

Employee Embeddedness and Turnover Intentions: Exploring the Moderating Effects of Commute Time and Family Embeddedness

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Abstract

This study aims to investigate the moderating effects of commute time, availability of nearby replacement jobs, and family embeddedness to the relationship between employee embeddedness and turnover intentions. Employee embeddedness includes organizational and community embeddedness. Previous studies showed that employee embeddedness is a good predictor of turnover. However, other studies have subsequently demonstrated different results in employee embeddedness-turnover relationship. The present study hypothesizes that commute time, availability of nearby replacement jobs, and family embeddedness moderate the relationship between employee embeddedness-turnover intentions. Data were obtained from a sample of 330 full-time employed nurses in two hospitals in Jakarta, Indonesia. Results showed that commute time and family embeddedness moderated the organizational embeddedness-turnover intention relationship. Availability of nearby replacement jobs did not moderate employee embeddedness-turnover intentions. Theoretical and practical implications of the findings are discussed.

Employee Embeddedness dan Intensi Meninggalkan Organisasi: Efek Moderasi Waktu Tempuh antara Rumah dan Tempat Kerja dan Family Embeddedness

Abstrak

Penelitian ini bertujuan untuk menggali efek moderasi waktu tempuh antara rumah dan tempat kerja, ketersediaan alternatif pekerjaan lain, dan *family embeddedness* pada hubungan antara *employee embeddedness* karyawan dengan *turnover intentions* (intensi meninggalkan organisasi). *Employee embeddedness* terdiri dari *organizational embeddedness* dan *community embeddedness*. Penelitian terdahulu menunjukkan *employee embeddedness* merupakan prediktor variabel *turnover* yang baik. Akan tetapi, studi selanjutnya mengenai hubungan *employee embeddedness-turnover* menunjukkan hasil yang bervariasi. Hipotesis penelitian ini adalah waktu tempuh antara rumah dan tempat kerja, ketersediaan alternatif pekerjaan lain, dan *family embeddedness* adalah moderator yang signifikan pada hubungan antara *employee embeddedness* dan intensi meninggalkan organisasi. Sampel penelitian adalah 330 perawat di dua rumah sakit di Jakarta, Indonesia. Hasil penelitian menunjukkan bahwa waktu tempuh antara rumah dan tempat kerja dan *family embeddedness* memoderasi hubungan antara *organizational embeddedness* dan intensi meninggalkan organisasi. Akan tetapi, ketersediaan alternatif pekerjaan lain tidak terbukti sebagai moderator *employee embeddedness* dan intensi meninggalkan organisasi. Selanjutnya akan dibahas implikasi teori dan praktis dari hasil studi.

Keywords: *commute time, community embeddedness, employee embeddedness, family embeddedness, job embeddedness, organizational embeddedness, turnover intentions*

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1. Introduction

High turnover intentions may impact employee's work behaviors, such as higher absenteeism, tardiness, lower

OCB, and lower task performance (Burton, Holtom, Sablinski, Mitchell, & Lee, 2010). Turnover intentions are defined as positive attitude toward leaving the organization by thinking about leaving (Mobleby,

Horner, & Hollingsworth, 1978). Concerns over turnover intentions also are prevalent in health care organizations, such as hospitals, especially among nurses (Jones, 2008). It is becoming more and more difficult to recruit nurses, and the factors related to nurse turnover are also becoming more diverse. For example, nurses tend to be more mobile early in their careers, yet it remains unclear what factors influence their mobility (LeVasseur, Wang, Mathews, & Boland, 2009). The need for nurse profession in Indonesia is also prevalent. The nurse–population ratio according to Sistem Kesehatan Nasional 2003 (National Health System 2003) is 1:2,850. This number is regarded as low compared to the ideal ratio of 117.5 nurses per 100,000 people according to Indonesia Sehat 2010 (Healthy Indonesia 2010). Therefore, for approximately 237.5 million Indonesian people, the ideal number of nurses should be around 278,700. According to the latest data in 2009, there were only 174,000 nurses in Indonesia, and we still need over 100,000 nurses to achieve the ideal ratio. Available nurses are mostly spread in city areas, causing high demand for nurse profession in other areas. According to Indonesia Sehat 2010, many graduates of nurse school preferred to change profession upon graduation, adding to the lack number of nurses in Indonesia. Furthermore, although there is a lack of published information on turnover costs in the health sector, it is known that nurse turnover is costly, specifically as it is manifested in productivity losses and organizational inefficiencies due to staff instability (Jones, 2008). Therefore, healthcare organizations need to understand this phenomenon comprehensively. For this reason, the present study was conducted in two hospitals in Jakarta, Indonesia.

From the beginning of its conception, job embeddedness has been posited as a major predictor of turnover, playing a key role as a buffer to the effects of shocks on employee turnover (Mitchell & Lee, 2001, Ramesh & Gelfand, 2010). Job embeddedness is defined as “a broad constellation of influences on employee retention” (Mitchell, Holtom, Lee, Sablinski & Erez, 2001, p. 1104), and more specifically as: “(1) the extent to which employees’ jobs and communities are similar to or fit with the other aspects of their life spaces, (2) the extent to which employees have links to other people or activities, and, (3) the ease of with which links can be broken—what they would give up if they left, especially if they had to physically move to other cities or homes” (Mitchell *et al.*, 2001, p. 1104). These influences can be work-related (organizational embeddedness) as well as non-work-related (community embeddedness). Together, these distinctions lead to six dimensions of job embeddedness, namely *organization fit* (fit with the organization), *community fit* (fit with the community), *organization links* (connection with people in the organization), *community links* (connection with people in the community), *organization sacrifice* (what an employee may forfeit if they leave the organization),

and *community sacrifice* (what an employee may forfeit if they leave the community). In the present study we use the term “employee embeddedness” to substitute “job embeddedness” to make it easier for us to interpret it together with other form of embeddedness, namely family embeddedness.

As family is considered important in employees’ decision to stay in the organization especially in collective societies like Indonesia (Ramesh & Gelfand, 2010; Wasti, 2002), this study adds a measure of family embeddedness. Family embeddedness, like employee embeddedness, is also defined as factors that influence family’s attachment in the organization and in the community, and is also elaborated to fit, links, and sacrifice dimensions. Fit dimension is the value congruence between family values and organizational and community values, namely *family organization fit* (family fit with the organization), and *family community fit* (family fit with the community). Links dimension is the quantity and the quality of connections family has with the organization and the community, namely *family organization links* (family connection with people in the organization), and *family community links* (family connection with people in the community). Sacrifice dimension is material and psychological sacrificial the family members have to let go if the employee leaves the organization and the family leaves the community, namely *family organization sacrifice* (what the family may forfeit if the employee has to leave the organization) and *family community sacrifice* (what the family may forfeit if they leave the community).

