



## Meta-analysis of work–family conflict mean differences: Does national context matter?



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### ABSTRACT

Work–family conflict continues to be a topic of considerable interest to researchers and practitioners across the globe. In the current study, meta-analysis is used to compare cross-national mean differences in work-to-family conflict and family-to-work conflict across cultural, institutional, and economic aspects of context. No significant differences in work-to-family conflict were detected. Reports of family-to-work conflict were higher in more collectivistic versus more individualistic cultures, in countries with a higher versus a lower economic gender gap, and in countries other than the U.S. versus the U.S.

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A topic that has long captured the attention of work–family scholars is the prevalence of work–family conflict. For example, research reports such as those prepared by the *Families and Work Institute* include percentages of respondents who report experiencing work–family conflict (Galinsky, Aumann, & Bond, 2009). Moreover, within the work–family field there is an enduring interest in demographic factors, particularly gender, as determinants of who experiences more or less work–family conflict (e.g., women or men) (Byron, 2005; Gutek, Searle, & Klepa, 1991; Powell & Greenhaus, 2010). As interest in work–family issues continues to grow, studies emanating from all corners of the globe are increasing in frequency (Poelmans, Greenhaus, & Maestro, 2013). This is no surprise in that the simultaneous management of work and family roles is an issue that impacts workers across most segments of society (Allen, 2012).

Individuals across countries can find it challenging to meet both work and family demands, yet they do so under a variety of different national contexts (Trefalt, Drnovšek, Svetina-Nabergoj, & Adlešič, 2013). Thus, there is a need to understand differences in work–family conflict cross-nationally. In order to gain insight into the contextual factors that underlie mean differences in work–family conflict, the objective of the current study is to meta-analytically examine differences across multiple macro-level factors. Specifically, we investigate country-level cultural, institutional, and economic factors thought to influence work–family experiences (Ollier-Malaterre, Valcour, Den Dulk, & Kossek, 2013).

This research makes several key contributions to the literature. Lack of awareness of the effects of national context has been referred to as “an elephant in our field” (Ollier-Malaterre et al., 2013, p. 434). Although cultural differences have received some attention in the work–family literature (e.g., Yang, Chen, Choi, & Zou, 2000), little research has been conducted concerning institutional and economic variables in relation to work–family conflict (see Allen et al., 2014 for an exception). By investigating multiple aspects of context (cultural, institutional, and economic), we contribute to a more nuanced understanding of the relative degree of work–family

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conflict reported by individuals across national boundaries. Thus, our study not only explores new macro-level predictors, but also allows us to see if a particular category of macro-level factors tends to predict level of work–family conflict more so than others. This is important in that institutional and economic macro-level factors might have more proximal roles than national culture. By studying them, we can identify potentially changeable aspects of macro-level contextual factors to reduce work–family conflict.

To date, meta-analytic research on work–family conflict has primarily focused on individual and organizational predictors. Multiple meta-analyses exist that have examined predictors such as work and family role stressors (Byron, 2005; Mesmer-Magnus and Viswesvaran, 2005; Michel, Kotrba, Mitchelson, Clark, & Baltes, 2011), dispositional variables (Allen et al., 2012; Michel, Clark, & Jaramillo, 2011), workplace flexibility (Allen, Johnson, Kiburz, & Shockley, 2013; Gajendran & Harrison, 2007; Mesmer-Magnus & Viswesvaran, 2006), supervisor and organizational support (Kossek, Pichler, Bodner, & Hammer, 2011; Michel, Clark, et al., 2011; Michel, Kotrba, et al., 2011), and dependent care supports (Butts, Casper, & Yang, 2013). Meta-analysis has yet to be employed in cross-national work–family research, resulting in a gap of comprehensive knowledge regarding the role that national-level contextual factors play in shaping work–family experiences. Given the difficulty in collecting data from multiple countries, meta-analysis seems particularly relevant for such questions, allowing for comparisons on a more extensive scale. Specifically, because cross-cultural work–family research is typically conducted on a single non-U.S. sample or on samples from just two countries (Ollier-Malaterre, 2015), theoretical progression of the literature has largely been stunted (Shockley et al., 2014). The piecemeal examination of various countries, which vary on numerous dimensions, makes it difficult to see systematic and theory-driven explanations for observed differences. Meta-analysis permits systematic comparisons of multiple countries on multiple dimensions, facilitating a more holistic perspective on the role of national context and work–family conflict.

Much of the cross-national research to date has treated culture/context as a moderator. An examination of relative levels of work–family conflict is also important. For example, existing moderator research demonstrates that relations between work–family conflict and predictors such as work demands and outcomes such as job satisfaction are weaker in collectivist societies than in individualist societies (e.g., Spector et al., 2007). Because collectivism has been shown to attenuate relationships between work–family conflict and other variables, there may be the tendency to conclude that work–family is less of a concern in collectivistic cultures than in individualistic cultures. By meta-analytically examining relative differences in levels of work–family conflict, we can better distinguish differences in levels versus moderating effects. This is important to the theoretical development of cross-national work–family research.

In sum, investigating multiple macro-level context factors is important for multi-level theory building in work–family research, for understanding the possible implications of national policy and norms, and for global human resource practice. For example, if we know that mean levels of work–family conflict are greater in certain cultural contexts than in others, we can develop theory that captures such variation and identify policies that may be implicated. Moreover, such information would be of value to organizations that operate cross-nationally.

