

Proposing A Conceptual Model of Mediators and Moderators in the Link Between the Work-And-Family Interface and Innovation Outcomes

Yinghong (Susan) Wei, Texas A&M International University

Abstract

Although the literature has established that the work-and-family interface—including conflicts and enrichments between work and family—influences employees' well-being, family-related outcomes, and work-related outcomes, its relationship with innovation outcomes, particularly individual creativity and problem-solving capability related to work, remains unclear. This study proposes a novel conceptual research model aimed at investigating potential mediators and moderators at both personal and organizational levels to enhance the literature's comprehension of this relationship. We suggest that individual well-being indicators—including mood states and energy levels—may act as mediators in the link between the work-and-family interface and an individual's creativity and problem-solving capability. Furthermore, we propose that personal-level coping resources (e.g., family-to-work enrichment and psychological capital) and firm-level coping resources (e.g., work-to-family enrichment and a supportive organizational climate) could have negative interaction effects with work-and-family conflicts to alleviate their detrimental effects on individual-level innovation outcomes. Therefore, this paper offers regulatory mechanisms at the personal and organizational levels to enhance creativity and problem-solving capabilities in the workplace through the perspective of integrated work-and-family management. Finally, we provide a comprehensive table containing constructs, their sources, and examples of measurement items to facilitate future empirical studies in this domain.

Key Words: Work-and-Family Interface, Work-and-Family Conflicts, Work-and-Family Enrichments, Individual and Firm Coping Resources, Individual Well-being, Individual Innovation Outcome

“Juggling a career and a family is a challenge for anyone.” Daphne Koller

Introduction

Both new product innovation and business success depend primarily on the creative ideas generated by leaders and employees (e.g., Burroughs et al., 2011). As a significant source of innovation, employees' creativity and problem-solving capabilities are viewed by corporations as essential qualities for both their leaders and employees to possess (e.g., Atuahene-Gima, 2003; Kim, Choi, & Lee, 2016). Promoting creativity and

nurturing problem-solving capabilities in individuals are critical to a firm's sustainable competitive advantage in the fast-moving market and economy. Achieving sustainable employee engagement and optimal performance, including innovative behavior, is more attainable when individuals experience a harmonious integration of work and life (e.g., Wang et al., 2022; Zhang et al., 2018).

Previous literature has established that a positive work-and-family interface, characterized by fewer conflicts and more enrichments between work and family, can encourage positive outcomes related to employee well-being, family, and work (see meta-analyses by Amstad et al., 2011; McNall, Nicklin, & Masuda, 2010; Mesmer-Magnus & Viswesvaran, 2005; Zhang et al., 2018). Conflicts between work and family describe the incompatibility between work and family roles, while enrichments between work and family refer to the positive interdependence between these roles. In this study, work-and-family conflicts refer to situations where work interferes with family life (work-to-family) and family life interferes with work (family-to-work). Moreover, work-and-family enrichments also encompass two-directional influences: work enhancing family life (work-to-family) and family life enhancing work (family-to-work) (e.g., Netemeyer, Boles, & McMurrin, 1996). Individual-level and firm-level coping resources may mitigate negative interplay between work and family life, promote work-life balance, and eventually improve employee well-being and productivity (Amstad et al., 2011; McNall, Nicklin, & Masuda, 2010; Mesmer-Magnus & Viswesvaran, 2005; Zhang et al., 2018).

However, the extant literature provides little insight into the relationship between the work-and-family interface and innovation outcomes, such as individual creativity and problem-solving capability. Creative problem-solving behavior requires employees to break norms, take risks, and invest substantial effort in learning, exploring, and experimenting while engaging in critical thinking. Work-and-family conflicts adversely affect individual's positive mood and energy level, resulting lower engagement in innovative activities (Wang et al., 2022). Effective management of the work-and-family interface may foster employee innovation outcomes, which in turn influence firm-level survival and business competitiveness (e.g., Carlson, Kacmar, & Willavi, 2000; Carlson et al., 2006; Chelariu & Stump, 2011; Schieman & Young, 2010; Stollberger, Heras, & Rofcanin, 2022). Understanding how to leverage coping resources from both individual and firm levels to alleviate the negative effect of work-and-family conflicts on innovation outcomes has significant implications for innovation management literature and practice.

This conceptual research model aims to fill this gap by investigating potential mediators and moderators in the relationship between work-and-family interface and innovation outcomes. Work-and-family tensions may lead to struggle and impede success in life and the workplace. Conversely, effective work-and-family integration nurtures allies between these domains, fostering fulfillment and sustainable work productivity (Friedman, 2022). We expect that the proposed conceptual model will offer novel insights for both academic literature and business practice, enhancing the management of the work-and-family interface to yield superior individual innovation outcomes.

