IS PROFESSIONAL COMMITMENT THE REASON FOR TURNOVER INTENTIONS OF IT PROFESSIONALS?

Mohamed Buhari Mufitha[1], Lee Su Teng[2] and Yong Chen Chen[3]

[1]Institute for Advanced Studies, University of Malaya, Malaysia
[2]Department of Business Policy and Strategy, Faculty of Business and Accountancy, University of Malaya, Malaysia
[3]Department of Economics, Faculty of Economics and Administration, University of Malaya, Malaysia

mufithabuhari3@gmail.com[1]
stlee@um.edu.my[2]
ccyong@um.edu.my[3]

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Abstract

Compared to others, professionals share distinguish workplace characteristics: one such is the high commitment to the professions over to working organizations. Information Technology (IT) professionals demonstrate higher turnover rates compared to others: their commitments to the profession has been suspected as a source of turnover. Considering their job satisfactions the present study aimed to investigate the influence of professional commitment on IT professionals' turnover intentions. Data were collected from a sample of software engineers from Sri Lank using a survey questionnaire. The results of the structural equation model analysis concluded that professional commitment weakens IT professionals' turnover intentions, which is partially mediated by job satisfaction. Professional commitment stimulates IT professionals' job satisfaction. The findings challenge the presumption that IT professionals leave their organizations due to high commitments to the profession. Few factors were identified as significant in their job satisfactions: supervision, co-workers and work design. Pay and promotions were the least influencing job satisfaction factors. Managers may employ few strategies in their retention strategies: facilitate professional advancement needs within organizations, closely monitor supervision activities occurs and provide challenging and meaningful jobs. The study contributes to the turnover literature through empirical evidence on the influence of professional commitment on knowledge workers' turnover intentions.

Keywords: IT professionals; Job satisfaction; Professional commitment; Sri Lanka; Turnover intention

Introduction

Despite the fact that turnover is a natural occurrence, losing critical talents bother many organizations (Lo, 2014; Zylka & Fischbach, 2017). Turnover symbolizes a failure of relationship between employees and the organization (Avanzi, Fraccaroli, Sarchielli, Ullrich, & van Dick, 2014). IT industry continuously records high turnover (Lo, 2015), and it is among one of the top four industries with poor employee retention rates (Rhatigan, 2016). Subsequently, IT professionals are known as one of the most unpredictable workforces (TINYpulse, 2016). They show a higher turnover tendency than other professionals (Hoonakker, Carayon, & Korunka, 2013). Thus, turnover has been identified as one of the major causes of productivity decline in the IT industry.

In general, professionals are more committed to the profession (Benner, 2008; Carson & Bedeian, 1994; Dess & Shaw, 2001; Ross & Ali, 2011) while being more loyal to colleagues in workgroups than to the working organizations (Cappelli, 2000) and low in organizational citizenship behaviours (Mithas &

Krishnan, 2008). Consequently, they have been criticized for high commitment to the profession and suspected it as a main cause to high turnover in the industry.

IT professionals, particularly seek intellectually challenging jobs and have urges to solve problems and to learn new technologies (Bigelow, 2012). They have higher growth, personal development and learning needs (Lee, Carswell, & Allen, 2000). Their jobs can easily be transferred even to different industries (Cappelli, 2001; Ramos & Joia, 2013). However, they face threats of professional obsolescence (Fu, 2011; Harden, Boakye, & Ryan, 2016). Thus, they prepare and plan for movements between organizations to increase own employability (Ramos & Joia, 2013).

As per the Society for Human Resource Management in USA, cited in TINYpulse (2016), due to high employee turnover, the total employee replacement cost ranges from 90% to 200% of the annual income of companies. This can even be higher in technological companies (TINYpulse, 2016). Turnover results in extra costs in all phases of IT projects, and it delays project schedules (Zylka & Fischbach, 2017) and affects the success of software projects (Pee, Tham, Kankanhalli, & Tan, 2008). Turnover is a global problem, cost to organizations (Agrusa & Lema, 2007; Cho & Son, 2012; Pietersen & Oni, 2014) and a major cause of productivity decline (Huffman, Casper, & Payne, 2014). Even in non-IT firms, managements often have to recruit IT personnel than non-IT personnel (Zylka & Fischbach, 2017). Turnover creates extra client costs of information systems, offshore companies (Dibbern, Winkler, & Heinzl, 2008) as the replaced developers take time to achieve the productivity level and to be familiar with the project or to maintain the codes (Zylka & Fischbach, 2017). Turnover affects remaining employees too. When leading employees leave, subordinates are uncertain about the continuation of work and about the incoming leader (Shapiro, Hom, Shen, & Agarwal, 2016). Remaining team members' workloads get increased (Zylka & Fischbach, 2017). Moreover, once the group members left, turnover trend is followed by the remaining employees (Vijayakumar, 2012). Since IT workforce is also aging (Lo, 2015), retention of the existing talented workforce is essential to the industry.