## 1. Work–family conflict

Work–family conflict is “a form of inter-role conflict in which the role pressures from the work and family domains are mutually incompatible” (Greenhaus & Beutell, 1985, p. 77). For the purpose of clarity, in the current research we use work–family conflict as an umbrella term intended to recognize research on the topic in general. Moreover, we underscore that our focus is on work–family conflict, rather than work–nonwork conflict. The term WIF is used to designate work–family conflict/interference that flows from the work domain to the family domain while the term FIW is used to designate work–family conflict/interference that flows from the family domain to the work domain. It is important to note that measurement of work–family conflict is based on self-reports by individuals and thus should be considered as a perceptual variable. Understanding factors that relate to the prevalence of work–family conflict has been a key research and practice aim in that greater work–family conflict has been associated with a wide variety of detrimental work, non-work, and health-related outcomes (e.g., Allen, Herst, Bruck, & Sutton, 2000; Amstad, Meier, Fasel, Elfering, & Semmer, 2011).

### 1.1. Hypotheses

Multiple macro-level factors may play a part in work–family experiences. To facilitate a comprehensive investigation of mean differences, we conducted multiple comparisons that incorporated several aspects of macro-level contextual factors. Work–family researchers have grouped these macro-level factors into three categories: cultural, institutional, and economic (Ollier-Malaterre et al., 2013; Poelmans, O'Driscoll, & Beham, 2005). We discuss each in turn.

### 1.2. Cultural factors

Culture refers to the values, assumptions and beliefs shared by individuals within a country (Hofstede, 1984). Cultural norms and values are thought to play a role in shaping the work–family interface (Powell, Francesco, & Ling, 2009). We include two cultural factors that have received the most attention in the work–family literature, *individualism/collectivism* and *gender egalitarianism* (e.g., Lyness & Kropf, 2005; Spector et al., 2007; Yang et al., 2000).

Individualism/collectivism refers to the way in which individuals within a society relate to one another (Triandis, 1995). Societies in which individuals are closely linked are referred to as collectivistic. Collectivists tend to focus on others and are more embedded in social networks that include extended family and groups (Markus & Kitayama, 1998). Societies in which individuals see themselves as

relatively independent are referred to as individualistic. Individualists tend to focus on the self and on personal achievement. We expect individuals from more individualistic cultures to report greater work–family conflict than individuals from more collectivistic cultures. Family member relationships as well as employer–employee relationships vary according to the level of collectivism in a culture (Powell et al., 2009). In more collectivistic societies there tend to be large networks of family support and individuals are encouraged to seek help from family members. In addition, the relationship between employee and employer is viewed as a family relationship in which employer support is freely provided in exchange for employee loyalty (Powell et al., 2009). Given the role of support from family and employers in reducing work–family conflict (Kossek et al., 2011; Michel, Clark, et al., 2011; Michel, Kotrba, et al., 2011), we propose the following:

**Hypothesis 1.** Individuals from more collectivistic countries report less WIF and FIW than do individuals from less collectivistic countries.

Gender egalitarianism (GE) refers to how individuals in societies perceive prescribed social roles based on biological sex (Emrich, Denmark, & Den Hartog, 2004). Low GE is representative of a male-dominant society whereas high GE is reflective of a society that views men and women as equally suitable for various societal roles including work- and family-related roles (Emrich et al., 2004). Gender role expectations set the stage for how individuals experience their work and family roles. Thus, we formed a research question to determine if GE was associated with work–family conflict. There are reasons to expect that differences could exist in both directions.

On one hand, in higher GE societies within which biological sex is not regarded as the critical determinant of social roles, both men and women may be less likely to perceive work and family roles as in competition with each other. Moreover, in higher GE societies, men and women are more likely to equally share in the roles and responsibilities that accumulate across work and family domains. This equal sharing may foster greater cooperation and communication that helps to prevent demands from overwhelming any one partner, thereby mitigating the occurrence of work–family conflict. On the other hand, it is also possible that in higher GE cultures that both men and women experience higher expectations for their involvement and performance at work and at home. Such expectations could foster higher levels of work–family conflict relative to cultures with highly defined gender roles. Moreover, if men and women have specialized roles as is the case in lower GE societies, there is less role ambiguity. This could mitigate the occurrence of work–family conflict. Thus, we pose the following research question:

**Research Question 1.** Do individuals from less gender egalitarian countries report greater WIF and FIW than do individuals from more gender egalitarian countries?

### 1.3. Institutional factors

Institutional factors are socially constructed formal structures or rules that govern individual and organizational behavior and interactions (Meyer & Rowan, 1977). Examples include public policies, laws and regulations, and other institutions at the country level (Ollier-Malaterre et al., 2013). Institutional theory proposes that these macro-level rules and regulations result in consequences, expectations, and norms for organizations and individuals, encouraging conformity in aspects of work such as paid vacations, paid sick leave, and parental leave following the birth/adoption of a child (Ollier-Malaterre et al., 2013; Meyer & Rowan, 1977). For example, organizations in countries with generous national parental leave policies are expected to provide support for parental leave and encourage employees to participate in the parental leave.

Institutional factors that govern work and family time are difficult to compare due to the numerous ways in which national policies differ (e.g., by organization size, individual tenure, gender, time allotted for leave, percentage of salary paid). We therefore use two proxies. First, we used the Organization for Economic Co-operation and Development (OECD) work–family balance rankings. In addition because the lack of national work–family policies (a key institutional indicator) in the U.S. is often discussed in the work–family literature (e.g., Williams, 2010), we compare the U.S. to other countries.

