract research has been gaining momentum over the past two decades, it has focused on a narrow range of core content (e.g., pay, training, and promotion) that were considered most essential. The rapidly changing world we research in, however, calls for expansion of the content of the psychological contract to reflect the most up-to-date working life. Therefore, creating a measure of psychological contract breach specific

to work-family issues is in order for us to explore the link between work interference with family and its potential consequences.

The psychological contract breach and its relationships with other variables, however, can be culture-bound. According to Thomas, Au and Ravlin (2003), culture may affect the psychological contract breach through: 1) the formation of the psychological contract; 2) the perception and attribution of the contract breach; and 3) responses to the contract breach. Individuals from different cultures may have different levels of tolerance to perceive a breach of the psychological contract and may have different behavioral and psychological responses to such breaches. Therefore, it is also important to expand research beyond North America and study the work-family psychological contract across cultural contexts.

Purpose of the Study

The objectives of the current study are threefold. First is to expand and update the content of employees' psychological contract, and create a measure of work-family psychological contract breach (WFPCB). The second objective is to examine the mediating role of WFPCB in the relations between WIF and several individual and organizational outcomes. Last but not least, the study explores potential cultural influences on the relationships. This includes looking at the moderating role of individual-level cultural value on the relations between WIF and WFPCB and between WFPCB and the outcomes. Specifically, individualism-collectivism was examined. Relationships would also be compared across two countries, namely, the U.S. and China, to obtain some preliminary evidence for the value's moderating effect at the country-level.

Significance of the Study

The present study contributes to the work-family literature in several ways. First, this research sheds some light on a potential mechanism through which WIF affects important outcomes such as employee performance and well-being. Second, the explicit use of psychological contract theory adds to the little work that has been done on this important topic in work-family research. Third, the exploration of cultural values' moderating influence helps us better understand cross-cultural differences observed in the WIF-outcome relationships. In addition, there have only been a few cross-country comparative work-family studies (e.g. Spector, Cooper, Poelmans, Allen, O'Driscoll, Sanchez et al., 2004; Yang, Chen, Choi & Zou, 2000; Yang, 2005), and therefore, this research can provide more insight into the differences in work-family issues across countries. This study also adds to the psychological contract literature through expanding its content and examining the relations between breach and important and consequences.

Outline of the Dissertation

There are six chapters in this dissertation. The first chapter gives an introduction to the research problem, the objectives, and significance of the study. Chapter two reviews the literature to highlight the potential of integrating existing research on work-family and psychological contract in a cultural context. Hypotheses were proposed based on the theoretical background. Chapter three, four and five summarizes the methods and results for the series of studies conducted including, the qualitative interview study, the pilot study, and the final survey study that tested the main hypotheses linking work interference with family, psychological contract breach and the outcomes. Chapter six concludes the dissertation with a general discussion on the key findings and their implications, the limitations of the study and directions for future research.

Chapter 2

Literature Review

Work-Family Research

Research on work and family has grown in response to several changing demographic trends, such as the increasing number of women as well as a higher percentage of married women in the workforce (Eby, Casper, Lockwood, Bordeaux, and Brinley, 2005). Whereas the “family” side of the work-family interactions has been expanded to include other non-work aspects of people’s lives (DeMarr, 1996), this paper will adopt the established “family” terms but to encompass the non-work aspects in general. As the boundaries between work and family blur, different forms of interactions between them occur, including conflict, facilitation, and positive or negative spillover. Several theoretical frameworks have been proposed in the literature to depict these possible forms of interactions between the work and family domains.

Segmentation. This framework indicates that work and family domains can operate independently. Employees that intentionally maintain the boundaries of the two domains are able to segment work and life time, space and function (Zedeck, 1992). Segmentation has also been referred to in terms such as, compartmentalization, disengagement, and detachment (Lambert, 1990; Zedeck, 1992)

Spillover. According to the spillover theory, the influence of work and life can flow over the boundaries resulting in positive or negative spillover (Grzywacz, 2000).

With positive spillover, satisfaction from one domain can enhance the other (e.g. success at work improves quality of family life). Negative spillover, on the other hand, refers to the negative influences between the domains (e.g. fatigue from caring for a sick child can impact performance on the job).

Compensation. The compensation model suggests that dissatisfaction in one domain may be compensated by the other domain (Lambert, 1990; Zedeck, 1992). For example, unsuccessful performance at work may be compensated by a satisfactory family life. Employees may choose to reallocate their time and resources to focus on the domain that provides satisfaction.

Facilitation. Similar to positive spillover and role enhancement, this perspective defines facilitation as the extent to which engagement in the work or family domain contributes to growth in the other (Grzywacz, Carlson & Kacmar, 2007). For example, benefits from work such as tuition assistance can facilitate family life. Drawing on systems theory, Grzywacz et al. (2007) also details the process of facilitation as including such elements as resource acquisition/drain/enhancement, and systemic and individual catalyst.

Conflict. Much research so far has focused on the conflict between the work and family domains based on the role theory or the limited resources perspective (Grandey & Cropanzano, 1999). They indicate that individuals have certain number of roles and have limited resources (e.g. time and energy) to perform these roles. According to Greenhaus and Beutell (1985), work-family conflict refers to “a form of interrole conflict in which the role pressures from the work and family domains are mutually incompatible in some

respect” (p. 77). Demand from one role can lead to diminished performance in the other role (Greenhaus et al., 2006).

Work-family conflict can take different forms, including time-based, strain-based, and behavior-based conflict (Greenhaus & Beutell, 1985). Time-based work-family conflict refers to when time pressure from one role produces a preoccupation or makes it physically impossible to fulfill the other role. For example, working late can prevent an employee from picking up his or her children from school. Strain-based conflict, on the other hand, arises when the strain produced by one role makes it more difficult to meet the demands of the other role. An example of this is that stress from trying to meet a deadline at work may cause an employee to argue with their spouse. Although behavior-based conflict generally refers to when behaviors prescribed by one role do not fit the other, its definition is less clear than the other two forms of work-family conflict. A possible example may be a policeman brings the behavior mode from work to home.

Work Interference with Family (WIF)

In addition to the forms of work-family conflict, research has found that work-family conflict can also flow in two directions, distinguishing between work interference with family (WIF, also referred to as work-to-family conflict) and family interference with work (FIW, also referred to as family-to-work conflict). This bi-directional nature of work-family conflict has been increasingly recognized by researchers (Frone, Russell & Cooper, 1992b), and evidence for the distinction between WIF and FIW can be found in meta-analytic work (Kossek & Ozeki, 1998) as well as research that found different antecedents and consequences for the two forms of work-family conflict (Frone et al., 1992b). As the psychological contract, which is introduced later in the paper, is about the

exchange relationships between the employee and the employer, and this study focuses on the employee side of the contract, only work interference with family (WIF) was considered.

When work interferes with the family domain, it can take away employees' time, physical, and emotional resources. When this interference exceeds employees' expectations and range of tolerance, it may reduce their satisfaction with the job, identification with the organization, and even affect their physical and mental health. Past research has found that WIF relates to many important individual and organizational outcomes (Hammer et al. 2005). For example, it has been found to relate negatively to job attitudes (e.g., Thomas & Ganster, 1995; Kossek & Ozeki, 1998; Carlson & Kacmar, 2000) and job performance (e.g., Aryee, 1992; Frone et al., 1997; Witt & Carlson, 2006), and relate positively to intentions to quit (e.g., Aryee, 1992; Grandey & Cropanzano, 1999) and distress or burnout (e.g., Frone et al., 1997; Grandey & Cropanzano, 1999; Greenhaus & Parasuraman, 2002). The following section provides more details from these studies on WIF and some of its potential consequences.

WIF and Potential Consequences

Job Satisfaction (JS). Job satisfaction is an important outcome in organizational studies, and is one of the most studied variables in Industrial/Organizational Psychology. Job satisfaction has been defined in several ways in the literature (Vroom, 1964; Locke, 1969). Simply put, however, it can just refer to how much people like their jobs (Spector, 1997). Job satisfaction can reflect both attitudinal and affective reactions to the job, and measures have been created to gauge both overall job satisfactions and facets of job satisfaction such as, satisfaction toward the supervisor, coworkers, salary, and benefits.

As work interferes with family and other aspects of employees' personal lives, the values they can obtain from work may be reduced and thus decreasing their job satisfaction. For example, having to work on weekends upon supervisor's request may reduce job satisfaction and especially satisfaction toward the supervisor. Kossek and Ozeki's (1998) meta-analysis examined studies on work-family conflict and job/life satisfaction. Results point to a consistently strong and negative relationship between work-family conflict and job satisfaction across all samples. The relationship is strongest for bi-directional measures of work-family conflict followed by work-to-family conflict (a mean correlation of $-.27$). Similarly, Allen et al. (2000) found a correlation of $-.23$ between WIF and job satisfaction. Furthermore, Hammer et al. (2005) showed that WIF predicted job satisfaction one year later in a longitudinal study.

Organizational Commitment (OC). Organizational commitment reflects employees' degree of identification with the organization. Mowday, Steers and Porter (1979) defines commitment as accepting organizations' goals and values, willing to put in effort for the organizations, and desiring to maintain the organizational membership. Meyer and Allen (1991) further differentiate three types of OC, namely, affective, continuous, and normative commitment. Whereas affective commitment indicates employee loyalty toward an organization, continuous commitment is based on perceived investment in the organization, and normative commitment is about a sense of obligation toward the organization. In line with the above definitions, increasing work interference with family is likely to decrease affective reactions toward the employer, increase perception of cost relative to investment and reduce the sense of moral obligation to stay with the organization. Empirical findings have shown support of the negative relationship

between WIF and OC although less strong than with job satisfaction (e.g. Carlson et al., 2000; Carr, Boyar & Gregory, 2008)

Turnover Intention. Turnover intention indicates employees' conscious intent to leave their present employment (Tett & Meyer, 1993). It has been found to be the strongest predictor of actual turnover (Carsten & Spector, 1987; Lee & Mowday, 1987), which induces high cost for both the employees leaving and the organizations they intend to leave. When employees are unable to fulfill both work and family roles and meet both demands, they may be more likely to consider leaving their current work role to achieve better allocation of resources. A meta-analysis conducted by Allen et al. (2000) found a correlation of .29 between WIF and turnover intentions. Karatepe and Uludag (2008) examined the relationship between work-family conflict and turnover intentions for a sample of Turkish hotel frontline employees, and found a significant positive link ($r = .27$, $p < .05$). Interestingly, similar to job satisfaction, Spector et al. (2007) found a stronger link between WIF and turnover intention in Anglo countries than other more collectivistic countries.

Psychological Well-being (PWB). Psychological well-being is an overall term that has been operationalized and measured in various ways. It may indicate an individual's general level of satisfaction and mental health conditions. Research that relate WIF to psychological well-being have looked at variables such as, life satisfaction, psychosomatic symptoms, distress, depression, and burnout. From a limited resources perspective, when work demands compete with family demands, the increased pressure and stress can lead to mental health problems such as depression, anxiety, and burnout (e.g., Frone, 2000; Vinokur, Pierce, & Buck, 1999). Allen et al.'s (2000) meta-analysis

reported weighted mean correlations of $-.28$ between WIF and life satisfaction and $.32$ with depression. In a longitudinal study, Frone et al. (1997) found that WIF related significantly to self-report of depressive symptoms, health problems and objective measures of health outcomes. Grandey and Cropanzano (1999) also found support for relationships between WIF and both job and life distress. Exploring the impact of hospital restructuring, Burke and Greenglass (2001) found a significant relationship between WIF and psychological well-being with a sample of nursing staff in Canada. This relationship carried across with a Turkish sample in Aycaan and Eskin's (2005) study for life satisfaction and depression.

Job Performance. Job performance is an important outcome variable in Industrial/Organizational Psychology that can be linked to organizations' bottom lines. The expansion of the performance domain from task performance (TP) to include organizational citizenship behavior (OCB) and counterproductive work behavior (CWB) also marks important progress in organizational research. Whereas TP focuses on behaviors and activities directly related to creating products and services, OCB generally refers to more discretionary behaviors that contribute to the social psychological environment of the organization (Organ, 1997; Borman and Motowidlo, 1997). CWB, on the other hand, are behaviors that go against organizational goals (Fox & Spector, 1999).

According to Lambert (1990), employees may try to limit their involvement in work to accommodate their family demands. On the other hand, employees with high WIF may also be more likely to focus on seeking satisfaction from the family domain resulting in reduced TP and OCB. It is also possible that time pressure and role conflict can make it difficult to go above and beyond (Braggar, Rodriguez-Srednicki & Kutcher,

2005). The direction of the relationship, however, is not clear for performance, as it is possible that increased TP and OCB can lead to increased WIF as well. Using a sample of teachers, Braggar et al. (2005) found support for WIF's negative contribution to OCB above and beyond job satisfaction and organizational commitment. Bolino and Turnley (2005), on the contrary, found a significant positive relationship between the individual initiative type of OCB and WIF. However, their results may be specific to the initiative type of OCB. For increased WIF to take away resources for OCB seems more likely than increased OCB to consistently result in more WIF, because employees have more control over the more discretionary OCB.

Similarly for CWB, it is likely for WIF to result in higher CWB as a means of alleviating the impact of WIF, or retribution against the organization. There has been little research that directly linked work-family conflict with general measures of CWB, however, research on WIF and non-attendance behaviors (e.g. leaving early, tardiness, and absence) seem to point out a positive relationship between them (Hammer, Bauer & Grandey, 2003; Boyar, Maertz & Pearson, 2005). Therefore, we also hypothesized a positive link between WIF and CWB.

This study includes the attitudinal variables of job satisfaction, organizational commitment, and turnover intention; psychological well-being; and the behavioral variables of task performance, organizational citizenship behavior, and counter-productive work behavior. The outcome variables selected here are by no means comprehensive, but they are the ones that have been researched most, and are representative of the range of impact WIF exerts. Based on previous findings, it was hypothesized that:

Hypothesis 1: Work interference with family will relate negatively to job satisfaction, organizational commitment, psychological well-being, OCB, and task performance; and relate positively to turnover intention and counterproductive work behavior.

Mediators of WIF-Outcome Relationships

There has been little research on the mediating factors between WIF and the outcomes. Most work and family research in IO/OB that included mediation analysis examined work-family conflict itself as a mediator (Eby et al., 2005). Burley (1995) studied a sample of psychologists, and found both direct and indirect effect of work-family conflict on marital adjustment, and that the indirect effect may be attributed to the mediating role of spousal social support. In addition, there is some evidence for the mediating role of social support and negative communication skills on the relationship between WIF and domestic violence (i.e. psychological aggression to partner and psychological aggression to self; Trachtenberg, 2008). On the other hand, domain specific satisfaction such as family satisfaction and work satisfaction has also been found to partially mediate the relationships between WIF and the global life satisfaction (Treistman, 2005). In a study that explored gender-role conflict and men's body esteem, Schwartz and Tylka (2008) found that self-assertive entitlement was a mediator of the relationship between work-family role conflict and body esteem. Although the outcome of body esteem is quite different from the outcomes included in the present study, it is interesting to note the potential mediating role of entitlement, defined as "an individual's attitude about what he or she has the right to expect from others" (p. 68), which relates to what people do expect from others. The concept of expectation is related to the promise-

based psychological contract, and the following section provides definitions and a literature review of the psychological contract.

The Psychological Contract

Definition. The concept of the psychological contract can be traced back to as early as Barnard's (1938) equilibrium theory and other important writings from Argyris (1960) and Schein (1965; see also Conway & Briner, 2005). However, it did not really take off until Rousseau's (1989) work that revived and promoted research in this area. Although the concept evolved over time, most current research is based on Rousseau's conceptualizations. The psychological contract has been used as a framework to explain employment relationships (Shore & Tetrick, 1994) as according to Rousseau (1995), it refers to individuals' perceptions of the promises made of the exchanges between their organizations and themselves. Rousseau's definition characterizes the psychological contract as promissory, subjective, reciprocal and dynamic. It distinguishes itself from earlier definitions by emphasizing the "promissory" aspect of the contract. In this sense, the psychological contract differs from "expectations" in that it is about beliefs of obligations or perceived promises (Robinson & Rousseau, 1994). The psychological contract can contain not only explicit promises (arising from verbal or written agreements), but also implicit promises (arising from perceptions of patterns of past behaviors; Conway & Briner, 2005).

The psychological contract is an important concept because it can help us understand and predict employees' attitudes and behaviors (Robinson, 1996). Although psychological contracts are not usually communicated or negotiated formally, they can provide the employee with a sense of predictability on the one hand, and help the

employer obtain desired behaviors without close surveillance on the other hand (Shore & Tetrick, 1994).

Content. Past research on the psychological contract has focused on two areas, that is, its content and the influences of psychological contract breach on employee attitudes and behaviors (Conway & Briner, 2005). The content of the contract can include expectations for compensation, job security, training, and career development (Rousseau, 1989). Herriot, Manning and Kidd (1997) probably conducted the most comprehensive study of the content so far (Conway & Briner, 2005). They used the critical incident technique to capture cases when either the employer or the employee failed to meet or exceeded expectations. Results indicate that what employees in UK expect most from the organization include a good work environment, equitable pay, fairness in selection and other procedures, and adequate training. The organization most expects workers to work contracted hours, do a good job, and be honest. It was also found that the organization and the employee differed in their perceptions of their obligations. Specifically, employees perceived more promises in the traditional aspects of work, whereas the organization perceived more relational aspects. Similar findings were obtained by Guest and Conway (1998) who used a sample of 1000 UK workers. However, as the psychological contract may change over time (Sutton & Griffin, 2004), so may the content of the contract. According to Conway and Briner (2005), most researchers of this topic have focused on a limited subset of the content that is assumed to be the most important. Therefore, more research is needed to update the content of the psychological contract in order to reflect the current socio-economic changes, such as the increase in the number of dual-earner couples in the workforce. With changes in the structure of the

workplace and technology advancement that blur the boundaries between work and life, employees and employers may come into psychological agreement about employer assistance of non-work activities in addition to the traditional core content of the psychological contract.

Previous research has identified two major types of psychological contracts, namely, the transactional contract and the relational contract. The former puts more emphasis on “specific, short-term, monetary obligations” whereas the latter is more about “broad, long-term, socio-emotional obligations” (Thomas et al., 2003, p.452).

Transactional contracts tend to have a narrow scope, the terms and conditions are usually publicly available, and can be explicitly negotiated. Relational contracts, on the other hand, are broader and more open-ended, usually subjectively understood, and negotiated implicitly (Conway & Briner, 2005). Although the distinction between transactional and relational contracts is not entirely clear, some evidence on factor structure and their different causes and consequences suggest that the transactional and relational contracts may be two independent dimensions (Rousseau, 1990; Conway & Briner, 2005). In addition, Rousseau (2000) proposed a third type of contract, that is, a balanced psychological contract, which includes both transactional and relational aspects. The three factors of transactional, relational and balanced contracts have been found in Singapore, China, and Latin America using Rousseau’s (2000) Psychological Contract Inventory (PCI; Hui, Lee & Rousseau, 2004). It is also interesting to see whether these different types of contracts are relevant in the work-family context as well. It is possible that terms such as providing specific childcare or flexible work schedule programs may

constitute transactional contract whereas promise of a general supportive environment and reasonable workload may be terms of a relational contract.

