

# Social Context of Turnover-Mixed Methods Study of Indian IT Professionals

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## ABSTRACT

This paper examines the social context of turnover, defined by the influence of supervisors, peers, and family. Using a mixed-methods research design, data were collected by two rounds of semi-structured interviews with 75 IT professionals working in the IT outsourcing industry in India. After a span of 10 months, the respondents were contacted again to longitudinally measure actual turnover behavior. Using structured equation modeling, the study shows that family and supervisory justice play a critical part in the turnover process. The model has sufficient explanatory power and explains 37% of the variance in turnover intentions and 27% of the variance in actual turnover behavior. In addition, the authors used logistic regression to show the effect of various antecedents on the dependent variable. The detailed qualitative analysis offers insights into the dichotomy between intentions and behavior. Finally, implications for practice and research are discussed.

## KEYWORDS

Family, Justice, Longitudinal, Peers, Qualitative, Turnover Behavior, Turnover Intentions

## INTRODUCTION

Employee turnover remains an important administrative problem for both organizational scholars and managers (Srivastava & Eachempati 2021; Vardaman *et al.* 2018) across the globe. For organizations, the loss of an employee can be quite expensive in terms of hiring, training, and opportunity costs (Pee *et al.* 2014), and loss of organizational memory and seasoned mentors thereby affecting firm performance negatively (Rubenstein *et al.* 2018). Research shows the cost of replacing a worker is approximately 100% of the budgeted salary for the position (Allen *et al.* 2010), and noneconomic costs such as damage to employee morale and lost organizational memory can have significant consequences. For IT firms, this issue is even more serious ((Mirsaeedi & Rigby 2020). First, the turnover of IS professionals is 25-35% higher than other professionals (Hunter *et al.* 2008). Also, research has shown the importance of human capital vs physical capital is higher in IT firms than in non-IT firms (Mourmant *et al.* 2009) and losing IT workers to competitors is costly (Tambe & Hitt 2013). Since 2014, IT employee turnover has been on the rise- 9% in 2014, 8.6% in 2015, 8% in 2016, 7.3% in 2017, and 8.2% in 2018, with 69.9% of those being voluntary (Idell *et al.* 2021), impacting the bottom line of organizations. The situation is exacerbated by increased demand because as the IT area of data analytics and business intelligence grows, the need for IT professionals who can analyze, interpret and use big data for decision-making will influence the talent shortage of IT professionals (Moquin *et al.* 2019).

The above-mentioned consequences of turnover make it imperative for IT managers and scholars to understand factors influencing the turnover process (Hom *et al.* 2017; Niederman *et al.*

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2012). Social scientists have advanced both psychological (personality/attitudes) and sociological (network/structural) explanations (Porter *et al.* 2019). The bulk of turnover theory has grown from a psychological perspective, with process models explaining how individual and job characteristics influence key attitudes and, subsequently, turnover intentions (e.g., March & Simon, 1958; Mobley, 1977). Substantial research demonstrates that behavioral intentions are the best psychological predictors of behavior (e.g., Ajzen & Fishbein 1991), and turnover theory relies heavily on intentions as the key psychological process linking job experiences with behavior. Yet, turnover intentions explain only 15 to 20 percent of turnover variance and even the most comprehensive turnover models leave the majority of variance unexplained (Griffeth *et al.* 2000). In IT turnover research majority of studies have used turnover intentions as a proxy for behavior (Joseph *et al.* 2007) and only a handful of studies actually measure turnover behavior in the last two decades (Dinger *et al.* 2012; Lo, 2015). The study addresses the call to measure turnover behavior by gathering data at multiple times, and not using turnover intentions as an intermediate proxy. (Lo, 2015; Joseph *et al.* 2007; Maier *et al.* 2015). The study throws light that turnover intentions is an important variable in the process of turnover, but not an end in itself.

Further, recent research focuses on additional influences acknowledging that turnover is largely a social process where people around the individual create a web of relationships that the employee is situated in (Mossholder *et al.* 2005) creating a sense of “stuckness” (Mitchell *et al.* 2001). However, this development is not reflected in the research in IT turnover which has mostly relied on the March and Simon model. The social influences including peers, family, and supervisor that form the social environment that an IT professional is embedded in, have not been sufficiently studied in turnover research (Soltis *et al.* 2013). We address these issues with the following research question:

RQ1: What is the impact of social influence including the supervisor, peers and family on actual turnover behavior of IT professionals?

By addressing this key research question, our study responds to calls for the introduction of alternative theoretical perspectives that take into account contextual variables surrounding the occurrence of quitting. (Joseph *et al.* 2007). Specifically, the study extends the focus to social contextual variables including supervisor and peers, and more importantly, those who are outside the periphery of work such as family.

In addition, the paper focuses on Indian IT professionals. Research shows that there is a multifold rationale for investigating turnover amongst IS professionals working in India as a distinct group. Studies show that most turnover theories reflect a strong Anglo-American bias and need to be modified and refined to make them applicable to other countries (Miller *et al.* 2001, Hunter *et al.* 2008). This is especially true for IS turnover literature wherein a bulk of the research has been conducted in the U.S. (Niederman & Moore 2000; Ghapanchi & Aurum 2010) and recent studies show that studies undertaken in the West cannot be generalized to other countries (Huang *et al.* 2008; Lacity *et al.* 2008). With a more global and diverse IT workforce, current theories, and practices on managing turnover of IS professionals should be evaluated for their applicability across different countries, like India (Choi & Choi 2003; Ugargol & Patrick 2018). Further, India is one of the global leaders in the information technology (IT) outsourcing market (NASSCOM 2020; Krishnan and Singh 2010). IT outsourcing to India has been an attractive proposition because it provides an opportunity to reduce costs (Dossani & Kenny 2007), access a global pool of personnel and expertise (Lewin *et al.* 2009), leverage their talent (Gupta & Wang 2007), and spur innovation. Today India holds the premier position in the global sourcing landscape, accounting for 55% of the market (Sen, 2015). Despite the phenomenal growth of the Indian IT industry, one of the major challenges it faces is that of turnover among IS professionals (Upadhyya & Vasavi 2006). In India, even though annual salary increases average more than 10-12%, and as high as 20% (Niederman *et al.* 2006), turnover rates among young IT professionals can be as high as 50 to 60% (Dhillon, 2020) with an industry average of 20 to