IT companies are interested in understanding what contribute their employees to remain in organizations. However, prevailing IT turnover studies are incapable of making an impact on the issue (Lo, 2015). This is because those studies repeatedly used common predictors than investigating the uniqueness of IT professionals and the industry at large (Lo, 2015). Any IT turnover study needs to start from the basic question as, whether IT professionals are unique in their behaviour compared to others and if so, what impact it brings to turnover behaviour (Lo, 2015). Compared to non-IT personnel, IT professionals' differences in terms of skills, personalities and mindsets may generate exceptional consequences in their turnover (Zylka & Fischbach, 2017). Thus, Lo (2015) highlighted the importance of using industry-specific predictors in IT turnover intention studies while Ertürk and Vurgun (2015) suggested to use a wider variety of antecedents to investigate IT professionals' turnover intentions.

With the high turnover rates among IT professionals, often they were criticized for being committed to their professional development instead of being committed to the working organizations. It was the norm to believe that they leave their organizations to make themselves more employable by being familiar with various technologies practiced by different organizations.

Thus, this study is aimed to investigate whether IT professionals' commitments to the profession contributes to their higher turnover intentions. From the majority of the studies conducted in other countries, related to professionals such as project managers (Ekrot, Rank, Kock, & Gemünden, 2016; Korsakienė, Stankevičienė, Šimelytė, & Talačkienė, 2015), nurses (Hsu, Wang, Lin, Shih, & Lin, 2015), and IT professionals (Zylka & Fischbach, 2017), it was revealed that a turnover study should not exclude job satisfaction in a turnover model. Hence the current study aimed to investigate the association between professional commitment and the intention to leave the current organization in the presence of job satisfaction.

The sample was drawn from the software engineers from Sri Lanka. The data were analyzed using a structural equation model (SEM). The paper is organized with a review of the existing literature and hypotheses development, followed by methodology, analysis, discussion and a conclusion.

Literature Review And Hypotheses Development

Influence of Professional Commitment in Turnover

As per the arguments built in *inducements-contributions framework* of voluntary turnover (March & Simon, 1958), the decision of an employee to remain with an organization is a result of a balance between inducements offered by the organization and the contributions expected from the employee. There can be two main reasons for IT professionals to stay with organizations: *emotional attachment to the organization* and *the perceived cost of leaving the organization* (Paré & Tremblay, 2007). On the perceived cost of leaving organizations, as per the human capital theory, when an organization has invested in developing specific skills in employees, the possibility of them searching jobs elsewhere for the same level of rewards is less due to the difficulty of knowledge transfer. However, IT professionals enjoy high skill transferability (Cappelli, 2001) across even different industries (Adya & Kaiser, 2005; Ramos & Joia, 2013). It is therefore vital to study how skill development contributes to retain IT professionals.

On the other hand, in general, professional workers are more committed to professions than to working organizations (Carson & Bedeian, 1994). Therefore, it is probing to investigate the impact of their professional commitments on turnover intentions. Furthermore, lifetime employment is no longer a promise by organizations (Hall, Smith, & Langfield-Smith, 2005). Thus, employees experience insecure feelings regarding their current jobs (Cicek, Karaboga, & Sehitoglu, 2016). Meantime, organizations maintain a transactional relationship with their employees based on employees' short term contributions (Hall et al., 2005). As a result, for individual employees, the occupational commitment is more important than organizational commitment (Cohen, 2007). That is, employees are more concerned about their occupational goals, and thus, the attachment to the organization is weakened (Yousaf, Sanders, & Abbas, 2015). Due to all these changes, it is important to understand the role of professional commitment in organizational turnover intention (Yousaf et al., 2015).

Regarding the relationship between professional commitment and turnover intention, contradicting results was observed. Consequently, there are two opposite arguments. Cavanaugh and Noe (1999) argued that when an employee is professionally committed, the person would be succeeded in the career and more opportunities would be opened for the person; as a result, would stay a shorter period in the current organization. Similarly, Chang (1999); Silliker (1993) also found that higher the professional commitment, higher the intention to leave the organization. For this positive relationship, explanations had been given based on the contemporary belief that when a person is committed to one value system, it will not be compatible with the commitment to other value systems (Blau & Scott, 1962; Gouldner, 1957). Consequently, it was assumed that a professionally committed person would not be committed to the organization, so demonstrates a high turnover intention.

However, recently, Yousaf et al. (2015), from a sample of both professionals and non-professionals revealed that employees can simultaneously committed to organizations as well as to the occupation/profession. As Yousaf et al. (2015) explained, when employees are committed to the occupation/profession, they seek for opportunities in the working organization to fulfil the professional goals; as a result, it would not be easy to leave the current organizations. Thus, their study revealed a negative relationship between professional commitment and turnover intention. As Yousaf et al. (2015) further emphasized, when employees are not much committed to their professions, new opportunities will not be opened for them within their current organizations, which makes such employees to take turnover decisions easily. Similarly, on the argument of validity of the career commitment scale (G. Blau, 1985), Carson and Bedeian (1994) suggested that career commitment should be inversely related to withdrawal cognition.

Further, as Yousaf et al. (2015) stated, previous studies concluded that occupational/professional commitment is a strong predictor of organizational turnover. Consequently, a deeper understanding on the

construct will assist to craft better management strategies to increase favourable outcomes. Formerly, Bartol (1979); G. Blau (1989); Lu, Lin, Wu, Hsieh, and Chang (2002) also found as higher the professional commitment, lesser the intention to leave the organization. Though there is a paucity of evidence from the IT industry, based on the recent other industry-related studies and drawing conclusions from social exchange and social capital theories, it is hypothesized that;

[H1]: turnover intentions of IT professionals are negatively influenced by the degree of their professional commitments.