Psychological Contract Breach. As mentioned earlier, psychological contracts can evolve over time along with individuals' expectations. Due to the subjective nature of the contracts, the employee and the employer do not have to agree on the same terms. As a result, misunderstandings can arise as the psychological contract of the two sides develops at different paces (Conway & Briner, 2005). A psychological contract breach occurs when one party perceives that the promised obligations have not been met (Robinson & Rousseau, 1994). Although the terms "violation" and "breach" have been used interchangeably in most research, Morrison and Robinson (1997) made a distinction between the two. They point out that "breach" occurs "when one party in relationship perceives another to have failed to fulfill promised obligations" (Robinson & Rousseau, 1994). The opposite of breach, therefore, is fulfillment. "Violation", however, is the extreme affective or emotional reactions toward breaches. Based on these definitions, the term "breach" is adopted in this study.

Research on the antecedents of psychological contract breach has identified several factors, such as inadequate human resource management practices, lack of support from the organization or the supervisor, and outside-organization factors. Most empirical studies, however, have focused on the consequences of psychological contract breach. It has been found to relate to employee well-being, job attitudes, organizational attitudes, turnover, job performance and organizational citizenship behavior. Specifically, the relationship between psychological contract breach and outcomes may be explained by several mechanisms including, unmet expectations, perceived inequity, and goal

frustration (Conway & Briner, 2005). For example, it may be reasoned that perceptions of a breach of psychological contracts can result in a sense of betrayal that will in turn reduce job satisfaction, lower organizational commitment, or lead to various forms of counter-productive work behaviors (McLean Parks & Kidder, 1994). Therefore, breaching psychological contracts may influence employee attitudes, behaviors, as well as their well-being. Despite the extensive research on psychological contract breach and its potential consequences, few studies have explored moderators of the relationship. What have been examined include perceived importance of broken promises (Conway & Briner, 2002), attribution of the causes of breach (deliberate or accidental, within or outside organizational control; Turnley & Feldman, 1999; Turnley, Bolino, Lester & Bloodgood, 2003), and perception of fairness (distributive, procedural, or interactional).

Although much has been done on the psychological contract over the past two decades, little attention has been directed to it in the work-family literature. This concept, however, is useful in that it can help us understand employees' expectations of their benefits and support entitlements related to work-life balance (Smithson & Lewis, 2003). Meeting or failing to meet such perceived obligations can have important implications for individual and organizational outcomes, and therefore, may serve as a potential link between WIF and its consequences. Smithson and Lewis (2003), in their entry on the psychological contract for the *Sloan Work and Family Encyclopedia*, call for more consideration of the work-family aspects in psychological contract research as well as more explicit use of psychological contract theory in work-family studies. The present study, therefore, is an attempt to answer their call.

The Work-Family Psychological Contract

The psychological contract, being implicit and unwritten, can change over time due to changes in individual and organizational expectations (Borrill & Kidd, 1994). Today's world with dynamic socio-cultural conditions as mentioned above may very well affect employees' expectations for the organization, and vice versa. Researchers and practitioners generally agree that contract content has transformed along with organizational changes (Anderson & Schalk, 1998). However, Conway and Briner (2005) pointed out that past research on psychological contracts has focused on certain core items of the exchange relationships, and has neglected a diverse range of other possible aspects in the working life. Whereas the contract on the employee side may have in the past focused on work achievement needs, such as compensation, opportunities for growth, and feedback on work performance (Manning, 1993, cited in Borrill & Kidd, 1994), the changing workforce is adding more aspects to the psychological contract, such as an appreciation of employees' family responsibilities and other employee needs outside the workplace.

According to Giga and Cooper (2005), when the employment relationship matures and the "employer and employee enter adult contracts focusing on mutual benefits, work-life balance issues may be brought to the forefront" (p. 432). The rise of the importance of work-family research itself attests to the dynamic environment surrounding such issues. The economic, social, technological, legal, and cultural influences constitute a shifting environment that may indeed intensify work-family conflict (Joplin, Francesco, Shaffer & Lau, 2003). As a result, there's need for increasing employer and employee effort to balance and integrate work and family responsibilities. Whereas employees demand more resources to "maintain an equilibrium between work

and non-work life” (p.433), employers also realize the importance of developing capabilities in understanding and resolving work-life issues to be able to attract high-quality employees (Giga & Cooper, 2005).

In an effort to expand employees’ psychological contracts to include work-family related aspects, Scandura and Lankau (1997) examined a specific family-friendly policy, that is, flexible work hours. They argue that employee perceptions of flexible work hours may lead to the perception that the organization cares for both work and family; an overall favorable employee perception of the organization; increased feelings of control; and it may help in cases of social comparison with those that do not have flexible work schedules. Indeed, perceiving more flexible work hours was found to relate positively to job satisfaction and organizational commitment especially for women (Scandura & Lankau, 1997). With an increasing number of organizations offering flexible work schedules, it may become part of the obligations employees perceive as constituting their psychological contract.

Besides flexible work hours, employers provide assortments of many other benefits intended to enhance work-life balance. These benefits may also become the potential content of a work-family psychological contract. An examination of the literature reveals several categories of such benefits: 1) work schedule (e.g., flextime, flexplace, compressed work week, and job sharing); 2) dependent care (e.g., onsite childcare, eldercare, and childcare/eldercare referral services); 3) employee well-being (e.g., wellness programs, employee assistance programs, and retirement planning); 4) convenience services (e.g., dry cleaning, banking, groceries, and transportation) (Allen, 2001; Butler, Gasser & Smart, 2004; Thomas & Ganster, 1995; & Roberts, Gianakis,

McCue and Wang, 2004). Based on what is communicated to them by the organization, their observations of how others are treated in the organization, and their individual beliefs, different employees may form idiosyncratic psychological contracts that include expectations for different benefits and support.

In addition to family-friendly benefits, supervisor and organizational support for work and family as perceived by the employees are also related to work-family conflict and important work outcomes (Allen, 2001). Supervisor support is particularly important because they serve as the agents for carrying out organizational benefits and policies. Allen (2001) pointed out that lack of supervisor support can discourage employees from using the benefits provided by the organization. For example, employees may not use flex-place arrangements (e.g., work from home) for fear of negative performance review if face time is used by the supervisor as a major evaluation criterion. It is reasonable to think that if employees expect a benefit, they are likely to expect organization and especially supervisor support for using the benefit as well. Therefore, the work-family aspect of the psychological contract might also reflect employee expectations for work-family support from the supervisor.

As increase in the number of dual-earner couples and other socioeconomic changes have raised the prominence of work-family issues in the workplace, more research attention needs to be paid to studying the work-family related psychological contract. The present study attempts to further the effort of Scandura and Lankau (1997) in updating the content of the psychological contract and explore the role it plays in work-family research. Instead of adding items to the existing measures of psychological contracts, a new inventory was created in this study to reflect employees' work-family

needs in specific. In this way, the influence of work interference with family and the relevant outcomes can be related to a context-specific psychological contract.

Work-Family Psychological Contract Breach (WFPCB). As indicated previously, a psychological contract breach occurs when one party of the contract perceives that what is promised to them have not been fully met (Robinson & Rousseau, 1994). Similarly, a breach to the employee's work-family psychological contract would refer to an employee perception that the organization fails to fulfill its obligations in helping with the work and family integration. For example, if employees believe that they are promised flextime, however, they cannot use it (e.g., to leave early to pick up their children) due to a lack of support from their direct supervisors, they may perceive a breach to their work-family psychological contract.

As there are no readily available measures for work-family specific psychological contract breach, scales developed for general psychological contract breach are consulted. Three types of measures have been found. The first type is referred to as "composite measure" by Zhao, Wayne, Glibkowski and Bravo (2007). This type of measure (e.g., Kickul, Lester & Finkl, 2002) asks participants to check from a list, things that they believe the organization has promised to provide. They are then asked to indicate to what extent the organization has fulfilled these obligations checked. The scores are reversed and aggregated to indicate the degree of psychological contract breach. Example items (and they are relevant to the work-family context) include "flexible work schedule" and "a reasonable workload". Related to the "composite measure" is the "weighted measure" (Zhao et al., 2007), where importance ratings are used to weight the various content items of the psychological contract (e.g. Turnley & Feldman, 1999). The third type of measure,

referred to as the “global measure” (Zhao et al., 2007; e.g. Robinson & Rousseau, 1994; Tekleab & Taylor, 2003) asks the participants to indicate overall, how well their employer has fulfilled their obligations without asking for ratings on specific content items. An example item is “My employer has broken many of its promises to me even though I’ve upheld my side of the deal.” Most research on the psychological contract has employed the “composite measure” or the “global measure” (Zhao et al., 2007).

Whereas the first type of measure is helpful in revealing the specific content of the psychological contract and how each term has been fulfilled, the third type of measure reflects an overall employee perception and evaluation of how the organization did in keeping the perceived agreement. Research on overall job satisfaction and facets of job satisfaction indicates that facet measures in themselves are not sufficient for gauging overall job satisfaction (Ferratt, 1981). Similarly, different strategies can be used to combine dimension ratings into overall performance ratings (Sackett & Hakel, 1979). Indeed, according to Zhao et al. (2007), composite measures of breach run the risk of content deficiency in that they may not be able to capture all relevant content items for various employment settings. Therefore, an average rating of all items may not represent employee evaluation of the contract breach accurately. This concern applies to a work-family specific contract breach measure as well. However, because this contract measure is for a new context and includes new content, it may be a good idea to incorporate both “composite” and “global” types of items to be able to gather a fuller initial picture of the work-family psychological contract. By including both item formats, we can capture the detailed content of the contract as well as the overall evaluation, and it is possible to examine the relative effectiveness of these items in predicting relevant outcomes.

WIF and WFPCB. Research indicates that the employee is likely to perceive a psychological contract breach when an organization fails to realize an obligation whether or not it is recognized by both parties (Robinson & Morrison, 2000; Sutton & Griffin, 2004). However, according to Thomas et al. (2003), unmet terms are perceived as contract breach “only when they indicate an imbalance in the exchange relationship that is sufficiently unfavorable to exceed a perceptual threshold” (p.460). The reasoning behind this is that cognitive bias may direct people to confirming rather than disconfirming information, and that perception can be dominated by this bias until new information becomes too inconsistent to be integrated into the existing framework (Robinson, 1996). In this sense, if the unfulfilled obligation does not cross the threshold of being “unfavorable,” it may not be perceived as a psychological contract breach. This also highlights a difference between the psychological contract and the traditional written employment contract that one signs upon entering an organization, that is, “the perceptual and idiosyncratic nature of the psychological contract” as underlined by recent research in this area (Thomas et al., 2003, p.452).

As it follows from work on the general psychological contract breach, WFPCB may occur if the organization breaks what employees perceive as promised to them regarding work-family assistance. However, failing to meet a term does not necessarily result in psychological contract breach. It is possible that only when the unmet condition is so unfavorable (e.g., resulting in work interference with family) that a perception of WFPCB will occur. As mentioned earlier, past research has found several factors that may lead to a psychological contract breach including, inadequate human resource management practices and lack of support from the organization or the supervisor

(Conway & Briner, 2005). Therefore, not providing adequate work-family benefits or supervisor support for using the benefits are not in themselves psychological contract breach, but are rather, the possible antecedents of psychological contract breach. For example, an organization allows compressed work week, but the director of a particular department discourages the employees to use it. Discouraging using the benefit may intensify work-family conflict, which may then result in an employee perception of WFPCB. It may then be reasoned that the more work interferes with family, the more likely the unmet obligation crosses the “unfavorable” threshold, and the more likely for the employee to perceive a greater degree of WFPCB. It was thus hypothesized that:

Hypothesis 2: Work interference with family will relate positively to work-family psychological contract breach.

WFPCB and Consequences. Most research that empirically examined psychological contract breach has focused on its consequences. It is reasoned that breaching a psychological contract can exert negative influences on the outcomes through several theoretical routes. Broken promises can lead to unmet expectations, reduced trust, perceived inequity, or goal frustration (Conway & Briner, 2005), any combination of which can result in negative individual and organizational consequences. For example, Robinson and Rousseau (1994) point out that breaking a promise can lead to feelings of betrayal that may result in employee withdrawal or counterproductive work behaviors, such as theft, harassment and sabotage (McLean Parks & Kidder, 1994). Such feelings of betrayal may also result in distress, anxiety and negative emotions, and reduce voluntary behaviors that benefit the organization, that is, OCB. In addition, breach in the

psychological contract has been found to relate negatively to job satisfaction (Sutton & Griffin, 2004).

In sum, among the outcome variables researched, the ones that have been studied most include such attitudinal variables as job satisfaction, organizational commitment, and intent to quit; and such behavioral variables as task performance, OCB, and actual quitting. Conway and Briner's (2005) review shows that based on 13 cross-sectional studies, the average correlation between contract breach and job satisfaction is $-.46$. With the 9 studies on breach and organizational commitment, the average correlation is $-.32$. In addition, breach had an average correlation of $.33$ with intent to quit based on 15 studies. They also report the average effect size to be $-.20$ for the relations between contract breach and OCB, and $-.19$ for overall performance. Although the studies included in Conway and Briner's (2005) review may not be comprehensive, and these numbers are only approximations, they indicate that psychological contract breach is a relatively strong predictor of attitudes though may be less so of behavior.

A more recent meta-analysis on psychological contract breach and eight work-related outcomes was conducted by Zhao et al. (2007) based on a total of 51 studies. Psychological contract breach was found to relate significantly and highly to the attitudinal variables of job satisfaction ($-.54$), organizational commitment ($-.38$), and turnover intentions ($.42$). Breach also related significantly to the behavioral outcomes of OCB ($-.14$) and in-role performance ($-.24$). Their findings lend support to the range and degree of impact psychological contract breach has on important work-related outcomes.

As breach of a specific psychological contract, WFPCB may relate to similar consequences as found for the breach of a general psychological contract. WFPCB

reflects a perceived broken promise related to work-family issues. As work-family psychological contracts may contain obligations such as family-friendly benefits and supervisor support, failure to meet these expectations may lead to a decrease in the corresponding aspects of job satisfaction or other attitudes and behaviors. Based on previous research on the psychological contract and its consequences, it was hypothesized that:

Hypothesis 3: WFPCB will relate negatively to job satisfaction, organizational commitment, psychological well-being, OCB, and task performance; and relate positively to turnover intentions and CWB.

WIF, WFPCB and Consequences. It was hypothesized earlier that WIF will relate to several outcome variables, that WIF will relate to WFPCB, and that WFPCB will relate to these same set of outcome variables. It may be reasoned that the relationships between WIF and those individual and organizational outcomes are mediated by perceptions of breach to the work-family psychological contract. It is possible that greater amount of work interference with family can result in employee perception of a higher degree of work-family psychological contract breach, which may in turn, lead to the potential attitudinal, behavioral and well-being outcomes. When work takes away too much time and resources away from family or other non-work aspects of life, and therefore breach the terms in employee work-family psychological contract, it may then trigger the mechanisms of unmet expectations, feelings of unfairness, or goal frustration, and negatively affect employee satisfaction, performance and psychological health. Specifically, this mediation may be illustrated using job satisfaction as an example. Mobley and Locke (1970) suggest that job satisfaction occurs when the outcomes

correspond with the values, and that dissatisfaction arises from the discrepancy between the two. It has also been found that value attainment partially mediated the relationship between work–family conflict and job satisfaction (Perrewé, Hochwarter & Kiewitz, 1999). It is possible that breaching the work-family psychological contract undermines the value attainment for the employees and therefore, leading increased WIF to decreased job satisfaction. It was thus hypothesized that:

Hypothesis 4: The relationships between WIF and the outcomes (of job satisfaction, organizational commitment, turnover intentions, psychological well-being, OCB, task performance, and CWB) are mediated by WFPCB.

WIF, WFPCB and Cultural Value

According to Rousseau (1995), informal and unwritten agreement between the employee and the employer create practical and emotional expectations that constitute psychological contracts. In line with this, the psychological contract may also be seen as a “largely informal and unwritten ‘understanding’ of the culturally based expectations of the employee and the organization” (Maurer & Li, 2006, p. 31). Because the concept of the psychological contract is culture-bound, it is therefore important to examine the above hypothesized relationships among WIF, WFPCB and the outcomes with culture in mind.

Cultural Value. Much research on cultural differences has focused on cultural values, because they are the fundamental ideas that people share about what is good, right, and desirable in a society (Williams, 1970). Cultural values are important to study for the current topic because they not only shape beliefs and attitudes but also shape expectations of others’ behaviors within the same cultural context. Therefore, one way to understand

the influence of culture on the psychological contract may be through an examination of how culture values shape individual expectations, which can be as powerful as antecedents to behaviors (Schein, 1965). For example, cultural values may define the work-family psychological contract through shaping employee expectations of what the organization is obligated to provide in terms of work-family benefits and support. In addition, “cultural values affect the meaning of promissory contracts” because the meaning of promise can also vary across cultures (Rousseau, 1995, p. 22).

In addition to shaping expectations, Thomas et al. (2003) suggest that cultural influences can be exerted through two mechanisms, cognitive and motivational. Cognitively, there can be cultural differences in how people perceive and interpret the messages sent by the organization, as well as the norms that regulate their relationships with the organization. Motivationally, people with different cultural values may vary in the outcomes they prefer and the desirable ways to achieve these outcomes. More specifically, Thomas et al. (2003) propose that culture and cultural values can affect three aspects of the psychological contract via the two mechanisms: 1) formation of the psychological contract; 2) perception and attribution of a breach to the psychological contract; and 3) responses to the breach. The first aspect implies that the specific content of the psychological contract may vary across cultures. The second aspect indicates that there may be cultural variations in terms of whether an unmet obligation is perceived as a breach of the contract or not, and that individuals from different cultures may attribute the breach to different causes. In addition, even when a contract breach is perceived, people may react differently toward it according to the third aspect. As a result, culture

may influence the content of the psychological contract, the relationship between WIF and WFPCB, as well as the relations between WFPCB and the outcomes.

Individualism-Collectivism. Among the values identified in the various cultural value taxonomies, individualism-collectivism as proposed by Hofstede (1980) has been the most extensively researched in cross-cultural literature and organizational research in general. Individualism reflects a tendency to focus on oneself as independent of others with an emphasis on pursuing one's own well-being (Schimmack, Oishi & Diener, 2005). Collectivism, on the other hand, reflects a tendency to focus on the in-group and view oneself as interdependent of others. There is a stronger emphasis on norms and obligations, and a focus on group goals even when there is little benefit to the self. As individualism-collectivism is about individuals' relationship with the self, others and groups, and the relative importance one places on each, it has a natural connection with the concept of "expectations" and the psychological contract, which regulates the relationship between the employee and the employer. Despite the measurement issues that clouded the validity of individualism-collectivism (Spector, Cooper & Sparks, 2001), the current study focused on this cultural value from a theoretical perspective (and the chosen measure is discussed in the Method section of Chapter Five).