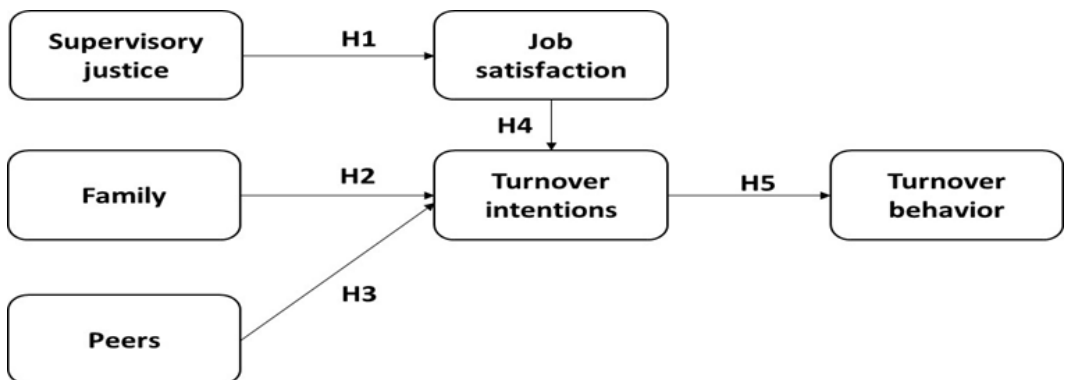
30% per year (Acharya & Mahanty 2007). These figures are very high compared to the annual 10% turnover in IT outsourcing service providers in Eastern Europe and between 7.5 and 15% in China (Rai, 2005). Annual turnover rates in major IT firms are in the range of 25-30% with some mid-sized firms battling with turnover rates as high as 40% (Sengupta & Mishra 2010). It affects the supplier's cost competitiveness by sometimes increasing the cost between 15-55% above contract (Niederman *et al.* 2006), and ability to deliver high quality services (Levina & Vaast 2008). In addition, it hurts the clients in terms of increased costs of control and coordination, delays in projects, and quality of service from the IT service provider ((Dibbern *et al.* 2007). The study addresses this issue with the following research question

RQ2: How does the context specific variables in India affect the turnover of Indian IS professionals?

An important contribution to research (and practice) would be to develop and test a model of turnover that is applicable to the Indian IS context. This study develops and tests a model of turnover that incorporates two kinds of constructs- universal and context specific. The universal constructs are those that have been shown to be strong antecedents of turnover in the literature, irrespective of where the study was conducted like job satisfaction (Allen & Vardaman 2020). The two constructs that research has shown to be relevant in the Indian collectivistic context are social norms (family and peer pressure) and supervisor (Lacity *et al.* 2008).

The paper is organized as follows. In the next section, the theoretical framework is provided, which is used to develop hypotheses. Following that, the research method is explained (research setting, data collection method and measures used). Then the paper presents the empirical model that validates the hypotheses and results from the analysis are discussed. The paper concludes with a discussion of results and implications for theory and practice.

Figure 1. Theoretical model



### Conceptual Model development

One of the earliest models of turnover was developed by March and Simon in 1958 (Hom & Griffeth, 1995). This model described individuals and organizations as being in a state of equilibrium, where the members contributed to the organization while the organization provided members with compensation in return. March and Simon posited that when the compensation provided by the organization was not balanced with the contribution of the organizational members, individuals quit the organization. This equilibrium between individual contribution and organizational compensation

is a function of two motivational components – perceived desirability of the job and perceived ease of movement. Elaborating further, they argued that the perceived desirability of the job is influenced by job satisfaction and organizational factors. They also argued that an individual's perceived ease of movement is influenced by the number of perceived opportunities outside of the organization. A limitation of this model of turnover (and other models loosely based on this) is that it does not explore in depth the social relations outside of work which may be especially important in India individuals see themselves as inherently connected with significant others. Pressure to stay (or quit) can be influenced by social relationships that are work-related (e.g., supervisor and coworkers) or non-work related (e.g., spouse works in the same area, parents live in the same community) that form the social context of an individual (Zagenczyk *et al.* 2010). This paper focuses on the elements of social influences– supervisor (Maertz *et al.* 2003; Payne & Huffman 2005), peers from within and outside the organization (Felps *et al.* 2009) and family (Ramesh & Gelfand 2010) to understand their influence on the turnover of IS professionals. Influence of supervisor is looked at from the angle of justice. An important reason why employees may want to leave their jobs is that they feel unfairly treated by their employer or supervisor, with the supervisor being an important source for the social exchange relationship employees form with the wider organization (Leineweber *et al.* 2020).

### Supervisory Justice

Organizational justice research has indicated that employee attitudes and behaviors are strongly affected by perceptions of fair treatment in the workplace (Harris *et al.* 2020; Leung *et al.* 2021). The paper focuses on the social influence of supervisor through justice lens. This is because of two reasons- first, fairness dimension of one's supervisor is often what first comes to mind when employees think about their supervisor and relationships with them (Choi, 2008). According to the social entity paradigm, an employee evaluates social entities about their overall propensity to perform fair behavior (Degoey, 2000) and develops perceptions about the justice of an entity (Cropanzano *et al.* 2001). Because employees depend heavily on their manager for rewards and access to various resources (Graen & Scandura, 1987), they evaluate the fairness of their supervisor through the concept of supervisory justice (Rupp & Cropanzano 2002), which in turn, influences their desire to be remain in the organization.

Secondly, by focusing on the entity or source of justice, the socio-relational aspect of justice comes to the forefront (Lavelle *et al.* 2015). According to multi-foci justice research, rather than considering the organization as a single monolithic entity, it is more useful to view an organization in terms of its various “coalitions and constituencies” (e.g., managers, customers).