The purpose of the OECD is to promote policies intended to improve the economic and social well-being of people around the world (<http://www.oecd.org/about/membersandpartners/>). The OECD has created an index of well-being that is based on 11 topics considered essential to the quality of life. One of the 11 topics is work–life balance, which consists of two indicators: percentage of employees who work long hours and percentage of time devoted to leisure and personal care. These two indicators are used to rank 36 countries. As noted by the OECD, governments play a role in these indicators by encouraging supportive and flexible working practices, making it easier for individuals to balance work and home life.

We used the OECD rankings to compare the bottom 12 countries against the top 12 countries (i.e., the bottom third versus the top third). We expect that individuals from countries in the top third report less work–family conflict than individuals from countries in the bottom third owing to the high work hours/low leisure hours (conditions ripe for promoting work–family conflict) compared to the top third where institutional conditions are such that work hours are lower and leisure hours are higher.

**Hypothesis 2.** Individuals from countries in the top third of the OECD work–family balance rankings report less WIF and FIW than do individuals from countries from the bottom third of the OECD work–family balance rankings.

As noted previously, the U.S. differs from other industrialized nations in that it has no national policy that supports paid family care such as paid parental leave, prompting scholars to assert, “Failures of public policy are a key reason that Americans face such acute

work–family conflict” (Williams, 2010, p. 8). As a research question, we conducted a U.S. versus non-U.S. cluster comparison to assess if individuals from the U.S. report greater work–family conflict than do individuals from other countries.

**Research Question 2.** Do individuals from the U.S. report greater work–family conflict than individuals from countries other than the U.S.?

#### 1.4. Economic factors

National economic factors can also influence the work–family interface (e.g., Ollier-Malaterre et al., 2013). We examine three aspects of country-level economic context. Economic country development and economic conditions are two well-established indicators of country-level economic prosperity. Consistent with these two economic factor categories, we investigate GDP as an indicator of country development and the unemployment rate as an indicator of economic conditions (Ollier-Malaterre, 2015). In addition, because gender plays a significant role in work–family experiences, we examine the economic gap between men and women. We chose these metrics because they are conceptually relevant to work–family issues, widely available, and comparable cross-nationally.

Economic prosperity can be viewed as a resource that mitigates work–family conflict. For example, economic resources such as higher wages can enable individuals to purchase goods and services that help manage work and family roles. Likewise, lower unemployment rates engender greater job security, warding off concerns with regard to financial well-being that can exacerbate work–family conflict (Lauzun, Major, & Jones, 2012). In addition, greater overall economic prosperity may influence the extent that organizations offer family-supportive provisions such as onsite dependent care support.

**Hypothesis 3.** Individuals from countries with greater average GDP report less WIF and FIW than do individuals from countries with lower average GDP.

**Hypothesis 4.** Individuals from countries with lower average unemployment report less WIF and FIW than do individuals from countries with greater average unemployment.

We used the gender gap index developed by the World Economic Forum (Hausmann, Tyson, & Zahidi, 2012) to compare country clusters high and low on gender equality. The gender gap captures the magnitude and scope of gender-based disparities based on economic, political, education, and health criteria. The index is independent from the countries' level of development. For example, the index measures gender differences in access to resources and opportunities regardless of the overall level of resources available. Individuals in higher gender gap countries may have more difficulty accessing resources (e.g., financial, health) that may mitigate work–family conflict compared to those in countries with a lower gender gap. Further, a high gender gap may indicate competitiveness or job-related constraints that can exacerbate work–family conflict. We therefore expect individuals from countries where the gap is greater report greater work–family conflict than do those from countries where the gap is smaller.

**Hypothesis 5.** Individuals from higher gender gap countries report greater WIF and FIW than do individuals from lower gender gap countries.

## 2. Method

### 2.1. Literature search

Searches were conducted using PsychINFO and ProQuest Dissertation. All studies available in these databases prior to August 2014 were screened for inclusion. To represent work–family conflict, several keywords were used (e.g., “work–family conflict,” “work–life conflict,” “work–nonwork conflict,” “work–family interference”). In addition to published research, efforts were made to identify unpublished research. Specifically, we reviewed relevant conference programs from the last five years (e.g., *Academy of Management; Society for Industrial and Organizational Psychology; Work, Stress, and Health*) and contacted authors who conduct cross-national work–family research to request unpublished data.

### 2.2. Inclusion criteria

To be considered for inclusion the study had to include a measure of WIF and/or of FIW. Consistent with the purpose of the present study, in order to compute a mean difference score, WIF/FIW had to be assessed across two or more countries within each study. This allowed us to calculate a *d* (later converted to *g*) for relevant comparisons within study using formulas provided by Borenstein, Hedges, Higgins, and Rothstein (2009). In addition, only primary studies that reported sufficient data to calculate an effect size were included. Efforts were made to contact authors for necessary data when the required information was not included in the original article. A total of 2461 studies were screened, and of these, 53 independent samples from 18 studies met the inclusion criteria. In addition, we included data from two large-scale cross-national work–family projects, The Collaborative International Study of Managerial Stress 2 (CISMS2) (26 independent samples, Poelmans et al., 2003) and Project 3535 (10 independent samples, Korabik, Lero, & Ayman, 2003).