Thomas et al. (2003) argue that because people tend to focus on information that confirm rather than disconfirm their prior cognitions, such bias can affect the threshold for perceiving a contract breach for individualists versus collectivists. Because individualists and collectivists may differ in their perception and attribution of a breach, the link between WIF and WFPCB may vary for them as well. It was hypothesized in Thomas et al. (2003) that collectivists will have a higher threshold for perceiving an

overall contract breach than individualists. Collectivists not only tend to expect longer-term employment or other relationships, but they also tend to have stronger desires to maintain these relationships, and have closer ties with their organizations. In this sense, collectivists may be more tolerant, at least initially, of obligations unfulfilled by the organization. Individualists, however, would perceive the unmet obligations as contract breach more immediately. Therefore, we may expect a weaker correlation between WIF and the overall WFPCB for collectivists, and a stronger correlation for individualists. It was hypothesized that:

Hypothesis 5: The relationship between WIF and WFPCB will be moderated by individualism-collectivism such that the relationship will be stronger for those with higher individualism/lower collectivism than those with lower individualism/higher collectivism.

WFPCB, Consequences and Cultural Value

Whereas the moderating effect of individual differences, organizational practices, and labor market factors have been explored related to how employees react to perceived psychological contract breach (Turnley & Feldman, 1999), cultural value has not been explicitly examined as a moderator of the relations between contract breach and its consequences. Thomas et al. (2003) point out that one of the ways that culture may impact the psychological contract is affecting the reactions to contract breach. Cognitively, people with different cultural values may vary in their responses to contract breach as different norms and scripts guide behaviors to be culturally acceptable. Motivationally, cultural values prescribe individuals' needs, and the desirable ways to meet these needs (Erez & Earley, 1993).

Regarding individualism-collectivism, employees with different levels of this value may vary in how they view their relationships with the organization. Compared to individualists, collectivists view the exchange relationship between the organization and themselves as longer-term, and have more trust that the organization will take care of them (Hofstede, 1980). There may be expectations that obligations will be met eventually, even if it is currently not fulfilled. Specifically, collectivists will be less likely to attribute unmet obligations to causes that are within the organization's control (Thomas et al., 2003).

In contrast, individualists tend to trust the organizations less in meeting their obligations. Emphasizing independence, particularly in making judgment and decisions (Schimmack et al., 2005), employees higher on individualism are more likely to perceive contract breach as within the organization's control. For example, when facing discouragement from supervisors for using flextime, individualists may attribute it to the supervisor's inconsideration or not being supportive, whereas collectivists may attribute it to the necessity of doing so to maintain a cohesive work group. In line with this reasoning, it may be argued that WFPCB is more likely to affect the work attitudes and behaviors of individualists who tend to attribute the contract breach to the organization's fault. Collectivists, on the other hand, may take into considerations situational and external influences that can prevent the organization from fulfilling their obligations, and may be more tolerant of a contract breach. Therefore, WFPCB may be more likely to translate into negative attitudes and behaviors for those higher rather than lower on individualism. It is thus hypothesized that:

Hypothesis 6a: The relationship between WFPCB and employee attitudinal/behavioral outcomes (i.e. job satisfaction, organizational commitment, turnover intentions, task performance, OCB, and CWB) will be moderated by individualism-collectivism such that the relationship will be stronger for those with higher individualism/lower collectivism than those with lower individualism/higher collectivism.

It was reasoned previously that collectivists may have a higher level of tolerance for psychological contract breach, because they may be less equity sensitive in in-group situations and are more likely to make attributions to external influences outside organizational control. This does not mean, however, that WFPCB will have less negative impact for collectivists on all outcome variables. Thomas et al. (2003) suggest that although, initially, collectivists may be more tolerant of contract breach, there can be more serious psychological implications in these cases once a breach is perceived. As collectivists view the self as interdependent with others, they tend to prefer unconditional relationships and thus trust in the organization. They may be more likely than individualists to attribute unmet obligations to outside factors, but once they do consider them to be within the organization's control, there can be stronger reactions such as feelings of betrayal and distress. The contract breach may "cause concomitant psychological reactions of stress, tension, and internal conflict" (Thomas et al., 2003, p.462), and thus affect the employees' psychological well-being. Therefore, it is hypothesized that:

Hypothesis 6b: The relationship between WFPCB and employee psychological well-being will be moderated by individualism-collectivism such that the

relationship will be stronger for those with lower individualism/higher collectivism than those with higher individualism/lower collectivism.

Spector, Allen, Poelmans, Lapierre, Cooper, O'Driscoll et al. (2007) explored the moderating effect of culture on the relationship between WIF and the attitudinal outcomes of job satisfaction and turnover intentions. They found that the variable of country cluster moderated the relations between WIF and job satisfaction, and WIF and turnover intentions such that the relationships were stronger in Anglo countries. The moderating hypotheses proposed in the present study are therefore in line with Spector et al.'s (2007) findings, in that Anglo countries tend to be higher on individualism than other country clusters, and it is possible that the cultural influence found was exerted through its impact on the work-family psychological contract. Specifically, employees that vary on individualism-collectivism may have different perceptions and reactions to the work-family psychological contract.

Cross-national Comparison: the U.S. and China. The hypotheses proposed previously examined the cultural value of individualism-collectivism at the individual-level of value endorsement. It would certainly be interesting to study the influence of the value at the country-level as well. However, in order to do so properly, analyses need to be conducted using the hierarchical linear modeling technique, which would require data from a minimum of 25 countries (Snijders & Bosker, 1999; cited in Huang & Van de Vliert, 2003). Due to the limited scope of the present paper, data were only collected from the U.S. and China. These two countries were chosen not only for convenience, but also because they have been found to score high and low on individualism-collectivism respectively. Oyserman, Coon and Kemmelmeier's (2002) meta-analysis on

individualism-collectivism across nations and within the U.S. found that Americans tend to have higher individualism and lower collectivism than Asians, but particularly than those with Chinese origin. In addition, previous work-family research supports the generalizability of work interference with family to China (Yang et al., 2000; Spector et al., 2004; Yang, 2005). Hui et al. (2004) also found that the concept of the psychological contract is applicable to the two independent Chinese samples employed in their study. Due to their different standing on individualism-collectivism, the U.S. and China would be compared on correlations between WIF and WFPCB, and between WFPCB and the outcomes in order to provide some initial evidence for the country-level effect. Based on previous reasoning, the following research questions were posed:

Research question 1: Will the correlation between WIF and WFPCB be stronger in the U.S. than in China?

Research question 2a: Will the correlation between WFPCB and the attitudinal and behavioral outcomes (i.e. job satisfaction, organizational commitment, turnover intentions, task performance, OCB, and CWB) be stronger in the U.S. than in China?

Research question 2b: Will the correlation between WFPCB and psychological well-being be stronger in China than in the U.S.?

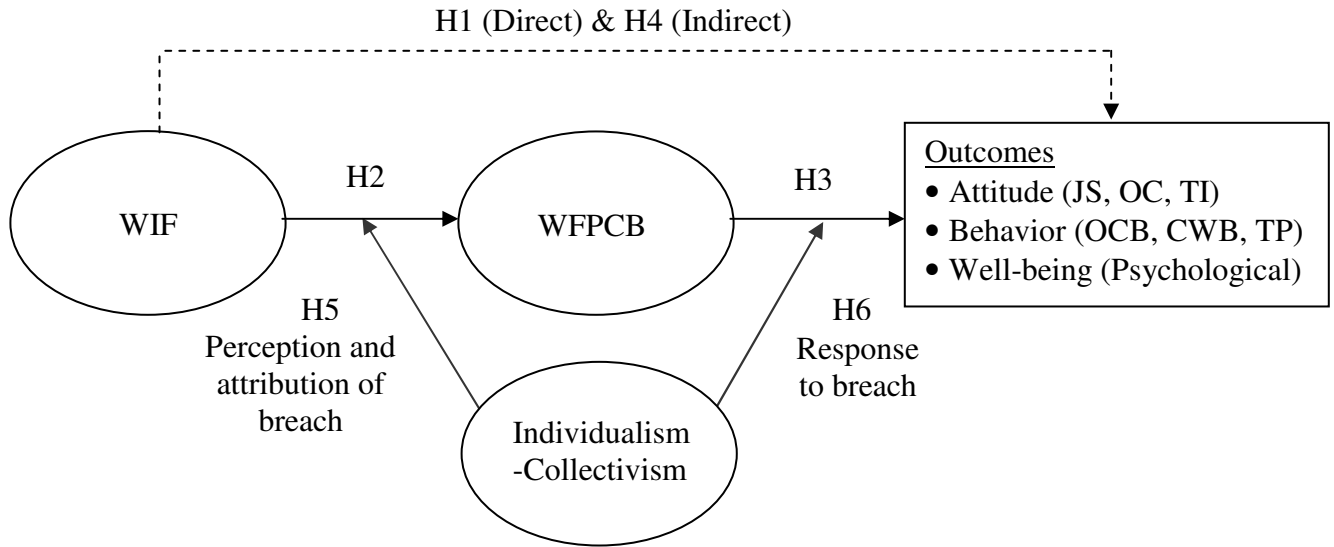
Because of the various factors the two countries differ on such as economic and social conditions, there are many competing hypotheses to explain any observed differences between the means and correlations found in the two samples. Liu, Spector and Shi (2007) point out that the U.S. and China differ greatly in terms of economic status, for example, unemployment rate, which is an indicator of social security that may influence society's openness to change. Therefore, the cultural value of individualism-

collectivism is only one potential explanation for any differences observed. However, results from such comparison could still provide some initial indication of country-level differences in the relationships studied, and add to the existing cross-national comparative studies in work-family research.

Summary of Hypotheses

Figure 1 graphically summarizes the hypotheses proposed by this study. It was hypothesized that WIF will relate to several outcomes, however, their relations may be mediated by WFPCB. It is also hypothesized that the cultural value of individualism-collectivism will moderate both the link between WIF and WFPCB as well as the link between WFPCB and the outcomes.

Figure 1. Summary of Proposed Hypotheses



Research Strategy

This dissertation research was conducted in three stages. During the first stage, 20 full-time employees from the U.S. and China respectively were interviewed over the telephone about their perceptions of the kinds of obligations organizations hold regarding work-family related issues. Their responses were content analyzed and draft items were developed for the Work-family Psychological Contract Breach (WFPCB) measure. During the second stage, the WFPCB measure was piloted along with other criteria measures with over 60 employees from each country. As the WFPCB measure showed reasonable reliability and demonstrated expected relationships with other variables, the final main survey study was carried out in the third stage to test the proposed hypotheses. Considering participant feedback about the length of the survey, and the format and scale of the WFPCB measure, the new measure was modified for the final stage of data collection. The following chapters describe in details the methodology used and results obtained from these three stages of research.

Chapter Three

Qualitative: Interview Study

Due to the novel nature of applying the psychological contract theory to work-family research, and the need to construct a new measure, this research started with the qualitative method of interviewing. The advantage of qualitative methods is providing rich and complex data by emphasizing the description, understanding, and interpretation (Parkes, 1985) of respondent feedback. It is also important to conduct interviews in both the U.S. and China as we cannot assume that the same contract terms apply to both countries.

Method

Participants

Participants were invited from personal and professional networks that represent a range of industries and demographic characteristics. Twenty interviewees each from the U.S. and China participated in the study. For the U.S., the participants include 45% female, 60% married, and 35% with children. Their age range from 27 to 60 with a mean of 37.5, and they have been with their organization for an average of 36 months. All participants work five days a week with an average of 46-48 hours. For ethnicity, White (70%), Asian/Pacific Islander (30%). For education, 15% of the interviewees have bachelor's degree, 35% have masters and 50% have doctoral degree. Participants came from a wide range of industries.

The Chinese interviewees include 55% female, 75% married, and 50% with children. Their age range from 26 to 60 with a mean of 35, and they have been with their organization for an average of 69 months. It seems more common among the Chinese interviewees to have overtime, as 35% of them work on weekends. The average weekly work hours are 48-52 hours. In terms of the type of organizations they work for, 50% work for foreign-owned enterprises, 40% work for state-owned enterprises, and 10% work for private-owned enterprises. For education, 15% of the interviewees have middle school degree, 10% with professional school degree, 40% have bachelors, 30% have masters and 5% have doctoral degree. Participants also came from a wide range of industries (e.g., Accounting, Manufacturing, and Healthcare) with a variety of job titles (e.g., auditor, insurance agent, and HR manager).

Materials

The interviewees were asked a similar set of core questions, although the order varied, and the follow-up questions varied for different interviewees in response to their answers. Sample questions asked include: What is the general culture regarding work-life balance in your organization? What benefits do you expect to obtain from your employer? What has your employer promised to you regarding assisting your work-life balance? Have these promises been kept? (For a more detailed list of the questions asked in the interviews, see Appendix A).

Procedure

An e-mail invitation was sent to potential interviewees to invite them to participate in the study. Interviews were then scheduled for those agreed to participate. The interviews were conducted over the phone, and recorded on a digital recorder for

transcription and content analyses. Interviews were conducted in English for interviewees in the U.S., and in Mandarin Chinese for the Chinese interviewees. The interviews were later transcribed in their respective languages. The transcription was then content analyzed.

Results

Whereas the interviews included a wide range of questions related to the topic of work-life balance, only the results of those directly related to creating the Work-family Psychological Contract Breach measure are presented here. Regarding the work-family supportive culture in general, the majority of the U.S. interviewees (70%) indicated that their organizations are supportive of work-life balance. However, the degree of supportiveness varies from providing a full range of family-friendly benefits and supportive leadership, to a general supportive culture but lack of execution or role modeling. Participants also indicated that there is much variance across departments and groups within the organizations. In China, on the other hand, the organizational culture regarding work-life balance seems to largely depend on the type of enterprise one works at (whether it is foreign-owned, state-owned or privately owned).

Based on feedback from both the U.S. and Chinese respondents, the types of benefits currently provided by organizations were grouped into six categories including, general work/leave benefit, flexible work schedule, dependent care, employee wellness programs, convenience services, and other. Several benefits that are rather unique to Chinese companies are included in the “other” category such as company sponsored trips. These categories are in line with past literature that reveals four major groups of work-life benefits (work schedule, dependent care, employee well-being, and convenience

services; Allen, 2001; Butler et al., 2004; Thomas & Ganster, 1995; Roberts et al., 2004). The interviews also reveal that overall U.S. employers provide more formal programs such as flextime than Chinese employers. Also, employee wellness programs in the U.S. are mostly individual-based whereas they are more group/company-based in China. For example, more U.S. companies provide on-site gyms or gym memberships, whereas more companies in China rent space for employees to play sports together.

Discussion

Findings from these initial interviews reveal both similarities and differences between the U.S. and Chinese employees and employers. Some of the basic employee expectations such as, reasonable workload and travel time carry across the countries, whereas other family-friendly benefits such as flexible work schedule are more common in the U.S. or foreign-owned companies in China. The differences in the type and nature of employer assistances offered in the U.S. and China also hint at the cultural differences between the two countries. As mentioned above, employee wellness programs in China are more collective in nature than those in the U.S. The China-specific benefit of company organized travel reflects the same tendency.

Employers in both the U.S. and China are careful about making promises, especially explicit promises, about what they can provide to assist with the work and non-work aspects of their employees' lives. Promises, if perceived by the employees, are more likely in the implicit form, through observing what other employees in the organization get. However, results also show that employer promises often fall short of employees' expectations. The Chinese interviewees also seem to have lower expectations than interviewees from the U.S.

The interviewees also responded to questions as to when they perceived broken promises and their reactions toward it. They reported a variety of reactions ranging from disappointment, distress, and dissatisfaction, to intentions to leave the current organization or find another job. This provided preliminary anecdotal evidence of the potential links between work-family psychological contract breach and outcomes such as employee well-being and turnover intention.

Chapter Four

Quantitative: Pilot Survey Study

During the second stage of the research, the Work-Family Psychological Contract Breach (WFPCB) measure was constructed and piloted with samples from both the U.S. and China. This step was taken to ensure the reliability of the new measure and that it worked in the way it was intended. Details of the measure are included below in the “Measures” section.

Methods

Participants & Procedure

Participants from the U.S. were invited through the snowball sampling strategy. E-mails containing a link to the web survey were sent out to invite participation in the pilot study. Employed individuals from the author’s personal and professional network were invited to participate in the study, and they were encouraged to forward information about the study to their friends and colleagues. One participant forwarded the invitation e-mail through an alumni listserv. Only employed individuals (excluding self-employment) were invited to participate. Pilot data from China were collected through both an online survey on the same survey website that hosted the U.S. survey, as well as paper-and-pencil format of the same survey administered in China by a focal contact to employees from several organizations.

The U.S. data downloaded from the survey website included 116 cases. The number of missing core items were counted, and 29 respondents were excluded for missing more than one third of the core items (most of those only completed the first five items). Next, two participants with Chinese and one with Israeli citizenship were also excluded from analyses. Outlier analyses were then performed by visually examining scatter plots of predictor-outcome pairs, and checking values for Cook's D, Studentized residuals, and leverage values (for details on these diagnostics, see Chapter Five Method section). After identifying five outlying cases, their item scores were carefully examined. Four cases were excluded for random responding (two answered most items in the same way, and two answered reverse-coded items the same way as positively-worded items). The above data cleaning resulted in a final set of 80 cases.

For China, combining online and paper-and-pencil data resulted in 81 cases. Similar data cleaning procedures as for the U.S. were applied. Thirteen respondents were excluded for missing more than one third of the core items (again, most completed the first five items). Next, outlier analyses were conducted via scatter plots and checking the diagnostics. Two outlying cases were identified, but were not excluded for lack evidence of random responding. The above data cleaning resulted in 68 cases.

Of the U.S. participants that reported gender, 54% are female and 57% are married. Participant age ranges from 22 to 51 with a mean of 32. Of those with partner/spouse, 75% of their partners/spouses work full-time, 12.5% work part-time, and 12.5% do not work. Participants have 0 to 3 children, with a mean of .5. Participant education levels include secondary (1%), some university (4%), university (18%), masters (74%), and doctorate (3%). As for work hours, 62% indicated that they have the

number of hours they wish to work, 31% more than they wish to work, 7% fewer than they wish to work. Participants also reported their ethnicity as 22% Asian or Pacific Islander, 6% Black, 2% Hispanic, and 71% White. On average, they work 5 days per week, ranging from 3 to 6. They also work 41 hours per week on average, ranging from 8 to 80 hours. Participants have also been with their organization for an average of 43 months.

In the Chinese sample, 51% of the participants are female and 75% are married. Participant age ranges from 23 to 54 with a mean of 32. Among participants' partners/spouses, 77% work full-time, 8% work part-time, and 15% do not work. The number of children they have ranges from 0 to 2 with a mean of .58. Participants' education levels are: secondary (12%), some university (29%), university (47%), master (10%), and doctoral (2%). Whereas 38% of the participants indicated that they have the number of hours they wish to work, 49% indicated more than they wish to work, and 14% fewer than they wish to work. On average, the Chinese respondents work 5.3 days (range from 5 to 7), and 44 hours (range from 35 to 70 hours) per week. Also, the participants have been with their organization for an average of 64 months.

Materials

The measures were administered in English and Mandarin respectively for the U.S. sample and the Chinese sample. Where Chinese translations were not available from existing research, the measures in English were translated into Chinese by the author and back-translated (Brislin's, 1986) into English by another bilingual researcher independent of this study.