Nowadays, social exchange theory (Blau, 1964) is a dominant theoretical framework used to examine the employment relationship in the organization (Stinglhamber *et al.* 2006; Gefen *et al.* 2014). Social exchange theory specifies that fair transactions create close social exchange relationships (Masterson, 2001). The Justice Theory focuses on four dimensions or normative rules of justice-distributive, procedural, interpersonal, and informational justice (Lavelle *et al.* 2015; Colquitt *et al.* 2015) Supervisory justice is defined as the holistic judgment of an employee's experience of fair treatment from one's supervisor (Holtz & Harold 2009) and is an aggregate of the four dimensions of justice (Ambrose & Schmike 2009) in relation to the supervisor. Supervisors can deliver and personify all organizational justice facets. However, the paper argues that the link between supervisory justice and turnover intentions is indirect, and not direct as found in many IT turnover studies (Joseph *et al.* 2015). This is because research suggests that job satisfaction serves as the global mediator for the effects of more distal antecedents like justice on turnover intentions (Liu *et al.* 2012). It is hypothesized that the relationship would hold in case of supervisory focused justice across all four dimensions of justice also. This leads us to the following hypothesis

H1: Supervisory justice affects the turnover intentions indirectly through job satisfaction. (Supervisory justice is positively related to the job satisfaction)

## Family Influence

Many turnover models have suggested that the family can influence turnover (Steers & Mowday, 1981). Even early in the development of turnover theory, March & Simon (1958) suggested that family members often have opinions about the organizations in which family members work, but this has not been well integrated within most of the turnover models (Ramesh & Gelfand 2010). As far as family influence is concerned, most turnover research looks at one aspect- work-family conflict. Specifically, in the IT literature, studies have shown how work-life conflict has significant impact on turnover intentions of IT professionals (Armstrong *et al.* 2007; Sarkar *et al.* 2010). According to Mitchell *et al.* (2001) embeddedness suggests that there are numerous strands that connect an employee and his or her family in a social, psychological, and financial web that includes work and non-work friends, groups, the community, and the physical environment in which he or she lives. (p. 1104). Ramesh & Gelfand (2010) identified family as an important component of attachment to the job and added a new family embeddedness factor to the job embeddedness model. This leads us to the following hypothesis:

H2: Family influence is positively related to turnover intentions.

## Peer Influence

The central theoretical claim made by turnover contagion theory (Felps *et al.* 2009) is that when an employee's coworker engages in behaviors antecedent to leaving a job, these activities sometimes spill over onto others in such a way that the affected others are more likely to leave. The turnover contagion model highlights the role played by simply observing co-workers suggesting that whether co-workers are leaving signals whether this is a viable option. Moore & Burke (2002) explain "turnover culture" highlighting the influence of attitudes and behaviors of others in the organization on an individual's turnover process, but empirical work to test their propositions is needed. This leads us to the following hypothesis:

H3: Peer influence is positively related to turnover intentions.

## Job Satisfaction

Job Satisfaction is the extent to which an employee likes his or her current job. Substantial evidence from several studies (including meta-analyses) has found that job satisfaction is negatively related to turnover intentions (Srivastava & Eachempati 2021; Swider *et al.* 2011). Not surprisingly, Joseph *et al.* (2007) found in meta-analysis that in all the 16 IS studies using this construct, job satisfaction had a negative relationship with turnover. This leads us to the following hypothesis:

H4: Job satisfaction is negatively related to turnover intentions.

## Turnover Intentions

Most IT studies on turnover have used turnover intentions as a surrogate for turnover behavior (Moore 2000; Ahuja *et al.* 2007) because they believe that turnover intentions are the best predictor of actual turnover (Ajzen and Fishbein 1980), and because turnover intentions and its correlates are more accessible to researchers (Josefek & Kaufman 2003). Irrespective of the magnitude of strength of relationship between turnover intentions and turnover behavior, there is general agreement that the relationship is positive (Dinger *et al.* 2015). This leads us to the following hypothesis:

H5: Turnover intentions is positively related to turnover behavior.

## Research Method

### Research Setting

This study focuses on the turnover intentions and behavior of Indian IS professionals working in India. A mixed-methods concurrent triangulation research design was used (Wisdom & Creswell 2013) that involved a dual phased interview process consisting of: (1) an initial probing phase using closed ended questions and a 1 to 5 scaling for classifying respondents according to key theoretical factors followed by (2) exploratory open-ended questions where the respondents explained the rationale behind each rating. Two rounds of interviews were conducted over the telephone with 75 IT professionals working in India (see Table 1). The respondents were from 34 companies including the “Top Five Indian IT Services Providers”- Tata Consultancy Services, Infosys, Cognizant, Wipro, and HCL Technologies (Gartner, 2012). These companies were situated in 9 different cities including Bangalore, the IT hub in India. The respondent job titles included from leads, consultants, analysts, software engineers, programmers and project managers. The demographic details are summarized in Table 1. Data was collected longitudinally over two rounds of interviews. The second round of interviews at time (t2) was done to measure the dependent variable- turnover behavior, with the measurement window of 10 months.

### Measures

Established instruments (where relevant) were used for measuring most of our constructs: job satisfaction, the four dimensions of supervisory justice (distributive, procedural, interpersonal, and informational), turnover intentions, and turnover behavior (See Appendix I). The reliabilities and validity scores (next section) provide further proof of this argument.

Table 1. Demographics of respondents

Total participants	75
Characteristics	Value
<b>Gender</b>	
Female	18 (24%)
Male	57 (76%)
<b>Marital Status</b>	
Single	31 (41%)

*Table 1 continued on next page*

Table 1 continued

Total participants	75
Married	44 (59%)
<b>Age</b>	
Range	22-38
Average	29.5
<b>Years in current job</b>	
Average	1.8 years
Range	3 months to 4.5 years
<b>Years in current company</b>	
Average	3.46 years
Range	3 months to 15 years
<b>Years of IT experience</b>	
Average	6.4 years
Range	8 months to 15 years
<b>Titles</b>	
Lead	12
Consultant	15
Analyst	7
Software Engineer	22
Manager	17
Other	2

## Data Analysis and Results

The theoretical model was analyzed using partial least squares (PLS) with SmartPLS (Ringle *et al.* 2005). Given the less stringent requirements for data, PLS is more suitable for the analysis of relatively small samples, and for complex models with second order formative constructs (Polites *et al.* 2012) as in the current study. Multiple tests were performed to validate our model, including tests for convergent and discriminant validity (see Table 2 and 3). Our results suggest that our model meets or exceeds standards for validity (Straub *et al.* 2004).

Family influence, and turnover behavior were measured using single items. For the rest of reflective constructs, the reliability of measures is reflected by Cronbach's alpha, which exceeds the recommended level of 0.70 for all constructs (Nunnally, 1978). The composite reliability for all constructs was above the recommended level of 0.70, indicating adequate internal consistency (Bagozzi & Yi 1988) (see Table 2).

