Abstract

Purpose: This study sought to examine the mediating effect of job satisfaction on the relationship between relational coordination and turnover intentions.

Methodology: Partial least squares structural equation modeling (PLS-SEM) was used to analyze data from a cross-sectional survey of 262 employees from banking sector. The capacity of this study’s theoretical model was demonstrated in a Monte Carlo simulation that created a simulated data set where the underlying true effects were established.

Results: The findings of this study suggest that relational coordination negatively affects turnover intentions, and job satisfaction mediates this relationship. The simulation results indicate fluctuation in path coefficients for different correlations and sample sizes. The values of path coefficients smooth out for all levels of correlations, as sample size increases.

Limitations: This research used cross-sectional design which limits its ability to determine the true causal relationships. The external viability of results may be limited due to the sample selection from banking sector. Although the empirical results support our theoretical model, other descriptions of these results need to be tested.

Practical implications: Managers can reduce employees’ turnover intentions by promoting relational coordination among their employees.
Social implications: Reduced turnover intentions may result in reduced actual turnover, which provides stability to organizations and to the lives of individual employees. It may reduce social discontent and instability.

Originality/value: No prior research has empirically tested the relationship between relational coordination and turnover intentions. Moreover, this research is first to test mediation between above mentioned relationship. It also provides a greater generalizability of theoretical model by using Monte Carlo simulation.

Keywords: Turnover intentions; relational coordination; job satisfaction; mediation; Monte Carlo Simulation.

JEL codes: C15, C31.
探讨通过工作满意度达到关系协调对员工轮班意向的影响：以结构方程模型及蒙特卡罗模拟法进行研究分析

Sajid Haider*, Munir Ahmed, Shaheen Anwer
伊斯兰堡大学（巴基斯坦）
Muhammad Aslam
布哈丁·扎卡利亚大学（巴基斯坦）
Muhammad Ali Asadullah
拉合尔大学（巴基斯坦）

研究目的：本研究以针对工作满意度的途径，分析在职场上增进同事之间的关系协调如何能够减少员工希望轮班的意向。

分析方法/重点：我们对262位银行从业员进行问卷调查，利用结构方程模型进行数据分析。研究以蒙特卡罗模拟法，模拟实际效果，产生一些模拟的数据，来验证本理论模型之分析能力。

研究结论：研究结果显示，关系协调对员工轮班意向与平均工作满意度产生负面影响。模拟结果指出，系数会因应不同的相应关系和样品大小而有所波动。当样品的数量增加，各层面之相应关系的系数数值会相应地缓和。

研究限制：本研究使用了横向设计，限制了其决定真实因果关系的能力。由于研究对象都是从事银行业，研究结果在外界的可行性或许会有所限制。虽然经验性结果支持我们的理论模型，我们还是需要对其他的结果描述进行进一步验证。

实际应用：经理人员可以通过增进员工之间的关系协调来减少员工希望轮班的意向。

社会应用：员工希望轮班的意向降低，可以减少实际的轮班状况，让各组织及员工的个人生活更稳定，也能够减少社会不满和提高社会稳定。

研究原创性/价值：过往的研究都没有对关系协调与员工希望轮班意向的关系进行过经验型研究。本研究是首项针对上述关系调解的研究。此外，我们通过使用蒙特卡罗模拟法提供了一个更广泛的理论模型。

关键词：员工希望轮班的意向、关系协调、工作满意度、调解、蒙特卡罗模拟法。

JEL分类号：C15, C31。
1. Introduction

Employee turnover is a widely studied phenomenon in human resources management and other disciplines related to personnel management in organizations (Buttner & Lowe, 2017; Johnson & Yanson, 2018; Salin & Notelaers, 2017; DiPietro & Bufquin, 2018). Turnover is often a great loss for organizations both in terms of human capital and the cost that follows from an employee’s exit and the process of hiring a new employee (Heavey, Holwerda, & Hausknecht, 2013). Existing literature has recognized that high turnover rates adversely affect an organization’s day to day operations and overall performance, and consequently threaten its success and sustainability (Alola, Avci, & Ozturen, 2018; Bok, 1995; Brereton, Beach & Cliff, 2003; Brymer & Sirmon, 2018; Leana III, & Van Buren, 1999). Given the importance of employee turnover in determining an organization’s success or failure, the topic has received substantial attention from business managers and researchers (Ton & Huckman, 2008).

Previous research has indicated that the strongest antecedent of actual turnover is turnover intention (Allen, Shore & Griffeth, 2003). It is an employee’s likelihood to quit his/her job, and has been studied as a consequence of many organizational and individual phenomena such as perceived working conditions (Rizwan et al., 2014; Arnoux-Nicolas et al., 2016), leadership behavior (Wells and Welty, 2011), job stress, organization commitment, job satisfaction (Egan, Yang, & Bartlett, 2004; Rizwan et al., 2014; Wells & Welty, 2011), organizational learning culture (Egan, Yang, & Bartlett, 2004), coworker/supervisor interactions (Cao et al., 2013), age, gender, marital status etc. (Emiroglu et al., 2015).