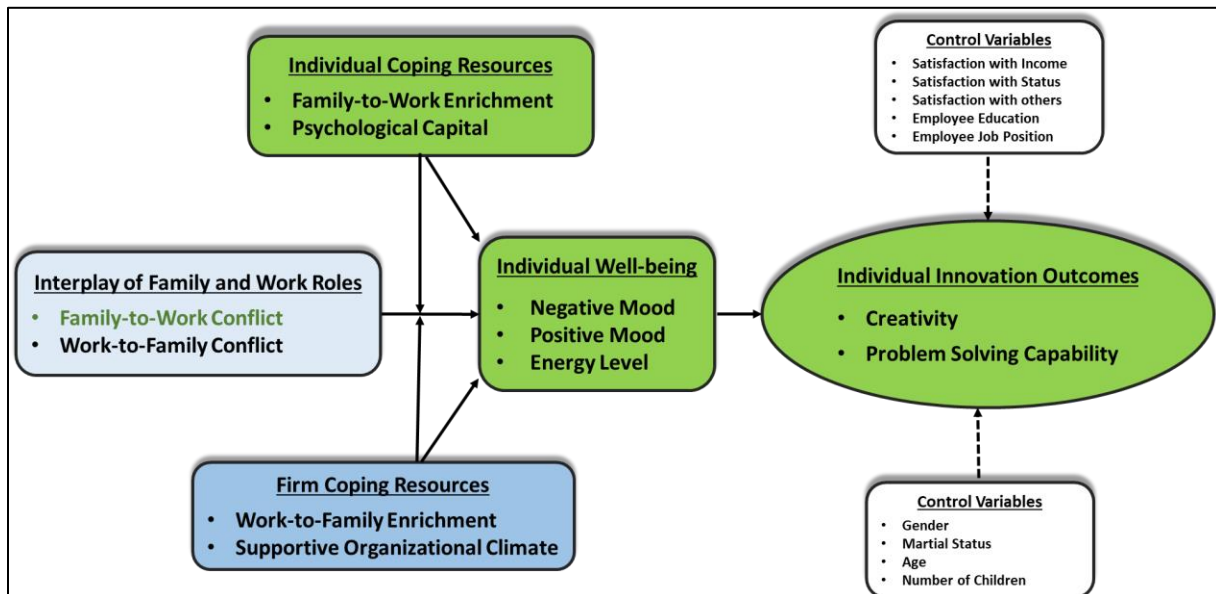
Conceptual Model and Propositions

A theory of family-work embeddedness suggests that an individual's roles in family and work domains are intertwined, impacting individual and firm-level outcomes (e.g., Greenhaus & Powell, 2006). Moreover, resource conservation theory posits that individuals have finite resources, and they are motivated to protect, maintain, and acquire resources (Hobfoll et al., 2018). The interface between family and work as a conditional resource may influence an employee's resources (such as mood and energy levels), which in turn affect their engagement in innovation (Wang et al., 2022). Work-and-family conflicts can deplete an individual's mood and energy levels, while work-and-family enrichments can replenish these resources. Innovation activities inherently demand significant cognitive resources, including continually searching for knowledge, exploring diverse solutions, and generating novel ideas. Therefore, lacking mood and energy resources may impede individual creativity and diminish problem-solving capabilities. Only individuals with ample mental and energy resources are more likely to engage in innovative behaviors (Wang et al., 2022).

Building upon these two theories, we introduce a novel conceptual research model (refer to Figure A), proposing that the interface between family and work can impact an individual's innovation abilities, encompassing creativity and problem-solving capability, through individual well-being outcomes as mediators. These well-being outcomes include perceived positive and negative mood states and energy levels. Furthermore, we posit individual-level coping resources and firm-level coping resources as moderators intended to alleviate the adverse effects of the family-and-work interface on individual well-being outcomes (e.g., Chelariu & Stump, 2011; Eisenberger et al., 1997; Netemeyer, Boles, & McMurrian, 1996). Moreover, we incorporate individual-related variables (such as gender, marital status, age, and number of children) and job-related control variables (such as satisfaction with income, status, others, employee education, and job position) into the conceptual model due to their potential influence on individual innovation outcomes (e.g., Martins, Eddleston, & Veiga, 2002; Powell & Eddleston, 2013; Wang et al., 2022; Zhang et al., 2018; Zhou & Geoge 2001).

Prior meta-analytical studies suggest that work-and-family conflicts can trigger negative mood states in individuals, including symptoms of depression, complaints, and psychological strains (e.g., Amstad et al., 2011; Mesmer-Magnus & Viswesvaran, 2005). Conversely, various forms of enrichment stemming from the interaction between work and family (such as enrichment, positive spillover, and facilitation) have been associated with improved physical and mental well-being, manifested as reduced stress levels, heightened positive emotions, and enhanced energy and motivation (Mcnall, Nicklin, & Masuda, 2010; Zhang et al., 2018). Furthermore, an alternative perspective argues that positive mood, reduced stress, and heightened energy and motivation not only enhance individual productivity but also bolster cognitive flexibility, curiosity towards internal and external stimuli, and interest in information processing and task engagement (e.g., Diener et al., 2015; Kim, Choi, & Lee, 2016), thereby fostering greater creativity and problem-solving capabilities (Wang et al., 2022).

Figure A. Conceptual Model



Another meta-analysis conducted by Bass, De Dreu, and Nijstad (2008) further validates that creativity thrives in positive mood states, as they trigger an approach-motivation and promotion focus while deactivating an avoidance-motivation and prevention focus. Conversely, negative mood states activate an avoidance-motivation and prevention focus, dampening creativity. These findings hold across different research methodologies, including experimental and correlational designs, diverse populations (students and the general adult population), and various aspects of creativity (such as fluency, flexibility, originality, eureka/insight). Thus, we propose:

Proposition 1: Conflicts between family and work negatively relate to positive mood and energy levels.

Proposition 2: Enrichments between family and work positively relate to positive mood and energy levels.

Proposition 3: Positive mood and energy levels positively relate to creativity and problem-solving capability.

Previous studies have predominantly examined the detrimental impact of work-and-family conflicts and the positive effect of work-and-family enrichments on mood and energy levels in isolation. However, little attention has been paid to whether and how these two factors may interact. A meta-analysis conducted by French et al. (2018), drawing on data from 1021 effect sizes and 46 countries, highlighted the significance of social support, encompassing both workplace and family support, in mitigating work-and-family conflicts. Building on this, we propose that family-to-work enrichment fostered by an individual's familial support and work-to-family enrichment nurtured by the organization may function as coping resources and act as moderators to alleviate and diminish the adverse impact of work-and-family conflicts on mood states and energy levels.

Moreover, we contend that additional coping resources provided by individuals and firms may also act as moderators to mitigate the negative impact of work-and-family conflicts

on mood states and energy levels. Firstly, psychological capital, comprising self-efficacy, hope, optimism, and resilience (Luthans et al., 2007), is a significant personal resource. Self-efficacy and optimism are particularly valuable for coping with stressful situations (Luthans & Youssef-Morgan, 2017), enabling individuals to manage challenges arising from work and family domains effectively. Consequently, employees with high psychological capital are likely better equipped to navigate work-and-family conflicts, thereby attenuating the adverse effects on mood states and energy levels compared to those with lower psychological capital. Secondly, organizational support emerges as a crucial source of overall support (French et al., 2018). We propose that a supportive organizational climate can function as a social coping resource at the firm level, assisting employees in addressing challenges associated with balancing work and family responsibilities (Karatepe, 2010). Thus, it may serve as a buffering moderator in the relationship between work-and-family conflicts and individual well-being. Therefore, we suggest:

Proposition 4: Psychological capital and supportive organizational climate as coping resources positively relate to mood and energy levels.

Proposition 5: The negative effect of work-and-family conflicts on mood and energy levels will be weakened by individual-level moderators: 1) the family-to-work enrichment and 2) psychological capital.

Proposition 6: The negative effect of work-and-family conflicts on mood and energy levels will be weakened by firm-level moderators: 1) work-to-family enrichment and 2) a supportive organizational climate.

Conclusions and Potential Research Contributions

Innovation management literature needs to grasp how to leverage individual and firm-level coping resources effectively to mitigate the negative effect of work-and-family conflicts on individual innovation outcomes through individual well-being. This conceptual model, along with its propositions, offers a nuanced insight into how to manage the work-and-family interface to foster individual innovation outcomes. By identifying key mediators and moderators, the model provides a fresh perspective for a comprehensive understanding of the relationship between work-and-family interface and employee innovation outcomes. Building on the theory of family-work embeddedness and resource conservation theory, this paper expects to make the following main contributions.

First, this conceptual model suggests that work-and-family interaction significantly influences employee innovative behavior through individual well-being. The direct impacts of conflicts between work and family on innovation outcomes and the mediating role of individual well-being underscore how achieving a work-and-family balance may minimize the depletion of emotion and energy resources, consequently promoting innovation outcomes.

Second, the positive roles of work-and-family enrichments, psychological capital, and a supportive climate as coping resources encourage individuals to enhance their well-being by creating positive work-and-family interactions, building positive psychological capital (including hope, efficacy, resilience, and optimism), and cultivating a supportive organizational climate.

Third, both personal-level (family-to-work enrichment and psychological capital) coping resources, and firm-level (work-to-family enrichment and supportive organizational climate) coping resources play vital roles in intervening the negative impact of work-and-family conflicts on individual well-being. This mechanism aids innovation management literature and practice in uncovering how to prevent the detrimental effects of work-and-family conflicts. These coping resources serve as essential tools to halt or weaken the transmission process of work-and-family conflicts, thereby fostering a more conducive environment for innovation behavior.

To empirically validate this conceptual model, future research should leverage quantitative studies through survey data collection. Table 1 provides an overview of potential constructs, their resources, and examples of measurement items for researchers to consider. We anticipate that this model will make substantial contributions to both academic literature and practical applications by comprehensively examining both conflicts and enrichments from both individual and organizational levels and developing holistic approaches to support individuals in managing the demands of both domains effectively.

Table 1. Potential Measurements for Future Empirical Studies
<i>Constructs, Sources and Examples of Measurement Items</i>
<u>Dependent Variables</u>
<i>Creativity (Zhou & George, 2001; 13 items)</i>
e.g., Suggested new and better ways of performing work tasks
e.g., Came up with new and practical ideas to improve work performance
e.g., Developed adequate plans and schedules for implementation of new ideas
e.g., Considered yourself as a good source of creative ideas
e.g., Had a fresh approach to work-related problems
<i>Problem-Solving Capability (Carmeli, Gelbard, & Reiter-Palmon, 2013; 8 items)</i>
Dimension of problem construction and identification (e.g., Capability to define work problems)
Dimension of idea generation (e.g., Ability to generate ideas to solve work problems)
Dimension of idea evaluation (e.g., Capability to choose the optimal solution for work problems)
Dimension of idea implementation (e.g., effectively implement ideas to solve work problems)

<u>Independent Variables</u>
<i>Work-Family Conflict (Grzywacz & Marks, 2000; Netemeyer, Boles, & McMurrin, 1996)</i>
e.g., The demands of work interfere with my family life
e.g., Work takes up a lot of my time, which makes it hard to fulfill family responsibilities
e.g., Things at home do not get done because of the demands my job puts on me
e.g., My job produces strain that makes it difficult to fulfill family duties
e.g., I have to make changes to my family activities because of work
<i>Family-Work Conflict (Grzywacz & Marks, 2000; Netemeyer, Boles, & McMurrin, 1996)</i>
e.g., Family needs interfere with my work
e.g., I have to put off doing things at work because of demands at home
e.g., Things at work do not get done because of the demands of family
e.g., Family life interferes with responsibilities at work (e.g., arriving on time and working overtime)
e.g., Family-related strain interferes my ability to perform job-related duties
e.g., Stress at home makes you irritable at work
<i>Constructs, Sources and Examples of Measurement Items (Contd.)</i>
<u>Mediators</u>
<i>Positive Affect (Van Katwyk et al., 2000)</i>
e.g., Satisfied, excited, energetic, happy, encouraged, etc
<i>Negative Affect (Watson, Clark, & Tellegen, 1988)</i>
e.g., Bored, tired, drained, burned out, frustrated, depressed
<i>Energy Level (Objective measure: heart rate, and subjective measures: Cole, Bruch, & Vogel, 2012)</i>
Affective dimension (e.g., feel ecstatic in their job)
Cognitive dimension (e.g., ready to act at any given time; always on the lookout for new opportunities)
Behavioral dimension (e.g., work extremely long hours without complaining; work at a very fast pace)

<u>Moderators</u>
<i>Work-Family Enrichment (Carlson et al., 2006)</i>
Dimension of Development resources:
(e.g., involvement at work helps to understand different viewpoints, to be a better family member)
Dimension of Affect resources:
(e.g., involvement at work helps to be in a good mood, to be a better family member)
Dimension of Capital resources:
(e.g., involvement at work instills confidence in me, and this helps me be a better family member)
<i>Family-Work Enrichment (Carlson et al., 2006)</i>
e.g., My home life helps me to relax and feel ready for the next day's work
e.g., The love and respect I get at home makes me feel confident about myself at work
<i>Psychological Capital (Luthans et al., 2007)</i>
Self-efficacy dimension (e.g., I feel confident contacting people outside to discuss problems)
Hope dimension (e.g., At the present time, I am energetically pursuing in my goals)
Optimism dimension (e.g., When things are uncertain for me, I usually expect the best)
Resilience dimension (e.g., can get through difficult times because I've experienced difficulty before)
<i>Supportive Organizational Climate (Rogg et al., 2001; 12 items)</i>
e.g., Coworkers support each other at work
e.g., Coworkers trust each other
e.g., Supervisors support employees at work
e.g., Supervisors treat everyone with respect at work

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