Jiang, Liu, McKay, Lee, and Mitchell (2012) in their meta-analytical review of 65 studies on employee embeddedness and employee turnover found inconsistent results of organizational and community embeddedness on employee turnover. For example, Lee, Mitchell, Sablinski, Burton, and Holtom (2004) did not find the relationship between organizational embeddedness and employee turnover, but they did find a relationship between community embeddedness and employee turnover. On the other hand, Mallol, Holtom, and Lee (2007) found the opposite result, that organizational embeddedness, rather than community embeddedness, was associated with employee turnover. Mallol *et al.* (2007) was supported by other studies investigating the same relationships (Crossley, Bennett, Jex, & Burnfield, 2007; Ramesh & Gelfand, 2010; Tanova & Holtom, 2008), while Lee *et al.* (2004) was supported by other studies (Mitchell, Holtom, Lee, Sablinski, & Erez, 2001; Tanova & Holtom, 2008). Jiang *et al.* (2012) and Zhang, Fried, and Griffeth (2012) suggested that the differing results might indicate the moderating effect of other factors in the relationship between employee embeddedness and turnover. Zhang *et al.* (2012) suggested variables such as commute time and availability of nearby replacement jobs to buffer the

negative relationship between community embeddedness and turnover. Another reason for the mixed results might be the moderating effect of location, as workers' mobility is linked to the specific location of their jobs and homes (Rousseau & Fried, 2001). Workers in urban areas have a relatively high mobility compared to workers in rural areas, since there are many competing organizations close to each other. Individuals from urban areas do not have to move to another residence if they decide to change their employer. In this study, we explore the effects of commute time and availability of nearby alternative jobs in the employee embeddedness-turnover intention relationship. We also include family embeddedness as a possible moderator, as family may influence the work decisions of individuals in collective society like Indonesia.

Commute time is defined as the time spent by individuals to travel from home to work. Living in a big city like Jakarta can be very expensive; many people choose to reside outside of the city and commute to their work. For low commute individuals, high employee embeddedness will lead to low turnover intentions. On the other hand, high commute individuals may perceive commuting as a burden. Previous research demonstrated the negative effect of high commuting on life satisfaction (Stutzer & Frey, 2008). As a consequence of high commuting, individuals often do not have time to build relationships with their colleagues at work and with their neighbors at home. Therefore, organizational and community embeddedness are less likely to inspire the same turnover intention in high commuters as in low commuters.

Perceived availability of nearby replacement jobs differs among individuals spending approximately the same commute time, depending on the area where they live, the suitable alternative workplaces that fit their criteria, and the links they have with those alternative workplaces. We argue that the negative relation between organizational embeddedness and turnover intentions will be stronger for individuals who perceive less nearby replacement jobs (versus individuals with more nearby replacement jobs) because such individuals feel they have less alternative jobs outside the organization that may increase their attachment with the organization (Zhang *et al.*, 2012). However, employees who have more links outside the organization perceive more availability of nearby replacement jobs. Such employees may not react the same way as those who perceive less availability of nearby replacement jobs because they already have some alternative jobs in mind. For those individuals, organizational embeddedness should neither decrease nor increase their turnover intentions. For the same reason, the negative relationship between community embeddedness and turnover intentions will be stronger for individuals who perceive less availability of nearby replacement jobs than those who perceive more availability of

nearby replacement jobs. Therefore, we hypothesize that:

Hypothesis 1a: Commute time moderates the relationship between organizational embeddedness and turnover intentions such that the relationship between organizational embeddedness and turnover intentions will be weaker for individuals who spend longer time commuting than for individuals who spend shorter time commuting.

Hypothesis 1b: Availability of nearby replacement jobs moderates the relationship between organizational embeddedness and turnover intentions such that the relationship between organizational embeddedness and turnover intentions will be weaker for individuals who have more availability of nearby replacement jobs than for individuals who have less availability of nearby replacement jobs.

Hypothesis 1c: Commute time moderates the relationship between community embeddedness and turnover intentions such that the relationship between community embeddedness and turnover intentions will be weaker for individuals who spend longer time commuting than for individuals who spend shorter time commuting.

Hypothesis 1d: Availability of nearby replacement jobs moderate the relationship between community embeddedness and turnover intentions such that the relationship between community embeddedness and turnover intentions will be weaker for individuals who have more availability of nearby replacement jobs than for individuals have less availability of nearby replacement jobs.

Family is considered important, and it often influences the work decisions individuals make in the organization especially in collective societies because collectivists usually take into account family's opinion on their decision at work (Wasti, 2002). Ramesh and Gelfand (2010) were the first researchers to be aware of this construct when they explored the possibility of including family into job embeddedness construct. Individual's perception about their family's opinions, feelings, and expectations toward the organization affects the individual's attitude toward staying or leaving. In the domain of turnover, there are many studies that have suggested that family may impact employee turnover (March & Simon, 1958; Mobley, 1982; Ramesh & Gelfand, 2010). High levels of family embeddedness indicate the congruency of family values with the values of organization and the community, the connections the family has within the organization and the community, and the unwillingness of the family for the employee to leave the organization and the community because they do not want to lose these relationships. For such individuals, high organizational embedded individuals are likely to have low turnover intentions because family enforces the attachment and the positive feeling

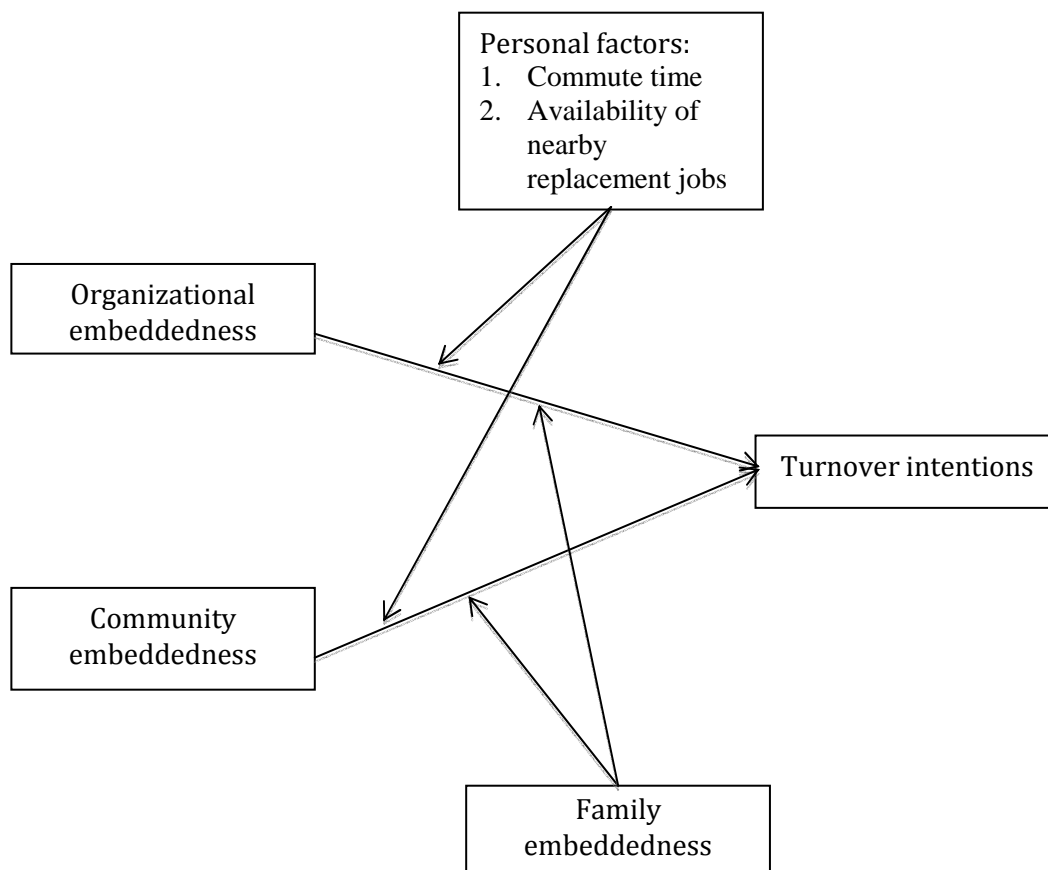


Figure 1. Hypothesized Model

toward the organization and subsequently lower their turnover intentions. However, individuals who have less family embeddedness will likely to feel less supported by their family (Orthner & Pittman, 1986; Wasti, 2002). Thus, individuals with less family embeddedness may see their own attachment to the organization as not important anymore to their work attitudes, i.e. turnover intentions. For the same reason, high community-embedded individuals are likely to have lower turnover intentions because family embeddedness enforces their attachment with the community. Therefore, we hypothesize that:

Hypothesis 2a: Family embeddedness moderates the organizational embeddedness-turnover intention relationship such that this relationship will be stronger for individuals with higher levels of family embeddedness than for individuals with lower levels of family embeddedness.

Hypothesis 2b: Family embeddedness moderates the community embeddedness-turnover intention relationship such that this relationship will be stronger for individuals with higher levels of family embeddedness than for individuals with lower levels of family embeddedness.

2. Methods

Participants and procedure. Data were collected among 500 nurses in a teaching hospital and 173 nurses in a private hospital in Jakarta, Indonesia. All participants completed the questionnaire on a voluntary basis. Data were collected by means of paper survey, which was completed during workdays within a time period of two weeks. Completion of the self-report questionnaire took approximately 20 minutes. The number of returned questionnaire from the teaching hospital was 280 (response rate 56%) and the number of returned questionnaire from the private hospital was 145 (response rate 84%). We deleted 95 cases from the dataset, as these participants did not complete the family embeddedness measure, since they felt family members did not influence their decisions at work. In the instruction of the survey, we asked participants to only fill out the family embeddedness scale if they feel that their family influences their decision at work. Therefore, the final sample consisted of 330 participants. The mean age of the participants was 31.28 years ($SD = 7.20$). The number of female participants was 282 (85.5%). Of the participants, 240 (72.7%) had permanent positions. Two hundred forty eight participants (75.2%) were college graduates, and the other 82 participants (24.8%) were university graduates.

Employee embeddedness. The measure contains 23 items on employee embeddedness adopted from Lee, Mitchell, Sablinski, Burton, and Holtom's (2004) job embeddedness scale and Crossley *et al.*, (2007) measure. Item examples of the six dimensions of job embeddedness are: *I feel like I am a good match for this organization (organizational fit dimension)*; *I discuss non-work related problems with my coworkers (organizational link dimension)*; *if I leave the organization, I would lose structure in my life (organizational sacrifice dimension)*; *my personal values fit into the values of my community (community fit dimension)*; *I interact frequently with people in the community (community link dimension)*; *leaving the area where I live now would mean many personal sacrifices (community sacrifice dimension)*.

We preferred to use a reflective measure of employee embeddedness to using Lee *et al.*, (2004) formative measure due to the possible weaknesses of formative measurement usage in the psychological domain (Howell, Breivik, & Wilcox, 2007). The original reflective measure of employee embeddedness that we created was a 64-item scale in English, which was translated into Indonesian by an independent bilingual organizational psychologist, and back translated into English by another bilingual independent organizational psychologist. It was validated in a pilot study among Indonesian and Dutch samples. Of the 64 items from the pilot study, number of items retained was 46 based on the validity testing using exploratory factor analysis and confirmatory factor analysis. The retained 46 items were used in the present study. The scale was comprised of 5 items on organizational fit, 3 items on organizational link, 3 items on organizational sacrifice, 4 items on community fit, 5 items on community link, and 3 items on community sacrifice.

Family embeddedness. We created 23 items of family embeddedness, which were adapted items from the employee embeddedness scale above. Item examples of the six dimensions of family embeddedness are: *My family thinks this organization is a good fit for me (family organizational fit dimension)*; *my family interacts frequently with my colleagues at work (family organizational link dimension)*; *it would harm my family's reputation if I left the organization (family organizational sacrifice dimension)*; *my family likes the environment of the community (family community fit dimension)*; *my family interacts frequently with people in the community (family community link dimension)*; *leaving the area where we live now would mean many sacrifices to my family (family community sacrifice dimension)*.

The final family embeddedness scale comprised of 5 items on the family's fit to the organization, 4 items on the family's link to the organizational, 3 items on the

family's organizational sacrifice, 4 items on the family's community fit, 3 items on the family's community link, and 4 items on the family's community sacrifice. Items were rated on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The coefficient alphas were: .73 for organizational embeddedness (11 items), .89 for community embeddedness (12 items), .78 for family organizational embeddedness (12 items), and .84 for family community embeddedness (11 items). Correlations varying between .15 and .68 were found among the subscales.

Turnover intentions. The 3-item turnover intentions scale from Mobley *et al.*, (1978) was translated into Indonesian and back translated into English by the same organizational psychologists as mentioned above. Items were rated on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). An example of an item is: *'I think a lot about leaving this organization'*. Coefficient alpha for the translated scale was .82.

Commute time. This variable was asked in the form of forced choice: less than 15 minutes, 15-45 minutes, 46 minutes to 1.5 hours, and more than 1.5 hours.

Alternative jobs. This variable was measured using 1 item only (*"there are a number of organizations nearby my house where I could find comparable work"*) from Zhang *et al.*, (2012).

3. Results and Discussion

Confirmatory Factor Analyses (CFA). Before testing the hypotheses, CFAs were conducted to evaluate the construct validity of the measurements using the software package AMOS. The CFA examined the goodness of fit of the measurement models, the discriminant validity of the scales, and common method variance effects.

We examined the measurement model by specifying all variables into thirteen-factor model, which comprised of three dimensions of organizational embeddedness, three dimensions of community embeddedness, three dimensions of family organizational embeddedness, three dimensions of family community embeddedness, and the turnover construct into a single CFA. The measurement model was a thirteen-factor model in which all items were loaded onto their respective factors: turnover intentions, organizational embeddedness fit, organizational embeddedness link, organizational embeddedness sacrifice, community embeddedness fit, community embeddedness link, community embeddedness sacrifice, family organizational embeddedness fit, family organizational embeddedness link, family organizational embeddedness sacrifice, family community embeddedness fit, family community embeddedness link, and family community embeddedness sacrifice. The alternative models were (1) a one-factor model in which all items loaded on the

same factor; (2) a three-factor model with turnover intentions, employee embeddedness, and family embeddedness as latent variables; and (3) a five-factor model with turnover intentions, organizational embeddedness, community embeddedness, family organizational embeddedness, and family community embeddedness as latent variables. In all models, all factors were allowed to correlate.

Since χ^2 test is not independent of sample size, other fit indexes are offered to supplement the χ^2 test to avoid problems related to sample size and distributional misspecification (Hu & Bentler, 1999). Of many fit indices available to assess models, four fit indices as recommended by Bollen and Long (1993), Byrne (2001), and Hu and Bentler (1999) are the most frequently reported in CFA studies: the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), the Root-Mean-Square Error of Approximation (RMSEA), and the Standardized Root Mean Square Residual (SRMR). Hu and Bentler (1999) suggested that the TLI and the CFI should be greater than 0.90 and the RMSEA should be close to or less than 0.06. Byrne (2001) suggested that a SRMR below 0.08 indicates good fit. The smaller the SRMR, the better the model fit. However, to determine whether the fit is acceptable, sample sizes and model complexity should be considered (Marsh, Hau, & Wen, 2004; Weston & Gore, 2006). For a sample size less than $n = 500$ and a complex model (a model of more than three latent variables), the indices of CFI = 0.90, RMSEA = 0.10, and SRMR = 0.10 are considered acceptable. Therefore, using the four fit indices (CFI, TLI, RMSEA, and SRMR), the values for the hypothesized model presented in Table 1 are considered acceptable. The χ^2 difference test was used to compare the proposed model to the alternative measurement models (Weston & Gore, 2006). The proposed model with thirteen constructs yielded a better fit to the data than the alternative models. All items loaded significantly and in the expected direction on their respective latent factors ($M_{\text{standardized loadings}} = 0.70$; $\text{Range}_{\text{standardized loadings}} = [0.30; 0.91]$). The results also supported the discriminant validity of all the measures.

As all five-study variables were measured using a cross-sectional design, common method variance could be a problem. Therefore, Harman single-factor test (Podsakoff, Mackenzie, Lee, & Podsakoff, 2003) was performed to identify whether there is a general factor accounting for the majority of variance in the variables. Results showed that the first factor accounted for only 18.20% of the variance. The common method factor explained only 0.81% of the variance, well below the threshold of 25% suggested by Williams, Cote, and Buckley (1989). Comparing standardized regression weights of the factor structures with and without latent method factor, we did not find significant loading differences (all well below the threshold of .20,

Podsakoff *et al.*, 2003). Moreover, comparisons of the alternative models indicated that common method variance was rather unlikely to significantly distort participants' responses (see Table 1), because the hypothesized model fitted the data better than the one factor model (Podsakoff *et al.*, 2003). Hence, it was unlikely that our findings could be explained by common method variance.

Hypotheses Results. Table 2 presents the means, standard deviations, and correlations of all study variables. Organizational embeddedness was negatively associated with turnover intentions ($r = -0.24, p < 0.01$), and community embeddedness had no significant relation with turnover intentions ($r = 0.08, ns$). Overall employee embeddedness also had no significant relation with turnover intentions ($r = -0.09, ns$). On the other hand, family organizational embeddedness was significantly associated with turnover intentions ($r = -0.28, p < 0.01$), and family community embeddedness had no significant relation with turnover intentions ($r = -0.05, ns$). Overall family embeddedness was negatively associated with turnover intentions ($r = -0.22, p < 0.01$).

The hypotheses were tested using the PROCESS macro for SPSS developed by Hayes (2013), which presents straightforward regression results with moderation effects. The macro is considered as the latest and easiest test that provides many capabilities of existing programs and tools in one go (Hayes, 2012), such as automatic mean-centering variables, which is required for modeling interaction effect while testing the model. Using structural equation modeling to test moderation effects is oftentimes difficult and laborious, in which one has to transform variables before testing them. Hayes' PROCESS macro is among the 'macros' and 'packages' methodologists developed to accommodate simple to complicated models with latest techniques (Hayes, 2012).

Table 3 presents the regression results from the output of Hayes' PROCESS macro for moderating effects of organizational embeddedness, commute time, and availability of nearby replacement jobs on turnover intentions, and Table 4 presents the regression results for moderating effects of community embeddedness, commute time, and availability of nearby replacement jobs on turnover intentions.

Hypothesis 1a posited that commute time would moderate the relationship of organizational embeddedness and turnover intentions. Hypothesis 1a was supported, as the results showed a significant interaction effect for commute time and organizational embeddedness ($B = 0.29, p < 0.05$). Hypothesis 1b posited that availability of nearby replacement jobs would moderate the relationship of organizational embeddedness and turnover intentions. The hypothesis was not supported ($B = 0.001, ns$).

Table 1. Results of The Confirmatory Factor Analysis: Fit Indices for Alternative Model Structures of Turnover Intentions, Organizational Embeddedness, Community Embeddedness, Family Organizational Embeddedness, and Family Community Embeddedness (N = 330)

Model	Latent factors	χ^2	df	CFI	TLI	RMSEA	SRMR	Model comparison	$\Delta\chi^2$	Δdf
Hypothesized model	TI, OrgJEfit, OrgJElink, OrgJEsac, ComJEfit, ComJElink, ComJEsac, Fam-OrgJEfit, Fam-OrgJElink, Fam-OrgJEsac, Fam-ComJEfit, Fam-ComJElink, Fam-ComJEsac	1441.266	782	0.902	0.887	0.051	0.0516			
One-factor model	General factor	6786.370	1127	0.301	0.270	0.124	0.1442	2 versus 1	5345.104**	345
Three-factor model	TI, employee embeddedness, family embeddedness	6166.454	1124	0.377	0.348	0.117	-	3 versus 1	4725.188**	342
Five-factor model	TI, OrgJE, ComJE, Fam-OrgJE, Fam-ComJE	4672.781	1117	0.535	0.510	0.104	0.1162	4 versus 1	3231.515**	335
Measurement model with common method factor	TI, OrgJEfit, OrgJElink, OrgJEsac, ComJEfit, ComJElink, ComJEsac, Fam-OrgJEfit, Fam-OrgJElink, Fam-OrgJEsac, Fam-ComJEfit, Fam-ComJElink, Fam-ComJEsac, CMF	2090.569	1048	0.864	0.847	0.058	0.0579	5 versus 1	649.303**	266

Note. TI = turnover intentions; OrgJE = organizational embeddedness; ComJE = community embeddedness, Fam-OrgJE = family organizational embeddedness; Fam-ComJE = family community embeddedness; CMF = common method factor. * $p < .05$; ** $p < .01$

Table 2. Means, Standard Deviations, and Correlations among Study Variables

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
Tenure	7.84	7.19	NA											
Age	31.28	7.20	0.74**	NA										
Education	1.25	0.43	0.16**	0.12*	NA									
Commute time	2.33	0.83	0.24**	0.23**	0.14*	NA								
Perceived available Replacement jobs	2.99	0.78	-0.03	-0.04	0.02	-0.04	NA							
OrgJE	3.27	0.40	0.00	0.04	-0.07	0.00	0.02	0.73						
ComJE	3.36	0.49	0.03	0.04	0.10	0.14*	0.50**	0.15**	0.88					
Employee Embeddedness	3.31	0.34	0.02	0.05	0.03	0.10	0.37**	0.70**	0.81**	0.82				
Family OrgJE	2.97	0.45	0.14**	0.18**	-0.05	0.10	0.01	0.44**	0.18**	0.39**	0.78			
Family ComJE	3.44	0.47	0.06	0.01	0.12*	0.14**	0.29**	0.17**	0.68**	0.59**	0.17**	0.84		
Family Embeddedness	3.21	0.35	0.13*	0.12*	0.05	0.16**	0.20**	0.39**	0.56**	0.64**	0.75**	0.78**	0.81	
Turnover intentions	2.44	0.71	-0.17**	-0.13*	-0.08	-0.05	0.22**	-0.24**	0.08	-0.09	-0.28**	-0.05	-0.22**	.82

Note. N = 330. NA = not applicable. Tenure and age were measured in years. Education was dummy coded (1 = college degree, 2 = university degree). Commute time was dummy coded (1 = less than 15 minutes, 2 = 16-46 minutes, 3 = 46 minutes to 1,5 hours, 4 = more than 1,5 hours). All other scales were measured on a 5-point scale. Coefficient alpha reliabilities are presented on the diagonal. OrgJE = organizational embeddedness, ComJE = community embeddedness. * $p < 0.05$ (two-tailed), ** $p < 0.01$ (two-tailed).

Table 3. Hierarchical Regression of Organizational Embeddedness, Commute Time, Availability of nearby Replacement Jobs, and their Interaction Effects on Turnover Intentions (Unstandardized Coefficients)

	<i>Turnover intentions</i>							
	B	SE	B	SE	B	SE	B	SE
Org embed	-0.43	0.1	-0.46**	0.1	-0.44**	0.09	-0.44**	0.1
Commute time	-0.04	0.04	-0.05	0.31				
Org embed x commute time			0.29*	0.14				
Availability					.21**	0.05	0.21**	0.05
Org embed x availability							0.001	0.13
<i>F</i>	10.67**		12.57**		20.51**		13.84**	
<i>R</i> ²	0.06		0.08		0.11		0.11	
ΔR^2	0.06		0.02		0.11		0	

Note. *N* = 330. Org embed = organizational embeddedness, Availability = availability of nearby replacement jobs. Org embed, commute time, and availability were mean centered prior to analysis. **p*<0.05, ** *p* < 0.01

Table 4. Hierarchical Regression of Community Embeddedness, Commute Time, Availability of nearby Replacement Jobs, and Their Interaction Effects on Turnover Intentions (Unstandardized Coefficients)

	<i>Turnover intentions</i>							
	B	SE	B	SE	B	SE	B	SE
Com embed	0.12	0.08	0.11	0.1	-0.06	.09	-0.08	0.1
Commute time	-0.05	0.05	-0.06	0.05				
Com embed x commute time			0.18	0.12				
Availability					0.22**	.06	0.23**	0.06
Com embed x availability							0.19	0.11
<i>F</i>	1.69		1.68		8.91**		5.15**	
<i>R</i> ²	0.01		0.02		0.05		0.07	
ΔR^2	0.01		0.01		0.05		0.02	

Note. *N* = 330. Com embed = community embeddedness, Availability = availability of nearby replacement jobs. Com embed, commute time, and availability were mean centered prior to analysis. **p*<0.05, ** *p* < 0.01

Table 5. Hierarchical Regression of Organizational Embeddedness, Community Embeddedness, Family Embeddedness, and Their Interaction Effects on Turnover Intentions (Unstandardized Coefficients)

	<i>Turnover intentions</i>							
	B	SE	B	SE	B	SE	B	SE
Org embed	-0.33**	0.1	-0.34**	0.09				
Fam embed	-0.3	0.12	-0.34**	0.12	-0.77**	0.13	-0.79**	0.15
Org embed x fam embed			0.59*	0.28				
Com embed					0.43**	0.09	0.44**	0.11
Com embed x fam embed							0.1	0.21
<i>F</i>	13.48**		9.19**		19.34**		9.85**	
<i>R</i> ²	0.08		0.1		0.11		0.11	
ΔR^2	0.08		0.02		0.11		0	

Note. *N* = 330. Org embed = organizational embeddedness, Com embed = community embeddedness, Fam embed = family embeddedness. Famembed, org embed, and com embed were mean centered prior to analysis. **p*<0.05, ** *p* < 0.01

Hypothesis 1c posited that commute time would moderate the relationship of community embeddedness and turnover intentions. We found a non-significant interaction effect of commute time and community

embeddedness (*B*= 0.18,*ns*). Therefore, Hypothesis 1c was not supported. Hypothesis 1d posited that availability of nearby replacement jobs would moderate the relationship of community embeddedness and

turnover intentions. We also found a non-significant interaction effect of availability of nearby replacement jobs and community embeddedness ($B= 0.19, ns$), thus Hypothesis 1d was not supported. Table 5 demonstrates the regression results of family embeddedness, commute time, and availability of nearby replacement jobs on turnover intentions.

Hypothesis 3a posited that family embeddedness would moderate the relationship of organizational embeddedness and turnover intentions. Table 5 shows that the hypothesis was supported, as the interaction effect of family embeddedness and organizational embeddedness was positive and significant on turnover intentions ($B = 0.59, p <0.05$). However, hypothesis 3b which posited that family embeddedness would moderate the relationship of community embeddedness and turnover intentions was not supported, as the interaction effect of family embeddedness and community embeddedness on turnover intentions was not significant ($B= 0.1, ns$).

Figure 2 presents the plots of the significant interaction effects. Figure 2a demonstrates the interaction effect of organizational embeddedness and commute time on turnover intentions. As demonstrated in the Figure 2a, the negative influence of organizational embeddedness on turnover intentions was only significant on people with low commute time ($B= -0.70, t = -5.35, p <0.01$). The negative influence of organizational embeddedness on turnover intentions was non-significant on people with high commute time ($B= -0.22, t= -1.28, ns$). Figure 2b demonstrates the significant interaction effect of organizational embeddedness and family embeddedness on turnover intentions. As demonstrated in the figure, the negative influence of organizational embeddedness on turnover intentions was only significant on people with low family embeddedness ($B = -0.54, t = -4.14, p <0.01$) and was non-significant on people with high family embeddedness ($B = -0.13, t= -0.92, ns$). Figure 2 interaction plots of commute time, availability of nearby replacement jobs, and family embeddedness on the

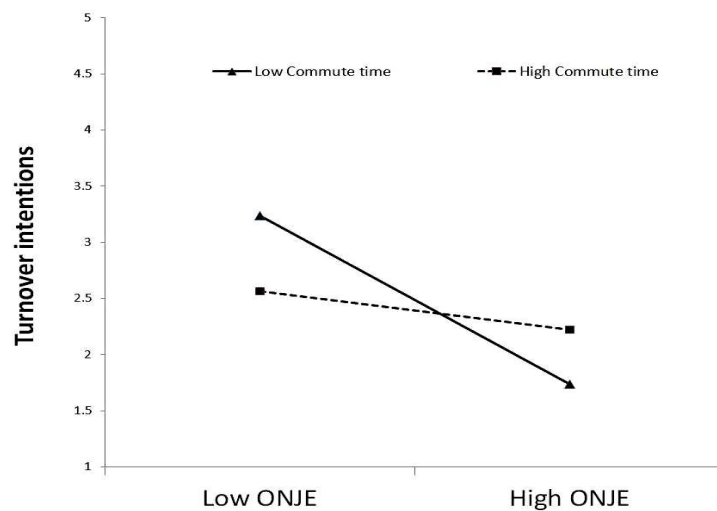


Figure 2a. Interaction Effect of Organizational Embeddedness (ONJE) and Commute Time on Turnover Intentions (N=330)

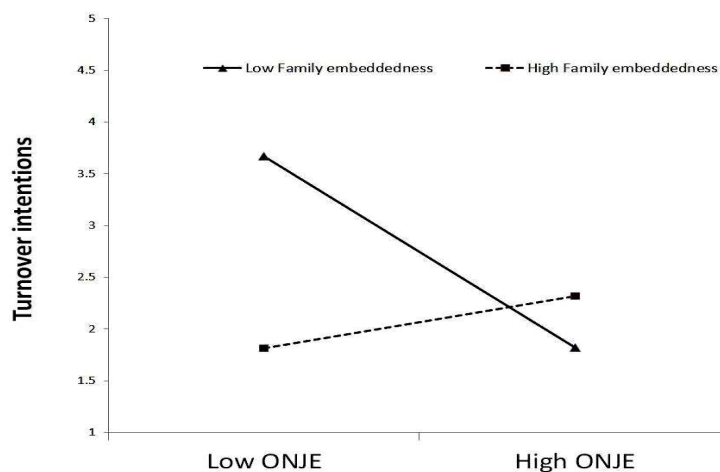


Figure 2b. Interaction Effect of Organizational Embeddedness (ONJE) and Family Embeddedness on Turnover Intentions (N=330)

relationship between job embeddedness and turnover intentions.

The purpose of this study is to investigate the role of commute time, availability of nearby replacement jobs, and family embeddedness on the relationship between employee embeddedness and turnover intentions in Indonesian nurses, in an attempt to explain the mechanism of employee embeddedness-turnover relationships (Jiang *et al.*, 2012; Zhang *et al.*, 2012). Results show that only commute time and family embeddedness moderate organizational embeddedness and turnover intention relationship.

The current study is focused on turnover intentions instead of actual turnover. Turnover intentions are defined as the positive attitude toward leaving the organization by thinking about leaving (Mobley *et al.*, 1978). Although many researchers tend to treat turnover intentions as a substitute for actual turnover, this study posits turnover intentions as one of the direct antecedents of actual turnover (Hom, Mitchell, Lee, & Griffeth, 2012) since there is no guarantee that people with low turnover intentions will stay for a long time within the organization, and vice versa. However, high turnover intentions may impact employee's work behaviors, such as higher absenteeism, tardiness, lower OCB and lower task performance (Burton *et al.*, 2010).

The results of the present study highlight plausible explanations for why previous studies found different results for the employee embeddedness-turnover relationship (Jiang *et al.*, 2012; Zhang *et al.*, 2012). Zhang *et al.*, (2012) focused on the relationship between community embeddedness and turnover, and suggested that commute time, job type, and financial requirements would moderate the relationship.

In general, our results demonstrate the importance to consider the context (i.e., personal and family factors) when examining the job embeddedness-turnover relationship. Results show that commute time (Hypothesis 1a) moderates the organizational embeddedness-turnover intention relationship. As seen in Figure 2a, high organizational embedded individuals tend to have low turnover intentions if individuals spend less time to commute from home to work. However, high commuters do not produce the same effect. This echoes a previous study on the relationship between high commuting and life satisfaction (Stutzer & Frey, 2008), in which spending more time to commute hampers the individual's effort to build quality relationships with their environment. As a consequence, high commuters may not develop perfect attachment with their organization and subsequently may have either lower or higher turnover intentions.

Contrary to previous proposition that perceived availability of nearby replacement jobs moderated the relationship between community embeddedness and

turnover intentions (Zhang *et al.*, 2012), the present study did not support it, as hypothesis 1b (regarding organizational embeddedness) and hypothesis 1d (regarding community embeddedness) were not supported. This might be a typical result for nurse profession or female employees in Indonesia.

The fact that perceiving more job alternatives (or lack thereof) did not influence their intentions to leave the organization might be because they value their attachment with current organization. The present result showed that organizational embeddedness had negative effect on turnover intentions ($B = -0.44$, $t = 4.58$, $p < 0.01$) and community embeddedness had no effect on turnover intentions ($B = -0.08$, $t = 0.81$, *ns*) regardless of their perceived availability of nearby replacement jobs. There may be other possible reasons to influence employee embeddedness and turnover intentions.

There is a significant interaction effect of family embeddedness on the relationship between organizational embeddedness and turnover intentions, supporting hypothesis 2a. However, our study results did not support the hypothesis in the expected direction, as the results demonstrate that high organizational embedded people have low levels of turnover intentions for individuals with low levels of family embeddedness, rather than for individuals with high levels of family embeddedness. We expected a stronger relationship between organizational embeddedness and turnover intentions for individuals with higher levels of family embeddedness than for individuals with lower levels of family embeddedness. Furthermore, family organizational embeddedness significantly moderates the employee organizational embeddedness-turnover intention relationship but not the family community embeddedness. This may mean that instead of family embeddedness as the moderator, employee embeddedness may have a moderating effect on the relationship between family embeddedness and turnover intentions. Dawson (2014) suggested that it is possible to swap the moderator and independent variable, since mathematically it is identical. Therefore, in line with the theory of family influence on employee's work decisions (Orthner & Pittman, 1986; Wasti, 2002), family embeddedness may or may not affect employee's turnover intentions, depending on the third factor, namely organizational embeddedness. For employees with low organizational embeddedness, their family organizational embeddedness decreases their turnover intentions ($B = -0.57$, $t = -3.17$, $p < 0.05$); for employees with high organizational embeddedness, family organizational embeddedness no longer affects turnover intentions ($B = -0.15$, $t = -0.71$, *ns*). In other words, family plays an important role in work decision only for employees with low organizational embeddedness.

Previous studies have tended to focus on organizational embeddedness (e.g., Halbesleben & Wheller, 2008;

Sekiguchi, Burton, & Sablinski, 2008), which is inconsistent with Mitchell *et al.*'s (2001) original idea of job embeddedness as a broad constellation of influences (i.e., organizational and community embeddedness) to retain employees. However, as can be concluded from the present study, organizational embeddedness explains more variance in turnover intentions and shows more significant relationships with other variables compared to community embeddedness. This could mean that organizational factors of embeddedness are more important to explain work outcomes than are community factors of embeddedness, at least in our current participants.

There are some limitations in the present study that may affect the generalization of the current study to other populations. All variables in the study were self-reported, which can raise several problems, such as common method biases and social desirability. The common method variance tests indicate that common method bias is not a serious problem in this study. However, we suspect that social desirability might have played a role in the link dimension of organizational embeddedness. Internal consistencies of organizational, family, and community link dimensions vary to a large extent (0.51, 0.69, and 0.89, respectively). Zhang *et al.* (2012) already noted the measurement problem of the link dimension since Mitchell *et al.*, (2001) defined link as "formal and informal connections between a person and institutions or other people" (p. 1104), which was translated into the number of people an individual interacts with in and outside the organization. The items on the organizational link dimension are as follows: *I interact with my colleagues quite frequently on a daily basis; I discuss non-work related problems with my coworkers; I frequently have informal meetings/talks with my colleagues; and overall, I have strong ties with people throughout the organization.* Since talking with colleagues during office hour oftentimes is considered as wasting work time in Indonesia, participants might think that frequent interaction with colleagues at work is not a desirable work behavior. We suggest for improvement on items of link dimensions for the future study. For example, Zhang *et al.*, (2012) suggested to also consider the quality aspect of links dimension.

Practical implications. The current study has a number of implications for human resource practitioners. The significant moderating effects of personal variables (such as commute time, age, tenure, and education), add to the evidence that the organizational embeddedness-turnover intention relationships that are likely to be taken for granted as negative and significant, is dependent on personal variables. Therefore, human resource practitioners should pay attention to creating a retention program for high commute, young, and low tenured individuals, as their turnover intentions are relatively higher than those of low commute, older, and

higher tenured individuals. For example, human resource practices can retain high commute individuals by applying flexible working hours to accommodate them. Retention programs could also include setting expectations and feedback between employees and the organization in the beginning of employment for young and low tenured individuals, to make individuals understand their role within the organization. Higher educated individuals (versus lower educated individuals) also tend to have higher turnover intentions even when they are highly embedded in the organization. Since organizations prefer hiring higher educated employees than the lower educated employees, human resource practices should pay more attention to retaining higher educated employees by giving them a working environment that enables them to learn and grow in their career.

The findings show that family embeddedness influence turnover intentions only for employee with low levels of organizational embeddedness. In this case, human resource practices should pay more attention to involving their employees' families in the organization, such as by inviting them for social events and family gathering. However, as employee organizational embeddedness increases, the influence of family embeddedness on turnover intentions decreases. This may mean that human resource practices can also be directed at increasing employee organizational embeddedness to reduce turnover intentions, such as installing flexible working hours, providing opportunity for employee to craft their own job, and providing place and time for employees to gather with other employees with similar hobbies.

4. Conclusions

The current study demonstrates that the relationship between job embeddedness and turnover intentions is moderated by commute time and family embeddedness. This study contributes to the body of research on the theoretical explanation of the relationship between job embeddedness and turnover intentions, and of the possible relationship between family embeddedness and turnover intentions.

References

- Ainsworth, S. (2002). The 'feminine advantage': A discursive analysis of the invisibility of older women workers. *Gender, Work & Organization*, 9, 579-601. doi: 10.1111/1468-0432.00176.
- Bollen, K.A., Long, J.S. (Eds.). (1993). *Testing structural equation models*. Newbury Park, CA: Sage.
- Breen, R., Buchmann, M. (2002). Institutional variation and the position of young people: A comparative