A review of existing literature suggests that employees’ relationships at workplace can also affect their intentions to quit (Maertz and Campion, 1998; Kevin & Moss, 2005). Employees’ formal and informal workplace relationships help them develop social networks which play a vital role in determining the extent to which they intend to quit their current organization (Soltis, Agneessens, Sasovova & Labianca, 2013). So, relational ties or social exchanges at workplace are important workplace phenomena that affect an employee’s turnover intentions (Regts & Molleman, 2013). Despite a large body of research on relational perspective of turnover intentions, existing research has not studied the effect of a specific form of employee relations—i.e. relational coordination—on turnover intentions.

Relational coordination is “a mutually reinforcing process of interaction between communication and relationships carried out for the purpose of task integration” (Gittell et al., 2002a: 301). Relational coordination is a useful tool for understanding the relational perspective of work coordination (Gittell et al., 2002; Heredero, Haider & Martinez, 2015). Quality of work coordination depends on the quality of communication (frequent, timely, accurate, problem-solving communication) and relationships (shared goals, shared knowledge and mutual respect) among coworkers (Gittell, 2006). Relational coordination is associated with many positive employee outcomes (Gittell & Logan, 2017; Gittell, Logan, Cronenwett, Foster, Freeman,
Godfrey & Vidal, 2018). The relational coordination theory posits that workplace ties among coworkers enable employees to develop social capital which provides them with greater support and resources in organization (Coleman, 1990; Gittell, Seidner & Wimbush, 2010, p. 491; Leana & Van Buren, 1999). This point of view suggests that employees’ greater attachment with the organization resulting from the possession of social capital may reduce their turnover intentions. So, insights from relational perspective of turnover intentions suggest that the relationship between relational coordination and turnover intentions can be determined.

Despite a theoretically robust relationship between relational coordination and turnover intentions, no prior research has empirically tested this relationship. So, there is a need to conduct empirical research on this theoretically sound relationship. Moreover, a greater understanding of this relationship may require why relational coordination reduces employee turnover intentions. In other words, there is also a need to understand the mechanisms that explain the relationship between relational coordination and turnover intentions. Previous research informs that relational coordination predicts employee job satisfaction (Gittell, Weinberg, Pfefferle & Bishop, 2008), and employee turnover intentions are greatly affected by job satisfaction (Johnson & Yanson, 2018; Naburi, Mujinja, Kilewo, Orsini, Bärnighausen, Manji, K., ... & Ekström, 2017; Shore & Martin, 1989). Given that, job satisfaction may be considered as a mediating mechanism between relational coordination and turnover intentions.

In addition, most previous research on relational coordination has been conducted in some specific contexts, and the findings of those studies cannot be generalized. Though generalization of research findings is highly desirable in social sciences research (Lucas, 2003), relational coordination researchers have paid little attentions toward using methods and tools for greater generalizability of their findings. Monte Carlo Simulation is a powerful methodological tool for developing and understanding theories in terms of addressing structural changes in different areas of management sciences (Davis, Eisenhardt & Bingham, 2007; Leitner, & Wall, 2015).

The objective of this research is three fold. First, this study aims to empirically examine the relationship between relational coordination and turnover intentions. Second, this study seeks to test the behavioral processes that may explain the relationship between relational coordination and turnover intentions. More specifically, we introduced job satisfaction as a mediator in this relationship. Finally, this study strives to provide a greater generalizability of its results by using Monte Carlo simulation. So, this research is an effort to address a complex organizational phenomenon in a more sophisticated way.

This study provides a new way to solve important organizational problems and achieve greater sustainability in organization’s functioning. If organizational leaders succeed in establishing relational coordination among their employees, they are more likely to increase employee job satisfaction and reduce their turnover intentions. As already mentioned, lower turnover intentions may reduce real turnover. Lower turnover rates are considered positive for an organization’s sustainability as
they establish an efficient work environment through improvement in organization’s learning curve (Hinkin and Tracey, 2000).

2. Theory and hypothesis

Figure 1 shows this study’s theoretical model where relational coordination predicts employee turnover intentions through job satisfaction. Previous research has reported a robust relationship between relational coordination and employee job satisfaction (Gittell et al., 2008). The relationship between job satisfaction and turnover intentions is also well documented in existing literature (Tett & Meyer, 1993). For the purpose of this study, we remained focused on developing two hypotheses. The first hypothesis is about the relationship between relational coordination and turnover intentions, and the second hypothesis is regarding the mediating role of job satisfaction in the above mentioned relationship.