## 2.3. Study variables

### 2.3.1. Work–family conflict

Studies that included a measure of WIF and/or FIW were included. Given our focus on cross-national differences we thought it especially important to focus on clear and discrete measures of work–family conflict. This was thought necessary because previous research has shown that work–nonwork conflict is distinct from work–family conflict (Huffman, Youngcourt, Payne, & Castro, 2008). Thus, we limit our analyses to studies that involved unambiguous measures of WIF and of FIW. That is, only measures that referred to conflicts between work and family rather than conflicts between work and nonwork (e.g., Gutek et al., 1991) were included. In addition, studies based on nondirectional assessments of work–family conflict (e.g., “My work and family life conflict with each other”), on measures that averaged WIF and FIW, or assessed work–family balance were excluded. In studies that included more than on dimensions of WIF/FIW (e.g., time, strain, behavior), but no overall WIF/FIW aggregate, we averaged the subdimensions based on the formulae from Borenstein et al. (2009) that account for intercorrelations.

### 2.3.2. National context

All comparisons were at the country-level. That is, we used country to determine the different classifications used to assess the various national context variables. From there, we grouped countries based on cultural, institutional, or economic factors. For example, if a primary study included data from the United States and from China, the U.S. would be coded as individualistic and China would be coded as collectivistic. Table 1 shows how each country for which we had data was classified for each comparison.

**Table 1**  
Country classifications.

	All—IC		Asian		Latin		GE		OECD		GDP		GDP per capita		Unemployment		Gender gap	
Country	I	C	I	C	I	C	Low	High	Top	Bottom	Low	High	Low	High	Low	High	Low	High
Argentina		X				X										X	X	
Australia	X		X		X					X							X	
Austria							X			X				X	X			
Belgium									X					X			X	
Bolivia		X				X					X		X					
Brazil		X				X	X					X	X					
Bulgaria											X		X			X		
Canada	X		X		X			X		X				X			X	
Chile		X				X				X								
China			X	X			X					X	X		X			
Denmark								X	X		X			X				X
Estonia											X					X		
Finland											X							X
France								X	X							X	X	
Germany									X			X					X	
Greece																X		
Hong Kong		X		X										X				
India							X					X	X		X			X
Indonesia												X	X					
Iran							X					X				X		X
Israel							X			X	X							
Japan		X		X			X			X		X			X			
Korea		X		X			X								X			X
Malaysia		X		X											X			
Mexico		X				X				X		X			X			
Netherlands									X					X	X		X	
New Zealand	X		X		X						X							X
Norway									X					X	X			X
Peru		X				X					X		X					
Poland								X		X						X		
Portugal								X										
Puerto Rico		X				X					X					X		
Romania													X					
Singapore		X		X				X						X	X			
Slovenia								X			X							X
Spain							X		X							X	X	
Sweden								X	X					X				X
Taiwan		X		X														
Turkey							X			X						X		X
UK	X		X		X			X				X					X	
Ukraine													X					
US	X		X		X					X		X		X			X	



With regard to *collectivism/individualism*, we made three comparisons. The first involved an overall collectivistic versus individualistic cluster comparison. Additional comparisons were made to disentangle region/ethnicity. Based on empirical findings and cultural indices (e.g., GLOBE, Gupta, Hanges, & Dorfman, 2002; Schwartz et al., 2010), Asian and Latin American societies are considered collectivistic while Anglo societies are thought to be individualistic. To disentangle region from culture, the second and third set of comparisons broke collectivistic cultures into two groups (Asian, Latin) and compared each with individualistic cultures. Our classifications are consistent with those made by Spector et al. (2007). However, we also included two Latin countries (Mexico, Brazil) and two Asian countries (Malaysia, Singapore) that are deemed collectivistic according to in-group and institutional collectivism scores found in the GLOBE Project but were not included in Spector and colleagues' study.

We classified countries as low or high in *gender egalitarianism* based on GLOBE "as is" (i.e., practices) scores (House & Javidan, 2004). GLOBE GE scores are available for 58 countries. To make sure we clearly distinguished low from high GE countries, we included countries that fell in the bottom (low) or the top (high) 20.

As described previously, we used *OECD rankings* to compare the bottom 12 countries on work–family balance rankings against the top 12 countries (i.e., the bottom third versus the top third). For the U.S. versus non-U.S. comparison, any country outside of the U.S. was included in the non-U.S. classification.

Country economic data came from World Data Bank online stats (<http://databank.worldbank.org/data/home.aspx>). Three indices of country economic status were assessed. Two GDP indicators, real (adjusted for inflation) average *gross domestic product (GDP)* (based on the purchasing power parity exchange rate) and real average *GDP per capita* (based on the purchasing power parity exchange rate) were included. Average GDP (PPP) allows us to assess the absolute volume of resources in a given country, whereas average GDP per capita (PPP) provides a measure of standard of living. Overall average *percent of labor force unemployed* was also analyzed as an indicator of economic prosperity and available resources. GDP, GDP per capita, and unemployment rate were calculated as the mean of each indicator from 2000–2013. This allowed us to assess overall economic status for the years in which data for the studies included in our meta-analysis were likely collected. We ranked countries in our data set and compared the top 10 to the bottom 10.

*Gender gap* data was taken from the World Economic Forum report (Hausmann et al., 2012). We compared the top 35 countries and bottom 35 countries out of the 147 total countries listed.

#### 2.4. Coding and statistical procedures

Two coders independently coded all articles. A total of 664 unique data points were extracted, including sample size (103 data points), means (209 data points), standard deviations (209 data points), work–family conflict directionality (43 data points), and country (100 data points). ICC3 and Kappa indicated near-perfect agreement (0.99 to 1.00 for all types of data points). Discrepancies were resolved through discussion and additional examination of the data. All calculations were based on the Hedges and Olkin (1985) random effects approach using formulas calculated in excel and SAS from Borenstein et al. (2009). Consistent with the Hedges and Olkin, inverse variance weights were used, and *d* was converted to *g* for analysis. Hedge's *g* is a bias-corrected estimate that can be interpreted like *d*. Effect sizes can be interpreted in terms of the percent of non-overlap between the two comparison groups. An effect size of 0.0 indicates that the distribution of scores across the two groups completely overlaps.

