

## **A cross-national model of job-related outcomes of work role and family role variables: A retail sales context**

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### **Abstract:**

This article proposes a model of job-related outcomes of four role variables in a retail sales context: work-family conflict (WFC), family-work conflict (FWC), work role conflict (RC), and work role ambiguity (RA). We tested the applicability of the model with three cross-national samples, that is, the United States, Puerto Rico, and Romania, and the results revealed that the model's measures and effects are mostly similar across samples. It was also posited and mostly supported that the effects that WFC and FWC have on the job-related outcomes are greater than the effects of RC and RA. Implications concerning the effects of role variables for international retail managers are offered.

**Keywords:** work-family conflict | job stress | retailing | performance | cross-national models

### **Article:**

Retail businesses are becoming increasingly "multinational" as U.S.-based firms are relying heavily on local nationals to staff their international operations. As such, an important issue in international retail management concerns factors affecting employee job-related outcomes (Ryan, Chart, Ployhart, and Slade 1999). Outcomes such as poor performance, job dissatisfaction, and turnover are costly as expenses due to recruiting, training, lost productivity, and managerial time devoted to substandard employees can be excessive. Furthermore, the marketing and customer-value chain literatures strongly suggest that customer satisfaction and retention are partially based on the customer-sales agent interface, where dissatisfied agents may provide poor customer service. Thus, dissatisfied and poor-performing retail salespeople can affect customer satisfaction and loyalty (Hartline, Maxham, and McKee 2000). From an international perspective, such outcomes are paramount as a primary difficulty for international managers is maintaining a productive workforce in another country (Money and Graham 1999).

Work role variables, such as role conflict (RC) and role ambiguity (RA), have been found to be predictive of job-related outcomes (Brown and Peterson 1993). Still, there is a lack of research on factors affecting the job-related outcomes of retail salespeople (Babin and Boles 1996), and the effects of two other role variables, work-family conflict (WFC) and family-work conflict

(FWC), have been largely ignored in the marketing literature. Although cross-national research has been conducted in industrialized economies, business globalization in developing economies has made the effects of role variables important to marketing managers there (Yang, Chen, Choi, and Zou 2000). Thus, modeling the effects of role variables with retail salespeople is needed to determine if these constructs and their outcomes generalize to developing economies.

The purpose of this article is to model job-related outcomes of WFC, FWC, RC, and RA in a cross-national retail sales context. We briefly discuss WFC, FWC, RC, and RC and offer a model positing their effects on job-related outcomes. We next discuss our rationale for an "etic" hypothesis, that is, testing the similarity of role variable effects cross-nationally. The equivalence of model measures and paths among constructs are then tested, as well as the relative effects of WFC and FWC versus RC and RA on job-related outcomes. A discussion with implications for cross-national retail managers follows.

## **WFC, FWC, RC, AND RA**

### **WFC and FWC**

WFC is defined as a form of *inter-(between)* role conflict where the demands created by the job interfere with performing family-related responsibilities, and FWC is viewed as a form of *inter-(between)* role conflict where the demands created by the family interfere with performing work-related responsibilities (Netemeyer, Boles, and McMurrian 1996). Several models show that WFC and FWC have differential effects on on-job variables such as job satisfaction and on off-job variables such as marital satisfaction (Frone, Russell, and Cooper 1992). Still, no research has modeled the effects of WFC and FWC on job stress, performance, satisfaction, and turnover intent simultaneously in a retail context, and we are unaware of any research testing the applicability of such a model cross-nationally.

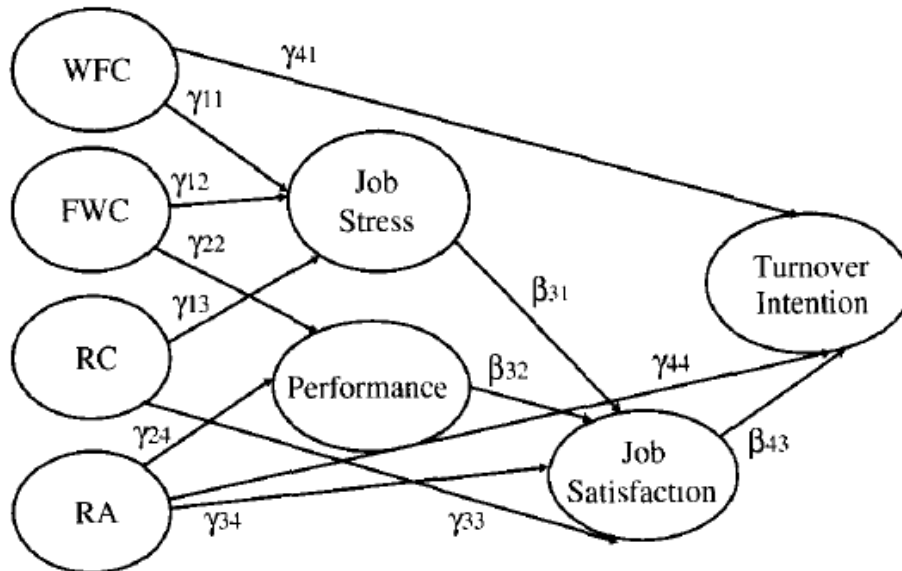
### **RC and RA**

RC is reflected in an employee's feeling that the demands/expectations of some job requirements are incompatible with the demands/expectations of other job requirements, and RA reflects employee uncertainty as to which job behaviors are most appropriate in a given situation (Rizzo, House, and Lirtzman 1970). Thus, RC and RA reflect *within-job* RC and RA, respectively. Although several studies have supported the effects of RC and RA on job-related outcomes (Brown and Peterson 1993), no studies have examined the direct or relative effects of WFC, FWC, RC, and RA simultaneously.