2.1. Relational coordination and turnover intentions

Using insights from existing theoretical paradigms such as social exchange theory (Blau, 1964), social identity (Tajfel & Turner, 1985; Capozza & Brown, 2000), social capital (Burt, 2000; Lin, 2001) and job embeddedness model (Mitchell, Holtom, Lee, Sablynski, & Erez, 2001), previous research has demonstrated that employee relations in work organization reduce turnover intentions (Chow, Ng & Gong, 2012; Soltis, Agneessens, Sasovova & Labianca, 2013; Regts & Molleman, 2013).

Insights from social exchange theory suggest that workplace connections influence individuals interacting with other organizational members. Social exchanges rest on the notion that gestures of goodwill will be reciprocated at some future time (Cartwright, & Cooper, 2009; Gonyea, 2013). Social exchange theory implies that workplace ties support in developing an employee’s connection with the organization. Such relationships can make a person to remain in the organization (Egan, Yang, & Bartlett, 2004) because “leaving such exchange relationships may entail a psychic loss, making withdrawal personally costly to individuals.” (Kevin and
The attachment to fellow workers provides employees with a distinctive motivational force that keeps him or her attached with the organization (Maertz Jr, & Griffeth, 2004). This view is also consistent with the notion of job embeddedness which describes that workplace relationships make an employee more immersed in her or his work and organization (Mitchell, Holtom, Lee, Sablynski, & Erez, 2001).

The social capital perspective argues that workplace social ties reduce turnover intentions because these ties provide employees with the resources that enhance their attachment to the organization (Coleman, 1990; Soltis et al., 2013). Based on this view, relational coordination theory presumes that employees’ sharing of good relationship with each other (i.e. communicate in frequent, timely, and accurate manner, share common goals and knowledge, exchange mutual respect) provides them with a social network where they feel socially supported (Gittell et al., 2010; Soltis et al., 2013; Lundstrom, 2014; Nohe & Sonntag, 2014; Khosla, Marsteller, Hsu & Elliott, 2016). These feelings of social support lead them toward greater satisfaction and lesser intentions to quit (Gittell et al., 2010; Zhang, Lin, & Wan, 2015). On the other hand a lower level of relational coordination can make them unhappy with their work environment, and they may think to quit the organization. Therefore, it can be expected that relational coordination is negatively related to turnover intentions. This discussion leads us to the following hypothesis.

Hypothesis 1: Relational coordination is negatively related to employee turnover intentions.

2.2. Mediating role of job satisfaction

Job satisfaction explains the feelings of an employee about his or her work environment which may include supervisor behavior, coworker relationships, and the fulfillment of personal and organization’s tasks (Melnyk, 2006). It suggests that an employee’s relationships with his or her work group matter for achieving job satisfaction. If employees have a good level of relational coordination with their coworkers, they are highly likely to be satisfied with their job (Gittell et al., 2008). This study argues that relational coordination reduces employee turnover intentions because it enhances employee job satisfaction which is negatively associated with turnover intentions (Tett, & Meyer, 1993; Smith, 2018).

Existing literature provides theoretical foundations for many indirect links between peer relationships and turnover intentions through job satisfaction. According to Lopes-Morrison (2005), employees’ turnover intentions are reduced when they experience greater job satisfaction due to group cohesiveness and friendship resulting from coworker relationships. This idea is consistent with Nielsen, Jex and Adams (2000) who stated that friendship opportunities at workplace reduce an employee’s probability to leave his or her current job because of greater job satisfaction.
Based on the notion of organizational social capital (Leana & Van Buren, 1999), relational coordination theory posits that relational coordination (RC) promotes positive work environment in three ways (Gittell et al., 2018). First, relational coordination makes an employee’s job easier by providing greater collaboration and alignment with others in organization (Gittell et al., 2018; Gittell et al., 2008). Second, relational coordination enhances employees’ physical and emotional wellbeing by promoting good communication and mutual respect (Gittell et al., 2018; Gittell et al., 2008). Third, positive workplace connections provide employees with social support which is negatively associated with work stress and burnout (Gittell et al., 2018; Gittell et al., 2008).

Existing literature informs that the above mentioned sources of positive work environment are associated with increased employee job satisfaction and reduced turnover intentions. This study posits that relational coordination reduces turnover intentions because it enhances employee job satisfaction due to its ability to create a positive work environment. So, we formally hypothesize the following statement.

Hypothesis 2: Job satisfaction mediates the relationship between relational coordination and employee turnover intentions.

3. Material and methods

3.1. Sample and survey

Data were collected from full-time employees working in the branches of different commercial banks in district Vehari (Pakistan). The employees of banking sector are quite relevant for surveying the study variables because each setting provides comparable groups of respondents required for the purpose of this study.