Role of Job Satisfaction in Turnover Studies

IT professionals' turnover decision is directly related to job satisfaction and commitment (Lo, 2014). This is because; desirability of leaving reflects one's satisfaction and commitment (Joseph, Ng, Koh, & Ang, 2007). Furthermore, as Sukriket (2014) summarized, the rational model of turnover suggests that it is the job dissatisfaction that plays a primary role in one's decision to leave an organization. Therefore, a turnover model is incomplete without capturing the implications of job satisfaction.

When IT professionals are provided with sufficient opportunities to develop competencies, fair, rewarding and procedural fairness, their turnover intentions are lowered (Paré & Tremblay, 2007). Furthermore, senior IT professionals are largely driven by push factors--career satisfaction and threat of professional obsolescence--in their turnover (Fu, 2011; Harden et al., 2016). In order to increase IT professionals' job satisfaction, adequate feedback (communicating organizational tasks, job objectives, job performance and so on), opportunities to spend time on professional work than administration work and work autonomy should be provided adequately (Chen, 2008). IT professionals experience high job satisfactions when supervisor support is high and opportunities are offered for career developments (Jiang & Klein, 1999). Also, recognition and feedback are identified as vital strategies to retain IT professionals (Zemke, 2000).

Based on an employment survey, Bigelow (2012) stated that regardless of the toughness of the IT career that is characterized by long working hours, tight budgets and steep learning curves, work natures with challenges keep IT professionals happy at their work. Further, Bigelow (2012) stated that their survey revealed that IT professionals wanted their jobs to be intellectually challenging, which will benefit them to grow their knowledge and expertise. They urge to solve problems and learn new technologies; consequently, it is clear that IT professionals need stimulating environments (Bigelow, 2012).

Further, few other factors were identified as important factors in job satisfaction: supportive work environment where job involvement is ensured, good working environments, co-workers, fair support by supervisors and opportunities to grow (Bigelow, 2012). Based on the "TechTarget's Salary Survey-2015"on technology industry, Smith (2015) briefed that with even high salaries, there were 49% of the respondents who were opened for new opportunities. Findings of both surveys can be summarized as: although, pay too matters, IT professionals experience high job satisfactions when jobs and the work environments are designed in a way to facilitate their intellectual and technical growth needs.

Around the world, studies on IT professionals' job satisfaction have generated different results. For instance, recently, Sukriket (2014) found that the effects of push and pull factors of job satisfaction for Thailand IT professionals' turnover were different from that of Europe. As per Sukriket (2014)'s study, supervision, nature of work, benefits and job conditions were important while pay and promotion were important in previous studies. In Sri Lanka, the work time extensions (in order to complete daily workload) had reduced IT professionals' job satisfaction; consequently, they reported high turnover later on (Wickramasinghe, 2010). Previously, several studies found a significant negative relationship between turnover intention and job satisfaction (see meta-analysis of Podsakoff, LePine, and LePine (2007)). While most of the job satisfaction studies were generated from the West (Wickramasinghe, 2009), considering the differences in work environments and cultural differences, it is essential to investigate job

satisfaction's influence from the Asian region--an emerging region for IT services. In particular, Wickramasinghe (2009) highlighted the need of further studies on Sri Lankan IT professionals' job satisfaction.

Job Satisfaction and Turnover Intention

Employee job satisfaction determines their workplace behaviours (Chen, 2008). Dissatisfied individuals resign from organizations, while satisfied individuals remain with it (Oshagbemi, 2000). Numerous evidence can be found on the negative relationship between job satisfaction and turnover intention (Baroudi & Igbaria, 1994; Igbaria & Guimaraes, 1999; Korunka, Hoonakker, & Carayon, 2008; Lu et al., 2002; Poggi, 2010; Rai, 2017). Thus, it was concluded that job satisfaction mainly determines IT professionals' turnover (Igbaria & Greenhaus, 1992; Igbaria, Meredith, & Smith, 1994; Igbaria & Siegel, 1992; Korunka et al., 2008), and it has a greater influence on turnover intention (Guimaraes & Igbaria, 1992). Consequently, it is hypothesized that;

[H2]: turnover intentions of IT professionals are negatively influenced by the degree of their job satisfactions.

Mediating Role of Job Satisfaction in Turnover Intention

A mediation is best occurred in a case of a strong relation between the predictor variable and the criterion variable (Baron & Kenny, 1986). Job satisfaction is an important variable that should not be omitted in turnover research (Allen, Shore, & Griffeth, 2003). Thus, as Hom and Griffeth (1995) put forwarded, many turnover models suggested that job satisfaction mediates relationships with withdrawal. For instance, regardless of the strong relationship between perceived organizational support and turnover intention, studies displayed that such relationships were mediated by job satisfaction (Allen et al., 2003; Eisenberger, Cummings, Aemeli, & Lynch, 1997; Knapp, Smith, & Sprinkle, 2017; Rai, 2017).

A similar mediation is expected from job satisfaction on the relationship between professional commitment and turnover intention. Professionals are more committed to their professions than to their organizations (Benner, 2008; Carson & Bedeian, 1994; Ross & Ali, 2011). Hence, it can be argued that the achievement needs and the expectations to fulfil ones' own career advancement needs from and within the organization increases create an increased interest in the workplace. Based on the arguments expressed by Yousaf et al. (2015) on the relationship between professional commitment and turnover intention, it can be presumed that this growing interest at the workplace is a reflection of a satisfaction, which weakens the intention to leave the current organization.

Job satisfaction has mediated many relationships in organizational settings: the relationship between organizational citizenship behaviour and turnover intention, organizational commitment and turnover intention, and so on. Job satisfaction is a feeling experienced by individuals, which converts experiences into behavioural outcomes. No prior demonstrations can be found on the mediating effect of job satisfaction on the relationship between professional commitment and turnover intention. However, as Tongchaiprasit and Ariyabuddhiphongs (2016) detailed, job satisfaction has been mediating relationships at individual, group and organization levels. Further, as Knapp et al. (2017) stated, studies are adding to the growing literature on the job satisfaction's mediating effect between independent and dependent variables. Consequently, it is hypothesized that;

[H3]: job satisfaction mediates the effects of professional commitment on turnover intention.

The proposed model is presented in Figure 1 below.

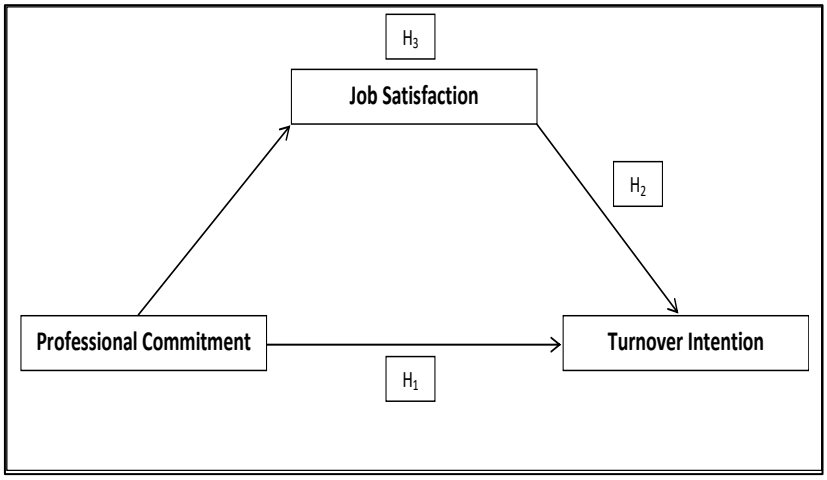

Figure 1 Proposed research model

Methodology

Sample and Data Collection

Data were collected from software engineers, whose companies are members of Sri Lanka Association of Software and Service Companies (SLASSCOM). SLASSCOM is the national chamber for the IT/BPM industry in Sri Lanka (Sri Lanka Association of Software and Service Companies, 2016). Twenty (20) companies were selected from the SALSSCOM member directory and obtained a list of email addresses of their software engineers. Thereafter, emails were sent to randomly selected individual software engineers. The responses of 134 were received and the response rate was 49.8%. As per the study on survey response rate levels and trends in organizational research by Baruch and Holtom (2008), the average response rate in studies that collect data at the individual level is around 57.2 %. After the data cleansing process, there were 96 complete data for the final analysis.

From the total respondents, 77.1% of the respondents were male and the majority (76%) belonged to the age of 26-35. The job position distribution shows that 37.5% of the respondents were working at junior level, followed by 34.4% at an intermediary level in their companies. Most of them (81.3%) possessed a Bachelor's degree, whereas 10.4% had Master's degree as the highest educational qualification. Respondents of 57.3% had IT certifications, while 70.8% of them possessed professional qualifications too.

3.2 Instrument and Measures

All the variables were measured on a five point Likert-type scale. The survey questionnaire was validated for the Sri Lankan context by two industry experts and three academic experts.

Professional commitment was measured by using the seven items developed by Blau (1985) (sample item includes "If had all the money needed, still want to be in this vocation").

Based on the similarity of the subject of interest, that is, IT professionals, in order to measure job satisfaction, the 20 items used by Kowal and Roztocki (2015), which were originally adapted from Vitell and Davis (1990) were selected. The items reported statistically significant alpha values and average variance extracted (AVE) in the study by Kowal and Roztocki (2015). Minor changes were made to

match those items to Sri Lankan context, which were validated by the two industry experts. The 20 items included items related to satisfaction with pay, promotion, co-workers, supervisor, work design itself (sample item includes: "My job is interesting"). The turnover intention measure was adapted from Bluedorn (1982) and Cammann, Fichman, Jenkins, and Klesh (1979). The sample item includes "I will probably look for a new job in the next year."

Structural equation model (SEM) was selected to analyze the data due to the fact that the study intended to find out an association between constructs which is a confirmatory approach with a reflective model.

Analysis

Evaluation of the Measurement Model

Reliability and validity

The measurement model of the constructs was assessed by individual item reliability, internal consistency and discriminant validity. On reliability and validity, referring to Table 1, the threshold of 0.5 was used. Barclay, Higgins, and Thompson (1995); Chin (1998) emphasized that loadings of at least 0.5 might be acceptable when the other items in the construct have greater alpha values. The Cronbach's alpha value for satisfaction was 0.857 after removing lower factor loading items. All the items related to satisfaction on pay were removed due to lower factor loading and only one item from promotion aspect remained in the final set of indicators. Altogether 11 job satisfaction items were used for further analysis. The Cronbach's alpha values for both professional commitment and for turnover intention were 0.803.