## **MODEL AND RATIONALE**

*WFC effects.* Figure 1 posits that WFC directly affects job stress and turnover intent. Job stress is viewed as a general nervousness or anxiety associated with the job affecting one's emotional and physical well-being. Role theorists contend that WFC should affect job stress (Kahn and Byosiere 1992), and empirical support for this effect is evident with U.S. samples (Netemeyer et al. 1996). As such, we posit a direct positive WFC  $\rightarrow$  job stress path ( $\gamma_{11}$  in Figure 1). Turnover intent encompasses thoughts about, and/or intention of, quitting one's job. It has been suggested

that the family role is more valued than the job role, and when the job interferes with the family role, turnover intent increases (Frone et al. 1992). There is also some anecdotal support for a WFC → turnover intent path. In a study of 1,057 firms, the Family and Work Institute reports that employees indicated a stronger intention to remain with the company when they felt that their level of work-family interference was low (Galinsky and Bond 1998). We thus posit a positive WFC → turnover intent path ( $\gamma_{41}$ , in Figure 1).



**Figure 1.** Role Variable Effects on Job Outcomes

NOTE: WFC = work-family conflict; FWC = family-work conflict; RC = role conflict; RA = role ambiguity

*FWC effects.* Identity theory suggests that FWC should affect job stress because the negative effect of one role may "spill over" to another role, that is, conflict with the family increases stress associated with work (Thoits 1995). We thus hypothesize a positive FWC → job stress path ( $\gamma_{12}$  in Figure 1). FWC should also affect in-role performance, which is defined as the retail salesperson's perception of quantity of sales achieved, management of time and expenses, knowledge of company and competitor products, and customer needs (Dubinsky and Mattson 1979). FWC should affect performance for several reasons. First, FWC is a form of interrole conflict where the demands created by the family interfere with *performing* work-related tasks. Second, retail salespeople are boundary spanners who find the compartmentalization of time and effort between family and work difficult to arrange, negatively affecting performance (Kahn and Byosiere 1992). Third, the Family and Work Institute reports that when family interferes with work, employee job performance likely suffers (Galinsky and Bond 1998). This negative FWC → performance path is posited in Figure 1 ( $\gamma_{22}$ ).

*RC effects.* Figure 1 posits two well-documented effects of RC in the sales literature. It has been shown that as RC rises, so does job stress (Singh 1998). Thus, we posit a positive RC → job stress path ( $\gamma_{13}$  in Figure 1). The effect of RC on job satisfaction is also clear in the sales literature both domestically (Netemeyer, Johnston, and Burton 1990) and internationally (Dubinsky, Michaels, Kotabe, Lim, and Moon 1992). We thus posit a negative RC → job satisfaction path ( $\gamma_{33}$  in Figure 1).

*RA effects.* We posit three RA effects. First, the majority of the evidence in the sales literature suggests a negative RA → performance path (Brown and Peterson 1993). Second, studies examining the RA-job satisfaction link report a negative effect, and third, a positive RA-turnover intent link has been shown (Brown and Peterson 1993). We thus posit a negative RA → performance path, a negative RA → job satisfaction path, and a positive RA → turnover intent path ( $\gamma_{24}$ ,  $\gamma_{34}$ , and  $\gamma_{44}$  in Figure 1).

*Job stress, performance, and satisfaction effects.* We posit one effect each from job stress, performance, and job satisfaction. We define job satisfaction as a global affective-based satisfaction with the job. Theorists contend that job stress results in feelings of anxiety and nervousness that produces job dissatisfaction (Kahn and Byosiere 1992), and empirical support for such an effect is abundant (Netemeyer et al. 1990). We thus posit a negative path from job stress to job satisfaction ( $\beta_{31}$  in Figure 1).

Although theoretical rationale for a direct performance → job satisfaction effect has been offered, results have been mixed. In one meta-analysis, Brown and Peterson (1993) did not find support for a direct performance → job satisfaction path, but in a smaller study (five samples), they did find support for this path (Brown and Peterson 1994). Empirically, then, the performance-satisfaction linkage requires further testing, and we posit a positive performance → job satisfaction path ( $\beta_{32}$  in Figure 1). Finally, job satisfaction is considered a primary determinant of turnover intent, and across the organizational behavior and marketing literatures, a direct path from job satisfaction to turnover intent has been found (Tett and Meyer 1993). Thus, we hypothesize a negative job satisfaction ~ turnover intent path ( $\beta_{43}$  in Figure 1).

### Role Variable Effects Across Samples

Empirical evidence suggests that work role constructs may have similar effects across countries. For example, Bhagat et al. (1994) found that RC, RA, and role overload had similar effects on job stress across seven countries, and marketing researchers found that the effects of RC and RA on performance, job satisfaction, organizational commitment, and work alienation did not differ between salespeople of the United States, Japan, and Korea (Dubinsky et al. 1992). Thus, the effects of RC and RA may be universal.

There is also evidence suggesting that WFC and FWC may not be country specific as Aryee, Fields, and Luk (1999) found similar correlations with antecedents (job and family involvement) and consequences (job distress) of WFC and FWC in Hong Kong. Given that the workforce in the samples we study is changing in a manner that may bring about conflicts between work and family roles similar to those found in industrialized economies (Zsembik and Peek 1994), we adopt an "etic" hypothesis and test if the effects of WFC and FWC (and RC and RA) are similar across the U.S., Romanian, and Puerto Rican samples.

### Relative Effects of WFC and FWC Versus RC and RA

Most of the effects of RC and RA on job outcomes have been shown before, and some of the effects of WFC and FWC on job-related outcomes have been shown as well. What has yet to be tested, though, are the relative effects of WFC and FWC versus RC and RA. It is our premise

that the effects that WFC and FWC have on job-related outcomes they predict in common with RC and RA will be stronger than the effects of RC and RA. Identity theory and recent empirical evidence guide our rationale.

Identity theory suggests that individuals engage in multiple social roles (Thoits 1991). These roles are ranked in a salience hierarchy that indicates the meaningfulness of one role vis-à-vis another role--the more salient the role identity, the greater the impact on psychological and behavioral outcomes. Clearly, two salient role identities are the work and family roles (Thoits 1991). It has been suggested that clashes between salient role identities can have more pronounced effects than within-role clashes/conflicts. In fact, among those who value both work and family identities, clashing expectations in those roles can be highly distressing and lead to negative outcomes for both salient roles. Given this view, the evidence that the effects of WFC and FWC are on the rise (Galinsky and Bond 1998), and the notion that the family role may be more valued than the job role (Frone et al. 1992), we hypothesize that WFC and FWC will have stronger effects than RC and RA on job outcomes. Each effect is now discussed.

*WFC/FWC* → *Job Stress* > *RC* → *Job Stress*. The within-job role conflict of RC may be affected by management clarifying employee tasks, but WFC and FWC cannot be completely eliminated since conflicts in these areas involve parties who are not part of the work environment. Given the identity salience of both the work and family roles, the effects of conflict between these roles may be more pronounced than conflicts within a given role (Thoits 1991). Thus, job stress due to WFC/FWC should be greater than job stress due to RC. There is some empirical evidence suggesting these effects. Meta-analyses (see King and King 1990) report RC-job tension/anxiety correlations of .28, while the correlations of WFC and FWC with job stress have been stronger. For example, MacEwen and Barling (1994) reported WFC-anxiety/stress and FWC-anxiety/stress correlations of .57 and .58 for men and .55 and .38 for women. Thus, we expect WFC and FWC to have stronger effects on job stress than RC.

*FWC* → *Performance* > *RA* → *Performance*. Recall that FWC is a form of *inter-(between)* role conflict where the demands created by the family *interfere with performing* work-related tasks. As such, retail salespeople must balance the demands of groups internal (company, customers, and supervisor) and external (family) to the job, and this makes work performance more difficult (Kahn and Byosiere 1992). Furthermore, identity theory suggests that conflicting expectations in salient roles will likely result in individuals engaging in strategies that allow them to focus most of their effort on the more valued role (Thoits 1991). If family is more valued than work, and if the effects of conflict between roles are more detrimental than the effects of within-role work issues, then work performance should be more affected by FWC than RA. Empirical results further suggest a stronger FWC than RA effect. Meta-analyses report an RA-performance correlation of  $-.24$  (King and King 1990) and a RA → performance path of  $-.28$  (Brown and Peterson 1993). The one sales study that we are aware of that examined the relation between FWC and performance showed a correlation of  $-.38$  (Netemeyer et al. 1996). In sum, a stronger FWC → performance path than RA → performance path is posited.

*WFC* → *Turnover Intent* > *RA* → *Turnover Intent*. Because social roles are a key source of self-evaluation, individuals are motivated to maintain this self-evaluation when salient role identities clash. That is, the role that is valued less may give way to the role that is valued more where

individuals voluntarily "extract" themselves from a problematic role (Thoits 1991). Thus, when work interferes with the more valued family role, and when an employee is willing to quit his or her present job for one that better matches the more salient family role, the WFC → turnover intent effect should be pronounced. The effects of RA, however, should be weaker as RA is a within-role issue that is likely unavoidable in most work environments (King and King 1990). Given that WFC involves pressure from both work and nonwork roles, management actions to reduce the effects WFC on turnover intent may be less effective. We posit that the WFC → turnover intent path is greater than the RA → turnover intent path.

## **METHOD**

### **Samples**

*Selection.* We gathered data from the United States, Puerto Rico, and Romania. Although the selection of these samples was primarily convenience based, we still considered three criteria. First, we wanted variation on levels of economic and social development with the understanding that such differences might affect work values and behavior. The United States is an advanced economy, while Puerto Rico and Romania are classified as less developed economies, with the latter being a transitional economy and emerging market. Second, the role of work in the United States and the prevailing work ethic may differ between the United States, a uniquely capitalist market, and that of Romania, a former communist nation. Puerto Rico, on the other hand, as part of the U.S. commonwealth, is not expected to vary as much on work-related dimensions. Yet, it is different from the United States due to its Spanish heritage. Third, most cross-national studies have neglected the emerging economies of Latin America and Eastern Europe. By choosing samples that vary along these three criteria, a reasonable test of the similarities of role variables is offered.

*U.S. sample.* The U.S. sample consisted of retail salespeople from a large southeastern city engaged in selling a variety of products/services from clothing to sporting goods to phone services. A mailing list was compiled, and 800 questionnaires were mailed with postage-paid return envelopes. A cover letter assured the confidentiality and anonymity of responses. Of the 800 mailed, 275 responses had complete data across study measures (an effective response rate of 34%). The median age of respondents was 34 years, 52 percent were female, 47 percent were currently married, 46 percent had children at home, the median income was in the \$40,000 to \$59,999 range, and 61 percent had a 4-year college degree or more. Their average amount of time with the organization was 5.70 years, and salesperson compensation was based on a base salary plus commission.

*Puerto Rican sample.* The Puerto Rican sample consisted of retail salespeople engaged in selling a variety of products/services from sporting goods to phone services. The Chamber of Commerce in the city where the research was conducted provided us with a list of retail salespeople, and every fifth listing was chosen for the sample ( $N = 400$ ). Students from a local university distributed the surveys to the salespeople at their place of work. The survey contained a cover letter explaining that the purpose of the study was to investigate job-related factors affecting retail salespeople in Puerto Rico. The research team retrieved 141 surveys. Of the 141, 125 had complete data on all study measures (an effective response rate of 31%). The median age was 29

years, the median income was in the \$10,000 to \$19,999 range, 62 percent were female, 55 percent were currently married, 43 percent had children at home, 31 percent had a 4-year college degree or more. The average time with the organization was 5.38 years, and the salespeople's compensation was composed of a base salary plus commission.

*Romanian sample.* The Romanian sample consisted of retail salespeople involved in selling a variety of products and services. An announcement recruiting participants was placed in a newspaper, and students from a local university distributed packets to those salespeople who responded to the newspaper ad. Five hundred surveys were administered with a cover letter explaining that the purpose of the study was to investigate job-related perceptions affecting salespeople in emerging economies. The research team retrieved 397 surveys, and each respondent received a monetary incentive equivalent to the price of a cup of coffee for completing the survey. Of the 397, 284 had complete data on all study measures (an effective response rate of 57%). The median age was 26 years, 77 percent were female, 51 percent were currently married, 51 percent had children at home, and 39 percent had some college or a 4-year college degree. The average amount of time that salespeople had with the organization was 4.49 years, and income was not reported categorically. Compensation was composed of a base salary plus commission.

### Questionnaire Translation and Measures

Prior to drafting the questionnaire, presurvey interviews were conducted in Puerto Rico and Romania that indicated "conceptual equivalence" of the constructs studied. Questionnaires were then drafted by bilingual experts fluent in both English and Spanish for Puerto Rico, and English and Romanian for Romania. The questionnaire was drafted in English first and translated into Spanish and Romanian by the respective bilinguals. The questionnaire was then back-translated into English and checked for consistency with the original translated versions to enhance "translation equivalence" (Van de Vijver and Leung 1997). The final translated version was back-translated one more time as a last precaution. For all samples, the items used to operationalize the constructs were the same.

WFC and FWC were measured with three items, and RC and RA were measured with four items. Job stress was measured with four items, and performance was measured with three items. Job satisfaction was measured with three items, and turnover intent was measured with two items. All items are displayed in the appendix along with the sources of the items.<sup>1</sup>

## RESULTS

### Measurement Model Results

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<sup>1</sup> We actually started with five work-family conflict (WFC) items, five family-work conflict (FWC) items, six role conflict (RC) items, six role ambiguity (RA) items, six job stress items, five job satisfaction items, five performance items, and four turnover intent items. Throughout the questionnaire translation process, it became evident that some of the items did not attain a level of "translation equivalence" we felt confident with. Also, via factor analyses, item analyses, our own author judgment, and valid concerns of reviewers, we deleted items that did not meet recommended psychometric criteria for item retention. Thus, the final items we used were a subset of the items originally drafted.

Given our focus of testing the similarity of the model's paths across samples, we first tested for measurement invariance across the samples. For each sample, the constructs were specified as eight correlated first-order factors, corresponding to a three-item WFC factor, a three-item FWC factor, a four-item RC factor, a four-item RA factor, a four-item job stress factor, a three-item performance factor, a three-item job satisfaction factor, and a two-item turnover intent factor. We then estimated a hierarchy of multigroup measurement invariance models where the hierarchy begins with the least restrictive model—a same pattern of fixed and nonfixed parameters across groups, that is, the configural invariance model (Steenkamp and Baumgartner 1998). If this model shows good fit and shows that all loadings to their respective factors are significant, evidence for configural invariance exists. This model is then used as a baseline for comparison with subsequent models in the hierarchy. The next model tested in the hierarchy specifies invariant factor loadings across samples, the full metric invariance model. If this model does not statistically differ from the configural invariance model, full metric equivalence exists. Although desirable, full metric invariance is rare in practical applications, and partial measurement invariance has been advocated as acceptable for measurement invariance models. Partial measurement invariance requires that some, but not all, of the factor loadings to their factors be invariant to examine the relationships between constructs in a model. Thus, partial invariance models represent a third class of models in the cross-national invariance hierarchy.

The top portion of Table 1 shows that the configural invariance model was supported as adequate levels of fit for the Comparative Fit Index (CFI), Non-Normed Fit Index (NNFI), and root mean square error of approximation (RMSEA) were found (Hu and Bentler 1995). Next, the model constraining the factor loadings to be invariant across groups was estimated—the full metric invariance model. Although the fit indices for this model were adequate, the difference in fit between this model and the configural invariance model was significant ( $\chi^2_{\text{diff}} = 168.76$ ,  $df_{\text{diff}} = 36$ ,  $p < .01$ ). Several items (1 performance, 2 job stress, 1 turnover intent, 2 FWC, 2 RC, and 3 RA) showed modification indices (MIs) indicative of item loading differences across samples. Thus, we estimated a series of partial measurement invariance models by sequentially relaxing the parameter constraints on these items (from largest MI to the smallest) creating a final partial metric invariance model that did not differ statistically from the configural invariance model ( $\chi^2_{\text{diff}} = 21.85$ ,  $df_{\text{diff}} = 14$ ,  $p > .05$ ). In sum, evidence of partial metric invariance exists, suggesting that assessing relations in the structural model is appropriate. Table 1 also shows internal consistency estimates derived from the final partial metric invariance model, and the appendix shows measurement item loadings for all samples. Coefficient alpha ranged from .62 to .93 across constructs, and average variance extracted (AVE), which assesses the amount of variance captured by a construct's measure relative to measurement error, ranged from .39 to .83. Using the  $\phi$  correlations (i.e., corrected for measurement error correlations) in Table 2, discriminant validity among constructs was examined by comparing ( $\phi^2$ ), or the "shared variance" between two constructs, to their average AVE. If  $\phi^2$  is less than the average AVE between the two constructs, discriminant validity is supported (Fornell and Larcker 1981). The maximum shared variance estimates ( $\phi^2$ ) per sample were as follows: WFC—FWC = .50 in the United States, job satisfaction--turnover intent = .48 in Puerto Rico, and WFC—FWC = .36 in Romania. For these pairs of constructs and all other pairs of constructs in Table 2,  $\phi^2$  was less than AVE, supporting discriminant validity.



**Table 1.** Measurement Model Results

	Measurement Invariance Tests						
	$\chi^2$	df	$\chi^2_{diff}$	df <sub>diff</sub>	CFI	NNFI	RMSEA
	Configural invariance model	1,453.23	813	—	—	.92	.90
Full metric invariance model	1,621.99	849	168.76	36	.90	.89	.06
Final partial metric invariance model	1,475.08	827	21.85	14	.92	.90	.06
	Internal Consistency Estimates						
	United States		Puerto Rico		Romania		
	Coefficient $\alpha$	AVE	Coefficient $\alpha$	AVE	Coefficient $\alpha$	AVE	
Work-family conflict	.91	.77	.89	.70	.84	.64	
Family-work conflict	.90	.77	.88	.71	.74	.50	
Role conflict	.75	.47	.77	.49	.78	.49	
Role ambiguity	.74	.47	.70	.43	.71	.39	
Job stress	.75	.43	.80	.54	.74	.43	
Performance	.76	.54	.62	.39	.72	.53	
Job satisfaction	.93	.83	.84	.65	.74	.53	
Turnover intent	.77	.65	.88	.80	.79	.68	

NOTE: CH = Comparative Fit Index; NNFI = Non-Normed Fit Index; RMSEA = root mean square error of approximation; AVE = average variance extracted.

**Table 2.** Disattenuated Correlations ( $\phi$ ) Among Constructs

	United States							
	1	2	3	4	5	6	7	8
1. Work-family conflict	1.00							
2. Family-work conflict	.71	1.00						
3. Role ambiguity	.07 <i>ns</i>	.04 <i>ns</i>	1.00					
4. Role conflict	-.05 <i>ns</i>	-.07 <i>ns</i>	.54	1.00				
5. Job stress	.45	.52	.12	-.13	1.00			
6. Performance	.00 <i>ns</i>	-.21	-.19	-.16	-.07 <i>ns</i>	1.00		
7. Job satisfaction	-.11	-.07 <i>ns</i>	-.47	-.36	-.15	.39	1.00	
8. Turnover intent	.37	.38	.30	.07 <i>ns</i>	.27	-.37	-.70	1.00
	Puerto Rico							
	1	2	3	4	5	6	7	8
1. Work-family conflict	1.00							
2. Family-work conflict	.61	1.00						
3. Role ambiguity	.33	.48	1.00					
4. Role conflict	.30	.19	.25	1.00				
5. Job stress	.38	.25	.30	.35	1.00			
6. Performance	-.28	-.43	-.52	-.03 <i>ns</i>	-.24	1.00		
7. Job satisfaction	-.17	-.13 <i>ns</i>	-.36	-.32	-.39	.46	1.00	
8. Turnover intent	.35	.20	.32	.40	.27	-.21	-.69	1.00
	Romania							
	1	2	3	4	5	6	7	8
1. Work-family conflict	1.00							
2. Family-work conflict	.60	1.00						
3. Role ambiguity	-.03 <i>ns</i>	.09 <i>ns</i>	1.00					
4. Role conflict	.22	.13	.02 <i>ns</i>	1.00				
5. Job stress	.46	.37	-.08 <i>ns</i>	.31	1.00			
6. Performance	-.13	-.28	-.08 <i>ns</i>	-.09 <i>ns</i>	.03 <i>ns</i>	1.00		
7. Job satisfaction	-.33	-.04 <i>ns</i>	-.12	-.14	-.23	.23	1.00	
8. Turnover intent	.45	.30	.10	.16	.21	-.37	-.56	1.00

NOTE: Except where noted by *ns* (nonsignificant), all correlations were significant at the .05 level or better.

**Table 3.** Structural Model Results

	Structural Invariance Tests						
	$\chi^2$	df	$\chi^2_{diff}$	df <sub>diff</sub>	CFI	NNFI	RMSEA
Baseline model (all paths free)	1,558.14	843	—	—	.91	.89	.06
Full structural invariance model	1,605.27	867	47.13	24	.91	.89	.06
Final partial structural invariance model	1,588.97	863	30.83	20	.91	.90	.06
	Unstandardized (completely standardized) Path Estimates						
	United States		Puerto Rico		Romania		
<i>WFC</i> → Job Stress: $\gamma_{11}$	.12	(.22)	.23	(.25)	.34	(.39)	
WFC → Turnover Intent: $\gamma_{41}$	.29	(.29)	.29	(.25)	.29	(.26)	
FWC → Job Stress: $\gamma_{12}$	.18	(.34)	.18	(.18)	.18	(.14)	
FWC → Performance: $\gamma_{22}$	-.13	(-.27)	-.13	(-.29)	-.13	(-.23)	
RC → Job Stress: $\gamma_{13}$	.05	(.05) <i>ns</i>	.04	(.03) <i>ns</i>	.04	(.03) <i>ns</i>	
RC → Job Satisfaction: $\gamma_{33}$	-.56	(-.41)	-.32	(-.20)	-.14	(-.11)	
RA → Performance: $\gamma_{24}$	-.05	(-.04)	-.05	(-.07)	-.05	(-.10)	
RA → Job Satisfaction: $\gamma_{34}$	-.10	(-.05)	-.10	(-.07)	-.10	(-.03)	
RA → Turnover Intent: $\gamma_{44}$	.02	(.01) <i>ns</i>	.01	(.00) <i>ns</i>	.01	(.01) <i>ns</i>	
Job stress → Job satisfaction: $\beta_{31}$	-.17	(-.11)	-.17	(-.18)	-.17	(-.23)	
Performance → Job Satisfaction: $\beta_{32}$	.48	(.27)	.48	(.23)	.48	(.28)	
Job Satisfaction → Turnover Intent: $\beta_{43}$	-.81	(-.67)	-.81	(-.56)	-.81	(-.54)	
$R^2$ job stress	.26		.16		.24		
$R^2$ performance	.07		.10		.07		
$R^2$ job satisfaction	.30		.18		.19		
$R^2$ turnover intent	.58		.43		.45		

NOTE: Except where noted by *ns* (nonsignificant), all paths are significant at the .05 level or better. Italicized paths denote significant differences across samples. WFC = work-family conflict; FWC = family-work conflict; RC = role conflict; RA = role ambiguity.

### Structural Model Results

To test our eric hypothesis with regard to model paths, we took the multiple-group approach used by Singh (2000). Table 3 presents the results. With the first model, all paths across samples were freely estimated, that is, the baseline model ( $\chi^2 = 1,558.14$ ,  $df = 843$ ). This model was then compared with a model where all paths were constrained to be equal across groups—a full structural invariance model ( $\chi^2 = 1,605.27$ ,  $df = 867$ ). Given the difference in fit between the two models was significant ( $\chi^2_{diff} = 47.13$ ,  $df_{diff} = 24$ ,  $p < .05$ ), not all paths are equal across groups. We then sequentially relaxed structural path equality constraints creating partially invariant structural models until the difference in fit between the baseline model and the final partial structural invariance model was not statistically significant. From the full structural invariance model, the WFC → job stress path had the highest MI. A model was estimated that allowed the WFC → job stress path to be freely estimated. The fit of this model still differed significantly from the baseline model. The next highest MI (from the partial structural invariance model with the WFC → job stress path free) was for the RC → job satisfaction path. When this path was freely estimated, this model—the final partial structural invariance model ( $\chi^2 = 1,588.97$ ,  $df = 863$ )—did not differ in fit from the baseline model ( $\chi^2_{diff} = 30.83$ ,  $df_{diff} = 20$ ,  $p > .05$ ). Thus, across samples, only 2 of 12 paths differed, the WFC → job stress path and the RC → job satisfaction path.

The bottom portion of Table 3 presents the path estimates from the final partial structural invariance model. The fit of this model was adequate, 10 of 12 paths were significant, and the model explained significant amounts of variance in job stress (.16 to .26), performance (.07 to .10), job satisfaction (.18 to .30), and turnover intent (.43 to .58).<sup>2</sup>

**Table 4.** Relative Effects of Work-Family Conflict/Family-Work Conflict (WFC/FWC) Versus Role Conflict/Role Ambiguity (RC/RA)

	United States		Puerto Rico		Romania	
	Standardized Path	$\chi^2_{diff}$	Standardized Path	$\chi^2_{diff}$	Standardized Path	$\chi^2_{diff}$
WFC → Job Stress > RC → Job Stress	.22/.05	1.08 <i>ns</i>	.25/.03	2.63 <i>ns</i>	.39/.03	11.85
FWC → Job Stress > RC → Job Stress	.34/.05	3.69*	.18/.03	3.69*	.14/.03	3.69*
FWC → Performance > RA → Performance	-.27/-.04	4.02	-.29/-.07	4.02	-.23/-.10	4.02
WFC → Turnover Intent > RA → Turnover Intent	.29/.02	19.53	.25/.00	19.53	.26/.01	19.53

NOTE: *Standardized Path* refers to completely standardized path estimates. Under Standardized Path, the first entry is the path that is posited to have the stronger effect. For example, for the WFC → Job Stress > RC → Job Stress comparison in the United States, the .22 represents the WFC → Job Stress path, and the .05 represents the RC → Job Stress path. "ns" denotes not significant. \**p* < .10. All other paths are significant at the .05 level or better.

#### Relative Effects of WFC and FWC vis-à-vis RC and RA

It was hypothesized that the effects of WFC/FWC would be stronger than the effects of RC/RA on job-related outcome variables. Using multigroup analyses with the final partial structural invariance model, we compared the following paths: (1) the WFC → job stress path to the RC → job stress path, (2) the FWC → job stress path to the RC → job stress path, (3) the FWC → performance path to the RA → performance path, and (4) the WFC → turnover intent path to the RC → turnover intent path. Each comparison was conducted as a chi-square difference test at 1 *df*, where the compared paths of interest were constrained to be equal in one nested multigroup model but were freely estimated in another. There were 12 comparisons in total (4 within-sample path comparisons across three samples). As Table 4 shows, 10 of the 12 comparisons were significant in the predicted direction. The WFC → job stress path is greater than the RC → job stress path for Romania, the FWC → job stress path is greater than the RC → job stress path for all three samples, the FWC → performance path is greater than the RA → performance for all

<sup>2</sup> When we estimated the path from RA → turnover intent, a significant negative coefficient was obtained for the U.S. sample (-.21 standardized). However, the disattenuated phi correlation between RA and turnover intent is positive and significant (.30, *t* = 3.83) in the U.S. sample. An examination of the correlations between turnover intent and its predictor variables (WFC, RA, and job satisfaction) revealed a pattern indicative of collinear effect. Thus, we used linear regression where turnover intent was regressed on WFC, RA, and job satisfaction. In this regression equation, the RA standardized beta coefficient was -.02 (*ns*). Given these results, we reestimated the model in the United States using the LISREL interval restriction command (p. 348-349 of the LISREL8 manual) and specified the RA → turnover intent path to be greater than 0. This procedure resulted in an unstandardized estimate of .02 and a standardized estimate of .01 for the RA → turnover intent path. This procedure did not affect any other estimates in the model, nor did it affect model fit. Thus, in Table 3, we report the effects of the interval restriction model, and we make our comparison between the WFC → turnover intent path and RA → turnover intent path using this interval restriction as well.

three samples, and the WFC → turnover intent path is greater than the RA → turnover intent for all three samples.<sup>3</sup>

## DISCUSSION

Recently, there have been calls for (1) testing international sales-based models (Money and Graham 1999) and (2) studying the cross-national effects of work and family role variables (Yang et al. 2000). The current study addressed these calls by developing and testing a model of job-related outcomes of four role variables with samples from three different countries.

Consistent with a primary goal of cross-national research, we established the applicability of our model to other countries by demonstrating the partial invariance of measurement and structural parameters.

### Summary of Findings

*Direct effects.* As per direct effects, WFC affected both job stress and turnover intent in all three samples, and FWC affected job performance across samples as well. These results suggest that conflict in one role can have pronounced effects for outcomes within that role, as well as outcomes in another role. Thus, the assertion that the source of conflict is felt most within the role of that source requires reexamination as our findings are akin to a "spillover" explanation where the conflict of one role affects outcomes of another role. Three of five RC and RA effects were also significant across samples: (1) RC affected job satisfaction, (2) RA affected performance, and (3) RA affected job satisfaction. Contrary to findings in the sales-based literature (Brown and Peterson 1993), RC did not affect job stress and RA did not affect turnover intent. Perhaps in the retail sales setting, within-role expectations and job descriptions are quite clear, and therefore RC and RA effects are of lesser strength.

*Relative effects.* As per relative effects, our results show that the effects of in-role conflict/ambiguity (RC and RA) are not as pronounced as the effects of between-role conflicts (WFC and FWC). These results concur with the role identity theory notion that when two salient roles clash, individuals may invest more resources in the more salient role (family) at the expense of the less salient role (work), thus hurting performance in the less salient role. In fact, Thoits (1991) has suggested that individuals may voluntarily relinquish a salient identity role if it conflicts with a more valued identity role. These results are also consistent with the view that individuals may be valuing the family role over the work role (Frone et al. 1992). In sum, when work and family conflict, their effects on job-related outcomes may be greater than the effects of in-role conflicts/uncertainties.

### Implications

*Practical implications.* There are several practical implications related to our study findings. First, retail firms can offer realistic job previews concerning the position being offered. These

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<sup>3</sup> As is evident from Table 4, the chi-square differences for three of the path comparisons (i.e., WFC → job stress vs. RC → job stress, FWC → job stress vs. RC → job stress, and WFC → turnover intent vs. RA → turnover intent) are the same across the country samples. This is due to the multi-group finding/approach that shows these paths (involved in the comparisons) to be invariant across samples.

can incorporate a variety of components, including interviews with current employees and providing information concerning performance expectations and work role clarity. If the potential employee is married, the spouse may also be given a preview of the workload involved in the position to help set expectations so that the family can make an informed decision regarding the job.

Second, it has been suggested that to lessen WFC and FWC, employees adopt readily available coping strategies in their environments (Thoits 1995). One such strategy involves a supportive work environment that includes family-friendly work policies. In established economies, firms are faced with increased employee expectations regarding family-friendly benefits. In developing economies, like Puerto Rico and Romania, corporate programs like flextime, family leave, on-site child care, and job sharing have not typically been offered. Now, however, they may need to be offered to hire and/or retain the best employees. There is mounting evidence that such programs are financially favorable to the firm. For example, the Family and Work Institute study reports that 46 percent of U.S. firms reported that such programs result in a positive return on the investment (Galinsky and Bond 1998).

Third, a principal role for the manager in charge of international retail operations involves establishing and maintaining productive employees. It has been noted that this role may be more difficult in developing and transition economies (Money and Graham 1999). Given our WFC → turnover intent and FWC → performance paths, such difficulty is becoming apparent to cross-national as well as U.S. managers. If an employee is experiencing a high level of FWC, the potential for lost productivity (performance) exists. If an employee is experiencing a high level of WFC, the potential for losing an employee exists. Thus, training managers to reduce WFC and FWC may enhance performance and aid in the retention of key retail salespeople.

Although not directly assessed in our study, a fourth implication relates to how retail sales agents experiencing high levels of *interrole conflict* (WFC and FWC) and/or high levels of within-role conflict/ambiguity (RC and RA) may ultimately affect customer perceptions. It is now widely accepted that customer satisfaction is partially a function of customer interaction with sales agents, an important aspect of performance (Hartline et al. 2000). A dissatisfied or poorly performing retail salesperson, then, may provide lackluster service to customers that negatively affect customer satisfaction. Thus, reducing WFC, FWC, RC, and RA can help enhance performance and employee job satisfaction, aid in the retention of key retail salespeople, and affect customer satisfaction.

*Theoretical implications.* Finally, we feel our study raises two theoretical implications. First, most studies in the area of selling have focused on just the effects of RC and RA and have ignored the effects of WFC and FWC. Our findings suggest that the effects of RC and RA are not as pronounced as the effects of WFC and FWC. This may be due to the employee perception that RC and RA can be affected much more easily by management than WFC and FWC. Thus, future studies may want to assess the relative effect of RC/RA vis-à-vis WFC/FWC in other boundary-spanning settings and test these effects where family-friendly programs are absent versus present. Are the effects of RC and RA more (less) pronounced when family-friendly programs are offered to employees? Also, does the reduction of one (RC and RA) coincide with a reduction in the other (WFC and FWC)? Future studies examining the interplay of all four role

variables under varying conditions of managerial support and family-friendly programs are of interest.

Second, we feel that the use of identity theory to posit and explain the relative effects of WFC and FWC vis-à-vis RC and RA presents a fruitful theoretical approach to studying the effects of within-role versus interrole conflicts. Identity theory posits that conflict between salient role identities (work and family) may have the more detrimental effects on outcomes (job stress, job satisfaction, performance) than conflict within a given role (RC and RA). Our results bear this out and suggest that when interrole conflict is perceived as high, maintaining a salient identity may be threatened. When a salient identity is threatened, employees may withdraw from (higher turnover) one salient role (work) to maintain identity in another salient role (family). Similarly, employees may feel a pronounced spillover effect where one salient role increases the negative effect associated with another salient role, that is, the FWC → job stress effect. Thus, future research may want to look at theories that account for interrole conflict, such as identity theory, in conjunction with the more conventional approaches, such as within-role stress theory (Kahn and Byosiere 1992), to more fully explain the effects of WFC, FWC, RC, and RA.

#### Limitations and Future Research

As with most survey research, our study is not without limitations. First, all data were collected cross-sectionally, and therefore, all we can conclude is that the role variables and their posited consequences were related at one point in time. Second, all of our measures, including performance, were self-reported by the study participants. Research examining manager-rated and/or objective performance data would allow for a richer understanding of the FWC → performance linkage. Third, our sample countries were chosen primarily on convenience. Whether our results generalize to other countries/economies is an open question. Finally, future research may also want to examine firm-level characteristics such as span of managerial control or the number of tasks performed by the sales employee. These variables may moderate the relationships between role variables and salesperson work outcomes.

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## APPENDIX

	Factor Loadings		
	United States	Puerto Rico	Romania
Work-family conflict (source: adapted from Netemeyer, Boles, and McMurrian 1996)			
1. Because of my job, I can't involve myself as much as I would like in maintaining close relations with my family (or spouse/partner).	.82	.79	.76
2. Things I want to do at home do not get done because of the demands that my job puts on me.	.88	.81	.76
3. I often have to miss important family activities because of my job.	.94	.91	.75
Family-work conflict (source: Netemeyer et al. 1996)			
1. My home life interferes with my responsibilities at work, such as getting to work on time, accomplishing daily tasks, and working overtime.	.93	.88	.75
2. <i>Things I want to do at work do not get done because of the demands of my family or spouse/partner.</i>	.86	.87	.80
3. <i>I sometimes have to miss work so that my family responsibilities are met.</i>	.83	.78	.55
Role conflict (source: Rizzo, House, and Lirtzman 1970)			
1. <i>I sometimes have to bend a rule or policy in order to carry out an assignment.</i>	.42	.41	.63
2. <i>I work with two or more managers who operate quite differently.</i>	.72	.73	.86
3. I receive incompatible requests from two or more people.	.75	.81	.68
4. I do things that are apt to be accepted by one person and not accepted by another.	.78	.78	.60
Role ambiguity (source: Rizzo et al. 1970)			
1. There are clear, planned goals and objectives for my job.	.63	.46	.57
2. <i>I know that I have divided my time properly.</i>	.85	.68	.72
3. <i>I know exactly what is expected of me.</i>	.33	.89	.64
4. <i>I know what my job responsibilities are.</i>	.81	.49	.53
Job stress (source: House and Rizzo 1972)			
1. <i>I feel fidgety or nervous because of my job.</i>	.48	.73	.75
2. Problems associated with work have kept me awake at night.	.67	.84	.65
3. I feel nervous before attending meetings in this organization.	.82	.84	.64
4. <i>If I had a different job, my health would probably improve.</i>	.64	.46	.55
Performance (source: Dubinsky and Mattson 1979)			
1. <i>How would you rate yourself in terms of the quantity of work (e.g., sales) you achieve?</i>	.61	.57	.53
2. How do you rate yourself in terms of the quality of your performance in regard to management of time, planning, and management of expenses?	.70	.53	.87
3. How do you rate yourself in terms of the quality of your performance in regard to knowledge of your products, company, competitor products, and customer needs?	.86	.75	.74
Global job satisfaction (source: Netemeyer et al. 1996)			
1. All in all, how satisfied are you with your present line of work?	.85	.77	.60
2. All things considered (i.e., pay, promotion, supervisors, coworkers, etc.), how satisfied are you with your present line of work?	.96	.90	.81
3. I feel a great sense of personal satisfaction from my line of work.	.91	.77	.77
Turnover intent (source: Netemeyer et al. 1996)			
1. I am thinking about quitting my line of work.	.91	.90	.74
2. <i>I often think about quitting my present line of work.</i>	.69	.89	.90

NOTE: The factor loadings are from the completely standardized solution of the Final Partial Invariance Model (Table 1). Items in italics are those items that were not statistically invariant across samples. With the exception of the performance and job satisfaction items, all items were measured with 7-point *strongly disagree—strongly agree* scales. The performance items were anchored by *among the worst in the company* and *among the best in the company*. Items 1 and 2 of job satisfaction were measured with 7-point *very dissatisfied—very, satisfied* scales.