3.2. Pilot Survey (identifying work groups)

As already mentioned, three variables are involved in this research; turnover intentions (dependent variable), relational coordination (independent variable), and job satisfaction (mediating variable). The measurement of relational coordination requires identifying groups of people involved in a work process (Gittell, 2000). In order to fulfill this requirement, a pilot survey was conducted to identify in each branch a group of people who should ideally interact with each other for providing services to all kind of customers during a normal a working day. The pilot survey involved one branch of each commercial bank in district Vehari. After short discussions with branch managers, following six profiles were identified in all branches: branch manager, operations manager, credit officer, cashier, customer service officer and personal banking advisor.
After this pilot survey, we were able to identify the target groups in each organization. Once it was done, a simple random sampling was used to select the branches for sending questionnaire. In Vehari district, there are 32 different banks with 62 branches. In these branches 372 (62×6) are in our target survey group, as identified in pilot study. Before selecting the branches for sending questionnaire, it was important to determine sample size. Hair et al.’s (2014) 10 times rule suggested that in a model where the maximum number of arrows pointing at a construct is two (as is the case in our model), the recommend sample size is 158 if the desired significance level is 1% (or p-value = 0.01), and the minimum desired coefficient of determination (R²) is 0.1. Owing to lower expected response rate, the number of respondents was decided almost double the recommended sample size. So, we randomly selected 53 out of 62 branches by using simple random sampling technique. A total of 318 questionnaires were distributed among the target population in 53 branches. It took about two months to complete the survey. Only 44 branches returned responses from all the people in target group (264 responses with 61 % response rate). Two out of these 264 responses were not usable. So, the data were analyzed based on 262 responses. Table 1 shows the sample characteristics.

Table 1. Sample characteristics

<table>
<thead>
<tr>
<th>Description</th>
<th>Classification</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>84</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>22-30</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>31-40</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>41-50</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>51-60</td>
<td>3</td>
</tr>
<tr>
<td>Designation</td>
<td>Branch Managers</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Operations Managers</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Credit Officers</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Cashiers</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Customer Service officers</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Personal Banking Advisors</td>
<td>16</td>
</tr>
<tr>
<td>Education</td>
<td>12 Years</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>14 Years</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>16 Years</td>
<td>38</td>
</tr>
</tbody>
</table>
Data were collected through established questionnaires. Relational coordination was measured using a 7-item scale (Gittell et al., 2008). Following Gittell et al. (2010), the communication dimensions of the relational coordination were scaled as: 1= never, 2 = rarely, 3 = occasionally, 4 = often, 5= always, and the relational dimensions were scaled as: 1= not at all, 2 = a little, 3 = some, 4 = a lot, 5 = completely (for shared goals and mutual respect), and 1= nothing, 2 = little, 3 = some, 4 = a lot, 5 = everything (for shared knowledge). Job satisfaction was measured through a 4-item questionnaire (Nadiri & Tanova, 2010). A three 3-items scale was used to measure turnover intentions (Nadiri & Tanova, 2010). Job satisfaction and turnover intentions measures were rated at 5 point Likert scale where 1 was coded as “strongly disagree” and 5 as “Strongly agree”. Table 2 shows the items of all variables used in this research.

### 3.3. Statistical analysis

Table 2 shows the items of all variables used in this research. Cronbach’s alpha and composite reliability (CR) were used to test the reliability of constructs. As a common rule, the value of alpha above 0.70, while the CR value between 0.70 and 0.90 indicate that the construct is reliable. Table 2 shows that all our constructs are reliable.
### Table 2. Scale items and construct evaluation