Table 1 Measurement model of PLS

Latent Variable	Factor loading	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)	R^2	Adjusted R^2
Professional Commitment		0.803	0.870	0.626		
PC1R	0.811					
PC2	0.736					
PC3R	0.785					
PC7R	0.831					
Job Satisfaction		0.857	0.884	0.412	0.448	0.442
Sat11	0.654					
Sat12	0.646					
Sat13	0.712					
Sat14	0.618					
Sat15R	0.686					
Sat16R	0.587					
Sat17	0.610					
Sat18	0.620					
Sat19R	0.769					
Sat5R	0.598					
Sat9R	0.529					

Turnover Intention		0.803	0.874	0.639	0.415	0.403
TOI1	0.850					
TOI2	0.860					
TOI3	0.590					
TOI4	0.863					

Except for satisfaction (0.412), the average variance extracted (AVE) exceeded the accepted level of 0.5 (Fornell & Larcker, 1981). One possible reason for lower AVE for job satisfaction could be the removal of the items related to pay. As suggested by Fornell and Larcker (1981) AVE is treated as a measure of reliability and is more conventional than composite reliability. The composite reliability has exceeded its acceptable cut off of 0.7 (Hair, Anderson, Tatham, & Black, 1998). Furthermore, as per the Fornell-Larcker criterion coefficients and Heterotrait-Monotrait Ratio (HTMT) in Table 2, cross loading in Table 3 and the inner and outer VIF values in collinearity statistics in Table 4, the constructs were loaded to their own constructs over other constructs, reflecting a higher discriminant and convergent validity.

Table 2 Discriminant validity

Criterion	Latent Variable	Job satisfaction	Professional commitment	Turnover intention
Fornell-Larcker Criterion	Job satisfaction	0.642		
	Professional commitment	0.669	0.791	
	Turnover intention	-0.630	-0.523	0.799
Heterotrait-MonotraitRatio (HTMT)	Professional commitment	0.761		
	Turnover intention	0.709	0.616	

Table 3 Loadings and Cross Loadings

	JS	PC	TOI
Sat11	**0.654**	0.421	-0.414
Sat12	**0.646**	0.252	-0.310
Sat13	**0.712**	0.387	-0.351
Sat14	**0.618**	0.339	-0.381
Sat15R	**0.686**	0.499	-0.412
Sat16R	**0.587**	0.410	-0.330
Sat17	**0.610**	0.534	-0.510
Sat18	**0.620**	0.396	-0.391
Sat19R	**0.769**	0.593	-0.612
Sat5R	**0.598**	0.304	-0.340
Sat9R	**0.529**	0.415	-0.198
PC1R	0.573	**0.811**	-0.439
PC2	0.387	**0.736**	-0.288
PC3R	0.548	**0.785**	-0.338
PC7R	0.575	**0.831**	-0.538

TOI1	-0.501	-0.340	**0.850**
TOI2	-0.449	-0.342	**0.860**
TOI3	-0.366	-0.415	**0.590**
TOI4	-0.636	-0.529	**0.863**

Note: Bold means loadings are higher than 0.5 and loaded to the own construct

Table 4 Collinearity statistics

	Outer VIF	Inner VIF	
		Job satisfaction	Turnover intention
Professional commitment		1.000	1.812
PC1R	1.645		
PC2	1.558		
PC3R	1.598		
PC7R	1.682		
Job satisfaction			1.812
Sat11	2.180		
Sat12	1.934		
Sat13	2.712		
Sat14	1.612		
Sat15R	2.127		
Sat16R	2.103		
Sat17	1.595		
Sat18	1.645		
Sat19R	2.036		
Sat5R	1.466		
Sat9R	1.531		
Turnover intention			
TOI1	4.544		
TOI2	4.595		
TOI3	1.217		
TOI4	1.814		

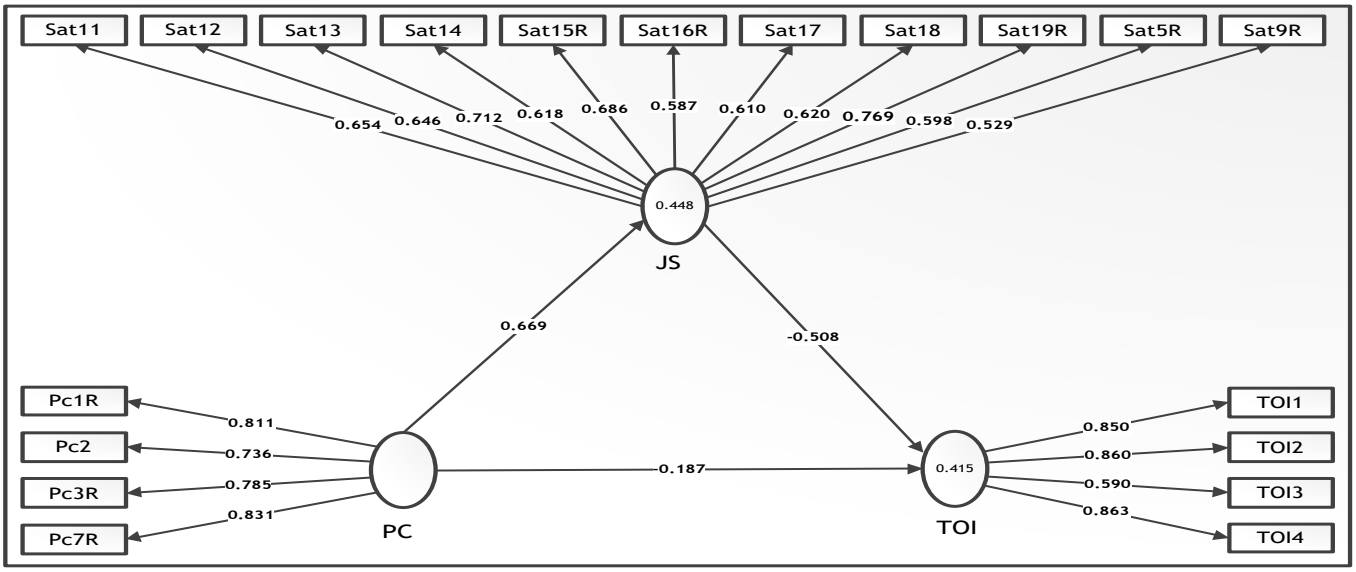

Fig 1: PLS path analysis for measurement model for Beta value and R-square values

Note: PC refers to professional commitment, JS refers to job satisfaction and TOI refers to turnover intention

As it can be seen in Figure 02 and Table 1, 44.8% of the variance of job satisfaction is explainable from the relationship between job satisfaction and professional commitment(R^2 =0.448). Professional commitment together with job satisfaction explains a variance of 41.5% in turnover intention. The bootstrap procedure with a sample of 5000 was used to assess the significance of the weights in the paths. As shown in Table 5, the effect size for professional commitment to turnover intention was smaller at 0.031 in the presence of all three variables.

Table 5 Effect sizes (f^2) of the measurement model

Paths	Effect Size	SE	t	Decision
Job satisfaction -> Turnover intention	0.243	0.115	2.112	Larger effect
Professional commitment -> Job satisfaction	0.812	0.264	3.078	Larger effect
Professional commitment -> Turnover intention	0.031	0.038	0.825	Smaller effect

Evaluation of the Structural Model

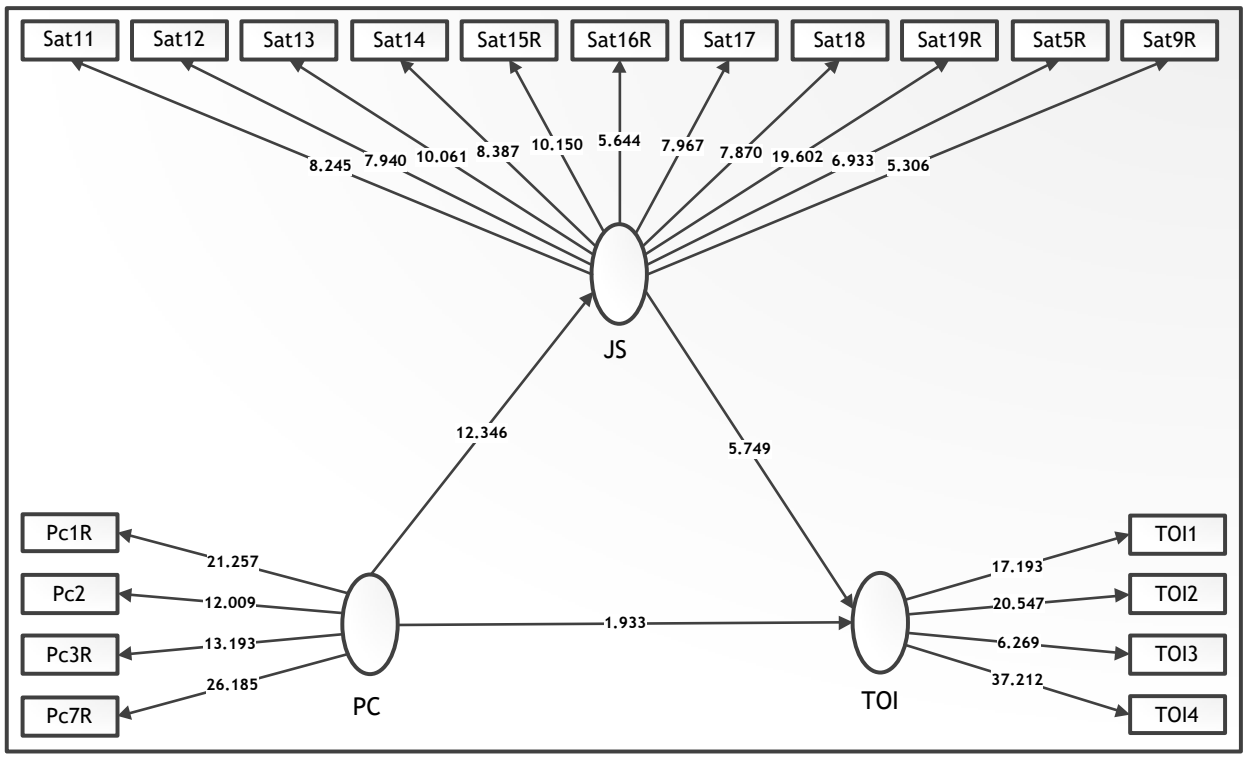

Fig 3 Structural model after the bootstrapping

In order to assess the hypotheses built in the conceptual model, each structural path was assessed. As discussed by Chin (1998), the main objectives of partial least square method are prediction (R^2) and model fitting. The variance explained (R^2 value) was assessed for this purpose. As per the rule of thumb, the R^2 value must be higher than 0.1 (Falk & Miller, 1992). Table 6 denotes that all the R^2 values are higher than 0.1, qualifying to test the hypotheses.

Table 6 R square values of the structural model

	R Square	SE	t	P Value
Job satisfaction	0.442	0.073	6.039	P<0.05
Turnover intention	0.403	0.069	5.831	P<0.05

After evaluating the R^2 value for the accuracy of predictions, path coefficients were tested for statistical significance by performing bootstrapping with 5000 samples. The results are shown in Table 7. All the paths were revealed as significant at $p<0.05$.

Table 7 Path coefficients

	Beta	SE	t	P Value
Job satisfaction -> Turnover intention	-0.508	0.088	5.749	P<0.05
Professional commitment -> Job satisfaction	0.669	0.054	12.346	P<0.05
Professional commitment -> Turnover intention	-0.182	0.094	1.933	0.027

Predictive Relevance using Blindfolding Procedure

To see how well the model predicts the population, predictive relevance was looked at using blindfolding procedure, where the omission distance was set at 7 (Chin, 1998). As shown by the cross validated redundancy statistics in Table 8, the model well predicts the population as $Q^2 > 0$ (Chin, 1998).

Table 8 Construct cross validated redundancy

	SSO	SSE	Q^2 (=1-SSE/SSO)
Job satisfaction	1,056.000	893.073	0.154
Professional commitment	384.000	384.000	
Turnover intention	384.000	294.250	0.234

Mediation of Job Satisfaction

In order to assess H_3, which states that job satisfaction mediates the effect of professional commitment on turnover intention, the direct effect of professional commitment on turnover intention and the indirect effect on the presence of job satisfaction were assessed. As it can be seen in Table 9, both direct effects ($t_{\text{professional commitment}}=1.933$, $p=0.05$) and the indirect effect ($t_{\text{professional commitment}}=5.064$, $p=0.05$) were significant; concluding that job satisfaction partially mediates the effect of professional commitment on turnover intention. Apart from the p values, the variance accounted for (VAF= Indirect effect/Total effect) was calculated to estimate the magnitude of the indirect effect to conform the partial mediation effect. As per Hair, Hult, Ringle, and Sarstedt (2016), a VAF value between 20% to 80% is a partial mediation.

VAF= (-0.340/-0.522)*100

VAF= 65%

Table 9 Mediation results

	Beta	SE	t	P<0.05	Decision
Total direct effect Professional commitment -> Turnover intention	-0.182	0.094	1.933	0.027	Significant
Total indirect effect Professional commitment -> Turnover intention	-0.340	0.067	5.064	0.000	Significant

Discussion

After evaluating the measurement model for its accuracy (reliability and validity), the estimations of the structural model revealed that the proposed conceptual model is well supported by the data, which is indicated by R^2 values ($R^2_{\text{satisfaction}}$ =0.448, p<0.05, $R^2_{\text{turnover intention}}$ =0.4153, p<0.05). By observing the individual effects, it can be concluded that both job satisfaction ($R^2_{\text{turnover intention}}$=0.415, $t_{\text{satisfaction}}$=5.749 p<0.05) and professional commitment ($t_{\text{professional commitment}}$=1.933, p=0.05) significantly influenced the turnover intention. Thus H1 and H2 were supported.

Finding of the negative relationship between professional commitment and turnover intention is contradictory to former findings by Cavanaugh and Noe (1999); Chang (1999); Silliker (1993) who found a positive relationship between professional commitment and turnover intention. Cavanaugh and Noe (1999) argued that when people are committed to the profession, they work hard to achieve career goals and as a result, more opportunities are opened for them, making the turnover of the current organization higher. However, it can be argued that the openness of opportunities will always depend upon the success of the career commitment, and as a result, the positive relationship is not always guaranteed.

On the other hand, even though employees are concerned about their career goals, as Aryee and Tan (1992) stated, highly occupationally committed employees attempt to develop their skills and achieve occupational goals through and within the current working organizations. The same understanding can be applied to the findings of the current study. Since the study had many young software engineers, it can be argued that not many outside opportunities are available for them, resulting in them remaining in the same organization to develop their skills.

The discovery of the negative relationship is consistent with the findings by Yousaf et al. (2015) who proved and emphasized that it is possible for both professional commitment and organizational commitment to operate simultaneously. As a result, one can commit to the working organization by remaining with it, and be committed to the profession and achieve career goals due to the organizational settings that complement their career goals. Professionals who are less committed towards professional advancement will make the leaving decisions easily. In supplement, the current study considered the mediating effect of job satisfaction. The analysis revealed that professional commitment facilitates software engineers feel more satisfied with their jobs, making the turnover decisions difficult due to the inverse relationship between job satisfaction and turnover intention. Overall the negative relationship found in the study is consistent with the findings by Bartol (1979); . Blau and Lunz (1998); Lu et al. (2002).

The finding may vary for established employees for whom more opportunities can be available and as they experience higher employability and skill transferability. However, evidence can be found that older IT personnel are less likely to quit compared to younger IT personnel (Igbaria & Greenhaus, 1992), age was highly connected to job satisfaction among IT personnel (Kuo & Chen, 2004), and older IT professionals are more satisfied with their jobs and committed to the organization than their younger counterparts (Lo, 2015).

Professional commitment was found to be significantly positively influence job satisfaction ($t=12.346$, $p<0.05$). Even though similar studies for the IT industry could not be found, the finding is consistent with the findings carried out for other professions such as nursing, for instance, the study by Hsu et al. (2015). Opportunities for competency development must be seen as a way to influence job satisfaction, and thereby to increase the organizational attachment (Heilmann, Vanhala, & Salminen, 2015).

The critical role of job satisfaction in turnover intention was revealed through its partial mediating effect on the relationship between professional commitment and turnover intention which can be seen in Table 7 (path coefficients/direct effect) and Table 9 (mediation results) and the VAF value. Hence, H3 also was supported by the data. Though published evidence on the mediation effect of job satisfaction on the relationship between professional commitment and turnover intention was not found, other mediating roles of job satisfaction found at individual, group and organizational level (Tongchaiprasit & Ariyabuddhiphongs, 2016) can be used to interpret the mediation results. Findings of the current study explains that software engineers who are committed to the profession intend to achieve professional development goals within the organization (direct effect) and they build interest in the organization when their career needs are fulfilled within the current organizations (indirect effect). Complementing the explanations given by Aryee and Tan (1992) on the relationship between professional commitment and turnover intention, the current study shows that the efforts put on professional advancement weaken the intention to leave the organization due to the software engineers' felt need to stay with the organization, since the organizational settings facilitate their career goals, and also through their felt interest about the organization. The latter part is reflected from their increased job satisfaction.

The initial scale had 20 items to measure job satisfaction; satisfaction related to pay, promotion, co-workers, supervisor and the nature of the work itself (work design). However, all the indicators related to pay and three items related to promotion were removed during the evaluation of the measurement model. Most of the higher factor loading items in job satisfaction were related to supervision and co-workers, followed by work design. This emphasized the importance of supervision and co-worker influence to software engineers. Knowing the team based work nature of most of the IT organizations, it is visible that job satisfaction related to interaction with other members is prominent. The findings related to job satisfaction is consistent with a recent study related to software programmers(Sukriket, 2014).

The findings emphasized that job satisfaction plays a significant role in turnover intention where satisfaction related to supervision, co-workers and work/job related factors are predominant. Since IT professionals are intrinsically motivated to the work they do (Lam, 2011), want their jobs to be intellectually challenging to grow their knowledge and expertise (Bigelow, 2012) and expect to achieve self-actualization and social satisfaction from their jobs (Chen, 2008), managers may take extra care in delivering these expectations through inclusive and thoughtful design of jobs. This may override the contemporary belief that flexible working hours(Ross & Ali, 2017) and pay will keep IT professionals with their organizations. The re-emphasis was placed upon the importance to abandon the notion that IT professionals leave their organizations as they are more committed to the profession than to their organizations.

Conclusion

The study was aimed to find evidence to answer the query: is it the professional commitment that makes IT professionals easily leave their working organizations. The data were collected from software engineers from Sri Lanka.The study filled the gap of empirical evidence on the influence of professional commitment on turnover intention in the IT industry. The findings suggest that professional commitment should be seen as a positive force which stimulates IT professionals' job satisfaction and job satisfaction partially mediates the effect of professional commitment on turnover intention. The detailed analysis concluded that job satisfaction of software engineers is highly influenced by the satisfaction related to

supervision, co-workers and the design of the work (which included the way the job has been designed, their sense of accomplishment in the job, the amount of responsibility and the overall feeling towards the job as whether it is interesting or not).

In essence, it was evident that just because software engineers are professionally committed, the belief that such commitments to the profession force them to move among organizations to gather more exposure in order to improve the employability is no longer a valid postulation. Instead, their intentions to leave organizations are partially mediated by their overall feelings on job satisfaction which is highly influenced by the way the supervision is carried out, the association with the co-workers and how the job and the work are designed by the organizations.

Further, the results revealed that the concern on pay and promotion may be very negligible: instead, the focus of software engineers is on skill development which was evident from their professional qualifications and IT certifications. Among the respondents, 68% of the software engineers possessed professional qualifications while 55% possessed IT certifications at their early career stages. Hence, future studies need to be carried out considering the effect of career stage on their job satisfaction and professional commitment.

Further, IT firms must closely monitor how the supervision is taking place in their firms and the interaction and the influence of co-workers. It is the human resource management personnel's responsibility to design the jobs in a meaningful manner and assign software engineers to various projects considering their sense of accomplishments. For instance, a vigilant rotation between different projects will make them feel that they were allowed to expose to various technologies, programming languages and frameworks, and finally are being empowered by the organization.

Though, unlike other employees, professionals display different workplace behaviours and are more committed to their profession, the final decision of leaving the organization will significantly be influenced by other factors; one such is the job satisfaction. Therefore, future studies need to be carried out to investigate other stereotypes related IT professionals, and to investigate other factors that influence their turnover intentions.

The study was targeted at software engineers via self-reported survey questionnaires. More studies need to be carried out with a sample inclusive of other specialties such as business analysts, web developers, etc. while capturing the effects of career stage, gender and national culture on their turnover intentions in order to obtain a wider understanding on their turnover intentions.

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