Table 2. Reliability, internal consistency, and discriminant validity

Variable	Cronbach's Alpha	Composite Reliability	AVE	1	2	3	4	5	6	7
1. Distributive Justice	0.92	0.96	0.93	<b>0.97</b>						
2. Procedural Justice	0.96	0.98	0.96	0.79	<b>0.98</b>					
3. Interpersonal Justice	0.94	0.97	0.94	0.56	0.61	<b>0.97</b>				
4. Informational justice	0.70	0.86	0.75	0.50	0.65	0.62	<b>0.87</b>			
5. Peer influence	0.76	0.89	0.80	0.07	0.13	0.09	0.20	<b>0.90</b>		
6. Job satisfaction	0.89	0.95	0.90	0.50	0.54	0.35	0.43	0.07	<b>0.95</b>	
7. Turnover Intentions	0.98	0.99	0.98	0.50	0.54	0.35	0.43	0.07	0.95	<b>0.99</b>

To test convergent validity, two tests were conducted. First, the recommended PLS validation procedures that Gefen & Straub (2005) outline was followed. Convergent validity is demonstrated when loadings of the indicators of the constructs are above 0.70 (Backhaus *et al.* 2003; Chin *et al.* 2003), and when the items load significantly on their respective latent construct. All indicators exhibited loadings greater than 0.70 that were significant at the 0.01 level (see Table 3), denoting strong convergent validity. Further, convergent validity is demonstrated when the average variance extracted (AVE) values for all constructs is higher than the suggested threshold value of 0.50 (Fornell & Larcker 1981), which suggests that the principal constructs capture much higher construct related variance than error variance (Hair *et al.* 1995)- also true in our case.

Table 3. Items and their loadings

Construct	Loading	T-statistics
Distributive justice	0.962	101.61**
	0.967	141.88**
Procedural Justice	0.983	198.20**
	0.983	187.73**
Interpersonal Justice	0.971	125.68**
	0.977	60.16**
Informational Justice	0.902	34.38**
	0.839	18.16**
Family Influence	1.00	
Peer Influence	0.890	5.29**
	0.901	4.75**
Job satisfaction	0.957	64.29**
	0.946	45.39**
Turnover Intentions	0.991	434.72**
	0.992	521.28**
Turnover Behavior	1.00	

\*\* p<0.01



Supervisory justice is a second order formative construct. Specifically, internal consistency (reliability testing) of indicators is not relevant for formative constructs because the indicators are not reflections of the underlying latent variable (Han *et al.* 2015; Tripp *et al.* 2016). However, discriminant validity can be tested for formative constructs (MacKenzie *et al.* 2005). To do so, the significance levels of the item weightings of the formative constructs (Diamantopoulos & Winklhofer, 2001) were examined. All the weights were significant at the 0.01 level (See Table 4). All four path weights are significant, indicating that each first-order construct makes a unique contribution to the second-order construct (Xue *et al.* 2011).

**Table 4. Weights for second order formative construct**

First order construct	Weight	T statistics
Distributive justice	0.31	16.74**
Procedural justice	0.34	16.72**
Interpersonal justice	0.28	11.83**
Informational justice	0.23	10.40**

\*\* p<0.01

Actual turnover behavior—the dependent variable in this study—took the form of a categorical variable with two categories- quit or not quit the current job after 6 months of the first interview. The latent variable scores produced by the SmartPLS software were entered into the SPSS software to run the logistic regression analysis. The following equation represents our logistic regression model, where p is the probability that an event Y occurs and the term  $[p/(1 - p)]$  is the odds ratio, noted as Exp (B) in the results:

$$\ln [p/(1 - p)] = \alpha + \beta_1 JS + \beta_2 TI + \beta_3 SDJ + \beta_4 SPJ + \beta_5 SIPJ + \beta_6 SIFJ + \beta_7 ITExp + e$$

The logistic regression model was statistically significant,  $\chi^2 = 34.36$ ,  $p < .0000$ .

The Wald statistic ( $\beta/SE\beta$ ) tests the unique contribution of each predictor holding constant the other predictors. As shown in Table 5, the following predictor (job satisfaction (JS), turnover intentions (TI), supervisory distributive justice (SDJ) and years of IT experience) in our model meet the conventional .05 standard for statistical significance.

The -2 log-likelihood ratio (-2LL) tests whether the predictors of the model make a difference in predicting the dependent variable. Larger values of the -2LL ratio indicate a poorly fitting model. As seen in Table 9, the -2LL was 51.9. How much variation in the dependent variable can be explained by the model (the equivalent of R2 in multiple regression ranges between 37 to 53%, depending on whether we reference the Cox & Snell R2 or Nagelkerke R2 methods, respectively. Nagelkerke R2 is a modification of Cox & Snell R2, the latter of which cannot achieve a value of 1 (See Table 6).

Table 5. Wald's test

	Wald	Sig.	Exp(B)	95% C.I. for EXP(B)	
				Lower	Upper
Job satisfaction (JS)	3.858	.05	3.818	1.003	14.537
Turnover Intentions (TI)	12.257	.00	4.527	1.944	10.541
Socil Norms Family (SNF)	2.525	.11	3.352	.754	14.906
Social norms peers (SNP)	1.284	.25	2.548	.505	12.841
Supervisory procedural justice (SPJ)	.497	.48	1.699	.389	7.419
Supervisory distributive justice (SDJ)	3.677	.05	.241	.057	1.032
Supervisory interpersonal justice (SIPJ)	2.725	.09	2.531	.840	7.624
Supervisory informational justice (SIFJ)	.348	.55	1.408	.452	4.390
IT Experience	5.830	.01	.673	.487	.928

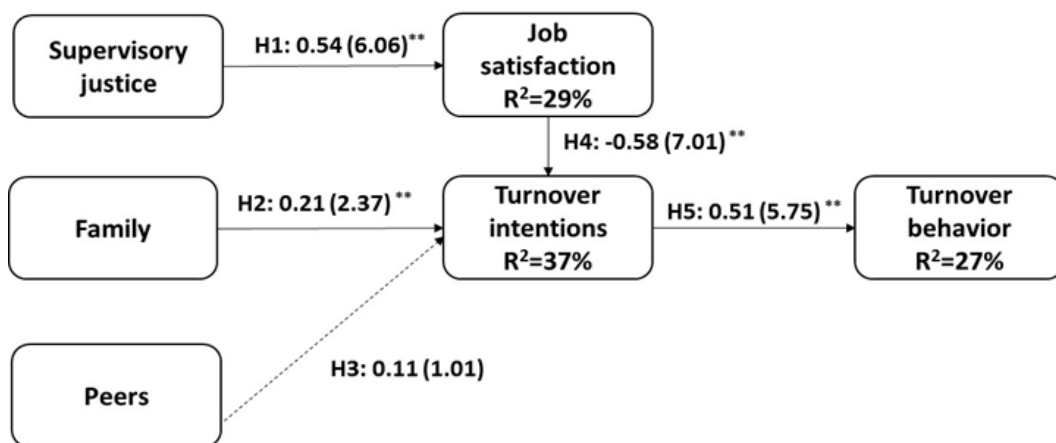
Table 6. 2 Log-likelihood ratios

-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
51.996	.371	.539

### Structural Model Assessment and Hypothesis Testing

Figure 2 presents a graphical depiction of the SmartPLS results, which shows the standardized path coefficients among the constructs using the bootstrap resampling method with 500 subsamples, and the R2 values for job satisfaction, turnover intentions, and behavior.