<table>
<thead>
<tr>
<th>Item</th>
<th>$\lambda^a$</th>
<th>$\alpha^b$</th>
<th>CR$^c$</th>
<th>AVE$^d$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Relational Coordination (RC)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How frequently do following people$^1$ communicate with you about providing services to bank clients? (RC1)</td>
<td>0.74</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do following people$^1$ communicate with you in a timely way about the status of services to bank clients? (RC2)</td>
<td>0.78</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do following people$^1$ communicate with you accurately about the status of services to bank clients? (RC3)</td>
<td>0.80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When an error has been made regarding bank services to clients, do following people$^1$ blame others rather than sharing responsibility? (RC4)</td>
<td>0.87</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To what extent do following people$^1$ share your goals for the services to bank clients? (RC5)</td>
<td>0.86</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How much do following people know about the work you do for the bank clients? (RC6)</td>
<td>0.86</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How much do following people$^1$ respect you and the work you do for the bank clients? (RC7)</td>
<td>0.75</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Job Satisfaction (JS)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am satisfied with the amount of pay received for the job done. (JS1)</td>
<td>0.89</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am satisfied with the working conditions. (JS2)</td>
<td>0.87</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am feeling of getting paid fairly. (JS3)</td>
<td>0.68</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am relatively well rewarded financially for the work. (JS4)</td>
<td>0.82</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Turnover Intentions (TOI)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have often thought of quitting. (TOI1)</td>
<td>0.85</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am looking for a new job next year probably. (TOI2)</td>
<td>0.65</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I will leave the job next year. (TOI3)</td>
<td>0.75</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: $^a$ Factor loading; $^b$ Cronbach Alpha; $^c$ Composite Reliability; $^d$ Average Variance Extracted.  
$^1$ These are the people who were identified in pilot survey i.e. branch manager, operations manager, credit officer, cashier, customer service officer and personal banking advisor. Each question of relational coordination followed the list of these people.
In addition to above reliability and validity analysis, we tested for the discriminant validity to check that all constructs are different from each other. Traditionally, two methods are used to find the discriminant validity; cross loadings and Fornell and Larker’s (1981) criterion. The cross-loadings criterion suggests that the indicators of a construct should not load higher on the opposing constructs. This is true in our case (Table 3). In Fornell and Larker criterion, the square root of AVE should be higher than the values of its bivariate correlations with all opposing constructs. This is also true in our case (Table 3). Henseler et al. (2015) suggested that Heterotrait-Monotrait (HTMT) ratio of correlations is a more sensitive test of discriminant validity. So, we used HTMT ratio also. According to the strictest criterion (HTMT$^{0.85}$), HTMT ratio between two constructs must be less than 0.85. In our data, all HTMT ratios are below 0.85 (Table 3). So, discriminant validity has been established by using cross-loadings, Fornell & Larker criterion, and HTMT ratios.

Table 3. Cross-loadings, Fornell & Larker Criterion, and HTMT ratios

<table>
<thead>
<tr>
<th>Cross-loadings</th>
<th>Fornell &amp; Larker Criterion (1986)</th>
<th>Heterotrait-Monotrait Ratio (HTMT)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>JS</td>
<td>RC</td>
</tr>
<tr>
<td>JS1</td>
<td>0.894</td>
<td>0.389</td>
</tr>
<tr>
<td>JS2</td>
<td>0.877</td>
<td>0.4</td>
</tr>
<tr>
<td>JS3</td>
<td>0.68</td>
<td>0.14</td>
</tr>
<tr>
<td>JS4</td>
<td>0.826</td>
<td>0.223</td>
</tr>
<tr>
<td>RC1</td>
<td>0.164</td>
<td>0.744</td>
</tr>
<tr>
<td>RC2</td>
<td>0.227</td>
<td>0.785</td>
</tr>
<tr>
<td>RC3</td>
<td>0.289</td>
<td>0.806</td>
</tr>
<tr>
<td>RC4</td>
<td>0.37</td>
<td>0.877</td>
</tr>
<tr>
<td>RC5</td>
<td>0.379</td>
<td>0.862</td>
</tr>
<tr>
<td>RC6</td>
<td>0.35</td>
<td>0.861</td>
</tr>
<tr>
<td>RC7</td>
<td>0.206</td>
<td>0.758</td>
</tr>
<tr>
<td>TOI1</td>
<td>-0.57</td>
<td>-0.146</td>
</tr>
<tr>
<td>TOI2</td>
<td>-0.309</td>
<td>-0.196</td>
</tr>
</tbody>
</table>

$^a$ square root of AVE (diagonal).

$^b$ off diagonal are Pearson correlations.

3.4. Structural model (hypothesis testing)

Figure 2 shows the mediation model (with two sub-models; model A and B). Model A estimates the direct relationship between relational coordination and
turnover intentions, while model B tests the indirect relationship between these two variables, by adding job satisfaction as a mediator in this relationship. Model A shows that 15% ($R^2 = 0.151$) of variance in the dependent variable (turnover intentions) is explained by the independent variable (relational coordination). Model B shows that about 40% ($R^2 = 0.396$) variance in turnover intentions is explained by job satisfaction when it is predicted by relational coordination. The difference in the $R^2$ of both models shows that the mediator accounts for much of variance in dependent variable.

Figure 2. Estimated mediation model

Model A: Direct effect

Model B: Indirect (mediation) effect

Four established steps of mediation analysis have been used. We explain each step with respect to the variables and relationships in our research model. First, the relationship between independent and dependent variable must be significant, without introducing mediator in this relationship. A relationship is considered significant when the $t$-value of that relationship is 1.96 or greater (i.e. $p < 0.05$). Model A in figure 2 shows a significant relationship between relational coordination and turnover intentions ($t$-value = 6.22; Beta coefficient = -0.388).

Second, the relationship between independent variable and mediator, and the relationship between mediator and dependent variable must be significant. Model B in figure 2 shows that the relationship between relational coordination and job satisfaction is significant ($t$-value = 7.179; Beta coefficient = 0.383). The relationship...
between job satisfaction and turnover intentions is also significant (t-value = 17.613; Beta coefficient = -0.599).