- perspective. *The Annals of the American Academy of Political and Social Science*, 580, 288-305. doi: 10.1177/000271620258000112.
- Burton, J.P., Holtom, B.C., Sablinski, C.J., Mitchell, T.R., Lee, T.W. (2010). The buffering effects of job embeddedness on negative shocks. *Journal of Vocational Behavior*, 76, 42-51. doi:10.1016/j.jvb.2009.06.006.
- Byrne, B.M. (2001). *Structural equation modeling with Amos: Basic concepts, application and programming*. Mahwah, NJ.: Erlbaum.
- Crossley, C.D., Bennett, R.J., Jex, S.M., Burnfield, J.L. (2007). Development of a global measure of job embeddedness and integration into a traditional model of voluntary turnover. *Journal of Applied Psychology*, 92, 1031-1042. doi: 10.1037/0021-9010.92.4.1031.
- Dawson, J.F. (2014). Moderation in management research: What, why, when, and how. *Journal of Business and Psychology*, 29, 1-19. doi: 10.1007/s10869-013-9308-7.
- Due, P., Holstein, B., Lund, R., Modvig, J., Avlund, K. (1999). Social relations: network, support and relational strain. *Social science & medicine*, 48(5), 661-673. doi: 10.1016/S0277-9536(98)00381-5.
- Fields, D., Dingman, M.E., Roman, P.M., Blum, T. C. (2005). Exploring predictors of alternative job changes. *Journal of Occupational and Organizational Psychology*, 78, 63-82. doi:10.1348/096317904X22719.
- Hu, L., Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1-55.
- Jones, C.B. (2008). Revisiting nurse turnover costs: Adjusting for inflation. *Journal of Nursing Administration*, 38, 11-18.
- Lee, T.W., Mitchell, T.R., Sablinski, C.J., Burton, J. P., Holtom, B.C. (2004). The effect of job embeddedness on organizational citizenship, job performance, volitional absences, and voluntary turnover. *Academy of Management Journal*, 47, 711-722. doi: 10.2307/20159613.
- LeVasseur, S.A., Wang, C.Y., Mathews, B., Boland, M. (2009). Generational Differences in Registered Nurse Turnover. *Policy Politics Nursing Practice*, 10, 212-223. doi: 10.1177/1527154409356477.
- Halbesleben, J.R., Wheeler, A.R. (2008). The relative roles of engagement and embeddedness in predicting job performance and intention to leave. *Work & Stress*, 22(3), 242-256. doi: 10.1080/02678370802383962.
- Hayes, A.F. (2012). Process: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling [white paper]. Retrieved from <http://afhayes.com/public/process2012.pdf>.
- Hayes, A.F. (2013). Model templates for PROCESS for SPSS and SAS. Available from <http://www.afhayes.com/public/templates.pdf>.
- Hom, P.W., Mitchell, T.R., Lee, T.W., Griffeth, R.W. (2012). Reviewing employee turnover: Focusing on proximal withdrawal states and an expanded criterion. *Psychological Bulletin*, 138, 831-858. doi: 10.1037/a0027983.
- Howell, R.D., Breivik, E., Wilcox, J.B. (2007). Reconsidering formative measurement. *Psychological Methods*, 12, 205-218. doi: 10.1037/1082-989X.12.2.205.
- Jiang, K., Liu, D., McKay, P.F., Lee, T.W., Mitchell, T.R. (2012). When and how is job embeddedness predictive of turnover? A meta-analytic investigation. *Journal of Applied Psychology*, 97, 1077. doi: 10.1037/a0028610.
- Lee, T.W., Mitchell, T.R., Sablinski, C.J., Burton, J.P., Holtom, B.C. (2004). The effect of job embeddedness on organizational citizenship, job performance, volitional absences, and voluntary turnover. *Academy of Management Journal*, 47, 711-722. doi: 10.2307/20159613.
- Mallol, C.M., Holtom, B.C., Lee, T.W. (2007). Job embeddedness in a culturally diverse environment. *Journal of Business and Psychology*, 22, 35-44. doi: 10.1007/s10869-007-9045-x.
- March, J.G., Simon, H.A. (1958). *Organizations*. Oxford, England: Wiley.
- Marsh, H.W., Hau, K. T., Wen, Z. (2004). In search of golden rules: Comment on hypothesis-testing approaches to setting cutoff values for fit indexes and dangers in overgeneralizing Hu and Bentler's (1999) findings. *Structural Equation Modeling*, 11, 320-341.
- Mitchell, T.R., Lee, T.W. (2001). 5. The unfolding model of voluntary turnover and job embeddedness: Foundations for a comprehensive theory of attachment. *Research In Organizational Behavior*, 23, 189-246. doi: 10.1016/S0191-3085(01)23006-8.
- Mitchell, T.R., Holtom, B.C., Lee, T.W., Sablinski, C.J., Erez, M. (2001). Why people stay: Using job embeddedness to predict voluntary turnover. *Academy of Management Journal*, 44, 1102-1121. doi: 10.2307/3069391.
- Mobley, W.H. (1982). *Employee turnover: Causes, consequences, and control*. Reading, Mass.: Addison-Wesley.

- Mobley, W.H., Horner, S.O., Hollingsworth, A.T. (1978). An evaluation of precursors of hospital employee turnover. *Journal of Applied Psychology*, 63, 408-414. doi: 10.1037/0021-9010.63.4.408.
- Ng, T.W., Feldman, D.C. (2009). Occupational embeddedness and job performance. *Journal of Organizational Behavior*, 30, 863-891. doi: 10.1002/job.580.
- Orthner, D.K., Pittman, J.F. (1986). Family contributions to workcommitment. *Journal of Marriage & the Family*, 48, 573-581. doi: 10.2307/352043.
- Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y., Podsakoff, N.P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88, 879-903. doi: 10.1037/0021-9010.88.5.879.
- Ramesh, A., Gelfand, M.J. (2010). Will they stay or will they go? The role of job embeddedness in predicting turnover in individualistic and collectivistic cultures. *Journal of Applied Psychology*, 95, 807-823. doi: 10.1037/a0019464.
- Rousseau, D.M., Fried, Y. (2001). Location, location, location: Contextualizing organizational research. *Journal of Organizational Behavior*, 22, 1-13. doi: 10.1002/job.78.
- Sekiguchi, T., Burton, J.P., Sablynski, C.J. (2008). The Role of job embeddedness on employee performance: The interactive effects with leader-member exchange and organization-based self-esteem. *Personnel Psychology*, 61, 761-792.
- Stutzer, A., Frey, B. S. (2008). Stress that doesn't pay: The commuting paradox. *The Scandinavian Journal of Economics*, 110, 339-366. doi: 10.1111/j.1467-9442.2008.00542.x.
- Tanova, C., Holtom, B.C. (2008). Using job embeddedness factors to explain voluntary turnover in four European countries. *The International Journal of Human Resource Management*, 19, 1553-1568. doi: 10.1016/j.ijhm.2009.05.001.
- Trevor, C.O. (2001). Interactions among actual ease-of-movement determinants and job satisfaction in the prediction of voluntary turnover. *Academy of Management Journal*, 44, 621-638. doi: 10.2307/3069407.
- Williams, L.J., Cote, J.A., Buckley, M.R. (1989). Lack of method variance in self-reported affect and perceptions at work: Reality or artifact? *Journal of Applied Psychology*, 74, 462-468. Accession number: 5112900.
- Wasti, S.A. (2002). Affective and continuance commitment to the organization: Test of an integrated model in the Turkish context. *International Journal of Intercultural Relations*, 26, 525-550.
- Weston, R., Gore, P.A. (2006). A brief guide to structural equation modeling. *The Counseling Psychologist*, 34, 719-751.
- Zhang, M., Fried, D.D., Griffeth, R.W. (2012). A review of job embeddedness: Conceptual, measurement issues, and direction for future research. *Human Resource and Management Review*, 22, 220-231.