Figure 2. Structural model results



The solid lines represent the hypotheses that were supported, and the dashed lines show the hypotheses not supported. As hypothesized, the paths between supervisory justice and job satisfaction ( $b=0.54, t=6.06, p<0.05$ ), family and turnover intentions ( $b=0.21, t=2.37, p<0.05$ ), job satisfaction and turnover intentions ( $b=-0.58, t=7.01, p<0.05$ ) and turnover intentions and turnover behavior were found to be significant, thereby supporting hypothesis H1, H2, and H4, and H5 (See Model 1 of Table 6). Contrary to our expectations, however, the path between peer influence and turnover intentions ( $b=0.11, t=1.01, p<0.05$ ) was not statistically significant; H3 was not supported. Supervisory justice accounts for 20% of variance in job satisfaction. Our model has good explanatory power, and after controlling for age, gender and marital status, family and peer influence along with job satisfaction explain 37% of variance in turnover intentions. Finally, turnover intentions explains 27% of the variance in turnover behavior.

### Post-Hoc Analyses

Additionally, because the focus was in realizing a more granular understanding of the four justice dimensions, the direct effects of each dimension of justice on job satisfaction was examined in Model 2 (See Table 7). Our focus is consistent with recent prescriptions found in developing IS literature on multi-dimensional constructs (Dinger *et al.* 2015). Specifically, Polites *et al.* (2012) suggest that, when interested in realizing a deeper understanding of the implications of higher-order constructs, researchers may choose to examine the direct effects of theoretically related, yet distinct, dimensions. None of the justice dimensions were significant, however, procedural justice had the highest path coefficient ( $b=0.28; t=1.74$ ).

Table 7. Model testing

	Model 1	Model 2	Model 3	Model 4	Model 5
Model 1: Formative Second Order Justice having indirect effect on turnover intentions through job satisfaction					
Second order supervisory justice@job satisfaction	0.54 (6.06)**	X	X	X	X
Family@turnover intentions	0.21 (2.37)**	0.21 (2.26)**	(2.34)**	X	X
Peers@turnover intentions	0.11 (1.01)	0.11 (0.96)	0.11(1.01)	X	X
Job satisfaction@turnover intentions	-0.58 (7.01)**	-0.60 (6.69)**	(4.68)**	X	X
Turnover intentions@turnover behavior	0.51 (5.75)**	0.51 (5.49)**	(5.67)**	0.58 (4.69)**	0.60 (4.54)**
Age@turnover intentions	-0.05 (0.43)	-0.05 (0.43)	0.05(0.44)	X	X
Gender@turnover intentions	0.04 (0.42)	0.04(0.41)	0.04(0.89)	0.06	X
Marital status@turnover intentions	0.12 (1.01)	0.11 (1.01)	0.1(1.00)	0.03	X
Model 2: Justice as four independent dimensions having indirect effect on turnover intentions through job satisfaction					
Distributive justice@job satisfaction	X	0.22 (1.59)	X	X	X
Procedural justice@job satisfaction	X	0.28 (1.74)	X	X	X

Table 7 continued on next page

Table 7 continued

	Model 1	Model 2	Model 3	Model 4	Model 5
Interpersonal justice@ job satisfaction	X	0.04 (0.33)	X	X	X
Informational justice@job satisfaction	X	0.16 (1.23)	X	X	X
Model 3: Second Order Justice having a direct effect on turnover intentions					
Second order supervisory justice@turnover intentions			-0.03 (0.54)		
Model 4: Direct Effect on Turnover Behavior (with second order justice)					
Second order supervisory justice@turnover behavior	X	X	X	0.003 (0.12)	
Family@turnover behavior	X	X	X	0.05 (0.16)	0.03 (0.25)
Peers@turnover behavior	X	X	X	0.06 (0.74)	0.05 (0.64)
Job satisfaction@turnover behavior	X	X	X	0.14 (0.96)	0.17 (1.23)
Model 5: Direct Effects of Each Justice Dimension on Turnover Behavior					
Distributive justice@turnover behavior	X	X	X	X	0.18 (1.17)
Procedural justice@turnover behavior	X	X	X	X	0.05 (0.29)
Interpersonal justice@turnover behavior	X	X	X	X	0.16 (1.05)
Informational justice@turnover behavior	X	X	X	X	0.04 (0.29)
R <sup>2</sup> job satisfaction	0.29	0.31			
Turnover intentions	0.37	0.37	0.37		
Turnover behavior	0.27	0.27	0.27	0.29	0.31

### Qualitative Analysis

The justification for combining qualitative and quantitative research includes complementarity that seeks elaboration, enhancement, illustration, clarification of the results from one method with the results from another (Bryman, 2006). The paper specifically looks at the anomalies- why some people with high turnover intentions didn't quit, and why some people with low turnover intentions did quit. On the one hand, the ratio of 77% of individuals following intentions with aligned actions represents a significant proportion of the sample. This shows a strong relationship between intention and action. However, probing more deeply, it is apparent that whatever causal mechanisms might move individuals from intention to aligned action, there are countervailing forces that generate a substantial, if not statistically significant number of exceptions. Understanding these countervailing forces is highly promising for completeness in our understanding of the retention/turnover phenomenon.

For those whose intentions are not followed by aligned actions, we investigated the 10 people with high turnover intentions who didn't quit, and 7 people with low turnover intentions that did quit. The most interesting revelation is that amongst the people who had low intentions to quit but did indeed quit, the topmost reason was "family". This is a very important finding and stresses the role of family in turnover decisions. For example, this is a sample quote from a respondent

“but only factor is like my family is not very comfortable here. To be honest this city is like this place is a little far away from my hometown and there are not many people we know. My office is outside the city so that is very far for me.”

The next two who had low intentions to quit, but did, accounted for 29% of the false negative. They had low intentions to quit because of their attachment to the project, and promise of better future projects, in spite of being unhappy with their supervisory justice perceptions, especially many aspects of procedural justice. This again highlights how important it is to consider the role of supervisor in turnover decisions. A sample quote below highlights this.

“He is not consistent. There is a lot of favoritism, he like some attributes in some people so he gives better ratings to that particular person whereas the other person who is actually working, he doesn't get the expected results. He is not transparent about the procedures also.”

Also, for false positives (high turnover intentions but didn't quit), it was found that the reason for not quitting- promotions, pay hike, role change were all constructs related to supervisory justice. A sample quote highlights the importance of supervisory justice in these aspects as said by these respondents-

“What I understood from my manager is that all the managers sit in one room and they stack the employees and rate one over the other. My manager fights for me and I get to be in the top 20%.”

Further, the content analysis revealed that the most cited reason for family pressure was to be in a particular city/location for reasons like being close to older parents or when the spouse liked a particular location more than others. A sample quote below shows this-

“Yes, my wife's concern is that she is more comfortable here compared to Bombay. So that's a debate that's going on. It puts a constraint to stay put in Bangalore but not necessarily in XXX.”

There were a few who felt direct to not quit was better flexibility and work-life balance option. For example,

“I think XXX that way is a best employer because we have the best work life flexibility that we enjoy in XXX. It enables us to manage things well- as a mom of 2 kids I get time to manage my family and kids well and at the same time also manage the work, nothing gets between the work.”

## Peer Pressure

There were 15 people with low turnover intentions who felt that the thought of quitting crossed their minds when they heard their friends talk about their new jobs. Also, 10 people with high turnover intentions admitted to getting influenced by friends in their decisions to quit their current companies. A quote sums up this pervasive influence.

“You can say 4- influenced to leave because of friends. Yes, it has influenced me. 2 or 3 of my colleagues have moved out and are quite happy with their new jobs and earning more than me. So, whenever I discuss about my work-life with them, I feel like changing jobs too.”

## Discussion

Turnover is ubiquitous, problematic, and costly. It is a singular, distinctive type of event (that reflects the ending of a formal employment relationship (Laulie & Morgeson 2020)). Taking the perspective that turnover is a social process (Tews *et al.* 2020), the results of the present study elucidate the crucial role that social environment plays in the turnover of IS professionals. The results were largely supportive of the model developed in the paper to examine the influence of supervisor and family as antecedents to turnover. Though peer influence is not statistically supported, the qualitative analysis reveals that there are different ways in which it can assert strong influence on individual behaviors.

The quantitative analysis provides evidence that justice perceptions affect turnover intentions indirectly through job satisfaction. In contrast, the absence of a direct significant impact of supervisory justice on turnover intentions further validates the argument that job satisfaction is the most proximal variable affecting turnover intentions and mediates the effects of distal variables like justice (Joseph *et al.* 2007). This finding also lends support to the argument that employees do not primarily quit

because of their pay but it does affect their job satisfaction, a finding corroborated by the observation that some people perceive injustice but may have surprisingly have low intentions to leave while also expressing low job satisfaction.

## Implication for Theory

This study provides several contributions to IT turnover research. The overarching significance of our paper is that it broadens the purview of IT turnover research to include influences from the social environment with elements beyond the focal organizational boundary, and draws attention to significant research opportunities in this domain. First, it provides empirical support for a relatively newer perspective of understanding IT turnover as a social process as well as an individual one.

This study contributes to the previously little explored effect of non-work-related variables on IT employee turnover. As noted by Joseph et al. (2007) most research to date has examined on-the-job factors, while additional non-work-related factors may also have significant effects. It is important to consider that just because managers may have more leverage to intervene in on the job factors, the effects of such intervention may be muted by factors outside their normal purview. In this paper we show that family influence can be an important antecedent to turnover intentions. Further we broaden the range of possible family influences from an exclusive focus on work life conflict (Ahuja et al. 2007, Sarkar et al. 2010). Although these findings are congruent with the theory of job embeddedness (Mitchell et al. 2001), which also emphasizes that non-job factors can influence individual turnover decisions, our analysis suggest that IT employees may not be as stuck to the company as suggested by job embeddedness theory but alternatively may be “stuck” to the location/city through community links. Multiple respondents felt that they would be comfortable joining another company if it is in the same location/city. Future researchers examining the effects of location on turnover might be challenged to deconstruct general issues of urban and rural lifestyles from the specific demographics of particular nations and regions.

Another principal theoretical contribution of this study is that it not only demonstrates the crucial influence of supervisor through supervisory justice, but also highlights which aspect of each dimension is critical for IT employees in generating fairness perceptions. The four dimensions of justice - distributive, procedural, interpersonal and informational - provide a more detailed view of justice perception, than focusing on just distributive or procedural justice (as was evident from the significant weights of each dimension in explaining variance in overall supervisory justice). In future research, other sources of justice like the organization, team member and customers should be investigated to see their influence in turnover.

This paper provides empirical support for the phenomenon of “turnover culture” (Moore and Burke 2002). Though peer pressure did not emerge as a moderating factor influencing the link between intentions and behavior, we found qualitative evidence of this subtle pressure influencing turnover intentions. Although researchers tend to think of quitting as an individual phenomenon, our research suggests that it is also a social one. Especially in a world that is increasingly becoming more connected through social media, peer pressure may increasingly become a significant force influencing turnover.

Finally, by measuring turnover behavior longitudinally, the study addressed an important gap in the IS turnover studies that have used turnover intentions as a surrogate for turnover behavior as a focal dependent variable (Joseph et al. 2007; Lo 2015). The modest correlation between turnover intentions and behavior (29%) behooves researchers not to use turnover intentions as a surrogate for turnover behavior as the correlation, though statistically significant, is not very high.

## Implications for Practice

The loss of key employees may mean interruption of their operations. For example, some key employees of high-tech enterprises cannot be replaced easily (Jia, 2010). Moreover, new information systems technology such as artificial intelligence, 5G technology and quantum computing changed the required knowledge and skills of the IT professional (Piel *et al.* 2019) and implementing new

technologies are expected to provide competitive advantage. But it does not guarantee that the organizations will create value with these new technologies, because without the employees who can use them, they will be useless (Ozkan, 2021). Hence, the managers can determine policies that can prevent an interruption in the operations of such companies by using the information they have about the relationships between turnover intention and its strongest antecedents as highlighted in this study.

We examined the interviews to gain deeper insights into the link between turnover intentions and behavior. Some strong themes emerged that are discussed below:

1. Rotation: Rotating people to different teams, projects helped keep the IS professionals excited and motivated.
2. On-site assignments:
3. Flexible work schedule
4. Gender issues

Our study makes important contributions to the community of IT practitioners, especially Indian IT organizations facing acute turnover of IS professionals.

## QUALITY OF WORK

It surfaced as the key reason for job satisfaction amongst Indian IS professionals. Twenty-one Indian IS professionals with low turnover intentions cited quality of work as the biggest reason for high job satisfaction. They mentioned various reasons like different projects and technologies to work on, working on innovative and new products, impact of their work has on the society, freedom at work and decision-making authority. At the same time, Indian IS professionals with high turnover intentions reported the various reasons of low job satisfaction including monotonous work, the project itself, and lack of freedom at work. Some reasons cited by respondents for job dissatisfaction/satisfaction were:

- Projects: Being on the same project can make the job monotonous, as was mentioned by 15 people.
  - Respondent P33 has low job satisfaction, and he says, *“When you join something new its fine, for 6 months you are excited learning new things new projects but once you are in the same project for one year or more than one year, then same activities everyday. That’s how I feel right now- no excitement for me in the job.*
- Onsite assignments: A strong theme throughout the interviews was that Indian IS professionals sought onsite assignments mainly for financial reasons and challenging work. In our sample, 7 Indian IS professionals had low turnover intentions because they were anticipating onsite assignments in near future. Similarly, 4 Indian IS professionals with high turnover did not quit when we contacted them after 10 months of the initial interview because they were given onsite assignments which made their work more interesting and challenging.
  - Respondent P55 was quite happy with his job, but a little dissatisfied with “the financial aspects- compensation”. He had low intentions to leave because *“I am looking forward to doing an on-site assignment working directly with customers which is an advantageous position in itself.* He said that he would be tempted to leave if not for the promise of an onsite assignment- *“I would have if my manager didn’t promise me on site opportunity. That gives us a chance to make some extra money and compensate for the good salary package at XXX(company). XXX has good onsite opportunities for me”.* When contacted after 10 months of initial interview, he said that he had got a hike and was working on site at client location outside India.
- Team: Another way to make one’s job more interesting is by not only job rotation (or project rotation) but also changing supervisors and teams. Nine Indian IS professionals with low turnover

intentions mentioned that one aspect of their high job satisfaction came from working with great teams.

## HR Practices

Another theme coming across the interviews is that job satisfaction can be increased, and turnover intentions can be reduced by caring HR practices and policies. Based on our interview transcripts, here are some issues:

- Gender issue at workplace: In our sample, we had 18 female respondents constituting 24% of the sample. We found that there are some gender issues faced by women at workplace consistent with research on how gender disparity exists in IT sector (Trauth *et al.* 2008). Six female Indian IS professionals talked about some of them and it is imperative that organizations address them in their HR policies and practices.
  - Respondent P57 is a 37-year-old female project manager working with an Indian IT service provider. She was denied a promotion and the reason her supervisor gave was, *“Why because there was an opportunity to promote me as an account manager where I was given the reason that its stressful and women can have problems while handling”*.
- Also, HR practices in India need to be designed to better fit the needs of working women and mothers. There were 5 Indian female Indian IS professionals who spoke how work-life balance affected their turnover intentions.
  - Respondent P60 is a 33-year-old female Indian IS professional working as a project lead for the past 2 years with a Non-Indian IT service provider. She says a big reason for not leaving her current company is, *“I don’t have a choice because XXX (company) is one of the only companies in India offering flexibility in working place. That is the only reason because of my personal limitations that I would not leave XXX. Other Indian companies like TCS and Cognizant they offer absolutely no flexibility and that makes it harder for women... last two three months I have been in production support tasks also and sometimes I had to work on weekends too whenever there was a high priority call. So that was quite difficult, specially being a woman to manage that with home.*

## Disparity in Compensation

In Indian context, an important implication for HR is that employees want compensation that is at par with market standards. More importantly, salaries of existing employees should be adjusted to match what is offered to newly recruited ones.

- Compensation disparity surfaced as an issue with some people. Five Indian IS professionals mentioned how the disparity of salaries between old employees and the new recruits existed, with 2 of them saying that such issues were causing them to think about leaving. There were 5 Indians who felt that their salaries were not at par with market standards or their peers; however their intentions to quit were low.
  - Respondent P71 is a 27 year old male Indian IS professional working as a systems analyst with an Indian service provider for the last 4 years. He has high turnover intentions because he says, *“There is high disparity between us and the new employees in the compensation, work is quite dissatisfactory”*. He faces issues of disparity and reports low satisfaction - *“Actually I have been working in XXX for 4 years now and this is based on my experience here. In the initial period I enjoyed working here but with time the company got new employees and it has better packages for new employees as compared to those who are here since 4 years.”*



## Reporting Structure

Results from this study show that an important area for HR managers to focus on is the dual reporting structure of supervisor and project manager in Indian IT firms. A strong theme that emerged during the interviews is that Indian IS professionals felt that it was important for their supervisors to know what work they were doing in order to implement fair decision making procedures related to outcomes concerning them.

- Fifteen Indian IS professionals spoke about how their perceptions of supervisory procedures and policies for decision making were affected by this.
  - Respondent P46 is a 27 year old male Indian IS professional working as a consultant for the past 2.5 years with a US based IT service providing company. He is not happy with supervisory procedural justice and has high intentions to leave. He says, *“I would actually give a 2.5 rather than a 3.5 now that I think about it. Actually we have a concept of a people manager and project manager, its not that person whom I might report to as a project manager takes the decision on my appraisal completely. In a year I might do 2 projects, 4 project or 6 projects, so I will be under 6 different project managers. So, sometimes its not fair because my program manager doesn’t get to know what all I did”*.

## Transparency

A strong theme from the content analysis of the transcripts was that people wanted their supervisors to be transparent and open about the procedures and decisions related to them, irrespective of favorable or unfavorable outcomes.