Third, the indirect effect along the whole path from relational coordination to job satisfaction, and from job satisfaction to turnover intentions must be significant. For obtaining indirect effect, the coefficients of both individual paths are multiplied (i.e. 0.383 * -0.599 = -0.23). So, the beta coefficient for indirect relationship is -0.223 which shows a negative indirect relationship. Based on the value of standard deviation (0.039), empirical t-value was calculated as -0.23/0.039 = -5.89, which shows a significant indirect relationship. The significant indirect relationship shows that job satisfaction absorbs some of the direct effect (path from relational coordination to turnover intentions).

Finally, in the presence of mediator (job satisfaction), a significant change must occur in the value of the previously significant relationship between relational coordination and turnover intentions. Figure 2 shows that by including mediator in model, the value of path coefficient in model B (-0.071) significantly reduces as compared to the path coefficient in model A (-0.388). The significant relationship between relational coordination and turnover intentions in model A becomes insignificant in model B, which reflects the strength of mediation effect (VAF=0.765) (Chin et al., 2003). The VAF value 20% < VAF < 80% shows a partial mediation.

3.5. Assessing the effect size $f^2$

The effect size reflects how the omission of a specific exogenous variable from the model changes $R^2$ value of endogenous variable. Effect size shows the meaningfulness of the impact of omitted construct on the endogenous construct. The effect size values of 0.02, 0.15, and 0.35 indicate small, medium, and large effects respectively (Aykan & Aksoylu, 2015).

Table 3 (below) shows the summarized results of $f^2$ to explain the meaningfulness of job satisfaction and relational coordination for predicting turnover intentions. Job satisfaction with $f^2$ effect size 0.40 shows a large effect size and relational coordination with $f^2$ effect size 0.028, show small effect on turnover intentions, respectively.
Table 4. Summarized results of effect size ($f^2$) and predictive relevance ($q^2$)

<table>
<thead>
<tr>
<th>Endogenous Latent variable</th>
<th>Job satisfaction (JS)</th>
<th>Relational coordination (RC)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$R^2$ excluded</td>
<td>$R^2$ included</td>
</tr>
<tr>
<td>Turnover intentions (TOI)</td>
<td>0.151</td>
<td>0.396</td>
</tr>
<tr>
<td></td>
<td>$Q^2$ excluded</td>
<td>$Q^2$ included</td>
</tr>
<tr>
<td></td>
<td>0.0739</td>
<td>0.2206</td>
</tr>
</tbody>
</table>

3.6. Assessing the predictive relevance $Q^2$ and the $q^2$ effect sizes

Stone-Geisser’s $Q^2$ value is used to measure the predictive relevance of the model (Stone, 1974; Leana & Buren, 1999). “When PLS-SEM exhibits predictive relevance, it accurately predicts the data points of indicators in reflective measurement models of endogenous constructs” (Eisenberger, Fasolo, & Davis, 1999). The value of $Q^2$ can be achieved by using blindfolding procedure (in SmartPLS software) for a certain omission distance $D$. $Q^2$ value greater than zero for an endogenous (reflective) variable indicates the predictive relevance of path model for this particular construct.

Two approaches are generally used to calculate the $Q^2$ value; cross-validated redundancy approach and cross-validated communality approach. The $q^2$ effect size is a relative measure of an exogenous variable’s predictive relevance for a certain endogenous variable.

Table 4 (above) shows the values of $Q^2$ and $q^2$. Job satisfaction with $q^2$ effect size 0.19, and relational coordination with $q^2$ effect size 0.026, shows a medium and small predictive relevance for turnover intentions, respectively.

3.7. The Monte Carlo Simulations

This study used a predictive model in Monte Carlo simulation where the implied correlation matrix of the observed variables was set, and then the data were generated on the observed variables from a multivariate distribution having this correlation matrix. Six different correlations matrices were used, including one that was based on the sample data (262 observations) to generate data with the distributional characteristics imposed by the model. Five different sample sizes (100, 500, 1000, 2000 and 5000) were used. Following table 5 displays the simulated results.
Table 5. The Simulated Results