Work-Family Psychological Contract Breach (WFPCB). As described above, WFPCB was assessed with a new measure created for the present study. The design of the measure was based on two types of most commonly used measures for the general psychological contract breach. As mentioned previously, one type is the composite measures that typically include a checklist of content items of the contract. The other type is global measures that ask for overall perceptions of contract breach. A decision was made to integrate both types of items to be able to identify both the content of the work-family psychological contract and the degree of contract breach.

The composite part of the items was based on both literature review and results from the preliminary interviews. The interview findings revealed six categories of employer assistance provided to help employees with balancing work and non-work aspects of their lives. Four of the six categories overlap with those identified from past research on family-friendly benefits and policies. The final measure includes a checklist of 27 items representing six groups: general work/leave benefit, flexible work schedule, dependent care, employee wellness programs, convenience services, and other. Modeled after Kickul et al. (2002), participants were asked to check those items that their employers have promised and then rate the degree of fulfillment of the promises on a 1-3 scale (1= not at all fulfilled, 3= very much fulfilled). Example items include, “a reasonable workload,” “work from home,” and “paid maternity leave.” The higher the total score across the items indicates higher fulfillment of the contract. The items were reverse scored and averaged to form the final score of WFPCB. Alpha coefficient for the overall scale was .93 (U.S.) and .96 (China), but of course the large number of items could be an influencing factor here. Alpha reliability for the categories was (first number

for the U.S. and second for China): general work/leave benefit (.74/.62), flexible work schedule (.76/.95), dependent care (.89/.96), employee wellness programs (.88/.91), and convenience services (.72/.87).

The global part of the WFPCB measure was from Robinson and Rousseau (1994), and was adapted for the work-family context. Participants were asked to consider the promises their employers have made regarding assisting with their work-life balance, and then indicate their agreement with five statements on a 1-5 scale (1=strongly disagree, 5=strongly agree). Three items need to be reverse coded (e.g. “Almost all the promises made by my employer during recruitment have been kept so far.”) to indicate contract breach, whereas two do not (e.g. “My employer has broken many of its promises to me even though I’ve upheld my side of the deal.”) The alpha coefficient for the items was .91 for the U.S. and .89 for China. Item analyses indicated that all item-total correlations were above .68 for the U.S. and above .80 for China.

Work Interference with Family (WIF). WIF was measured using the five work-family conflict items from Netemeyer, Boles and McMurrian (1996). Participants were asked to rate on 1 (strongly disagree) to 7 (strongly agree), indicating their agreement with the statements. Higher scores indicate higher levels of WIF. A sample item is “The demands of my work interfere with my home family life.” The measure has been found to have respectable reliabilities, with coefficient alphas ranging from .88 to .89 across samples (Netemeyer et al., 1996). In the current sample, coefficient alpha was .94 for the U.S. and .89 for China.

Job Satisfaction. Job satisfaction was assessed with three items from Cammann, Fichman, Jenkins, and Klesh (1979), which is a subscale from the Michigan

Organizational Assessment Questionnaire. Participants rated on a 1 to 6 scale, with 1= disagree very much, and 6= agree very much. Higher scores reflect higher levels of job satisfaction. A sample item is “All in all, I am satisfied with my job.” Reliability coefficients were .91 (U.S.) and .87 (China).

Organizational Commitment. The nine-item shortened version of the Organizational Commitment Questionnaire (OCQ; Mowday, Steers & Porter, 1979) was used to reflect attitudinal or affective commitment. A 1 to 7 scale is used (1= strongly disagree and 7= strongly agree). Higher total scores indicate higher levels of organizational commitment. “I am proud to tell others that I am part of this organization” is a sample item from the measure. Previous research indicates that this shortened version of OCQ measure has reasonable coefficient alpha and test-retest reliability. In the present study, alpha coefficients were .92 (U.S.) and .94 (China).

Turnover intentions. This was measured with a single question that asked about intentions to quit one’s job, that is, “How often have you seriously considered quitting your job” (Spector, Dwyer, & Jex, 1988). Participants were asked to rate from 1 to 6 (1= never and 6= extremely often). For the U.S., the percentage for each response option were: never (25%), rarely (32%), sometimes (25%), somewhat often (10%), quite often (4%), extremely often (4%). For China, the percentages were: never (31%), rarely (19%), sometimes (34%), somewhat often (6%), quite often (5%), extremely often (5%).

OCB. The OCB scale from Williams and Anderson (1991) was used in the U.S., which includes items on OCB directed toward individuals (OCBI) and OCB directed toward the organization (OCBO). Sample items include “Helps others who have heavy work loads” (OCBI) and “Conserves and protects organizational property” (OCBO).

Three reverse coded items for OCBO were not included as they are similar to some items in the CWB measure. The alpha reliability for the overall measure was .63, with .75 (OCBI) and .63 (OCBO). Item analyses indicated that the OCBO items did not relate very well to the whole measure, possibly because the OCBO items are more about adhering to rules and norms rather than going above and beyond, and may relate closer to in-role performance. The Williams and Anderson (1991) scale also includes seven items on task performance, but the two reverse worded items were not included. For the present study, alpha coefficient was .83.

For China, the People's Republic of China Organizational Citizenship Behaviors (PRC-OCB; Farh, Zhong & Organ, 2004) was used. This measure includes 33 items rated on a 5 point scale. For the current study, only the 18 items on interpersonal (OCBI) and organizational (OCBO) OCB were included. Cronbach's alpha was .93 for the overall measure, .89 for OCBI, and .85 for OCBO.

CWB. CWB was measured using the 19-item measure from Bennett and Robinson (2000). A frequency scale was used to indicate how often employees engage in certain behaviors, and it ranges from 1 to 7 (1= never, 7= daily). Among the items, seven of them measure CWB directed toward individuals, and a sample item is "Made fun of someone at work." The other 12 items are about CWB directed toward the organization and a sample item is, "Took property from work without permission." Reliability coefficient for the overall measure was .84 (U.S.) with .79 (CWBI) and .78 (CWBO); on the other hand, it was .84 (China) with .81 (CWBI) and .82 (CWBO).

Psychological Well-being. The 12-item mental well-being scale from the Occupational Stress Indicator-2 (OSI2; Williams & Cooper, 1996) was used for the U.S.

The measure reflects symptoms of anxiety and depression, such as feeling miserable, upset, and worried. The items each had six response choices, which varied across items. For example, the item “concerning work and life in general, would you describe yourself as someone who is bothered by their troubles or a ‘worrier’?” had choices that range from *definitely yes* to *definitely no*. Alpha coefficient in the current study was .84.

For China, the 13-item measure on emotional strain was used (Caplan, Cobb, French, Van Harrison & Pinneau, 1980). It includes three sub-dimensions: anxiety (four items), depression (six items) and irritation (three items). The scale had four response choices ranging from 1 (Never or a little) to 4 (Most of the time). A sample item is "I feel sad." Higher scores for this scale indicate higher emotional strain. Alpha coefficient was .88 in the current sample.

Individualism-Collectivism. The Cultural value of individualism-collectivism was measured with items from the Dimensions of Culture Questionnaire (DCQ; Dorfman & Howell, 1988). Using a 1 to 5 scale (1= strongly disagree, 5= strongly agree) participants rated on the six items on individualism-collectivism. The items in DCQ are approximately the same as the ones in the GLOBE culture scale, except that the latter has nine dimensions (personal communication, Dorfman, November 22, 2004). Alpha coefficients were .65 (U.S.) and .92 (China). Item analysis revealed that one item had a low item-total correlation ($< .30$) for the U.S. sample, that is, “Being accepted by the member of your workgroup is very important.” The different alphas may in itself be an indicator of the cultural differences between the U.S. and China.

Results

As shown above, the majority of the measures included in the pilot study showed reasonable reliabilities. For the new WFPCB measure, both the composite part and the global part of the measure had respectable alpha levels. The means and standard deviations are shown in Table 1 for the main study variables both for the U.S. sample and the Chinese sample.

Table 1. *Descriptive Statistics for the Main Variables of the Pilot Study- U.S. & China*

	U.S.			China		
	N	Mean	SD	N	Mean	SD
1 WIF	80	19.48	7.97	68	18.69	7.21
2 WFPCB (global)	80	11.52	4.11	64	12.58	3.58
3 WFPCB (composite)	71	28.21	17.08	68	12.75	12.79
4 Job Satisfaction	79	14.22	3.60	66	14.03	2.58
5 Organizational Commitment	79	42.94	11.79	63	43.97	9.82
6 Psychological Well-being	75	48.15	9.64	65	44.05**	5.44
7 Individualism	73	16.95	3.41	63	11.98***	4.36
8 OCB	71	63.54	4.96	60	72.00***	11.18
9 CWB	69	33.36	11.80	61	27.54**	8.19
10 Age	69	32.12	8.02	67	31.99	7.34
11 Number of children	62	0.48	0.76	53	0.58	0.54
12 Tenure (in months)	67	42.54	58.52	66	63.53	65.17
13 Work hours (per week)	69	40.59	12.58	65	44.09	7.38
14 Work days (per week)	69	4.84	0.61	65	5.31***	0.64

Note: Different scales were used in the U.S. and China for OCB; ‘*’= significant difference between the U.S. and China means; * $p < .05$; ** $p < .01$; *** $p < .001$

In evaluating the composite and the global part of the WFPCB measure, correlation results (Table 2) indicate that the global evaluation part of the WFPCB measure had stronger relationships with other variables than the composite part. This is in line with findings from Zhao et al.’s (2007) meta-analysis on psychological contract breach and work-related outcomes, where they tested the moderating effect of measure type on the breach-outcome links. They found that the global measures of breach had larger effect sizes than the content-specific composite measures. Zhao et al. (2007)

pointed out that the different performance of composite and global measures may be due to three reasons: 1) global measures do not limit the content of the psychological contract; 2) global measures do not assume equal weights for all the content items as composite measures do; 3) some composite measures use difference scores that can be problematic.

Regarding support for the proposed hypotheses, hypothesis 1 was partially supported as WIF related significantly to job satisfaction ($r = -.25, p < .05$) and psychological well-being ($r = -.31, p < .01$) in the U.S., and to organizational commitment ($r = -.28, p < .05$), psychological well-being ($r = -.48, p < .01$), and OCB ($r = -.27, p < .05$) in the Chinese sample. All relationships except for OCB in the U.S. sample were in the expected direction, and there might have been more significant relationships with a larger sample size. WIF and the global measure of WFPCB correlated positively and significantly in both the U.S. ($r = .28, p < .05$) and Chinese ($r = .30, p < .05$) samples, therefore supporting hypothesis 2. In terms of hypothesis 3 regarding the relationship between WFPCB and the outcomes, the global measure of WFPCB related significantly with job satisfaction (U.S. $r = -.47, p < .01$; China $r = -.59, p < .01$), organizational commitment (U.S. $r = -.52, p < .01$; China $r = -.67, p < .01$), and turnover intentions (U.S. $r = .47, p < .01$; China $r = .36, p < .01$). In addition, the link between WFPCB and psychological well-being ($r = -.59, p < .01$), and OCB ($r = -.57, p < .01$) was significant in the Chinese sample. The mediation and moderating hypotheses were not tested with the pilot data due to the relatively small sample size. However, the significant relationships observed among the variables seem to warrant further investigation of the proposed hypotheses with a larger sample using the measures piloted.

Table 2. Correlation Matrix for the Main Variables and Demographic Variables- U.S. & China

	1	2	3	4	5	6	7	8	9
1 WIF	1	.300*	0.095	-0.207	-.281*	0.156	-.479**	0.227	-.265*
2 WFPCB (global)	.275*	1	0.031	-.594**	-.671**	.355**	-.591**	.608**	-.566**
3 WFPCB (composite)	0.01	-0.09	1	-0.143	-0.189	0.236	-.340**	.290*	-0.174
4 Job Satisfaction	-.252*	-.473**	0.12	1	.740**	-.449**	.503**	-.463**	.593**
5 Organizational Commitment	-0.094	-.516**	.308**	.706**	1	-.486**	.691**	-.716**	.557**
6 Turnover Intention	0.202	.470**	-0.113	-.556**	-.551**	1	-.398**	.274*	-0.153
7 Psychological Well-being	-.311**	-0.113	0.128	.232*	0.067	-0.15	1	-.615**	.607**
8 Individualism	0.154	0.054	-.290*	-0.087	-0.206	0.157	-0.122	1	-.482**
9 OCB	0.089	0.123	0.045	0.089	0.073	0.079	-0.054	-0.028	1
10 CWB	0.005	0.049	-0.237	-0.026	-0.145	0.045	-0.016	0.185	-0.059
11 Gender	-0.038	-0.039	0.02	0.04	0.07	-0.01	0.009	.244*	-0.075
12 Age	0.14	0.033	0.19	0.004	0.057	0.107	0.11	0.055	-0.08
13 Marital status	-0.047	-0.049	-0.036	0.002	0.046	-0.186	-0.063	-0.172	0.107
14 Children	0.17	-0.073	0.087	-0.006	-0.005	0.05	0.07	.290*	-0.191
15 Education	0.005	-0.143	0.011	0.139	0.133	-0.072	-0.073	0.186	0.205
16 Tenure (in months)	0.137	0.089	0.154	-0.032	0.045	0.105	-0.098	0.103	-0.054
17 Work hours (per week)	.486**	.262*	0.081	-0.139	0.051	0.215	-0.149	0.142	0.191
18 Work days (per week)	.367**	0.076	0.226	0.045	0.118	0.077	-0.101	0.077	0.147
19 Workload (wish)	-.530**	-0.189	0.056	0.151	-0.011	-0.128	0.093	-0.125	-0.117

Note: * $p < .05$; ** $p < .01$; *** $p < .001$; U.S.: below the diagonal; China: above the diagonal

Table 2. Correlation Matrix for the Main Variables and Demographic Variables- U.S. & China (Continued)

	10	11	12	13	14	15	16	17	18	19
1 WIF	0.145	0.002	.251*	-0.195	0.064	.264*	0.223	.255*	0.026	-0.002
2 WFPCB (global)	0.233	-0.007	0.037	-0.004	-.380**	0.087	0.046	0.105	0.088	-0.065
3 WFPCB (composite)	.466**	-0.086	-0.202	0.035	-0.163	0.183	-0.116	0.013	-0.169	0.125
4 Job Satisfaction	-.300*	-0.144	0.225	-0.238	.484**	0.077	0.233	-.249*	-0.178	0.125
5 Organizational Commitment	-0.232	-0.118	0.169	-0.195	.454**	-0.173	0.222	-0.046	0.019	-0.024
6 Turnover Intention	0.13	0.214	0.011	0.11	-0.202	0.032	0.08	-0.104	-0.118	0.149
7 Psychological Well-being	-0.217	-0.112	0.018	-0.11	.420**	-.356**	0.002	-0.021	0.127	-0.151
8 Individualism	.339**	0	-0.179	0.121	-.511**	0.148	-0.216	0.009	-0.04	0.07
9 OCB	-.470**	0.081	0.106	0.079	.427**	-0.16	0.186	-.302*	-0.192	0.185
10 CWB	1	-0.053	-0.119	-0.064	-0.257	0.043	-0.102	0.186	0.122	-0.04
11 Gender	-.263*	1	0.051	0.026	-0.128	-.419**	0.108	-0.076	0.026	0.064
12 Age	-.262*	-0.202	1	-.484**	.609**	-0.041	.682**	-0.069	-0.008	0.017
13 Marital status	0.191	0.054	-.622**	1	-.533**	0.139	-.362**	-0.194	-.290*	.339**
14 Children	-0.165	-0.084	.638**	-.508**	1	-0.138	.432**	-0.039	0.003	-0.24
15 Education	0.018	.328**	-0.194	0.107	-0.068	1	-0.04	-0.235	-.475**	.281*
16 Tenure (in months)	-0.067	-0.195	.586**	-.323**	.418**	-0.242	1	0.024	0	-0.111
17 Work hours (per week)	-0.099	-0.1	.270*	-0.208	0.121	-0.002	0.216	1	.707**	-.452**
18 Work days (per week)	-0.102	-0.149	.260*	-0.204	0.052	-0.126	0.195	.703**	1	-.363**
19 Workload (wish)	0.029	0.03	-.247*	0.152	-0.148	0.01	-0.15	-.442**	-.318**	1

Note: * $p < .05$; ** $p < .01$; *** $p < .001$; U.S.: below the diagonal; China: above the diagonal

Chapter Five

Quantitative: Main Survey Study

Based on the interview results from the first research stage, a measure of work-family psychological contract breach (WFPCB) was created and piloted in the second research stage. In this final stage of the dissertation, a modified version of the piloted survey was administered to larger samples from the U.S. and China. Effort was also made in obtaining other report of the behavioral outcomes (i.e. task performance, OCB and CWB) to supplement the self-report. The research methods and findings for the main survey study are reported in the following section.

Method

Participants & Procedure

U.S. An online survey was administered to the U.S. sample. Participants were recruited using two strategies: continue tapping into personal and professional networks, and seek help from the alumni network of a liberal arts college in the Midwest of the U.S. Messages that explained the purpose of the study with the link to the online survey were sent to members of the alumni network. Again, only employed individuals (excluding self-employment) were invited to participate. Those invited were also encouraged to forward the link of the survey to their friends and colleagues to take advantage of the snowball sampling strategy.

Because the objective of this study was to understand the psychological contract in the work-family context and explore the relations among WIF, WFPCB and the outcomes, a sample from a variety of industries and organizations (a likely outcome of the snowball sampling) was suitable and desirable. To gather “other” report of performance ratings, a link to the supervisor/coworker survey and a sample email invitation was included at the end of the employee survey, for the employees to forward. The employees were also asked to create a unique code (at least eight characters in length) and include the code in the invitation e-mails to their supervisors or coworkers.

In terms of the demographics of the U.S. sample, 57% of the respondents are female and their age ranges from 23 to 67 with a mean of 38. Of those 64% that are married and have partner/spouse, 72% of their partner/spouse work full-time, 11% work part-time, and 17% do not work. The number of children they have range from 0 to 5, with a mean of .88. Participants’ education level attained is: secondary (1%), some university (1%), university (43%), masters (34%), doctorate (20%). In terms of ethnicity, 3% Asian or Pacific Islander, 1% Black, 2% Hispanic, 88% White, and 6% prefer not to answer. On average, participants have been with their organization for 67 months. As for work hours, 53% indicated that they have the number of hours they wish to work, 43% more than they wish to work, 4% fewer than they wish to work. On average, the participants work 5.15 days per week, ranging from 3 to 7, and they work 46 hours a week, ranging from 12 to 80 hours. Participants were from a wide range of industries including, consumer goods, hospitality, education, media, government and financial services.

China. A combination of online survey and paper-and-pencil format was again adopted for the Chinese sample, because some of the potential participants did not have easy access to computers. Participants were recruited using the snowball sampling strategy for the online survey. At the same time, paper-and-pencil versions of the same survey were administered to Chinese employees from a variety of organizations. Participants were mainly those that work in the five cities of China, namely, Beijing, Guangzhou, Hangzhou, Shanghai, and Tianjin, which are mostly large metropolitan areas in China. Therefore, the representativeness of the sample of the Chinese employed population at large may be limited in this sense and needs to be borne in mind when interpreting the results.

In terms of the demographics of the sample, 39% of the respondents are female and their age ranges from 23 to 57 with a mean of 33. Of those 71% that are married and have partner/spouse, 80% of their partner/spouse work full-time, 16% work part-time, and 4% do not work. The number of children they have range from 0 to 2, with a mean of .84. Participants' education level attained is: secondary (13%), some university (28%), university (43%), masters (13%), doctorate (1%), and other (2%). On average, participants have been with their organization for 82 months. As for work hours, 67% indicated that they have the number of hours they wish to work, 22% more than they wish to work, 11% fewer than they wish to work. On average, the participants work 5.15 days per week, ranging from 5 to 7, and they work 42 hours a week, ranging from 8 to 70 hours. Participants were from a variety of industries including, manufacturing, services, finance, insurance and hospitality.

Measures

As most of the measures remained the same as those from the pilot study, only the ones that were modified at this stage are presented below. The means and standard deviations are reported together with the scale and number of items for each variable in Table 3 below.

Work-family Psychological Contract Breach (WFPCB). As described previously, WFPCB was assessed with a newly developed measure that consisted of both a composite part and a global rating part. Results from the pilot study indicated that the global measure performed better in terms of relating to the other variables, whereas similar findings were reported in Zhao et al.'s (2007) meta-analysis of psychological contract breach in general. Therefore, only scores from the global measure were used in the subsequent final analyses. The composite measure, however, was still included in the survey with some modifications to provide us with a glimpse of the content of work-family psychological contract. Although the list of content items may not be comprehensive, it was based on qualitative interviews conducted both in the U.S. and China.

Based on feedback from some participants in the pilot study, indicating difficulty of correctly understanding and answering the composite items, they were revised from asking about the degree of fulfillment, to reporting employers' actual provision of the various types of work-family assistance. Participants were first asked to check the items that their organization promised to them, and were then ask to check in a second column (1=checked, 0=not checked), the items that were actually provided by the organizations (1=checked, 0=not checked). Making the question more objective can reduce the cognitive burden on the participants. It was possible to code the results such that

participants reporting “not checked” for promise and “checked” for actual provision as “1= exceeding promise.” Similarly, a combination of “1/1” and “0/0” can be coded “2=meet contract,” and a combination of “1/0” can be coded “3=breaching contract.” In this case, higher scores would indicate greater degree of breach of the work-family psychological contract. However, due to concern for such transformation of scores and reasons outlined by Zhao et al. (2007) for composite measures, an average score from this part of the measure was not used for testing the hypotheses for WFPCB. Instead, frequencies were run to show potential content of the contract, and the total score from the global measure was used to represent WFPCB in other analyses.

Organizational Commitment. For the final survey, four items from the Organizational Commitment Questionnaire (OCQ; Mowday, Steers & Porter, 1979) were selected out of the nine-items included in the pilot study. The items were selected based on item analyses conducted with both the U.S. and Chinese samples from the pilot study. Based on information such as, item-total correlations and alpha-if-item-deleted, the four items retained were the best performing items for both samples. Again, a 1 to 7 scale was used (1= strongly disagree; 7= strongly agree), with higher scores indicating higher organizational commitment.

Psychological Well-being. The 13-item measure on emotional strain was used (Caplan et al., 1980) for both the Chinese sample and the U.S. sample this time. The Mandarin and English version of the measure was administered respectively. The 12-item scale from the Occupational Stress Indicator-2 (OSI2; Williams & Cooper, 1996) was not administered for the U.S. sample again due to several concerns although it showed reasonable reliability with the pilot sample from the U.S. First, it is more time consuming

than (Caplan et al., 1980) due to longer and more complicated item stems. Second, its rating scale only indicates an anchor for the lowest point and highest point of a six point scale, leaving interpretation of the middle more difficult. Finally, although all items are on the six point scale, the anchors vary from item to item, making it more difficult for the participants. Therefore, the alternative measure of Caplan et al. (1980), which demonstrated respectable reliability with the Chinese sample, was used in both the U.S. and China for the final study. As a reminder, this scale has four response choices ranging from 1 (Never or a little) to 4 (Most of the time). A sample item is "I feel sad." Higher scores for this scale indicate higher emotional strain.

Analyses

Analyses overview. Several types of analyses were conducted at this final stage of research. First, scale equivalence was tested as usually recommended for cross-national research that uses measures in different countries. Following Spector et al. (2004), the four-phase procedure recommended by Riordan and Vandenberg (1994) and Schaffer and Riordan (2003) was used. Results of this step can inform the degree of comparison possible between the U.S. and Chinese findings. Second, correlations among WIF, WFPCB, and the outcome variables were obtained separately for the U.S. and China, and additional multiple regressions were conducted for Hypotheses 1 to 3. Next, mediation analysis was conducted using the Sobel test with bootstrapping to examine the mediating role of WFPCB between WIF and each of the outcomes for Hypothesis 4.

In addition, moderated regressions were performed for Hypothesis 5 and 6 to explore the moderating effect of the cultural value of individualism-collectivism, on both the links between WIF and WFPCB, and between WFPCB and the outcomes. Finally,

correlations were to be compared across the two countries (if reasonable measurement invariance was achieved for the measures) as exploratory analyses to shed light on the research questions about the effect of individualism-collectivism at the country level.

Data cleaning & preparation. Similar to what was described for the pilot study, data from the U.S. were downloaded from the survey website and imported into SPSS. Online data from China were also downloaded from the same website and merged with the paper-and-pencil data. After checking the data range for potential errors from data entry and merging of the data, several steps were carried out for further data cleaning.

First, valid respondents were identified as having answered at least one third of the core items. For the U.S., out of the core items (on WIF, WFPCB, JS, OC, TI, PWB, TP, OCB, CWB, IC), those that missed more than 49 items were excluded from analyses, resulting in the removal of 12 cases, and a sample size of 305. Next, responses to the country of citizenship questions were checked to exclude cases from outside the U.S., and 18 cases were excluded.

Analysis that identifies outliers was then conducted on the remaining 287 cases. Orr, Sackett and Dubois (1991) surveyed I/O psychologists and conducted analyses on test validation data. They found that there was a great deal of variation in treatment of outliers among organizational researchers. Visual examination of data were used more frequently than numeric techniques, and outlier removal may affect individual studies but not so much for a large test validity data set. Although their study was not intended to point out what *should* be done, they called for more awareness of the issue and proper documentation of outlier treatment. For the present study, scatter plots of predictor-outcome pairs were examined in combination with three diagnostics: the studentized

residuals, leverage values, and Cook's D (which were also the ones examined in Orr et al., 1991). Responses of the three outlying cases identified were then examined to see if they may be invalid answers (e.g. random responding as demonstrated by the same score for all items within the same measure and across measures). Answers to reverse-coded items were also used for evidence of random responses. As a result, one outlier was flagged and excluded from further analyses. The final dataset was therefore 286 for the U.S. sample.

The same data cleaning procedures were applied to the Chinese data. Out of the 233 cases, two cases were excluded for missing more than one third of the core items. Next, four outlying cases were identified based on scatter plots and the diagnostics, and three were excluded from analyses. This resulted in a final sample size of 228 for the Chinese data.

Results

Descriptives

Table 3 displays the means and standard deviations for the main variables and several demographic variables for the U.S. and Chinese sample, and Table 4 shows the correlation matrix of these variables. The numbers below the diagonal are results for the U.S. sample, whereas the numbers above the diagonal represent findings from the Chinese sample. The numbers on the diagonal represent the alpha coefficients for each of the measures.

Table 3. Variable Descriptive Statistics for the Final Survey- U.S. & China

	U.S.			Scale	Item	China		
	N	Mean	SD			N	Mean	SD
1 WIF	284	21.15	7.74	1-7	5	225	14.40***	7.63
2 WFPCB (global)	243	10.86	4.39	1-5	5	216	12.65***	2.37
3 Job Satisfaction	243	14.40	3.56	1-6	3	223	14.53	1.88
4 Org Commitment	243	19.61	5.91	1-7	4	224	20.67*	3.44
5 Turnover Intention	180	2.57	1.49	1-6	1	219	1.94***	1.11
6 Psychological Well-being	275	41.40	5.88	1-4	13	224	44.23***	6.26
7 Individualism	247	16.97	3.66	1-5	6	225	12.43***	4.14
8 Collectivism	247	19.03	3.66			225	23.57***	4.14
9 Task Performance (other)	66	19.73	2.10	1-7	3	179	20.23	3.18
10 OCB (self)	235	64.97	6.26	1-7/1-5	11/18	222	67.44**	9.89
11 OCB (other)	65	66.95	8.19			196	65.77	10.44
12 CWB (self)	222	31.99	8.89	1-7	19	218	29.93*	9.12
13 CWB (other)	62	24.73	6.89			193	32.45***	11.21
14 Age	237	38.31	10.27	NA	1	219	32.99***	7.10
15 Children	218	0.88	1.15	NA	1	138	0.85	0.38
16 Tenure (in months)	236	67.01	77.17	NA	1	220	82.30*	81.70
17 Work hours (per week)	238	46.14	11.02	NA	1	222	41.66***	6.27
18 Work days (per week)	237	5.15	0.74	NA	1	221	5.15	0.42

Note: Different scales were used in the U.S. and China for OCB; ‘*’ = significant difference between the U.S. and China means;

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

Table 4. *Correlation Matrix for the Main Variables and Demographic Variables- U.S. & China*

	1	2	3	4	5	6	7	8	9	10	11
1 WIF	(.94/.97)	.244**	-.227**	-0.087	.301**	-.576**	.215**	.267**	-0.037	0.107	-.302**
2 WFPCB (global)	.288**	(.92/.75)	-.364**	-.353**	.210**	-.383**	.371**	.204**	-.140*	-0.082	-0.119
3 Job Satisfaction	-.248**	-.542**	(.90/.89)	.517**	-.374**	.376**	-.306**	-0.078	.194**	0.025	0.02
4 Organizational Commitment	-.216**	-.581**	.741**	(.89/.86)	-.373**	.239**	-.234**	0.085	.247**	.237**	-.215**
5 Turnover Intention	.303**	.448**	-.640**	-.648**	NA	-.326**	0.097	0.018	-0.104	0.005	-0.008
6 Psychological Well-being	-.363**	-.385**	.608**	.458**	-.454**	(.87/.92)	-.226**	-.435**	0.015	-.190**	.295**
7 Individualism	-0.016	-0.012	-.139*	-.178**	0.121	-0.012	(.74/.91)	.149*	-.145*	-0.134	-0.007
8 Task Performance	0.11	-0.216	0.218	-0.081	0.208	0.011	-0.069	(.94/.89)	.208**	.343**	-.478**
9 OCB (self)	0.021	-.193**	.184**	.241**	-0.106	.161*	-.180**	-0.024	(.79/.91)	.440**	-.390**
10 OCB (other)	0.017	-.359**	.308*	0.139	-0.021	-0.066	-0.122	.674**	0.193	(.88/.95)	-.376**
11 CWB (self)	0.043	.148*	-.145*	-.161*	0.084	-.339**	0.028	0.023	-.210**	0.121	(.73/.87)
12 CWB (other)	0.078	0.125	-0.153	-0.061	0.189	-0.238	0.24	-0.088	0	-0.192	.321*
13 Gender	0.05	0.097	-0.101	-0.095	0.143	-0.074	0.103	-0.057	0.01	-0.172	-0.085
14 Age	0.069	-0.083	.129*	0.089	-0.036	.165*	0.032	0.068	0.076	0.099	-.235**
15 Marital status	-0.008	.143*	-0.069	-0.079	0.068	0.035	0.065	0.048	-0.035	0.088	.184**
16 Children	0.018	-0.13	.150*	0.132	-0.105	.166*	0.024	0.11	0.104	0.032	-.291**
17 Education	.131*	0.025	0.023	0.005	0.082	-0.034	-0.079	-0.012	-0.059	-0.148	0.037
18 Tenure (in months)	0.031	-0.084	.135*	0.062	-0.064	0.125	0.022	0.073	0.087	0.038	-.193**
19 Work hours (per week)	.359**	0.104	-0.007	-0.017	0.025	-0.052	-0.089	0.083	0.084	0.002	-0.069
20 Work days (per week)	.218**	0.05	-0.024	0.03	0.061	-0.108	-0.112	-0.024	-0.021	0.01	0.019
21 Workload (wish)	-.436**	-.236**	.195**	.221**	-.206**	.285**	0	-.321**	-0.039	-0.222	0.075

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

U.S.: below the diagonal; China: above the diagonal

Table 4. *Correlation Matrix for the Main Variables and Demographic Variables- U.S. & China (Continued)*

	12	13	14	15	16	17	18	19	20	21
1 WIF	-.358**	.153*	0.125	0.128	-.240**	.143*	0.044	.456**	.182**	-.530**
2 WFPCB (global)	-0.116	0.065	.181**	0.135	-.271**	0.128	.158*	.256**	0.011	-.356**
3 Job Satisfaction	0.109	-0.101	-.143*	0.004	0.128	-.196**	-.144*	-0.119	-.144*	.177**
4 Organizational Commitment	-.202**	0.078	-0.037	-0.025	0.154	-0.109	0.054	-0.072	-0.008	.212**
5 Turnover Intention	-0.04	0.092	-0.107	0.061	-0.005	.181**	-0.133	0.132	.174*	-.152*
6 Psychological Well-being	.500**	-.164*	-.205**	-.143*	0.161	-.287**	-.194**	-.372**	-.244**	.460**
7 Individualism	-0.042	0.004	0.105	0.054	-.171*	.147*	0.072	0.03	-0.065	-.237**
8 Task Performance	-.570**	.202**	.311**	-0.006	-0.136	0.121	.362**	.197**	0.1	-.310**
9 OCB (self)	-.338**	.147*	.155*	-.157*	-0.074	0.066	.154*	0.105	0.016	-0.085
10 OCB (other)	-.595**	.165*	0.087	0.058	-0.125	0.081	.200**	.302**	.152*	-.167*
11 CWB (self)	.757**	-.280**	-.345**	0.043	0.045	-.157*	-.358**	-.228**	-0.076	.311**
12 CWB (other)	(.72/.92)	-.347**	-.308**	-0.048	0.139	-.185*	-.431**	-.225**	-0.107	.360**
13 Gender	-0.005	NA	.143*	0.084	0.012	0.025	.166*	-0.072	-0.068	-0.098
14 Age	-0.209	-0.096	NA	-.349**	.229**	.224**	.809**	.155*	0.086	-.171*
15 Marital status	-0.081	0.055	-.146*	NA	-.555**	-0.083	-.241**	0.127	-0.045	-0.104
16 Children	-.312*	-.250**	.461**	-.274**	NA	.174*	.202*	-.186*	0.081	.213*
17 Education	0.005	0.006	0.033	-0.011	-0.041	NA	.282**	0.109	.273**	0.008
18 Tenure (in months)	-0.107	-0.046	.560**	-.179**	.258**	-0.082	NA	0.048	0.077	-0.125
19 Work hours (per week)	0.025	-.207**	-0.004	0.008	0.015	0.067	0.051	NA	.311**	-.410**
20 Work days (per week)	0.061	-.231**	0.041	0.058	-0.015	-0.035	-0.008	.561**	NA	-0.048
21 Workload (wish)	0.016	-0.006	-0.039	-0.001	-0.036	-0.062	-0.105	-.450**	-.297**	NA

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

U.S.: below the diagonal; China: above the diagonal

Analysis for Direct Effect

Hypothesis 1. Hypothesis 1, which proposed significant relationships between work interference with family (WIF) and the set of outcomes, was partially supported. In the U.S. sample, WIF related, as hypothesized, significantly and negatively with job satisfaction ($\beta = -.213, p < .001$) and psychological well-being ($\beta = -.375, p < .001$), and positively with turnover intention ($\beta = .247, p < .001$). In the Chinese sample, WIF related significantly and negatively with psychological well-being ($\beta = -.368, p < .001$) and the self-report of OCB ($\beta = -.27, p < .05$), and positively with turnover intention ($\beta = .275, p < .05$).

Hypothesis 2. The relationship between work interference with family and the proposed mediator, work-family psychological contract breach (WFPCB) was supported in both the U.S. sample ($\beta = .278, p < .001$), and the Chinese sample ($\beta = .244, p < .001$).

Hypothesis 3. This hypothesis looks at the direct relationship between the proposed mediator WFPCB and the set of outcome variables. This hypothesis was almost fully supported in the U.S. sample except for the outcome of CWB. WFPCB related as hypothesized significantly and negatively with job satisfaction ($\beta = -.479, p < .001$), organizational commitment ($\beta = -.543, p < .001$), and psychological well-being ($\beta = -.263, p < .001$), and positively with turnover intention ($\beta = .422, p < .001$). As for the behavior outcomes, there were significant findings for the self-report of OCB ($\beta = -.178, p < .05$), and the other (coworker) report of OCB ($\beta = -.378, p < .05$) and task performance ($\beta = -.366, p < .05$).

Less support was received in the Chinese sample, WFPCB related significantly with job satisfaction ($\beta = -.407, p < .001$), organizational commitment ($\beta = -.436, p < .001$),

and positively with turnover intention ($\beta=.356, p < .001$). In terms of the behavior outcomes, significant results were only found for the self-report of OCB ($\beta=-.267, p < .01$).

Table 5a. *Multiple Regression for WIF and WFPCB on the Outcomes- U.S.*

Predictor Variable	WFPCB	JS	OC	TI	PWB
	β	β	β	β	β
Step 1					
Gender		-0.071	-0.068	0.114	0.003
Age		-0.012	-0.016	0.054	0.09
Marital Status		0.026	-0.036	0.065	0.133*
Children		0.065	0.053	-0.001	0.138
Tenure		0.120	-0.013	-0.023	0.064
Work hours		0.113	0.076	-0.119	0.112
$R^2\Delta$		(0.064)*	(0.045)	(0.052)	(0.059)
Step 2					
WIF	0.278***	-0.213***	-0.108	0.247***	-0.375***
WFPCB		-0.479***	-0.543***	0.422***	-0.263***
$R^2\Delta$	(0.061)	(0.304)***	(0.317)***	(0.256)***	(.227)***
R^2 total	0.113	0.368	0.362	0.308	0.286
Adjusted R^2	0.082	0.342	0.336	0.272	0.256
Overall F	3.639***	14.322***	13.989***	8.413***	9.655***

Note.

* $p < .05$; ** $p < .01$; *** $p < .001$; N range from 54 to 205

β s are standardized regression weights

Table 5a. *Multiple Regression for WIF and WFPCB on the Outcomes- U.S. (Continued)*

Predictor Variable	TP	OCB (self)	OCB (other)	CWB (self)	CWB (other)
	β	β	β	β	β
Step 1					
Gender	0.082	0.048	-0.106	-0.195**	-0.109
Age	0.096	-0.023	0.111	-0.081	-0.023
Marital Status	0.144	0.011	0.137	0.138	-0.267
Children	0.074	0.119	-0.01	-0.249**	-0.357*
Tenure	0.050	0.06	0.004	-0.057	-0.069
Work hours	0.038	0.102	-0.095	-0.16*	-0.037
$R^2\Delta$	(0.035)	(0.029)	(0.065)	(.157)***	(0.152)
Step 2					
WIF	0.181	0.016	0.229	0.119	-0.033
WFPCB	-0.366*	-0.178*	-0.378*	0.076	0.129
$R^2\Delta$	(0.102)	(0.029)	(.114)*	(0.021)	(0.012)
R^2 total	0.137	0.058	0.179	0.178	0.164
Adjusted R^2	-0.007	0.019	0.04	0.142	0.016
Overall F	0.951	1.476	1.283	4.984***	1.105

Note.

* $p < .05$; ** $p < .01$; *** $p < .001$; N range from 54 to 205

β s are standardized regression weights

Table 5b. *Multiple Regression for WIF and WFPCB on the Outcomes- China*

Predictor Variable	WFPCB β	JS β	OC β	TI β	PWB β
Step 1					
Gender		-0.11	0.111	0.002	-0.007
Age		0.05	-0.112	-0.06	0.031
Marital Status		0.126	0.243*	-0.183	0.017
Children		0.059	0.115	0.166	0.006
Tenure		-0.13	0.193	-0.162	-0.259*
Work hours		-0.008	0.003	0.051	-0.281**
$R^2\Delta$		(0.085)	(.103)*	(0.089)	(0.369)***
Step 2					
WIF	0.244***	-0.088	-0.071	0.275*	-0.368***
WFPCB		-0.407***	-0.436***	0.356***	-0.126
$R^2\Delta$	(0.013)	(0.141)***	(.159)***	(0.163)***	(0.099)***
R^2 total	0.223	0.226	0.262	0.252	0.467
Adjusted R^2	0.177	0.172	0.212	0.198	0.431
Overall F	4.851***	4.189***	5.159***	4.679***	12.727***

Note.

* $p < .05$; ** $p < .01$; *** $p < .001$; N range from 99 to 125

β s are standardized regression weights

Table 5b. *Multiple Regression for WIF and WFPCB on the Outcomes- China (Continued)*

Predictor Variable	TP β	OCB (self) β	OCB (other) β	CWB (self) β	CWB (other) β
Step 1					
Gender	0.175	0.066	0.105	-0.171*	-0.165
Age	-0.005	0.131	-0.309	-0.299*	0.081
Marital Status	0.246*	-0.025	0.172	-0.129	-0.278**
Children	-0.016	-0.282*	-0.077	0.066	0.065
Tenure	0.367	0.123	0.467**	-0.187	-0.556***
Work hours	0.031	0.183	0.198	-0.094	-0.079
$R^2\Delta$	(.285)***	(0.050)	(0.147)**	(.303)***	(.402)***
Step 2					
WIF	0.055	-0.27*	-0.078	0.016	-0.054
WFPCB	0.067	-0.267**	-0.152	0.013	0.073
$R^2\Delta$	(0.006)	(.106)***	(0.023)	(0.000)	(0.006)
R^2 total	0.291	0.156	0.171	0.303	0.408
Adjusted R^2	0.229	0.096	0.106	0.254	0.361
Overall F	4.628***	2.629*	2.628*	6.152***	8.613***

Note.

* $p < .05$; ** $p < .01$; *** $p < .001$; N range from 99 to 125

β s are standardized regression weights

Mediation Analysis

Hypothesis 4 states that the work-family psychological contract breach serves a mediating role between WIF and the outcomes. As various tests for mediation effect are available, decisions were needed as to which method was most appropriate and applicable. Wood, Goodman, Beckman and Cook's (2008) most recent review of mediation testing and results reporting was therefore consulted. Wood et al. (2008) recommended that: 1) when using Baron and Kenny's (1986) causal steps approach, all four conditions need to be examined; 2) this should also be supplemented with "a test of differences in coefficients or products of coefficients, such as the Sobel (1982) test" (p.291). Whereas the Sobel test requires a relatively larger sample, the bootstrap technique can be applied to moderate or small sample size (e.g. 20–80 cases; Shrout & Bolger, 2002).

Based on the above recommendations from Wood et al. (2008), the Baron and Kenny (1986) procedure in combination with the Sobel test and bootstrapping procedures were used to test the mediation effect of WFPCB on the relations between WIF and the outcomes. Specifically, a SPSS macro provided by Hayes (<http://www.comm.ohio-state.edu/ahayes/sobel.htm>) aided the mediation test. Dr. Hayes' website provides download of the SPSS macro as well as instructions for using it. Following the instructions, the macro was downloaded and executed in SPSS, resulting in a new SPSS syntax command, SOBEL, available for later use. To run mediation, the following command was used:

SOBEL y=yvar/x=xvar/m=mvar/boot=z.

(*yvar* is the dependent variable (DV), *xvar* is the independent variable(IV), *mvar* is the proposed mediating variable, and *z* specifies the number of bootstrap re-samples needed, in increments of 1000 up to a maximum of 1,000,000; The bootstrapping module is deactivated, when *z* is set to 0 or any number less than 1000; listwise deletion is applied). According to the instructions, requesting a bootstrapped estimate when the original sample is very small can result in error, but the macro usually worked with a minimum *n* of 25. Therefore, the macro should work for the current study with samples of more than 200 participants, and *z* was specified to be 1000 for the current study (enough to achieve stable estimates for the study).

The output from the SPSS macros provides unstandardized coefficients for the regression equations discussed by Baron and Kenny (1986) as required to test mediation. Figure 2 provides an example of the output from the SPSS macro for the outcome variable of job satisfaction.

Figure 2. *Sample Output for the Mediating Role of WFPCB between WIF and Job Satisfaction*

```

-----
DIRECT AND TOTAL EFFECTS
      Coeff   s.e.    t   Sig(two)
b(YX)  -.1206   .0287  -4.2083  .0000
b(MX)   .1520   .0351   4.3267  .0000
b(YM.X) -.4120   .0463  -8.8914  .0000
b(YX.M) -.0580   .0258  -2.2503  .0254

INDIRECT EFFECT AND SIGNIFICANCE USING NORMAL DISTRIBUTION
      Value   s.e.  LL 95 CI  UL 95 CI   Z   Sig(two)
Sobel  -.0626   .0162  -.0943  -.0309  -3.8708  .0001

BOOTSTRAP RESULTS FOR INDIRECT EFFECT
      Mean   s.e.  LL 95 CI  UL 95 CI  LL 99 CI  UL 99 CI
Effect  -.0627   .0161  -.0972  -.0329  -.1073  -.0236

SAMPLE SIZE
      234

```

NUMBER OF BOOTSTRAP RESAMPLES
1000

----- END MATRIX

According to Preacher and Hayes (1994), $b(YX)$ is the total effect of the IV on the DV; $b(MX)$, is the effect of the IV on the proposed mediator; $b(YM.X)$, is the effect of the mediator on the DV, controlling for the IV; and $b(YX.M)$ is the direct effect of the IV on the DV, controlling for the mediator. Baron and Kenny (1986) suggested that a full mediation effect would require significant results from the first three steps and non-significant results from the last step; a partial mediation effect, on the other hand, would result in a retained significant relationship between the IV and DV after controlling for the mediator, yet with reduced coefficients.

Table 6a and 6b show the results from the Sobel (1982) test using the SPSS macro with bootstrapping. Hypothesis 4 proposed a mediating role of WFPCB between WIF and all the outcome variables studied, which was partially supported in the U.S. sample. Whereas significant direct relationships were found for the attitudinal outcome variables of job satisfaction, organizational commitment, and turnover intention, as well as psychological well-being, there were no significant direct path between WIF and the behavioral outcomes of task performance, OCB and CWB. Therefore, the requirement of a significant direct relationship between IV and DV for mediation was not met for the behavioral variables (although some argue against this requirement; see Shrout & Bolger, 2002). Table 6a indicates, however, that the relationship between WIF and organizational commitment was fully mediated by WFPCB. The coefficient was no longer significant when controlling for WFPCB, and the Sobel Z is also significant ($p < .001$). In addition,

partial mediation effect was revealed for job satisfaction, turnover intention, and psychological well-being. Their coefficients were reduced in size when counting for WFPCB, although still significant. Table 6b indicates that in the Chinese sample, the Sobel (1982) test was significant for three variables. Full mediation was supported for job satisfaction, and partial mediation for psychological well-being. For organizational commitment, the direct path from WIF was not significant, and therefore, failing to support the mediating role of WFPCB.

Table 6a. *Mediation Results Using Sobel (1982) Test: WIF, WFPCB, and Outcomes- U.S.*

	<i>coefficient</i>	<i>s.e.</i>	<i>t</i>	<i>sig (two)</i>	Sobel Z
Job Satisfaction N=234					
b(YX)	-0.1206	0.0287	-4.2083	0.0000	-3.8708***
b(MX)	0.152	0.0351	4.3267	0.0000	
b(YM.X)	-0.412	0.0463	-8.8914	0.0000	
b(YX.M)	-0.058	0.0258	-2.2503	0.0254	
Organizational Commitment N=234					
b(YX)	-0.1686	0.0483	-3.4899	0.0006	-3.911***
b(MX)	0.1496	0.0351	4.2608	0.0000	
b(YM.X)	-0.763	0.0754	-10.1248	0.0000	
b(YX.M)	-0.0545	0.0418	-1.3021	0.1942	
Turnover Intention N=174					
b(YX)	0.0609	0.0141	4.3086	0.0000	2.9562**
b(MX)	0.1419	0.0405	3.5068	0.0006	
b(YM.X)	0.1399	0.0245	5.7149	0.0000	
b(YX.M)	0.0411	0.0134	3.053	0.0026	
Psychological Well-being N=232					
b(YX)	-0.2565	0.0444	-5.7745	0.0000	-3.3141***
b(MX)	0.1591	0.0359	4.4309	0.0000	
b(YM.X)	-0.3964	0.0774	-5.1184	0.0000	
b(YX.M)	-0.1934	0.0439	-4.4031	0.0000	
Task Performance (other report) N=64					
b(YX)	0.0328	0.0357	0.9198	0.3612	-1.8434
b(MX)	0.2146	0.0634	3.384	0.0012	
b(YM.X)	-0.1584	0.0691	-2.2922	0.0254	
b(YX.M)	0.0668	0.0376	1.7787	0.0803	
OCB (self report) N=228					
b(YX)	0.0186	0.0526	0.3535	0.7241	-2.5079*
b(MX)	0.1523	0.0356	4.2762	0	
b(YM.X)	-0.3065	0.0964	-3.1799	0.0017	
b(YX.M)	0.0653	0.0537	1.2168	0.225	
OCB (other report) N=56					
b(YX)	0.0039	0.1378	0.0285	0.9773	-2.2633*
b(MX)	0.2107	0.0638	3.3052	0.0016	
b(YM.X)	-0.8352	0.2574	-3.2448	0.0019	
b(YX.M)	0.1799	0.1392	1.2928	0.201	
CWB (self report) N=214					
b(YX)	0.0444	0.078	0.5687	0.5702	1.8617
b(MX)	0.1629	0.0366	4.4456	0	
b(YM.X)	0.3049	0.1451	2.1014	0.0368	
b(YX.M)	-0.0053	0.0809	-0.0654	0.948	
CWB (other report) N=60					
b(YX)	0.0619	0.1156	0.5355	0.5943	0.6362
b(MX)	0.2397	0.0661	3.628	0.0006	
b(YM.X)	0.1547	0.2307	0.6703	0.5054	
b(YX.M)	0.0248	0.1286	0.1929	0.8477	

Note: X= Work Interference with Family (WIF)
M= Work-Family Psychological Contract Breach (WFPCB)
* p< .05. ** p< .01. *** p< .001

Table 6b. *Mediation Results Using Sobel (1982) Test: WIF, WFPCB, and Outcomes- CN*

	<i>coefficient</i>	<i>s.e.</i>	<i>t</i>	<i>sig (two)</i>	Sobel Z
Job Satisfaction N=211					
b(YX)	-0.0464	0.0163	-2.8421	0.0049	-2.9690**
b(MX)	0.0882	0.0237	3.729	0.0002	
b(YM.X)	-0.2294	0.0452	-5.0805	0.0000	
b(YX.M)	-0.0262	0.016	-1.6419	0.1021	
Organizational Commitment N=212					
b(YX)	-0.0292	0.0312	-0.936	0.3503	-2.9830**
b(MX)	0.087	0.0238	3.6589	0.0003	
b(YM.X)	-0.4553	0.0852	-5.3403	0.0000	
b(YX.M)	0.0104	0.0303	0.3422	0.7326	
Turnover Intention N=206					
b(YX)	0.0395	0.0093	4.2328	0.0000	1.8253
b(MX)	0.0861	0.0237	3.6347	0.0004	
b(YM.X)	0.0598	0.0273	2.1892	0.0297	
b(YX.M)	0.0343	0.0095	3.6001	0.0004	
Psychological Well-being N=212					
b(YX)	-0.4639	0.0461	-10.0695	0.0000	-2.7380**
b(MX)	0.088	0.0232	3.7851	0.0002	
b(YM.X)	-0.541	0.1319	-4.1015	0.0001	
b(YX.M)	-0.4163	0.0459	-9.0665	0.0000	
Task Performance (other report) N=169					
b(YX)	0.1257	0.0363	3.4662	0.0007	1.3027
b(MX)	0.0516	0.0311	1.6623	0.0983	
b(YM.X)	0.2179	0.089	2.4477	0.0154	
b(YX.M)	0.1144	0.036	3.1766	0.0018	
OCB (self report) N=211					
b(YX)	-0.0435	0.0897	-0.4843	0.6287	-1.5902
b(MX)	0.0794	0.0231	3.4388	0.0007	
b(YM.X)	-0.4993	0.2673	-1.8678	0.0632	
b(YX.M)	-0.0038	0.0917	-0.0417	0.9668	
OCB (other report) N=186					
b(YX)	0.1032	0.1054	0.9793	0.3287	-1.1474
b(MX)	0.08	0.0271	2.9508	0.0036	
b(YM.X)	-0.3761	0.286	-1.315	0.1902	
b(YX.M)	0.1333	0.1077	1.2383	0.2172	
CWB (self report) N=207					
b(YX)	-0.3548	0.0789	-4.4957	0.0000	-.7788
b(MX)	0.0824	0.0235	3.5069	0.0006	
b(YM.X)	-0.195	0.2348	-0.8306	0.4072	
b(YX.M)	-0.3387	0.0813	-4.1658	0.0000	
CWB (other report) N=183					
b(YX)	-0.5377	0.108	-4.9772	0.0000	-.6967
b(MX)	0.0743	0.027	2.7565	0.0064	
b(YM.X)	-0.2284	0.2982	-0.766	0.4447	
b(YX.M)	-0.5208	0.1104	-4.7166	0.0000	

Note: X= Work Interference with Family (WIF)

M= Work-Family Psychological Contract Breach (WFPCB)

* p< .05. ** p< .01. *** p< .001

Moderation Analysis

For hypothesis 5 and 6 regarding the moderating effect of the cultural value of individualism-collectivism (IC; individualism was used in the analyses, which was reverse coded from collectivism), they were tested using multiple regressions. Hypothesis 5 stated that IC moderated the relationship between WIF and WFPCB such that the relationship would be stronger with higher individualism. Therefore, the interaction term of WIF and IC was created. For Hypothesis 6, which looks at the moderating effect of IC on WFPCB and the outcomes, the interaction term of WFPCB and IC was created. After entering the demographic variables of gender, age, marital status, number of children, tenure and work hours into the regression equation as Step 1, WIF, IC and their interaction term were entered at Step 2. Similarly, WFPCB, IC and their interaction term were entered in Step 2 for testing hypothesis 6a and 6b. The same steps were repeated for the different outcome variables.

Results from the multiple regression analyses indicated that none of the interaction term was significant for the U.S. sample. Therefore, Hypothesis 5 and 6a and 6b were not supported in the U.S. sample. For the Chinese sample, IC and WFPCB had a significant interaction effect in the expected direction for the outcome variable of organizational commitment ($\beta = -.307, p < .001$), such that the relationship between WFPCB and organizational commitment was stronger for those higher on individualism than those lower on the value. In addition, the interaction term approached significance for the other (supervisor) report of CWB. These results for the Chinese sample are shown in Table 7 below. Also, Figure 3 illustrates the interaction effect between WFPCB and IC on organizational commitment.

Table 7. Moderated Regression of WFPCB and Individualism on Organizational Commitment and Supervisor Ratings of CWB- China

Predictor Variable	WFPCB	CWB (other)
	(N=124) β	(N=108) β
Step 1		
Gender	0.036	-0.196*
Age	-0.004	0.134
Marital Status	0.288**	-0.248*
Children	0.11	0.098
Tenure	0.094	-0.613***
Work hours	-0.126	-0.161
$R^2\Delta$	(0.121)*	(.412)***
Step 2		
WFPCB	-0.532***	-0.011
Individualism (IND)	-0.094	0.063
WFPCB*IND	-0.307***	-0.159†
$R^2\Delta$	(0.244)***	(0.024)
R^2 total	0.365	0.436
Adjusted R^2	0.315	0.385
Overall F	7.291***	8.435***

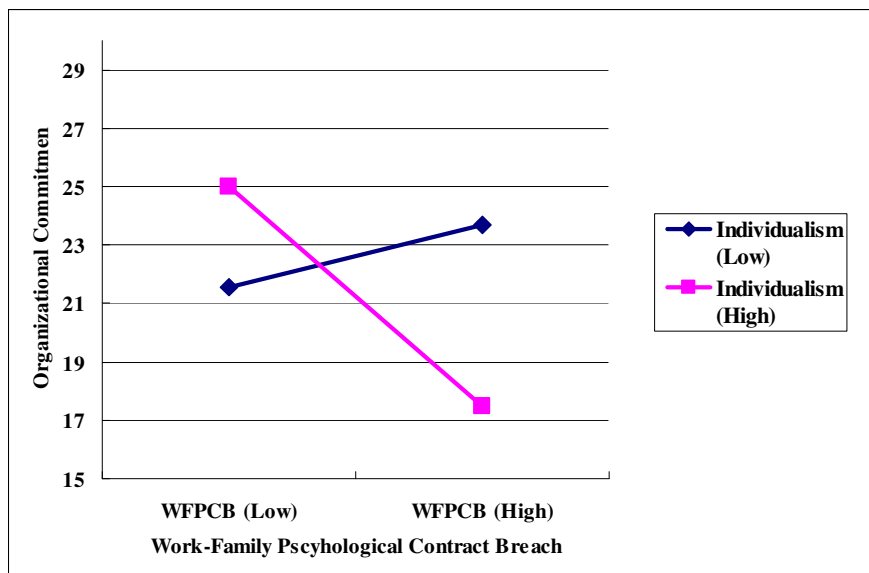
Note.

Gender: Male=1 Female =2; Marital Status: 1=Married/Cohabiting,

2=Unmarried/Separated; † $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

β s are standardized regression weights

Figure 3. Moderating Effect of Individualism on WFPCB & Organizational Commitment



Research Questions

In addition to the hypotheses, research questions were also posed regarding cross-country comparisons. Based on theoretical reasoning for the potential moderating effect of individualism-collectivism: 1) Will we find stronger correlation in the U.S. than China for WIF and WFPCB; 2) Will we find stronger correlation in the U.S. than China for the relationships between WFPCB and the attitudinal and behavioral outcomes; and 3) Will the correlation between WFPCB and psychological well-being be stronger in China than in the U.S.?

Measurement equivalence. To better answer these questions, analysis for checking measurement equivalence of the scales used in the U.S. and China was first conducted, and the four-phase procedure outlined in Riordan and Vandenberg (1994) was followed. In phase 1, the null hypothesis of equal variance-covariance matrices for the U.S. and Chinese samples was examined. In case that significant difference was found, the factor structure from both samples was then compared in the second phase. If the null hypothesis from phase 2 was accepted, the factor loadings could then be compared in a third phase. If the null hypothesis of equal factor loadings was further supported, the mean difference tests could be carried out in the fourth and final phase.

LISREL 8.8 (Jöreskog & Sörbom, 2006) was used to compare the variance-covariance matrices from the U.S. and Chinese samples for each measure respectively. Based on the variance-covariance matrices that have been input, LISREL outputs a series of indices to help researchers determine the fit between the variance-covariance matrices from different groups. Because the chi-squares are known to be very sensitive to differences between the matrices especially when sample size is large, other indices

should be examined as well. Based on survey results from Coover and Craiger (2000), SEM researchers consider the root-mean-square error of approximation (RMSEA; Steiger & Lind, 1980) and the comparative fit index (CFI; Bollen, 1989) the most important. Therefore, these two indices were examined together with the normed fit index (NFI; Bentler & Bonett, 1980) and the nonnormed fit index (NNFI; Tucker & Lewis, 1973) in the current study. There are some general rules for evaluating the above mentioned indices. For RMSEA, a value of .05 or less is generally considered a close fit (up to .08 represent reasonable errors of approximation; Browne & Cudeck, 1993). The CFI, NFI, and NNFI values can range from 0 to 1, with higher values indicating better fit. Values above .90 are generally considered satisfactory (Hoyle, 1995).

During phase 1, significant chi-squares and RMSEA values larger than .08 were found for most of the measures, with the exception of the measure for job satisfaction. Most measures showed reasonable (above .90) values for CFI, NFI and NNFI, however, as chi-squares and RMSEA are considered the most important indices of fit, the results seem to point out potential differences between the measures administered in the U.S. and in China. Therefore, the second phase of checking the factor structure equivalence was conducted as the next step. Results from the second phase revealed again significant chi-square values and unsatisfactory RMSEA values, despite satisfactory CFI, NFI, and NNFI values for most measures. Measurement equivalence analysis was thus stopped at the second phase, and the results brought caution about the measurement invariance across the two samples.

A t-test was conducted comparing the U.S. and Chinese sample on the means of the main study variables. Significant differences were indeed found between the two

samples for all the main variables, except for job satisfaction, task performance and the other ratings of OCB. A comparison of the correlations among the variables between the two samples also supported what was proposed in the research questions (correlations were stronger in the U.S. for WIF and WFPCB, for WFPCB and the attitudinal/behavioral outcomes, and weaker for WFPCB and psychological well-being). However, because of the concern for potential measurement variance, the differences in means cannot be interpreted to indicate difference in the actual level of the constructs measured, and the pattern of correlations cannot be inferred as providing evidence for the research questions.

Differences in the demographic variables were further examined. Significant results were found for age ($t=6.5, p<.001$), and the number of work hours per week ($t=5.5, p<.001$), with the U.S. participants being older and work more hours. Chi-square tests conducted also show statistically significant differences between the two samples for gender, education, whether their spouse work, and the comparison between their current work hours and the number they wish to work (more than, the same, or fewer than I wish to work). Two-way analysis of variance (ANOVA) revealed that several of the demographic variables had direct effect on the main variables and some had interaction effect with the country variable (U.S.=1 and China=2). For example, age and work hours had significant interaction effect with country on psychological well-being.

Based on the above analyses on the demographics, it is possible that differences in the sample demographic characteristics might have contributed to the potential measurement variance between the two samples, which needs to be determined by further analysis. Although efforts were spent on recruiting participants from a wide range of

industries and organizations to seek better representation of the countries' populations in general, future research may benefit from gathering data from a single organization across the countries to be able to better match the samples in terms of their demographic characteristics.

Supplemental Analysis

This section presents a more detailed look at the findings from the composite part of the WFPCB measure. Again, the composite measure consists of a list of 27 items related to work-family benefits and support employers have been providing (according to literature review and results from the interviews). The composite measure results were not used for testing the hypotheses, because both meta-analytic review in the literature (Zhao et al., 2007) and results from the pilot study point to the relatively smaller effect sizes that can be achieved when composite measures of contract breach are used. As mentioned above, reasons for the smaller effect sizes include incomplete content items and assumption of equal weightings for all items. However, the WFPCB composite measure was still included in the final survey study to gather more insights into employee expectations of work-family assistance from the employers, their perception of the promises made by employers, and the actual provision of assistance from the employers. Table 8 to 12 below present a series of frequency analyses conducted to show the expectation, promise and usage of each item on the measure.

Table 8 presents a general view of the results for both the U.S. and China. In line with results from the interviews and the pilot study, the percentage of participants that perceived an item to be "promised" is smaller than the percentage "expected" across the items for both countries. Interestingly, for the U.S. sample, the percentage of participants

that indicated an item to be actually “provided” is generally higher than the percentage “promised.” This may indicate that employers of this sample are careful about making promises. It could also mean that the participants were only reflecting on written or more explicit promises, although the scale instructions direct respondents to think about both explicit and implicit agreement.

Table 8. *Frequency Analysis Results for the Work-Family Psychological Contract Composite Items- U.S. & China*

	US			China		
	Expected	Promised	Provided	Expected	Promised	Provided
A reasonable workload	73.4%	35.3%	42.7%	84.1%	73.8%	71.7%
Reasonable amount of business travel	49.7%	26.9%	46.2%	35.6%	23.2%	22.7%
Reasonable amount of vacation time	65.7%	47.6%	67.8%	80.3%	75.5%	72.5%
Reasonable amount of paid leave	61.5%	42.3%	58.7%	54.9%	28.8%	31.8%
Flexitime (flexible start and end time)	48.6%	34.3%	61.9%	60.1%	28.8%	26.6%
Work from home	32.5%	21.0%	44.8%	37.8%	11.2%	8.2%
Work from a mobile office	15.7%	10.5%	22.7%	27.5%	11.2%	5.2%
Compressed work week	14.3%	6.3%	16.8%	30.0%	10.3%	2.1%
Job-sharing	8.7%	3.8%	10.5%	35.2%	11.6%	3.9%
Part-time	10.1%	8.0%	15.4%	26.6%	10.3%	2.1%
Paid maternity leave	37.1%	22.0%	36.7%	20.6%	16.3%	20.6%
Paid paternity leave	30.4%	16.4%	26.6%	19.3%	13.7%	13.7%
Onsite childcare	12.6%	3.1%	5.9%	26.2%	7.3%	3.4%
Childcare referral	13.6%	4.5%	10.8%	22.3%	6.9%	2.6%
Eldercare referral	11.9%	3.8%	8.0%	23.6%	7.3%	2.1%
Onsite gym	19.9%	12.2%	30.1%	61.4%	11.6%	5.2%
Gym membership/discount	20.3%	10.5%	23.4%	48.1%	13.3%	8.2%
Annual physical exam	19.2%	8.0%	16.4%	73.8%	63.1%	73.0%
Onsite physician	8.0%	4.2%	8.4%	23.6%	13.7%	12.4%
Other health-promoting initiatives	23.1%	11.5%	29.0%	24.5%	14.2%	14.6%
Transportation/Parking	40.9%	24.1%	51.4%	76.8%	57.5%	58.4%
Food services/Cafeteria	24.5%	15.4%	36.0%	79.4%	52.4%	52.8%
Other services (haircut, laundry, car wash, and etc.)	8.4%	2.4%	7.3%	42.9%	16.3%	12.0%
After-work activities (social clubs, sports events, outings, etc.)	19.2%	7.7%	25.9%	65.7%	59.7%	62.2%
Organization sponsored trips	14.3%	6.6%	17.5%	71.2%	67.4%	74.7%
Overtime compensation (pay, reimbursement for taxi, meals, etc.)	36.4%	16.1%	33.6%	59.7%	48.9%	51.1%
Supervisor support for using the above-mentioned benefits	32.2%	14.0%	30.8%	36.9%	27.0%	28.8%

Note: Expected= Employee expects it; Promised= Employer has promised it; Provided= Employer actually provides it

When comparing across the two samples, there are both similarities and clear difference in what was “expected,” what was “promised,” and what was “provided.” In Table 9 to 11, the percentages were ordered and the top ten items were presented for each sample. Summarizing across Table 9 to 11, four items make it into the top ten list for both countries for most expected, most promised, and most provided, and they are “a reasonable workload,” “reasonable amount of vacation time,” “transportation/parking,” and “overtime compensation.” Therefore, employees and employers seem to be on the same page regarding these items. The most expected items also include “flextime”, the most promised items also include “flextime” and “reasonable amount of paid leave”, and the most provided items also include “food services/cafeteria.”

Although not presented here, analyses also show that for the bottom ten items, and therefore, the least expected, least promised, and least provided, items that make it into the bottom ten list for both countries include five items, namely, “compressed work week,” “onsite childcare,” “childcare referral,” “eldercare referral,” and “part-time.” “Onsite physician” and “work from a mobile office” were also on the least expected list.

Further analysis was also conducted to see for each item, among those that perceived it to be “promised,” what is the percentage of them that also reported the item to be “provided” by their employers. Higher percentage would indicate higher fulfillment and vice versa. As shown in Table 12, four items are most fulfilled across the two samples, namely, “annual physical exam,” “transportation/parking.” “food services/cafeteria,” and “overtime compensation.” On the other hand, the least fulfilled/most breached items include “work from home,” work from a mobile office,” “job-sharing,” “onsite childcare,” and “eldercare referral.”

Table 9a. *Top Items Expected by the U.S. Participants*

	U.S.	China	U.S. Order	China Order
A reasonable workload	73.4%	84.1%	1	1
Reasonable amount of vacation time	65.7%	80.3%	2	2
Reasonable amount of paid leave	61.5%	54.9%	3	11
Reasonable amount of business travel	49.7%	35.6%	4	16
Flextime (flexible start and end time)	48.6%	60.1%	5	9
Transportation/Parking	40.9%	76.8%	6	4
Paid maternity leave	37.1%	20.6%	7	26
Overtime compensation (pay, reimbursement for taxi, meals, etc.)	36.4%	59.7%	8	10
Work from home	32.5%	37.8%	9	14
Supervisor support for using the above-mentioned benefits	32.2%	36.9%	10	15

Note: The items in bold are the ones that are top ten items for both the U.S. and Chinese participants

Table 9b. *Top Items Expected by the Chinese Participants*

	China	U.S.	China Order	U.S. Order
A reasonable workload	84.1%	73.4%	1	1
Reasonable amount of vacation time	80.3%	65.7%	2	2
Food services/Cafeteria	79.4%	24.5%	3	12
Transportation/Parking	76.8%	40.9%	4	6
Annual physical exam	73.8%	19.2%	5	16
Organization sponsored trips	71.2%	14.3%	6	19
After-work activities (social clubs, sports events, outings, etc.)	65.7%	19.2%	7	17
Onsite gym	61.4%	19.9%	8	15
Flextime (flexible start and end time)	60.1%	48.6%	9	5
Overtime compensation (pay, reimbursement for taxi, meals, etc.)	59.7%	36.4%	10	8

Note: The items in bold are the ones that are top ten items for both the U.S. and Chinese participants

Table 10a. *Top Items Promised by Employers Reported by the U.S. Participants*

	US	China	US Order	China Order
Reasonable amount of vacation time	47.6%	75.5%	1	1
Reasonable amount of paid leave	42.3%	28.8%	2	9
A reasonable workload	35.3%	73.8%	3	2
Flexitime (flexible start and end time)	34.3%	28.8%	4	10
Reasonable amount of business travel	26.9%	23.2%	5	12
Transportation/Parking	24.1%	57.5%	6	6
Paid maternity leave	22.0%	16.3%	7	13
Work from home	21.0%	11.2%	8	21
Paid paternity leave	16.4%	13.7%	9	16
Overtime compensation (pay, reimbursement for taxi, meals, etc.)	16.1%	48.9%	10	8

Note: The items in bold are the ones that are top ten items for both the U.S. and Chinese participants

Table 10b. *Top Items Promised by Employers Reported by the Chinese Participants*

	China	US	China Order	US Order
Reasonable amount of vacation time	75.5%	47.6%	1	1
A reasonable workload	73.8%	35.3%	2	3
Organization sponsored trips	67.4%	6.6%	3	20
Annual physical exam	63.1%	8.0%	4	17
After-work activities (social clubs, sports events, outings, etc.)	59.7%	7.7%	5	19
Transportation/Parking	57.5%	24.1%	6	6
Food services/Cafeteria	52.4%	15.4%	7	11
Overtime compensation (pay, reimbursement for taxi, meals, etc.)	48.9%	16.1%	8	10
Reasonable amount of paid leave	28.8%	42.3%	9	2
Flexitime (flexible start and end time)	28.8%	34.3%	10	4

Note: The items in bold are the ones that are top ten items for both the U.S. and Chinese participants

Table 11a. *Top Items Actually Provided by Employers Reported by the U.S. Participants*

	US	China	US Order	China Order
Reasonable amount of vacation time	67.8%	72.5%	1	3
Flextime (flexible start and end time)	61.9%	26.6%	2	11
Reasonable amount of paid leave	58.7%	31.8%	3	9
Transportation/Parking	51.4%	58.4%	4	6
Reasonable amount of business travel	46.2%	22.7%	5	12
Work from home	44.8%	8.2%	6	19
A reasonable workload	42.7%	71.7%	7	4
Paid maternity leave	36.7%	20.6%	8	13
Food services/Cafeteria	36.0%	52.8%	9	7
Overtime compensation (pay, reimbursement for taxi, meals, etc.)	33.6%	51.1%	10	8

Note: The items in bold are the ones that are top ten items for both the U.S. and Chinese participants

Table 11b. *Top Items Actually Provided by Employers Reported by the Chinese Participants*

	China	US	China Order	US Order
Organization sponsored trips	74.7%	17.5%	1	18
Annual physical exam	73.0%	16.4%	2	20
Reasonable amount of vacation time	72.5%	67.8%	3	1
A reasonable workload	71.7%	42.7%	4	7
After-work activities (social clubs, sports events, outings, etc.)	62.2%	25.9%	5	15
Transportation/Parking	58.4%	51.4%	6	4
Food services/Cafeteria	52.8%	36.0%	7	9
Overtime compensation (pay, reimbursement for taxi, meals, etc.)	51.1%	33.6%	8	10
Reasonable amount of paid leave	31.8%	58.7%	9	3
Supervisor support for using the above-mentioned benefits	28.8%	30.8%	10	11

Note: The items in bold are the ones that are top ten items for both the U.S. and Chinese participants

In line with the interview and pilot results, whereas a higher percentage of the U.S. sample report provision of benefits in general, especially for flexible work schedule and dependent care, a higher percentage of the Chinese sample reported more provision of “annual physical exam,” “after-work activities” and “company organization sponsored trips,” which may to some extent, reflect the residual influence of practices from state-owned companies.

Table 12. *Percentage of “Promised” Items “Provided” by Employers- U.S. & China*

	US	China	US Order	China Order
1 A reasonable workload	56.4%	86.5%	25	5
2 Reasonable amount of business travel	75.3%	58.5%	20	13
3 Reasonable amount of vacation time	84.6%	83.9%	12	8
4 Reasonable amount of paid leave	84.3%	71.2%	14	10
5 Flextime (flexible start and end time)	87.8%	68.2%	9	11
6 <i>Work from home</i>	57.1%	24.0%	24	20
7 <i>Work from a mobile office</i>	76.7%	15.4%	19	25
8 Compressed work week	83.3%	16.7%	15	24
9 <i>Job-sharing</i>	63.6%	22.2%	23	22
10 Part-time	82.6%	12.5%	17	27
11 Paid maternity leave	52.2%	64.9%	27	12
12 Paid paternity leave	85.1%	41.9%	10	16
13 <i>Onsite childcare</i>	55.6%	29.4%	26	18
14 Childcare referral	84.6%	25.0%	13	19
15 <i>Eldercare referral</i>	72.7%	23.5%	22	21
16 Onsite gym	91.4%	14.8%	6	26
17 Gym membership/discount	90.0%	16.7%	8	23
18 Annual physical exam	91.3%	91.0%	7	3
19 Onsite physician	83.3%	43.8%	16	15
20 Other health-promoting initiatives	93.9%	37.5%	4	17
21 Transportation/Parking	92.8%	91.7%	5	2
22 Food services/Cafeteria	97.7%	85.1%	2	7
23 Other services (haircut, laundry, car wash, and etc.)	100.0%	52.6%	1	14
24 After-work activities (social clubs, sports events, outings, etc.)	81.8%	86.1%	18	6
25 Organization sponsored trips	73.7%	92.3%	21	1
26 Overtime compensation (pay, reimbursement for taxi, meals, etc.)	95.7%	86.6%	3	4
27 Supervisor support for using the above-mentioned benefits	85.0%	74.2%	11	9

Note: Items in bold are the ones that are top ten fulfilled items for both the U.S. and Chinese participants; items in italics are the ones that are bottom ten fulfilled/top ten breached items for both the U.S. and Chinese participants

Chapter Six

Discussion

Key Findings

The current study employed both qualitative and quantitative methods to explore the role employee psychological contract plays in work-family issues in a cross-national context. Research was carried out in two countries and in three stages, with a preliminary interview study, a pilot survey study and a final full-scale survey study. Results from the series of studies highlight the relevance of the psychological contract construct in work and family research, provide evidence for the utility of the newly created measure of Work-Family Psychological Contract Breach (WFPCB), and revealed interesting differences between the U.S. and China both in the relationships among the variables and the measurement of these variables. This final chapter of the dissertation offers a summary of the major findings, discusses the theoretical and practical implications of the findings, and points out some limitations of the study and directions for future research.

Interview Study. Whereas the interviews conducted with the U.S. and Chinese participants provided rich information regarding work-life balance issues, their main contribution to the current study was identifying the item content for the work-family psychological contract. The interviews confirmed the categories of benefits found in past research including, flexible work schedule, dependent care, employee wellness programs and convenience services, but also uncovered some unique benefits offered in China such as company organized trips and outings, which are more of a collective nature.

Pilot Study. During the second stage of research, the WFPCB scale was created with both a composite measure and a global measure. With samples of over 60 participants from the U.S. and China, pilot study results show reasonable reliabilities for all the measures tested. The WFPCB scale worked well and more so for the global measure, which not only had good alpha reliability but also significant relationships with several outcome variables in both samples. Therefore, larger samples were collected for the main survey study to use these measures to test the hypotheses.

Hypothesis 1 to 3. Findings from the final study, which had over 200 participants from each country, provided partial support for the direct relationships among the variables. The direct path between WIF and outcomes was found to be significant for job satisfaction, psychological well-being and turnover intention for the U.S.; and for psychological well-being, turnover intention and OCB (self report) for China. WIF also correlated significantly and positively with the proposed mediator, WFPCB, in both samples. As for WFPCB and the outcomes, all links were significant (except CWB) in the U.S. sample and all three of the attitudinal variables plus OCB (self report) for the Chinese sample. In sum, there is strong although incomplete support for the direct relationships hypothesized, especially for the attitudinal variables, thus paving the road for potential mediating effect of WFPCB. Such results also reflect the potential impact WIF and WFPCB may have on important individual and organizational outcomes.

Hypothesis 4. To test the hypothesis of a mediating role of WFPCB between WIF and the outcome variables, the Sobel (1982) test in combination with Baron and Kenny's (1986) procedures were conducted using a SPSS macro with bootstrapping. Hypothesis 4 was partially supported, with evidence for full mediation of the link between WIF and

organizational commitment in the U.S. sample, and of the WIF-job satisfaction link in the Chinese sample. Partial mediation effect was revealed for job satisfaction, turnover intention, and psychological well-being for the U.S. and for psychological well-being alone for China.

There are several cases where the Sobel (1982) test was significant, against results from the Baron and Kenny's (1986) condition testing. Preacher and Hayes (2004) point out that the latter method has been found to suffer from low statistical power, whereas the former has been found to have greater power than other formal methods. They therefore proposed a strategy for determining mediation to only require that there is an effect to be mediated, and that the indirect effect is statistically significant in the hypothesized direction.

In some other cases, the direct path between the predictor WIF and the outcome was not significant in the first place despite a significant decrease in coefficients after controlling for the mediator WFPCB. Although the general assumption of an established mediation is a significant link between IV and DV, Shrout and Bolger (2002) argue that if the process to be mediated is theoretically distal, then testing the IV to DV relation may not be a prerequisite. In line with this reasoning, if the relationship between WIF and the behavioral outcomes is distal in the first place, testing the direct path may not be necessary for determining WFPCB's mediating role.

In sum, the current study provides some evidence for full and partial mediation of WIF and the attitudinal outcomes through WFPCB. It is likely that the accumulating influence of work interfering with family on employees' satisfaction, commitment and withdraw intentions is exerted through breaking the terms in employees' work-family

psychological contract. However, it is also important to keep in mind that finding statistically significant mediation effect does not in itself imply causation (Preacher & Hayes, 1994).

Hypothesis 5 and 6. The moderating effect of the cultural value of individualism-collectivism was tested with hypothesis 5 and 6. No significant interaction effect was uncovered with the U.S. sample. However, individualism was found to moderate the WFPCB-organizational commitment link such that the relationship was stronger for those higher on individualism than those lower on the value. This is in accordance with Thomas et al.'s (2003) theoretical reasoning that individualists and collectivists may react differently toward breach of the psychological contract. Individualists, being more concerned about self and their own wellbeing may have stronger initial reactions to contract breach. Additional analyses on the U.S. and China combined sample revealed significant interaction effect of WIF and IC on WFPCB, however, this cannot be interpreted due to insufficient evidence for measurement equivalence. This also leads to difficulty in answering the research questions that require cross-national comparisons. Test of measurement equivalence using LISREL causes concerns for the potential differences in the measurement of the variables in the U.S. and Chinese sample.

Overall, results from the current study were generally supportive of the reliability of the WFPCB global measure, and the direct relationships and mediation hypotheses proposed, especially for the attitudinal outcomes including, job satisfaction, organizational commitment and turnover intentions (thus providing criterion validity evidence for the WFPCB measure as well). On the other hand, further research can help

evaluate the moderating influence of individualism-collectivism both at the individual level and the country level.

Theoretical and Practical Implications

A theoretical contribution of this research is to unite the burgeoning research on the psychological contract theory and research on work and family. Despite growing interest and research effort in both areas, little has been done to bring them together. However, the concept of promise and breach of promise can be applied to work-family issues as well, in addition to the more traditional contract terms such as, pay, promotion and career development. This is particularly important in light of the rapid changes in work force composition, technology advances and societal trends. On the one hand, the traditional terms of the psychological contract have matured. On the other hand, the increasing workload and need for flexibility that follows global competition and collaboration, and the blurring of the boundaries between work and non-work aspects of life have raised both employee and employer awareness of work-family/life issues. This study, therefore, provides a first look at a new aspect of the psychological contract, the work-family psychological contract (and breach of the contract), and has shown evidence of its relationships with WIF and important work-related outcomes.

The current study is also in sync with recent development in psychological contract research that focuses on “i-deals” (Rousseau, 2005; Rousseau, Ho & Greenberg, 2006). “I-deals” or idiosyncratic psychological contract is particularly relevant in the work-family context. Employees of various ages, marital status, family situation, and ethnic and cultural backgrounds can have very different needs and expectations on how to best balance their work and life. By linking the psychological contract theory to WIF

and employee job attitudes, behaviors and well-being, this study helps lay the theoretical and empirical ground for further research on idiosyncratic work-family contracts.

In addition to the implications for research, findings from the study can also inform practice. The direct and mediating effect found for the work-family psychological contract breach on several outcomes, and its relationship with WIF indicates that employees not only form expectations and enter into tacit agreement with their employers regarding work-family issues, but may also be negatively influenced when the perceived promises are broken. The potential reduction in satisfaction with the job, commitment to the organization and increased intention to leave may in turn affect employers' bottom line. Therefore, it is important for both employees and organizations to be aware of, to better understand, and to honor the terms established in their work-family psychological contracts. For the employees, it can mean taking full advantage of existing work-family benefits and support, or negotiating with their employers when the terms are breached, or when a new contract is needed. A recent study on "i-deals" has shown with a sample of German employees from a government agency that personal initiative relates positively to "i-deal" negotiations (Hornung, Rousseau & Glaser, 2008).

For the employers, they need to understand the kinds of work-family agreement formed with their employees, provide relevant family/non-work-friendly benefits and support that meet employee expectations, and be willing to negotiate idiosyncratic deals with individuals. The afore mentioned study on "i-deals" (Hornung et al., 2008) also found that idiosyncratic deals on flexible work arrangements related to work-family conflict and overtime work. Furthermore, to prevent work-family psychological contract breach, employers need to readily adapt the terms as the psychological contract changes

over time due to changes in employee needs (e.g. move on to different stages of life), in organizational structure (e.g. mergers and acquisitions), or in societal trends (e.g. more women entering the workforce). This is obviously not an easy one-time effort, but requires a great deal of flexibility, and constant and persistent effort on the employer side.

Whereas direct influence and indirect role of WFPCB was found with both the U.S. and Chinese samples, the observed pattern and strength of the relationships differ. Although concerns for measurement invariance cautions against further interpretation of such findings, it nevertheless highlights the importance of employers being sensitive to potential cultural influences on the impact of work interference with family and on breach of the psychological contract. This is relevant not only for multinational and global companies but also for organizations with employees of diverse backgrounds.

Limitations of the Study

One limitation of the interview study conducted is that the interviews might have raised the awareness of the interviewees regarding work-life issues and benefits provided by their employers. Employees do not necessarily think about their expectations and organizational promises consciously. Their post-hoc recall of expectations and promises might have been affected by the recalling process itself. However, the rich data from the interviews not only provided anecdotal evidence and textual support for the proposed hypotheses, but also informed the creation of the WFPCB measure.

In terms of the survey study, the cross-sectional design limits the ability to draw causal inferences, and as Preacher and Hayes (2004) cautioned, evidence for mediation does not equal evidence for causation. Therefore, it is possible for the relationships to

flow in the direction opposite to what was hypothesized, and further research is needed to establish more evidence for the causal relations among the variables.

There is also some limitation to the data collected, in that although effort was made to collect other ratings of performance to reduce mono-method bias, there was only a relatively small sample from the U.S. Also, most U.S. participants chose to provide coworker report whereas supervisor ratings of performance were available with the Chinese sample. The researcher was told that for Chinese employees, it is within the supervisors' role to provide performance ratings but not the peers, which is in accordance with a more collectivistic and hierarchical culture. On the other hand, results also show statistically significant differences in several demographic variables (e.g. gender, age, education, and tenure) that may have affected the equivalence of the samples.

Directions for Future Research

Future research can improve on the current study by taking into consideration the above mentioned study limitations. More equivalent samples that match participants on demographics (e.g. from the same organization that operates across countries) need to be obtained to facilitate cross-national comparisons. Larger samples are also needed for performance ratings from the coworkers or supervisors, but can also help with power to detect indirect and moderating effect.

The Work-Family Psychological Contract Breach measure created for this study also needs to be further researched and refined. It may also be interesting to adapt it and integrate the categories from the composite measure with the global measure. For example, items can be created to reflect the degree of breach on flexible work schedules or dependent care, and participants can be asked to indicate agreement with statements

such as, “Almost all promises on providing flexibility in work arrangements have been fulfilled by my employer.” Although the specific and detailed content of the composite measure would be partly lost in this format, it can be an improvement on the global measure, and a tool of practical length for research.

Future research may also examine other important outcomes such as employee physical well-being and health indicators. It may also be interesting to extend the application of psychological contract from the workplace to family and the self, and explore whether there are tacit work-family agreement with one’s family and oneself, whether they relate to work-family conflict, and what are the consequences of fulfilling or breaching such contracts.

More research is also needed to understand the cultural influences on work interference with family and the psychological contract at the individual and national level. Studies of work-family psychological contract in different countries and across the countries can provide insights for employees and organizations that operate in an ever rapidly changing global environment.

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Appendices

Appendix A

A Sample of Interview Questions

1. Can you tell me a little bit about your work and the current organization you work for? For example, the industry you are in, what you do, how long you have been with this organization, and the general culture of the organization regarding work and family.
2. Are there things you expect your employer to provide to help you manage work-life balance issues?
3. Are there things you believe your employer has promised to provide to you to help you manage work-life balance issues?
4. If so, is it communicated to you through written documents, intranet communications, verbally, or just based on your observation of what others get?
5. Are there any instances where you believe your employer has broken their promises to help you with work and family issues?

If so, how did you feel when that happened? What was your reaction toward it?

If not, what has your employer done to keep the promises? How do you feel about them keeping their promises?

Thank you so much again for your help!

Appendix B

Employee Survey

WFPCB (Final Version)

For the following questions: Please check in the 1st column the items that you EXPECT your employer to provide to assist your work-life balance. Please check in the 2nd column the items that your employer has PROMISED to provide to assist your work-life balance. It may have been communicated to you explicitly (verbally or in writing) or implicitly (implied through other statement or behaviors, or treatment toward other employees). Please check in the 3rd column the items that your employer actually PROVIDES to assist your work-life balance.

* Instructions adapted from Kickul et al. (2002)

		I Expect It	Employer Promised It	Employer Provides It
1	A reasonable workload	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Reasonable amount of business travel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Reasonable amount of vacation time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Reasonable amount of paid leave	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Flexible work schedule			
5	Flextime (flexible start and end time)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Work from home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Work from a mobile office	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Compressed work week	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Job-sharing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Part-time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Dependent care			
11	Paid maternity leave	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	Paid paternity leave	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix B (continued)

13	Onsite childcare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	Childcare referral	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	Eldercare referral	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Employee wellness program			
16	Onsite gym	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	Gym membership/discount	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	Annual physical exam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19	Onsite physician	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20	Other health-promoting initiatives (corporate athlete, weight-watcher, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Convenience service			
21	Transportation/Parking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22	Food services/Cafeteria	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23	Other services (haircut, laundry, car wash, and etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Other			
24	After-work activities (social clubs, sports events, outings, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25	Organization sponsored trips	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26	Overtime compensation (pay, reimbursement for taxi, meals, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27	Supervisor support for using the above-mentioned benefits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Regarding the **work-life balance** related promises your employer has made to you: (1= strongly disagree to 5= strongly agree; ®: reverse coded)

1. Almost all the promises made by my employer during recruitment have been kept so far. ®
2. I feel that my employer has come through in fulfilling the promises made to me (explicitly or implicitly). ®
3. So far my employer has done an excellent job of fulfilling its promises to me. ®
4. I have not received everything promised to me in exchange for my contributions.
5. My employer has broken many of its promises to me even though I've upheld my side of the deal.

* Items were from Robinson and Rousseau (1994)

Appendix B (continued)

Work interference with family (WIF):

Please indicate your agreement or disagreement with each of the following questions:

	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
1. The demands of my work interfere with my home and family life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The amount of time my job takes up makes it difficult to fulfill family responsibilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Things I want to do at home do not get done because of the demands my job puts on me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. My job produces strain that makes it difficult to fulfill family duties	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Due to work-related duties, I have to make changes to my plans for family activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Job Satisfaction:

To what extent do you agree or disagree with each of the following statements?

	Disagree Very much	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree Very Much
1. In general, I don't like my job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. All in all, I am satisfied with my job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. In general, I like working here	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix B (continued)

Psychological well-being:

This section focuses on feelings and how these are affected by the pressure you perceive in your job. Please use the scale to answer each question by circling the relevant number. Consider the questions with reference to how you have felt over the last three months.

	Never or a little	Some of the time	A good part of the time	Most of the time
1. I feel sad	1	2	3	4
2. I feel unhappy	1	2	3	4
3. I feel good	1	2	3	4
4. I feel depressed	1	2	3	4
5. I feel blue	1	2	3	4
6. I feel cheerful	1	2	3	4
7. I feel nervous	1	2	3	4
8. I feel jittery	1	2	3	4
9. I feel calm	1	2	3	4
10. I feel fidgety	1	2	3	4
11. I get angry	1	2	3	4
12. I get aggravated	1	2	3	4
13. I get irritated or annoyed	1	2	3	4

Turnover Intention:

How often have you seriously considered quitting your current job over the past 6 months?

- Never
- Rarely
- Sometimes
- Somewhat often
- Quite often
- Extremely often

Appendix B (continued)

OCB & Task Performance

	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly Agree	Agree	Strongly Agree
1. Helps others who have been absent.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Helps others who have heavy work loads.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Takes time to listen to co-workers' problems and worries.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Goes out of way to help new employees.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Takes a personal interest in other employees.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Passes along information to co-workers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Assists supervisor with his/her work (when not asked).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Attendance at work is above the norm.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Gives advance notice when unable to come to work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Conserves and protects organizational property.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Adheres to informal rules devised to maintain order.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Adequately completes assigned duties.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Fulfills responsibilities specified in job description.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Perform tasks that are expected of him/her.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Meets formal performance requirements of the job.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Engages in activities that will directly affect his/her performance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix B (continued)

CWB

Please use the following scale to rate how often you have engaged in the following behaviors:

	1	2	3	4	5	6	7
	Never	Once a year	Twice a year	Several times a year	Monthly	Weekly	Daily
<hr/>							
How often have you...							
1. Made fun of someone at work						1 2 3 4 5 6 7	
2. Said something hurtful to someone at work						1 2 3 4 5 6 7	
3. Made an ethnic, religious, or racial remark at work						1 2 3 4 5 6 7	
4. Cursed at someone at work						1 2 3 4 5 6 7	
5. Played a mean prank on someone at work						1 2 3 4 5 6 7	
6. Acted rudely toward someone at work						1 2 3 4 5 6 7	
7. Publicly embarrassed someone at work						1 2 3 4 5 6 7	
8. Taken property from work without permission						1 2 3 4 5 6 7	
9. Spent too much time fantasizing or daydreaming instead of working						1 2 3 4 5 6 7	
10. Falsified a receipt to get reimbursed for more money than you spent on a business expense						1 2 3 4 5 6 7	
11. Taken an additional or longer break than is acceptable at your workplace						1 2 3 4 5 6 7	
12. Come in late to work without permission						1 2 3 4 5 6 7	
13. Littered your work environment						1 2 3 4 5 6 7	
14. Neglected to follow your boss' instruction						1 2 3 4 5 6 7	
15. Intentionally worked slower than you could have worked						1 2 3 4 5 6 7	
16. Discussed confidential company information with an unauthorized person						1 2 3 4 5 6 7	
17. Used an illegal drug or consumed alcohol on the job						1 2 3 4 5 6 7	
18. Put little effort into your work						1 2 3 4 5 6 7	
19. Dragged out work in order to get overtime						1 2 3 4 5 6 7	

Appendix B (continued)

Organizational Commitment:

Listed below is a series of statements that represent possible feelings that individuals might have about the company or organization for which they work. With respect to your own feelings about the particular organization for which you are now working, please indicate the degree of your agreement or disagreement with each statement by checking one of the seven alternatives beside each statement.

1. I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful	1	2	3	4	5	6	7
2. I talk up this organization to my friends as a great organization to work for	1	2	3	4	5	6	7
3. I would accept almost any types of job assignment in order to keep working for this organization	1	2	3	4	5	6	7
4. I find that my values and the organization's values are very similar	1	2	3	4	5	6	7
5. I am proud to tell others that I am part of this organization	1	2	3	4	5	6	7
6. This organization really inspires the very best in me in the way of job performance	1	2	3	4	5	6	7
7. I am extremely glad that I chose this organization to work for over others I was considering at the time I joined	1	2	3	4	5	6	7
8. I really care about the fate of this organization	1	2	3	4	5	6	7
9. For me, this is the best of all possible organizations for which to work	1	2	3	4	5	6	7

Appendix B (continued)

Cultural Values:

Dimensions of Culture Questionnaire

In the questionnaire items below, please indicate the extent to which you agree or disagree with each statement. For example, if you *strongly agree* with a particular statement, you would circle the **5** next to that statement.

		1 = Strongly Disagree	2 = Disagree	3 = Neither agree nor disagree	4 = Agree	5 = Strongly agree				
Individualism/ Collectivism	1	Group welfare is more important than individual rewards.				1	2	3	4	5
	2	Group success is more important than individual success.				1	2	3	4	5
	3	Being accepted by the members of your workgroup is very important.				1	2	3	4	5
	4	Employees should only pursue their goals after considering the welfare of the group.				1	2	3	4	5
	5	Managers should encourage group loyalty even if individual goals suffer.				1	2	3	4	5
	6	Individuals may be expected to give up their goals in order to benefit group success.				1	2	3	4	5

Demographics:

1. Your gender: () Male () Female
2. Your age: _____ years
3. Your country of citizenship: _____
4. Your country of birth (if different from citizenship): _____
5. Your marital status: () Married/Cohabiting () Unmarried or separated

6. If married/cohabitating, does your spouse/partner work?
 Yes, fulltime Yes, part-time No, doesn't work No spouse/partner
7. How many children do you have? _____
8. Educational level reached:
 Secondary education (highest grade completed) _____
 Some university
 University degree
 MA/MSc
 PhD or Doctorate
 Other (please specify) _____
9. How long have you been with the present organization: _____ years and _____ months
10. Your job title is: _____
11. List your industry sector.
 Manufacturing (1) Hospitality (2)
 Service (3) Education (4)
 Finance (5) Entertainment (6)
 Medical/Social service (7) Security/protection (8)
 Government (9) Military (10)
 Other (please specify) _____ (11)
12. How many hours do you work in a typical week? _____ hours
13. How many days per week do you work in a typical week? _____ days
14. Do you work more or fewer hours than you wish to work each week?
 More
 Number I wish to work
 Fewer
15. Ethnicity:
 Asian or Pacific Islander (1)
 Black (2)
 Hispanic (3)
 White (4)
 Other (please specify) _____ (5)

Thank you for your participation!

About the Author

Xian Xu graduated in 2001 with a Bachelor of Arts in English from Fudan University, Shanghai, China. In 2004, Xian received her Master of Arts in Industrial/Organizational Psychology from the University of South Florida. Xian has worked with colleagues to contribute a book chapter in the *Blackwell handbook of mentoring: A multiple perspectives approach*, has created technical reports, and presented at national conferences such as the *Society for Industrial and Organizational Psychology* and the *Academy of Management*. In addition to research on work and family, her research interests also include organizational citizenship, emotions in the workplace, and cross-cultural research.