- Twenty-nine Indian IS professionals spoke about this issue and how it affected their intentions to quit.
  - Respondent P66 is a 24-year-old male Indian IS professional working as a senior software engineer for the past 3 years in an Indian IT service providing company. He says, *“I will say 1. No he is not at all open. Only the result is known. how he got the result, why this judgment, what procedure he followed is not known. And even if it happens it happens at a higher level. So people who are like me and working below me will not know the procedure or the result”*.

## LIMITATIONS

This study’s research method incorporates several strengths including a time-lagged design measuring the focal dependent variable of turnover behavior. Nonetheless, like all studies this is constrained by a set of limitations. The data were collected from respondents working in the IT industry in India. Though we had respondents from all across India, and various IT roles, this sample must some degree limit the generalizability of the findings. To the extent that all IT workers share characteristics that enable and are shaped by the nature of the work, these findings should apply to all IT workers. However, contextual conditions (like compensation, alternative workforce opportunities, and cultural values) vary by geographic location and these influences may affect results drawn from other samples of the IT worker population. Future research should study how social influence of peers, family and supervisors in different countries and industries.

The data were collected using self-reporting methods from the same source, which may raise the possibility of producing inflated correlations (Crompton & Wagner 1994). Also, another possible limitation is “right censoring”. This refers to the selection of a specific time period in which turnover data is collected (10 months in this case), as observations are truncated after the measurement period. For example, if an individual left an organization the day after the final turnover information was

collected, this individual is still identified as “working with the same company” in our data. This is known as “right censoring” (Morita *et al.* 1993) and can impact the accuracy of the findings. Also, data were collected from a particular culture and may not represent all IT workers, but rather do represent an important subset. While these findings may not represent the most frequent occurrences (to be determined by further testing) they must not be ignored in larger theorizing.

## **CONCLUSION**

The principal focus of the paper is to investigate the social influences on the turnover of IT professionals. Though the quantitative analysis provides strong evidence that these influences are significant in the turnover process, the qualitative analysis reveals that these social influences are nuanced and in different circumstances exert forces in different directions. These findings contribute to our understanding of the dynamics of IT turnover behaviors, the nature of the variables influencing them, and the complexity of their dynamics. In addition, our study draws attention to the importance of focusing on actual turnover behavior as the dependent variable in turnover studies, requiring longitudinal research design.

In this study we also empirically investigated turnover intentions and behaviors of Indian IS professionals using a theoretical framework that was most relevant in the Indian context by testing new antecedents especially relevant in Indian contexts like social norms, supervisory organizational justice measured across all four dimensions of justice. The data found strong support for three out of four dimensions of supervisory justice, i.e. distributive, procedural and informational justice, as predictors of turnover intentions. Also, consistent with the findings of studies conducted in Western countries, job satisfaction and overall organizational justice were also negatively related to turnover intentions. Of great interest is the detailed qualitative analysis used to illustrate the issues faced by employees in IT firms in India and its implications. This can be pointers for IT firms on how to improve quality of work for Indian IS professionals and HR practices specifically tailored to meet the needs of Indian IS professionals. In summary, the study hopes to have opened doors to looking at turnover holistically with as a social phenomenon.

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## APPENDIX A: CONSTRUCT MEASURES

CONSTRUCT	DEFINITION	SCALE USED
<b>Turnover Intentions</b>	The extent to which an employee anticipates to leave the organization (Igbaria and Greenhaus 1992)	Turnover intention (Thatcher <i>et al.</i> , 2002) 1. I intend to quit. 2. I am thinking about quitting.
<b>Turnover Behavior</b>	The act of employee leaving his/her current organization (Bartol 1983).	
<b>Job Satisfaction</b>	The extent to which an employee likes his/her current job (Spector 1996).	Job satisfaction (Hackman & Oldham, 1980) 1. Generally speaking, I am very satisfied with this job. 2. I am generally satisfied with the kind of work I do on this job.
<b>Supervisory Justice</b>	<i>Supervisory justice</i> is defined as the holistic judgment of an employee's experience of fair treatment from one's supervisor	Measured as a second order formative construct (Xue <i>et al.</i> 2012)
<b>Supervisory Interpersonal Justice</b>	The extent to which an employee believes that his/her supervisor treats the employee with dignity, respect and courtesy (Bies and Moag 1986).	Supervisory Interpersonal Justice (Colquitt 2015) 1. Does he/she treat you in a polite manner? 2. Does he/she treat you with dignity? 3. Does he/she treat you with respect? 4. Does he/she refrain from improper remarks or comments?
<b>Supervisory Informational Justice</b>	The extent to which an employee believes that his/her supervisor shares relevant work-related information with employees and adequacy of information provided by supervisor to employees regarding procedure (Colquitt 2001).	Supervisory Informational Justice (Colquitt 2015). 1. Is he/she candid when communicating with you? 2. Does he/she explain decision-making procedures thoroughly? 3. Are his/her explanations regarding procedures reasonable? 4. Does he/she communicate details in a timely manner?
<b>Supervisory Procedural Justice</b>	The extent to which an employee believes that his/her supervisor is fair in policies and procedures used to determine the rewards and outcome distribution (Leventhal 1980; Rupp and Cropanzano 2002).	Supervisory Procedural Justice (Sweeney & McFarlin, 1993) The questions below refer to the procedures your supervisor uses to make decisions about <i>pay, rewards, evaluations, promotions, assignments, etc.</i> 1. How fair or unfair are the procedures used to evaluate performance? 2. How fair or unfair are the procedures used to determine outcomes like salary increases and promotions?
<b>Supervisory Distributive Justice</b>	The extent to which an employee believes that his/her supervisor is fair in outcome distribution (Colquitt 2001).	Supervisory Distributive Justice Colquitt 2015. The questions below refer to the outcomes you receive from your supervisor, such as <i>pay, rewards, evaluations, promotions, assignments, etc.</i> 1. Do those outcomes reflect the effort you have put into your work? 2. Are those outcomes appropriate for the work you have completed? 3. Do those outcomes reflect what you have contributed to your work? 4. Are those outcomes justified, given your performance?
<b>Family pressure</b>	The employee's belief that family thinks that he/she should remain with his/her company (Lacity <i>et al.</i> 2008)	1. To what extent do you feel the pressure from your family to be in this company?
<b>Peer pressure</b>	The extent to which employees look to peers (within and outside their organization) in evaluating whether to seek alternative employment (Felps <i>et al.</i> 2009).	<b>2. To what extent do you feel the pressure from your peers within the company to be in this company?</b> <b>3. To what extent do you feel the pressure from peers outside the company to stay in the current company?</b>

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