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>RC→TOI</td>
<td>-0.3859** -0.3726***</td>
<td>-0.4009</td>
<td>-0.4770*** -0.3820*** -0.5175*** -0.3888***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RC→JS</td>
<td>0.2776*** 0.4504***</td>
<td>0.3880*** 0.3971*** 0.2930*** 0.4344*** 0.3791***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JS→TOI</td>
<td>-0.5272*** -0.5615*** -0.5317*** -0.6023*** -0.6083*** -0.5828*** -0.5445***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RC→TOI(ID)</td>
<td>0.1432*** -0.0832</td>
<td>-0.0680 -0.2113*** -0.1488</td>
<td>-0.1538 -0.0573</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>RC→TOI</td>
<td>-0.3489*** -0.3504*** -0.4022*** -0.3527*** -0.4168*** -0.3719*** -0.3787***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RC→JS</td>
<td>0.3023*** 0.3381***</td>
<td>0.3824*** 0.3453*** 0.3687*** 0.3806*** 0.3515***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JS→TOI</td>
<td>-0.5807*** -0.5338*** -0.5710*** -0.5252*** -0.5712*** -0.5471*** -0.5110***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RC→TOI(ID)</td>
<td>-0.1196*** -0.0026</td>
<td>-0.1047*** -0.0521 -0.0999*** -0.0569 -0.1318***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>500</td>
<td>RC→TOI</td>
<td>-0.3841*** -0.3861*** -0.3649*** -0.3915*** -0.3598*** -0.3695*** -0.3695***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RC→JS</td>
<td>0.3187*** 0.3956***</td>
<td>0.3722*** 0.3357*** 0.3843*** 0.3796*** 0.3796***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JS→TOI</td>
<td>-0.5537*** -0.5315*** -0.5672*** -0.5770*** -0.5396*** -0.5879*** -0.5879***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RC→TOI(ID)</td>
<td>-0.1417*** -0.1117***</td>
<td>-0.0194 -0.0946*** -0.0705*** -0.0399 -0.0399</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000</td>
<td>RC→TOI</td>
<td>-0.3700*** -0.3581*** -0.3569*** -0.3767*** -0.3670*** -0.3698*** -0.3698***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RC→JS</td>
<td>0.3676*** 0.3744***</td>
<td>0.3488*** 0.3793*** 0.3641*** 0.3526*** 0.3526***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JS→TOI</td>
<td>-0.5661*** -0.5827*** -0.5480*** -0.5693*** -0.5715*** -0.5689*** -0.5689***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RC→TOI(ID)</td>
<td>-0.0772*** -0.0616***</td>
<td>-0.0871*** -0.0860*** -0.0681*** -0.0938*** -0.0938***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>RC→TOI</td>
<td>-0.3634*** -0.3638*** -0.3651*** -0.3544*** -0.3653*** -0.3778*** -0.3668***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RC→JS</td>
<td>0.3612*** 0.3381***</td>
<td>0.3678*** 0.3434*** 0.3512*** 0.3782*** 0.3612***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JS→TOI</td>
<td>-0.5669*** -0.5338*** -0.5577*** -0.5695*** -0.5632*** -0.5592*** -0.5364***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RC→TOI(ID)</td>
<td>-0.0845*** -0.0026</td>
<td>-0.0823*** -0.0663*** -0.0737*** -0.0733*** -0.0938***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4 shows the simulation results of the path coefficients of the relationships between RC and TOI, RC and JS, JS and TOI and again RC and TOI when JS is used as mediator for different sample sizes (100, 500, 1000, 2000 and 5000) and for different correlation schemes (weak to strong) around empirical correlation level of the model which is measured earlier on the basis of 262 observations.

The results report that there is fluctuation in regression coefficient values for different correlation levels for small sample sizes. As sample size increases, it smooths out for all levels of correlations. For example for RC→TOI, β coefficient ranges from -0.5175 to -0.3859, 0.2776 to 0.4544 for RC→JS, -0.6083 to -0.5272 for JS→TOI and -0.1538 to -0.0573 for RC→TOI (ID) when sample size is 100. Similarly, for sample size 1000 and above, the difference in β coefficients for all the relationships at different correlation schemes is very minimum. For example for sample size of 2000, the β coefficient ranges from -0.3767 to -0.3569 for RC→TOI, 0.3488 to 0.3744 for RC→JS, -0.5715 to -0.5480 for JS→TOI and -0.0938 to -0.0616 for RC→TOI (ID).
It can also be seen that there is a minimum fluctuation in $\beta$ coefficients at actual correlation scheme of the model for all sample sizes. The $\beta$ coefficients fluctuate for all sample sizes as correlation schemes depart from proposed correlation scheme. It is also noticed that relationships are significant for large sample sizes but not in a case for small sample size like 100 and 500. It is reported that indirect relationship between RC and TI is non-significant for all correlation schemes except the proposed correlation scheme of the model. So it can be concluded that our proposed model works well even in small sample. It is also interesting to note that for large sample sizes all correlation schemes which are taken for simulation perform well.

4. Discussion

Our results indicate that relational coordination is negatively related to employee turnover intentions. It is consistent with the relational perspective of turnover intentions. The relational perspective describes that good relationship with other organizational members reduce intentions to leave. Support for a relational perspective on organizational withdrawal processes is rooted partly in the concept of social capital, which refers to the sum of actual and potential resources available through relationships that individuals have established with others. Existing literature suggests that relational and communication dimensions of relational coordination are likely to enhance social capital (Nahapiet & Sumantra 1988), and consequently, the relational networks and social capital may reduce turnover intentions (Krackhardt & Hanson, 1993). So, our findings suggest that individuals view their interpersonal citizenship behavior as an investment that increases their value to the organization and profession, and they will be more likely to stay and reap potentially ensuing rewards.