Some studies had multiple countries for a given cultural/economic/institutional value group, allowing for multiple comparisons within a single study. In these cases we first determined the maximum number of possible comparisons within each study by identifying cultural/economic/institutional value group containing the fewest countries in that study. For example, Poelmans et al. (2003) included two low gender gap countries (Korea, Turkey) and ten high gender gap countries (Finland, Australia, Netherlands, Argentina, Canada, New Zealand, U.K., Spain, U.S., and Slovenia), allowing for two possible mean difference comparisons. Specifically, Korea and Turkey could each be compared to one or more of the ten high gender gap countries. A random number generator (RNG) was used to assign all countries to a comparison. In the example, the RNG would produce a 1 or a 2 twelve times, assigning each of the twelve countries to either the first or second comparison. For example, if the RNG produced a "1" when assigning Korea to a comparison, Korea would be assigned to the first comparison. Similarly, if the RNG produced a "2" when assigning the U.S. to a comparison, the U.S. would be assigned to the second comparison. To ensure the maximum number of comparisons, countries might be placed into a comparison by default. In the example, because Korea was assigned to the first comparison, Turkey would by default be assigned to the second comparison. For the analysis presented in this paper, the Poelmans et al. (2003) countries were assigned as follows: the first comparison included Turkey compared with Finland, Netherlands, Canada, New Zealand, and Spain, and the second comparison included Korea compared with Australia, Argentina, U.S., U.K., and Slovenia. Each of the countries in the first comparison group received a "1," and each of the countries in the second comparison group received a "2" using the RNG.

We completed the described RNG process twice, producing two sets of results. Using the same Poelmans et al. (2003) example above, comparisons for the second RNG analyses were assigned as follows: first comparison included Korea compared with Finland, Australia, Netherlands, Argentina, Canada, New Zealand, U.K., and Spain, and the second comparison included Turkey compared with U.S. and Slovenia. Running the analyses twice allowed us to examine the robustness of our results and ensure that our conclusions were not due to chance based on a single unique RNG set. Although point estimates differed slightly across the two sets of analyses, for all but one of the analyses there were no significant statistical differences and conclusions drawn from the results were the same. As an exception, average GDP per capita was not a significant predictor in the first analysis ( $g = .17, p = .21, 95\% \text{ CI} = [-.10, .44], 95\% \text{ CrI} = [-0.87, 1.22]$ ), but was statistically significant in the replication ( $g = .18, p = .01, 95\% \text{ CI} = [.04, .32], 95\% \text{ CrI} = [-0.33, 0.69]$ ). Both effect sizes were below the conventional .20 value designated as a small effect (Cohen, 1992). We

present and discuss the results based on the first analyses. Results from the second analyses are available from the first author upon request.

### 3. Results

For each meta-analytic relationship, we report the total sample size across studies ( $N$ ), the number of countries ( $k_c$ ), number of studies ( $k_s$ ), number of effect sizes ( $k_e$ ), meta-analytic mean difference ( $g$ ), standard error of meta-analytic mean difference ( $SE$ ), and the 95% confidence interval ( $CI$ ) of the meta-analytic mean difference. To evaluate if a single population of effect sizes could be assumed, we also calculated the  $Q$  statistic. A significant  $Q$  value indicates significant heterogeneity in the true effect size, suggesting the presence of moderators.  $I^2$  indicates the proportion of dispersion attributable to real differences in effect sizes as opposed to within-study error (Borenstein et al., 2009). A higher random effects variance component (REVC) indicates greater random effects variance. The 90% credibility interval (CrI) indicates the range in which we expect 90% of all true effect sizes to exist.

Results for WIF are shown in Table 2 and results for FIW are shown in Table 3. In all cases, the first group in the label is the referent group for each comparison.

#### 3.1. Cultural factors

**Hypothesis 1** stated that individuals from more collectivistic countries would report less WIF and FIW than individuals from less collectivistic countries. This hypothesis was not supported. No significant difference was found for WIF for the overall comparison ( $g = .01$ ,  $CI = -.13$  to  $.16$ ), the Asian cluster comparison ( $g = .04$ ,  $CI = -.14$  to  $.21$ ), or the Latin American cluster comparison ( $g = -.04$ ,  $CI = -.19$  to  $.12$ ). A significant overall difference was found for FIW, but the direction was contrary to expectations. Those from more individualistic cultures reported less FIW than did those from more collectivist cultures ( $g = -.23$ ,  $CI = -.34$  to  $-.12$ ). In addition, the Asian collectivistic subgroup was significantly different from the individualistic subgroup ( $g = -.27$ ,  $CI = -.40$  to  $-.14$ ) indicating individuals from the Asian cluster reported greater FIW than did individuals from the more individualist cluster. No significant difference as found with regard to the Latin American cluster comparison ( $g = .13$ ,  $CI = -.31$  to  $.18$ ). Research Question 1 questioned if individuals from less gender egalitarian countries would report greater WIF and FIW than individuals from more gender egalitarian countries. No significant difference was detected (WIF,  $g = .11$ ,  $CI = -.19$  to  $.24$ ; FIW,  $g = .16$ ,  $CI = -.25$  to  $.37$ ). All  $Q$ -statistics were significant, indicating a significant degree of heterogeneity.

#### 3.2. Institutional factors

**Hypothesis 2**, which stated that individuals from countries in the top third of the OECD work-family balance rankings report less WIF and FIW than do individuals from countries from the bottom third of the OECD work-family balance rankings, was not supported

**Table 2**

Summary of random effects results for mean differences – WIF.

Comparison	Group	N	$k_c$	$k_s$	$k_e$	$g$	SE	95% CI	Q	$I^2$	REVC	90% CrI
Ind vs. Col	Ind	6276	5	12	18	0.01	0.08	[-0.13, 0.16]	307.37 <sup>a</sup>	94.47	0.09	[-0.65, 0.68]
	Col	6288	14									
Ind vs. Asian Col	Ind	5960	5	11	17	0.04	0.09	[-0.14, 0.21]	306.25 <sup>a</sup>	94.78	0.12	[-0.74, 0.81]
	Asian Col	4475	7									
Ind vs. Latin Col	Individ	1891	5	3	7	-0.04	0.08	[-0.19, 0.12]	36.08 <sup>a</sup>	83.37	0.03	[-0.56, 0.49]
	Latin Col	1813	7									
GE As-Is	Low	3378	7	4	8	0.03	0.11	[-0.19, 0.24]	110.84 <sup>a</sup>	93.68	0.09	[-0.75, 0.79]
	High	2800	9									
WF Balance OECD	Bottom 12	3678	11	4	5	-0.04	0.17	[-0.38, 0.30]	143.90 <sup>a</sup>	97.22	0.14	[-1.35, 1.28]
	Top 12	2834	6									
U.S. vs. Non-U.S.	U.S.	4785	1	11	13	-0.08	0.08	[-0.23, 0.07]	207.26 <sup>a</sup>	94.21	0.07	[-0.68, 0.52]
	Non-U.S.	12954	33									
GDP Avg	Low	5567	10	7	13	0.01	0.05	[-0.09, 0.11]	95.15 <sup>a</sup>	87.39	0.03	[-0.39, 0.40]
	High	5737	9									
GDP Per Capita Avg	Low	4186	10	8	14	0.09	0.17	[-0.24, 0.42]	723.63 <sup>a</sup>	98.2	0.38	[-1.13, 1.49]
	High	3113	5									
Unemp Rate Avg	Low	2392	7	5	10	-0.11	0.08	[-0.27, 0.05]	84.38 <sup>a</sup>	89.33	0.06	[-0.69, 0.47]
	High	3750	9									
Gender Gap	High	1918	4	5	8	0.22	0.13	[-0.03, 0.47]	155.32 <sup>a</sup>	95.49	0.12	[-0.68, 1.13]
	Low	4900	9									

Notes. The first group in the label is the referent group for each comparison. For example, U.S. countries have significantly lower mean WIF than non-U.S. countries. Group = comparison group used in effect sizes,  $N$  = Total sample size,  $k_c$  = Number of countries,  $k_s$  = Number of studies,  $k_e$  = Number of effect sizes,  $g$  = Meta-analytic mean difference,  $SE$  = Standard error of the meta-analytic mean difference, 95%  $CI$  = 95% confidence interval of the meta-analytic mean difference,  $Q$  =  $Q$  statistic. A significant value indicates significant heterogeneity in the true effect size.  $I^2$  = Proportion of observed variance due to random effects, REVC = Random effects variance component. Higher values indicate more random effects variance, 90% CrI = 90% credibility interval, which indicates the range in which we expect 90% of all true effect sizes.

<sup>a</sup> Random effects significant at  $p < .05$ .

**Table 3**

Summary of random effects results for mean differences – FIW.

Comparison	Group	N	k <sub>c</sub>	k <sub>s</sub>	k <sub>e</sub>	g	SE	95% CI	Q	I <sup>2</sup>	REVC	90% CrI
Ind vs. Col	Ind	5824	5	9	14	−0.23	0.06	[−0.34, −0.12]	110.01 <sup>a</sup>	88.18	0.04	[−0.68, 0.22]
	Col	5313	13									
Ind vs. Asian Col	Ind	5824	5	9	14	−0.27 <sup>a</sup>	0.06	[−0.40, −0.14]	116.04 <sup>a</sup>	88.8	0.05	[−0.77, 0.23]
	Asian Col	4066	7									
Ind vs. Latin Col	Indiv	1575	5	2	6	−0.07	0.13	[−0.31, 0.18]	47.32 <sup>a</sup>	89.43	0.08	[−0.94, 0.81]
	Latin Col	1247	6									
GE As-Is	Low	2984	7	3	6	0.06	0.16	[−0.25, 0.37]	113.70 <sup>a</sup>	95.6	0.14	[−1.07, 1.19]
	High	1276	7									
WF Balance OECD	Bottom 12	3493	10	3	4	0.05	0.08	[−0.11, 0.22]	16.81 <sup>a</sup>	82.15	0.02	[−0.66, 0.77]
	Top 12	898	3									
U.S. vs. Non-U.S.	U.S.	4105	1	9	10	−0.15 <sup>a</sup>	0.05	[−0.25, −0.05]	57.94 <sup>a</sup>	84.47	0.02	[−0.51, 0.21]
	Non-U.S.	12094	32									
GDP Avg	Low	3234	9	5	9	−0.05	0.07	[−0.20, 0.09]	40.11 <sup>a</sup>	88.59	0.04	[−0.57, 0.47]
	High	2816	8									
GDP Per Capita Avg	Low	3327	9	6	11	0.18	0.07	[−0.10, 0.44]	266.31 <sup>a</sup>	96.24	0.20	[−0.87, 1.22]
	High	2180	5									
Unemploy Avg	Low	1978	7	4	8	0.02	0.18	[−0.33, 0.37]	264.98	97.36	0.25	[−1.29, 1.33]
	High	3001	9									
Gender Gap	High	1918	4	5	8	0.31 <sup>a</sup>	0.11	[0.09, 0.52]	110.86 <sup>a</sup>	93.69	0.08	[−0.45, 1.06]
	Low	4898	9									

Notes. The first group in the label is the referent group for each comparison. For example, U.S. countries have significantly lower mean WIF than non-U.S. countries. Group = comparison group used in effect sizes, N = Total sample size, k<sub>c</sub> = Number of countries, k<sub>s</sub> = Number of studies, k<sub>e</sub> = Number of effect sizes, g = Meta-analytic mean difference, SE = Standard error of the meta-analytic mean difference, 95% CI = 95% confidence interval of the meta-analytic mean difference, Q = Q statistic. A significant value indicates significant heterogeneity in the true effect size. I<sup>2</sup> = Proportion of observed variance due to random effects, REVC = Random effects variance component. Higher values indicate more random effects variance, 90% CrI = 90% credibility interval, which indicates the range in which we expect 90% of all true effect sizes.

<sup>a</sup> Random effects significant at  $p < .05$ .

(WIF,  $g = -.04$ , CI =  $-.38$  to  $.30$ ; FIW,  $g = .05$ , CI =  $-.11$  to  $.22$ ). Research Question 2 concerned if individuals from the U.S. report greater work–family conflict than individuals from countries other than the U.S. Individuals from the U.S. did not report greater WIF than individuals from all other countries ( $g = -.08$ , CI =  $-.23$  to  $.07$ ). With regard to FIW, individuals from the U.S. reported less FIW than individuals from all other countries ( $g = -.15$ , CI =  $-.25$  to  $-.05$ ). All Q-statistics were significant, indicating a significant degree of heterogeneity.

### 3.3. Economic factors

**Hypothesis 3**, which stated that individuals from countries with greater average GDP would report less WIF and FIW than individuals from countries with lower average GDP, was not supported using average GDP (WIF  $g = -.05$ , CI =  $-.09$  to  $.11$ ; FIW  $g = -.05$ , CI =  $-.20$  to  $.09$ ) nor using GDP per capita (WIF  $g = .09$ , CI =  $-.24$  to  $.42$ ; FIW  $g = .17$ , CI =  $-.10$  to  $.44$ ). **Hypothesis 4**, which proposed that individuals from countries with lower average unemployment would report less WIF and FIW than individuals from countries with greater average unemployment, was also not supported (WIF  $g = -.11$ , CI =  $-.27$  to  $.05$ ; FIW  $g = .02$ , CI =  $-.33$  to  $.37$ ). **Hypothesis 5** proposed that individuals from higher gender gap countries would report greater WIF and FIW than would individuals from lower gender gap countries. No significant difference was associated with WIF ( $g = .22$ , CI =  $-.03$  to  $.47$ ). However, significant mean differences were found when comparing individuals from lower gender gap countries versus higher gender gap countries on FIW. Specifically, individuals from higher gender gap countries reported greater FIW than did individuals from lower gender gap countries ( $g = .31$ , CI =  $.09$  to  $.52$ ). All Q-statistics were significant, indicating a significant degree of heterogeneity.

## 4. Discussion

Despite growing interest in work–family conflict across the globe, there has been little summarization of the predictors of work–family conflict at the level of national context. By meta-analytically investigating multiple aspects of national context, we provide the most comprehensive investigation to date of macro-level mean differences of work–family conflict. Given the growing body of cross-national research on work–family conflict, the findings are timely and offer insights into new directions for cross-cultural work–family research. Moreover, our findings help to empirically document the generalizability of existing primary study results.

Several key findings emerged. Overall, our results revealed few effects for macro-level factors in explaining mean differences in work–family conflict. Significant differences that do exist occur for FIW, rather than WIF. Why do macro-level factors appear to be more important for FIW than for WIF? Previous meta-analytic research shows that work-related factors play a significant role in predicting WIF (e.g., Michel, Clark, et al., 2011; Michel, Kotrba, et al., 2011). Thus, it may be that the role of the organization is stronger for WIF than for FIW, leaving more room for macro-environment influences on FIW.

Participants from less collectivistic (i.e., individualistic) countries reported less FIW than did those from more collectivistic countries. This finding held for the Asian region, but not for the Latin region. We theorized that close family ties act as a resource that helps



mitigate work–family conflict, but based on our findings it may be that family ties increase opportunities for FIW to occur. That is, close family ties can act as a demand rather than as a resource, increasing opportunities for FIW to occur.

The different results across Asian and Latin American cultures could be due to the different basis for collectivism. Specifically, Latino/Hispanic collectivism emphasizes familism while Asian collectivism is based on Confucianism. Familism refers to having a strong identification and attachment to the nuclear as well as to the extended family (Rinderlie & Montoya, 2008). Confucianism stresses the value of understanding one's role within a hierarchy and respect for family (Li & Karakowsky, 2002). Thus, it may be that because family is viewed as more of a duty in Asian culture, family demands may be higher, resulting in greater FIW relative to Latin culture in which dependence on family is more aligned with support. These findings underscore the importance of examining the intersection of culture and ethnicity to better understand work–family differences.

Individuals from the U.S. reported less FIW than did individuals from outside the U.S. This finding is in contrast to reports from scholars who state that the U.S. experiences more work–family conflict than anywhere else across the globe (Williams, 2010). Despite having no national policy mandating paid vacation, sick, or parental leave, the U.S. does not report greater WIF. Structuration theory may offer one explanation for this finding. Structuration theory recognizes that individual action and social structure impact one another (Gauntlett, 2002; Trefalt et al., 2013). Accordingly, the social context influences individuals, but individual action can also change the nature of social structures. When macro-level policies such as paid parental leave exist, structures such as organizations that reside at a lower level may develop solutions that bring alignment. When there is a lack of alignment, greater work–family conflict is likely to occur. Within the U.S., organizations play a considerable role in the provision of family-supportive policies. Family-supportive organizational perceptions and family-supportive supervision have been found to relate to work–family conflict across a variety of countries (e.g., Allen et al., 2014) and may offset the lack of national policy.

Across both WIF and FIW the largest effect size observed was associated with the gender gap index. The gender gap index may be most powerful differentiator because it encompasses multiple aspects of national policies and norms. While we classified it under the economic category, it essentially takes into account all three aspects of context. Another reason for these findings may be that the gender gap is more proximal to individual experiences than are other context variables given that it is assessed independent of a country's developmental level and indicates the nature of shared resources rather than available resources.

#### 4.1. Implications for theory and practice

Results of the current study can be used to help develop work–family theory. One reaction to our findings may be to conclude that macro-level factors have little relationship to individual reports of work–family conflict and therefore the field may be better served by directing research efforts at individual, organizational, and/or community factors. However, we believe this conclusion is premature. The degree of heterogeneity present suggests efforts are needed to investigate moderators along with cultural, institutional, and economic factors. Cultural factors probably work in concert with other variables that lie at multiple levels of analysis, such as organizational norms, occupation, or individual values. Results further support the call for multilevel research that takes into account macro, meso, and individual factors (e.g., Allen, 2012; Ollier-Malaterre et al., 2013). The degree of heterogeneity found also underscores that care is needed in drawing conclusions from any single study. Moreover, it seems unlikely that any one country can claim to having the least or the most work–family conflict.

Our findings also highlight that there are likely aspects of national context not captured in the current research that may make a difference in work–family conflict. For example, there may be specific components of cultural values such as individualism–collectivism that are implied by the construct definitions but not explicitly measured such as employee–employer relationships, autonomous self vs. integrated self, and organizational interest for employee welfare vs. employee work (e.g., Coyle-Shapiro & Shore, 2007). In addition there may be cultural values more proximal to the work–family interface that have yet to be examined (Allen, 2013). For example, values concerning the integration and segmentation of work and family domains may play a role in work–family conflict experiences cross-nationally.

In addition, our findings revealing no difference in mean levels of WIF and that individuals in the U.S. report less FIW than individuals from other countries supports the notion that we need a more nuanced look at the impact of national policy on work–family experiences. For example, as reviewed by Hegewisch and Gornick (2011), long paid maternity leave policies can reinforce the traditional and asymmetric division of paid and nonpaid work between mothers and fathers. This is important particularly in light of our findings that indicate that the largest effect size is the economic gender gap between men and women.

#### 4.2. Limitations and suggestions for future research

The limitations associated with the present research help spotlight areas for future research. We cannot be certain that reports of work–family conflict have the same meaning from one culture to the next. Tests of measurement invariance are not consistently conducted in studies that have compared multiple countries. This is important given the perceptual nature of the work–family conflict construct and in that there is some evidence to suggest that individuals from different cultures think about work–family conflict differently (e.g., Grzywacz et al., 2007). The development of open repositories of cross-national data and reports that show which measures and across which countries demonstrate measurement invariance are needed to assist scholars interested in cross-national comparative research.

Another limitation concerns second-order sampling error. Cross-national comparative studies tend to be based on convenience samples rather than nationally representative samples. Thus, sampling error likely has an impact on our results. Our study is also limited with regard to the small number of primary studies available for some of our comparisons. Along these same lines, our review

helps to illustrate the relative dearth of research from some regions of the globe. For example, there is particular lack of comparative studies from Africa and the Middle East. Our findings help to highlight the need for additional comparative studies, particularly from underrepresented countries.

As is common in cross-cultural research, country is used as a proxy for culture. To our knowledge, work–family conflict research has not been conducted that assesses culture at the individual level. This is a critical gap in that individual measures may be an unassessed linking mechanism between national context and work–family conflict. As an example, research on economic disparity shows the importance of measuring peoples' *perceptions* of their economic status (Carroll et al., 2011). Finally, we note that we our investigation of institutional factors was based on proxy variables that do not squarely map onto traditional institutional factors. Moreover, in some cases the classification of indicators could be argued (e.g., OECD ratings might be better classified as cultural variables). Primary studies that directly address the impact of institutional variables are needed to build the knowledge base for future meta-analytic research.

## 5. Conclusion

Work–family issues remain a topic of keen interest to researchers across the globe. Our research contributes to the need noted by work–family scholars to better understand the variety of ways in which individuals experience work–family conflict around the globe (e.g., Powell et al., 2009). Our findings reveal a more precise understanding of what macro-level contextual variables are more or less associated with reports of work–family conflict. By highlighting the current state of knowledge concerning national context differences in work–family conflict, we set the stage for further theoretical and empirical development of this important area of study.

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