We also found a positive relationship between relational coordination and job satisfaction. The previous research found a positive effect of relational coordination on job satisfaction and quality outcomes (Gittell et al., 2008). However, Gittell’s research (2008) is the only example of examining the effect of relational coordination on job satisfaction. Our research is an addition to this kind of research.

Furthermore, we tested the effect of job satisfaction on turnover intentions in the context of relational coordination as a predictor of job satisfaction. This aspect of our research provides explanation for why relationships and more specifically the relational coordination negatively affect turnover intentions. We analyzed if relational coordination influences an employee’s turnover intentions by affecting the degree to which he or she perceives job satisfaction and if this perception of job satisfaction discourages intentions to quit. By introducing the mediator, we found strong support for a partially mediated model of the relationship between relational coordination and turnover intentions.

Given that the effect of relational coordination on turnover intentions has not been studied in previous research, and by examining job satisfaction as a mediator,
this study made two contributions to the existing research. First, the strong support for our hypothesis 1 suggests that relational coordination fits well within the relational perspective of turnover intentions. By examining this relationship, our research provide specific direction to organizational leaders for reducing employees’ turnover intentions and achieve sustainable growth by establishing a climate of relational and communication dimensions of relational coordination. Second, by examining job satisfaction as a mediator, our research answers why and how employee relationships predict a negative effect on turnover intentions. Our results show that a strong relational climate of an organization enables them to increase employee satisfaction and decrease their intentions to quit. Our research applies a specific relational approach (relational coordination) and unveils how relational coordination affects employee turnover intentions through its effect on job satisfaction.

In addition to its theoretical contribution, this study offers significant methodological insights. The use of Monte Carlo simulation for different sample sizes and multiple sets of correlation schemes make our findings more convincing and generalizable. Monte Carlo simulation allowed us to test an improved mediation model in relation to previously tested similar models because it produces its own “virtual” data, retrieves true population parameters, and provides comparisons of regression based estimates (Chin and Newsted 1999, Chin, Marcolin and Newsted, 2003; Chou et al. 1991, Noreen 1989; Sharma et al. 1989; Harrison, Lin, Carroll and Carley, 2007). We expect that future researchers may draw similar results by using this model in different contexts. However, the use of large sample size is suggested.

4.1. Implications

Recognizing the fact that employee turnover intentions may affect the sustainable performance of an organization, and given the importance of employee relationships to reduce their intentions to quit, organizations can benefit from promoting relational coordination among their employees. Promoting relational coordination, while compared with expensive reward systems, is a less expensive source of increasing employee satisfaction and decreasing their intentions to withdraw the organization.

4.2. Limitations and future research directions

In order to draw true causal relationships, longitudinal or experimental designs are more suitable. This research, however, used cross-sectional design which limits its ability to determine the true directions or causal relationships. An experimental design can be used for this kind of research. Moreover, the external viability of our results may be limited due to the sample selection from banking sector. Future researchers can also extend this study’s model to inter-organizational and inter-departmental contexts because greater coordination and quality of relationships would
create, among parties, the bond which is beyond the contractual relationships (Galán et al., 2012; Mpinganjir et al., 2013). It would enhance the inter-organizational/departmental satisfaction, and subsequently, reduce the intentions to quit from the network of relationships.

Declaration of Conflicting Interests

The author(s) declare that there is no potential conflict of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

References


important for subjective health complaints, job satisfaction, and perception of job demands and job control? Scandinavian journal of public health, 46(3), 358-367. http://dx.doi.10.1177/1403494817726617


Notes on Contributors

Name: Sajid Haider
Position: Assistant Professor
School / Faculty: Department of Management Sciences
University: COMSATS University Islamabad
Address:
Telephone:
Email: sajidhaider@ciitvehari.edu.pk

Name: Munir Ahmed
Position: Assistant Professor
School / Faculty: Department of Management Sciences
University: COMSATS University Islamabad
Address:
Telephone:
Email:

Name: Muhammad Aslam
Position: Associate Professor
School / Faculty: Department of Statistics
University: Bahauddin Zakariya University
Address:
Telephone:
Email:

Name: Muhammad Ali Asadullah
Position: Assistant professor
School / Faculty: Emirates College of Technology, UAE
University: University of Lahore
Address:
Telephone:
Email:

Name: Shaheen Anwer
Position: Research Scholar
School / Faculty: Department of Management Sciences
University: COMSATS University Islamabad
Address:
Telephone:
Email: