TURNOVER INTENTION OF INFORMATION TECHNOLOGY PROFESSIONALS IN SRI LANKA: THE INFLUENCE OF PERCEIVED ORGANIZATIONAL SUPPORT, PROFESSIONAL COMMITMENT AND JOB SATISFACTION

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DISSERTATION SUBMITTED IN FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF PHILOSOPHY

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TURNOVER INTENTION OF INFORMATION TECHNOLOGY PROFESSIONALS IN SRI LANKA: THE INFLUENCE OF PERCEIVED ORGANIZATIONAL SUPPORT, PROFESSIONAL COMMITMENT AND JOB SATISFACTION

ABSTRACT

Information technology (IT) industry is one of the top four industries with low employee retention rate. Considering the high cost involved in replacements, companies are keen to know what will keep IT professionals with their organizations. Anchored in social capital and social exchange theories, this study investigated the influence of perceived organizational support and professional commitment on IT professionals' turnover intentions. A partial least square structural equation model (PLS-SEM) analysis of 383 software engineers from Sri Lanka revealed that both perceived organizational support and professional commitment weaken turnover intentions and job satisfaction partially mediates such relationships. Nevertheless, comparing between the two predictors, professional commitment found to be the stronger predictor of turnover intentions than perceived organizational support. Further, the results suggested that perceived organizational support and professional commitment are positive stimulus to increase job satisfaction. It is concluded that (1) when reached to mature career stages, IT professionals' intentions to leave the current organization decrease, (2) gender has no effect in their turnover intentions, and (3) co-workers, supervision, and work design are the most influencing job satisfaction factors. Among factors of perceived organizational support, job satisfaction-related support was the most sought form of support. The findings suggest that IT firms might concentrate on professional advancement, job designing, and supervision in their retention strategies. Some stereotypes related to IT professionals were challenged from the behaviour of

professional commitment component and from the zero effect of gender in the model. Theoretically, the study contributes to better understand IT professionals' turnover behaviours, and to widen the applications of social capital and social exchange theories in turnover models. It also strengthens the argument that professional commitment is more relevant than continuous organizational commitment in knowledge workers' turnover studies.

Keywords: IT professionals, job satisfaction, perceived organizational support, professional commitment, turnover intention

NIAT PELETAKAN JAWATAN DALAM KALANGAN PROFESIONAL TEKNOLOGI MAKLUMAT DI SRI LANKA: PENGARUH PERSEPSI SOKONGAN ORGANISASI, KOMITMEN PROFESIONAL DAN KEPUASAN PEKERJAAN

ABSTRAK

Industri teknologi maklumat merupakan salah satu daripada empat industri yang mempunyai kadar pengekalan pekerja yang rendah. Memandangkan kos yang tinggi dalam penggantian pekerja, syarikat berhasrat untuk mengetahui cara-cara pengekalan pekerja di kalangan profesional teknologi maklumat. Berasaskan modal sosial dan teori pertukaran sosial, kajian ini menyiasat pengaruh sokongan organisasi dan komitmen profesional terhadap niat peletakkan jawatan di kalangan profesional teknologi maklumat. Analisa pemodelan struktur di kalangan 383 jurutera perisian dari Sri Lanka mendedahkan bahawa kedua-dua sokongan organisasi dan komitmen profesional dapat mengurangkan keinginan peletakan jawatan. Didapat juga, kepuasan pekerjaan merupakan pengantara separa hubungan. Berbanding dengan sokongan organisasi, komitmen profesional merupakan prediktor yang paling kuat terhadap keinginan peletakan jawatan. Keputusan analisa juga menunjukkan bahawa sokongan organisasi dan komitmen profesional memberi rangsangan positif terhadap peningkatan kepuasan pekerjaan. Model ini juga mendedahkan pengaruh peringkat kerjaya di mana apabila profesional teknologi maklumat mencapai tahap kerjaya yang matang, keinginan peletakan jawatan menjadi lemah. Menurut analisa kajian juga, jantina tidak memberi sebarang kesan terhadap model ini. Di sebaliknya, rakan kerja, pengawasan, dan reka bentuk kerja merupakan faktor yang paling mempengaruhi kepuasan pekerjaan. Antara faktor sokongan organisasi, sokongan berkaitan dengan kepuasan pekerjaanlah yang paling diidami. Penemuan ini mencadangkan bahawa firma teknologi maklumat harus memberi tumpuan kepada kemajuan profesional, reka bentuk pekerjaan, dan

pengawasan dalam strategi pengekalan pekerja. Beberapa stereotaip yang berkaitan dengan profesional teknologi maklumat dicabar dari segi sifat komitmen profesional dan ketiadaan pengaruh jantina dalam model ini. Secara teorinya, kajian itu menyumbang kepada pemahaman perilaku keinginan peletakan jawatan di kalangan profesional teknologi maklumat dan memperkuatkan hujah bahawa komitmen profesional lebih relevan daripada komitmen organisasi yang berterusan di kalangan kajian sifat organisasi pekerja berpengetahuan.

Kata kunci: kepuasan pekerjaan, komitmen profesional, keinginan untuk peletakan jawatan, profesional teknologi maklumat, sokongan organisasi

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LIST OF ABBREVIATIONS

AVE	Average variance extracted
BPM	Business process management
BPO	Business process outsourcing
CMB	Common method bias
EFA	Exploratory factor analysis
HRM	Human resource management
ICT	Information and commination technology
ICTA	Information and commination technology agency
ILO	International labour office
IT	Information technology
JDI	Job descriptive index
JS	Job satisfaction
PC	Professional commitment
PLS	Partial least square
POS	Perceived organizational support
Sat	Satisfaction
SEM	Structural equation model
SLASSCOM	Sri Lanka association of software and service companies
SLICTA	Sri Lanka information communication technology association
TOE	Theory of organizational equilibrium
TOI	Turnover intention

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CHAPTER 1: INTRODUCTION

1.1 Introduction

This chapter presents the background of the study followed by the problem statement, aim and objectives of the study, research questions, scope and the significance of the study. The definitions of the terms and the outline of the dissertation are presented at the end of the chapter with the chapter summary.

1.2 Background of the Study

Ownership of a talented workforce is a critical success factor for any business organization, in this knowledge driven era. Among all employees, information technology (IT) professionals receive exceptional contemplation, as they deal with information: one of the most precious resources in any organization. Information is also serves as one of the sources of competitive advantage. Consequently, IT professionals have gained attention from researchers on their unique workplace behaviours, especially related to commitment, satisfaction and reasons for leaving organizations.

Employee voluntary turnover is inevitable (Lo, 2014), yet losing critical talents bother many organizations (Lo, 2014; Zylka & Fischbach, 2017). Employee turnover symbolizes a failure of relationship between employees and the organization (Avanzi, Fraccaroli, Sarchielli, Ullrich, & van Dick, 2014). Turnover is a global problem which cause organizations to incur additional costs in many ways (Agrusa & Lema, 2007; D.-H. Cho & Son, 2012; Pietersen & Oni, 2014) and also affects the productivity (Huffman, Casper, & Payne, 2014). Turnover leads to increase inefficiencies, lose relationships, and incur high replacement and training costs (Korsakienė, Stankevičienė, Šimelytė, & Talačkienė, 2015). Gurazada and Rao (2013) stated that as per the American Management Association, employee turnover cost exceeds the annual salary of existing employees. At times, the total employee replacement cost exceeds the annual

income of companies (TINYpulse, 2016). Consequently, the total costs of employee turnover can be two to three times higher than the left employees' annual salaries (Deloitte, 2009).

Over several recent decades, turnover among IT professionals has been consistently high (Lo, 2015). As a result, IT industry is among one of the top four industries with poor employee retention rate (Rhatigan, 2016). Even in non IT firms, IT personnel are recruited frequently than non-IT personnel (Zylka & Fischbach, 2017) due to their higher turnover compared to other employees. In the IT industry the indirect costs of employee turnover include leakage of knowledge to competitors (Aime, Johnson, Ridge, & Hill, 2010), operational disruptions (Mobley, 1982), reduced project performances, knowledge losses (Pee, Tham, Kankanhalli, & Tan, 2008) and additional time (Zylka & Fischbach, 2017) and client costs (Dibbern, Winkler, & Heinzl, 2008). It leaves a feeling of uncertainty behind existing IT employees on the continuation of work and about the new employees (Shapiro, Hom, Shen, & Agarwal, 2016) while overloading the project teams (Zylka & Fischbach, 2017). Apart from those consequences, companies might lose client relationships and other relationships in the business chain, of which the cost would be incomputable. Thus, there is a direct relationship between success of software projects and employee turnover (Pee et al., 2008).

At large, IT professionals' turnover is a critical issue in developing countries (Ertürk, 2014; Lacity, Iyer, & Rudramuniyaiah, 2008; Rahman, Naqvi, & Ramay, 2008). However, regardless of the prevailing turnover studies, the IT turnover issue is seldom covered in behavioural studies. As Scholarios and Marks (2004) correctly predicted, software development profession has now become a key profession in knowledge workers' behavioural studies.

Sri Lanka, as one of the developing countries in the South Asian region can have no exclusion to the scenario. High employee turnover in Sri Lankan IT industry has limited the industry from moving forward and limits its contribution to the country's development. Further, only a few studies can be found in Sri Lankan context on the issue, such as the studies carried out by Wickramasinghe (2010) and Wickramasinghe and Jayaweera (2010).

1.2.1 Introduction to Sri Lankan IT Industry

The information and communication technology (ICT) sector plays a vital role in converting Sri Lanka into a knowledge hub in the region, and the hope kept on the ICT sector for country's development is comparatively higher (Information and Communication Technology Agency [ICTA], 2013). The ICT sector has the ability to create higher job opportunities, increase efficiencies in markets, provide access to universal information; consequently, ensures social inclusion, justice and connect communities to the globe (ICTA, 2013). The ICT sector has promised a high employment generation to Sri Lanka (ICTA, 2013).

Sri Lankan IT industry has categorized into few major components: suppliers of ICT products and services (ICT companies), suppliers of IT-enabled services, business process outsourcing (BPO) companies, ICT training organizations and users of ICT products and services, which can separately be categorized as private sector organizations and government organizations (ICTA, 2013). Sri Lanka has preferred as a BPO destination by many European countries (ICTA, 2013) due to higher infrastructure facilities at lower cost structure and rigorous intellectual property protections, compared to other countries in the region (Sri Lanka Association of Software and Service Companies[SLASSCOM], 2016b). The total export revenue generated by the industry for the country was USD 850 million in 2015 (SLASSCOM, 2016b). In 2014, the

software sales was USD 111 million while IT services sales was USD 135 million in Sri Lanka (SLASSCOM, 2016b).

1.2.1.1 Job categorization

According to the key technical functions, the IT industry jobs are categorized in to fourteen major groups (ICTA, 2013). The profile of the ICT workforce by job
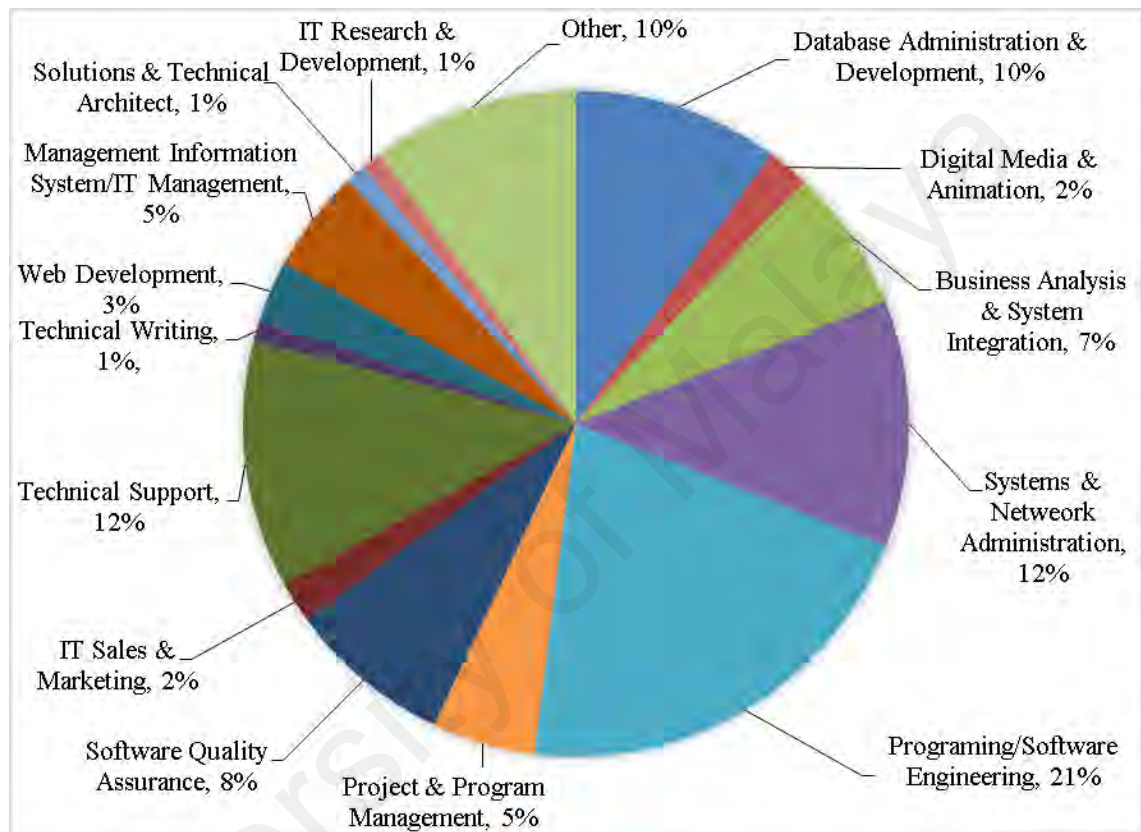
Figure 1.1: Profile of ICT Workforce by Job Categories (ICTA, 2013)

categories is shown in Figure 1.1. *Programming/software engineering* is the major job category, employing more than one fifth of the total workforce, and *Technical support* is the emerging job category (ICTA, 2013).

1.2.1.2 Workforce composition

The industry has created direct employments to 82,854 people in the country in 2014 (SLASSCOM, 2016b). As per the latest ICT workforce survey, the overall workforce has grown from 50,159 in 2010, to 75,107 in 2013 (Figure 1.2), with a noticeable

increase in female IT professionals (ICTA, 2013). The average annual growth rate of the total ICT workforce has been recorded as high as 13% in 2016 (SLASSCOM, 2016b).
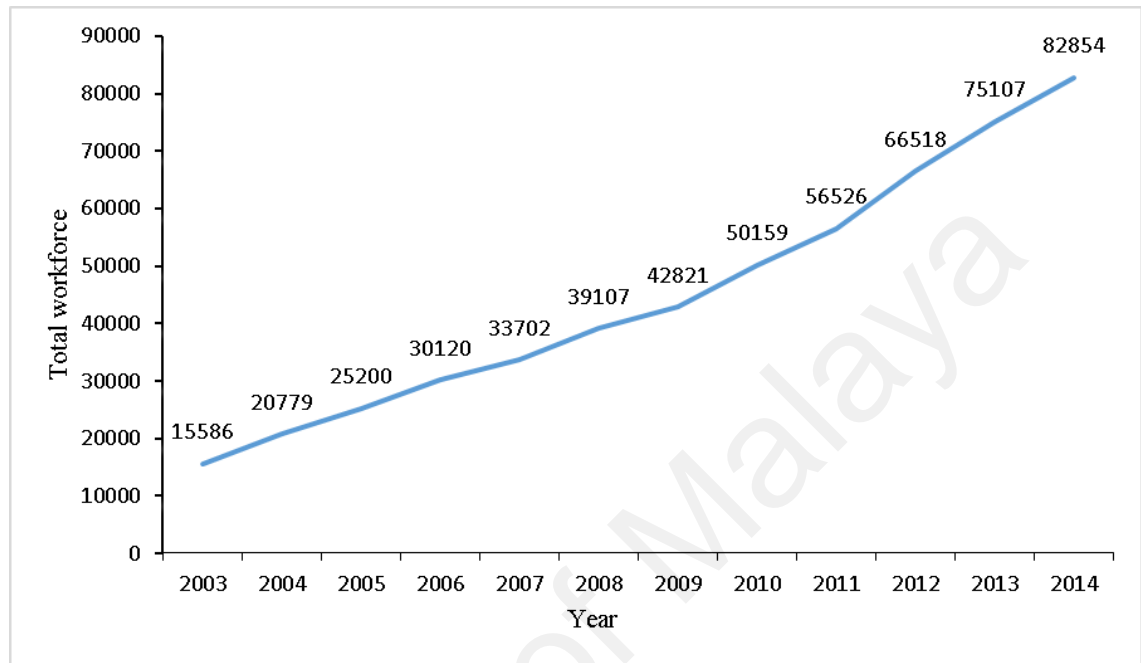
Figure 1.2: Overall Growth of the ICT Workforce (ICTA, 2013)

The entry level qualification demanded by most of the employers in Sri Lankan IT industry is a bachelor's degree (Wickramasinghe & Perera, 2012). More than 50% of the ICT workforce is possessing a bachelor's degree or above as the basic qualification (ICTA, 2013). As shown in Figure 1.3, Sri Lankan IT workforce is young in terms of their experiences. Majority of the workforce (26%) has one to three years of working experience in the industry (ICTA, 2013).
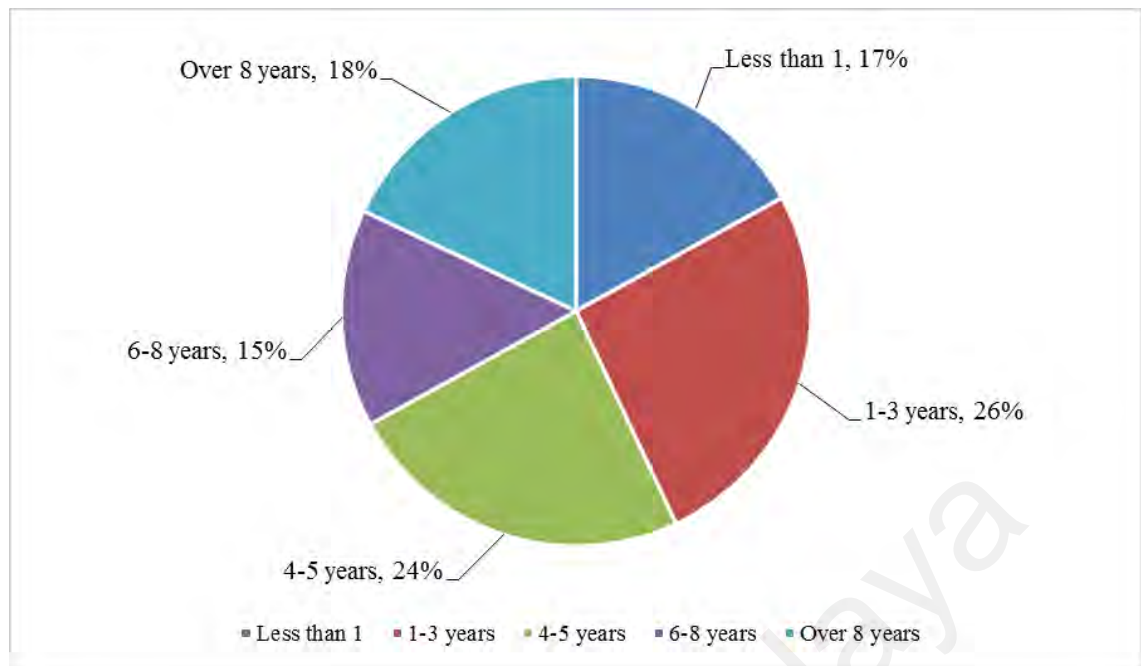
Figure 1.3: Experience of the Workforce (ICTA, 2013)

1.2.1.3 Female participation in the industry

Parallel to the increase in female population in Sri Lanka (Department of Census and Statistics, 2016), their participation in the IT industry is also increasing. According to previous workforce surveys, it was noted that female participation has increased from 21% in 2009 to 29.0% in 2013 (ICTA, 2013). As per the Figure 1.4 which depicts gender composition in the industry by their sub sectors in 2013, BPO sector has significantly contributed to improve the gender balance in the ICT workforce (ICTA, 2013). Previously, Jayaweera, Sanmugan, and Wanasundara (2006) too noted that more females were seen in senior management positions in BPM companies. However, their participations in the areas of networking, operating systems, or software development are yet to increase (Jayaweera et al., 2006).

Conversely, Wickramasinghe and Perera (2012) found that more than 75% were male in senior manager positions in globally distributed software development firms in Sri Lanka; it revealed the male dominant culture in senior positions. Furthermore, in general, literature from other countries provide evidence as women have less

opportunities for promotions and salary increments in IT industry (Igbaria & Greenhaus, 1992b). Meantime, regardless of the limited opportunities for women in the industry, Sumner and Werner (2001) exposed that many women do not achieve expectations of their employers, which creates morale and productivity issues in the industry.
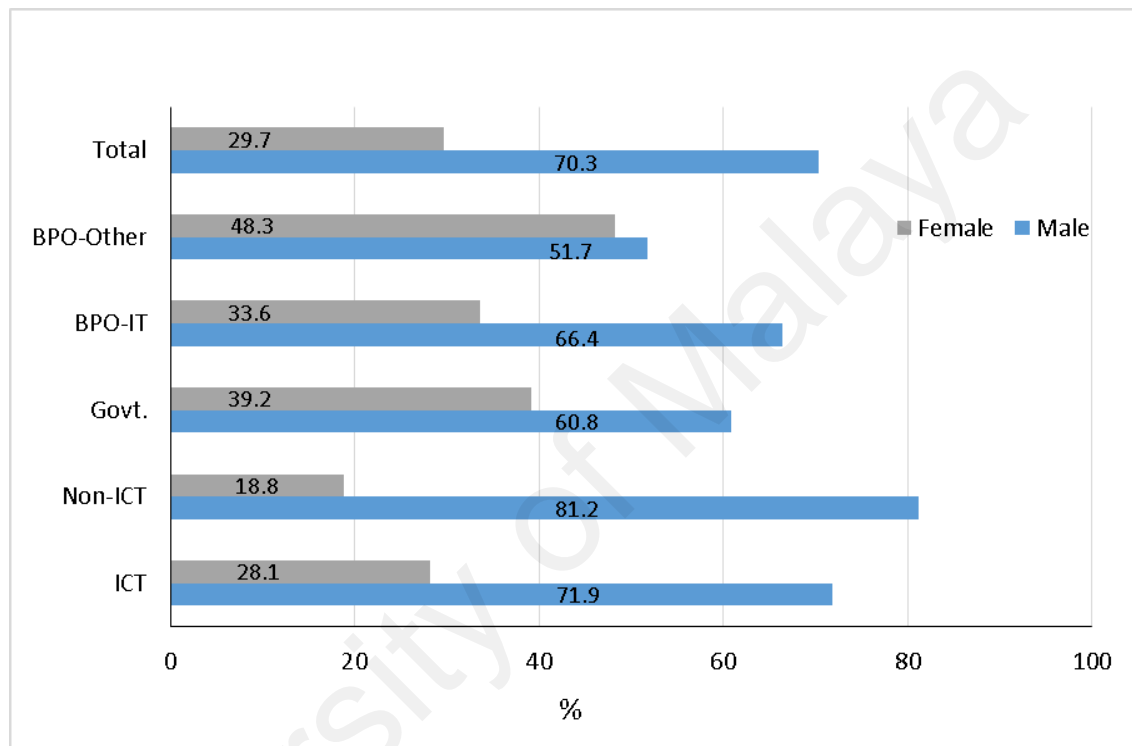
Figure 1.4: Gender Composition (ICTA, 2013)

1.2.1.4   Structure of the firms

As Wickramasinghe and Kumara (2009) noticed, majority of the IT firms had two layers in their organizational hierarchy: senior management and technical specialists. Most of the firms were characterized by flat organizational hierarchies due to limited employees in senior management levels (Wickramasinghe & Perera, 2012). Further, it was noted that formal human resource management (HRM) departments are rare in most of the Sri Lankan IT firms; administration of HRM activities is seen mainly as the responsibility of line managers (Wickramasinghe & Perera, 2012). In terms of the

working hours, in BPO firms, flexible employment contracts are very much rare (Wickramasinghe & Kumara, 2009).

1.2.1.5   Turnover issue in Sri Lanka

As per the latest available national ICT workforce survey, Sri Lankan IT industry suffers from a shortage of IT professionals, and 67% of the total ICT workforce records an average tenure of less than five years in one organization (ICTA, 2013). Software developers who accounted for 21% of the total ICT workforce (ICTA, 2013), remain in one organization less than three years (Wickramasinghe, 2010). The analysis of the statistics revealed that BPO sector suffers from a sever turnover problem continuously; The average rates are recorded as 13%, 17% and 18.2% for 2007, 2010 and 2013 respectively (Sri Lanka Information and Communication Technology Association [SLICTA], 2007; ICTA, 2010; ICTA, 2013). Overall, the turnover rate was high as 11%. There is a high possibility that better educated or trained IT professionals to stay shorter period in a particular firm (SLICTA, 2005), resulting such firms to incur high opportunity cost. SLASSCOM being the national chamber for Sri Lankan IT/BPM industry has also identified employee turnover issue as a key challenge in their vision 2020 report (SLASSCOM, 2016b). Thus, higher employee turnover rate and the shortage of IT professionals can create possible business losses to Sri Lankan IT industry (ICTA, 2013), and the issues may disrupt the industry's aim to become the knowledge hub in the South Asian region.

1.3   Problem Statement

Employee voluntary turnover is a natural occurrence, provided it happens at a tolerable rate. However, many organizations worry about losing their critical talents (Lo, 2014; Zylka & Fischbach, 2017). This is because; in this knowledge era, employees are the source of competitive advantage. Moreover, when skilled employees

leave, the organizational knowledge may leak to competitors; so at a disadvantage (Aime et al., 2010; Suseno & Rowley, 2018). Further, employee turnover denotes a failure of employee-organization relationship (Avanzi et al., 2014).

In the IT industry, regardless of the industry expansions and the increase in the demand for IT professionals, higher employee turnover remains unchanged (Lo, 2015; Zylka & Fischbach, 2017); therefore, turnover has been a concern in the industry since 1960's (Lo, 2015). As Lo (2015) noted, despite the studies conducted on IT turnover (Ertürk, 2014; Ertürk & Vurgun, 2015; Korunka, Hoonakker, & Carayon, 2008; Paré & Tremblay, 2007; X. W. Wang, Teo, & Yang, 2010)--the recommendations provided from--the issue remains unsolved. Moreover, compared to other industries, despite the large benefits offered to employees, IT industry is among top four industries with intolerable employee retention rate (Rhatigan, 2016). Thus, "Tech Industry Report" released by TINYpulse (2016) name IT workforce as one of the most unpredictable workforces. Among all professionals, IT professionals demonstrate distinct workplace characteristics due to their differences in perceptions, expectations, exposures and experiences. They demonstrate higher tendencies than other professionals to leave one company for another (Hoonakker, Carayon, & Korunka, 2013) which is higher in Asian countries than to the United States and Europe (Cha & Quan, 2011). Severity of IT professionals' turnover has been noted by many developing countries: Turkey (Ertürk, 2014; Ertürk & Vurgun, 2015), India (Lacity et al., 2008; Vijayakumar, 2012), Pakistan (Rahman et al., 2008), Thailand (Sukriket, 2014) and so forth.

Statistics around the globe reveal several aspects of the issue. A job satisfaction survey conducted by ComputerWeekly (2017) revealed that in the UK, while job opportunities in the IT industry are increasing, only 30% of the IT professionals are satisfied with their current employment, and 92% of the respondents are thinking of

changing their jobs. As per the empirical evidence, IT professionals frequently leave their companies and even join to other industries later on. For example, compared to civil engineers, only 19% of the computer science graduates remain in the field later on (Cappelli, 2001). Furthermore, IT professionals deliberately move between organizations and to other fields for which they plan well (Ramos & Joia, 2013): The objective is to make themselves attractive to employers from the acquired new professional experiences (Ramos & Joia, 2013).

It is understood that high turnover in the IT industry needs to be controlled, and the IT turnover issue needs to be investigated in several perspectives. As March and Simon (1958) proposed, when the inducements given to an employee are higher than or equal to the expected contribution from the person, such an employee will remain with the organization. Therefore, it is vital to understand as what IT professionals expect as inducements from their organizations; consequently, what will contribute to weaken their intentions to leave current organizations.

Scholars have been widely using social exchange and social capital theories in explaining the turnover phenomena. For instance, social exchange theory was used by Avanzi et al. (2014); Biron and Boon (2013); Ertürk (2014); Ertürk and Vurgun (2015); Harden, Boakye, and Ryan (2016); Osman, Noordin, Daud, and Othman (2016) in their turnover studies, and Dess and Shaw (2001); Paré and Tremblay (2007); Strömgren (2017); Suseno and Rowley (2018); Wickramasinghe and Weliwitigoda (2011); Wingreen, LeRouge, and Nelson (2017) used social capital theory in their investigations.

Social exchange theory focuses on the quality of employee-organization relationships (Avanzi et al., 2014) and posits that the workplaces develop social exchange relationships (Cropanzano & Mitchell, 2005). As per the theory, employees'

perceptions on the quality of exchange relationships with organizations decide their well-being and motivations (Avanzi et al., 2014). That is, employees tend to leave their organisations when they are dissatisfied with exchange relationships at work (Avanzi et al., 2014). On the other hand, social capital theory posits that helpful organizations motivate their employees to stay with them (Paré & Tremblay, 2007). As Shore and Wayne (1993) stated, perceived organizational support (POS) is comprehensive and best suited than conventional commitment concept in explaining employee behaviour. Studies on POS concluded as individuals with higher POS tend to less search and accept job offers in other organizations (Eisenberger, Fasolo, & Davis-LaMastro, 1990). This is because; POS differentiates between those who feel stuck and those who willingly stay in organizations. However, little is known on its application for professionals: especially IT professionals. This study considers employees' perspective on organizational support in predicting turnover intentions. Organizational factors determine an individual's behaviour and attitude at workplace (G. Blau & Boal, 1989). Conventional continuous commitment concept does not differentiate between individuals who willingly remain in organizations and who are entrapped. However, an employee's willingness to remain with the organization should be differentiated from the feeling of discomfort of being trapped in an organization due to high cost of leaving (Rhoades & Eisenberger, 2002). Recently, in their review of literature, Ahmed and Nawaz (2015) concluded that POS intensely impacts employee workplace attitudes and behaviours.

Another aspect of the turnover issue is related to employee job security. Organizations no longer provide lifetime employment (Hall, Smith, & Langfield-Smith, 2005), thus employees experience job insecurity (Cicek, Karaboga, & Sehitoglu, 2016). Alongside the changes in economic conditions, social life and employee-organization psychological bond--employee commitment has shifted from the organization to one's

own career development. Accordingly, employees are more concerned about their occupational goals, which weaken their attachments to organizations (Yousaf, Sanders, & Abbas, 2015). Thus, for an individual, occupational commitment is more important than organizational commitment (A. Cohen, 2007). Similarly, professionals are likely to be more committed to the profession than to organizations (Carson & Bedeian, 1994). Thus, it can be presumed that professional commitment influences the turnover intentions of professionals. Overall, highly professionally committed people are less covered in the commitment literature (X. Wang & Armstrong, 2004).

1.4   Aim and Objectives of the Study

The aim of the research is to find out the influence of perceived organizational support (POS) and professional commitment on turnover intention, considering the influence of job satisfaction, career stage and gender while identifying predominant POS factors.

Following are the research objectives.

1. To examine the level of effect of POS on job satisfaction and in turn on turnover intention by identifying the predominant POS factors that are most applicable and influencing to turnover intentions of IT professionals.

2. To examine the level of effect of professional commitment on job satisfaction and in turn on turnover intentions of IT professionals.

3. To investigate the moderating effect of gender on the relationship between job satisfaction and turnover intentions of IT professionals.

4. To study the moderating effect of career stage on the relationship between professional commitment and turnover intentions of IT professionals.

1.5   Research Questions

1. To what extent POS influences job satisfaction and in turn on turnover intention?

2. What are the predominant POS factors that are most applicable and influencing to turnover intentions of IT professionals?

3. To what extent professional commitment influences job satisfaction and in turn on turnover intention?

4. Does gender serve as a moderator on the relationship between job satisfaction and turnover intention?

5. How does career stage moderate the effect of professional commitment on turnover intention?

1.6   Scope of the Study

This study mainly investigates the influences of POS and professional commitment on turnover intentions of IT professionals, using a sample of software engineers from Sri Lanka. The study also examines the mediating role of job satisfaction in turnover intentions. Further, it attempts to explore variations that can result in above relationships due to differences in gender and career stages of the software engineers.

That is, this study's scope is limited to investigate the employee perspective on organizational support and professional commitment in predicting their turnover intentions. That is, the scope of the study is individual employee centred rather than organizational centred. Further, the study's scope is limited to intention to leave the current organization. The positive relationship between intention and the actual turnover decision was well established from previous empirical studies; as a result, the intention is a valid proxy of actual turnover.

1.7   Significance of the Study

Despite the industry in which businesses operate, managers across the globe face the challenge of employee retention. The difficulty to retain critical talents has burdened the IT industry resulting it to go for frequent replacements (Raman, Budhwar, & Balasubramanian, 2007). As Lo (2015) pointed out, though exceptions were seen during economic recessions, from the history, IT professionals' turnover has been remaining high. The issue is more serious in the developing countries as they have fewer options in replacing IT professionals (Cha & Quan, 2011). Therefore, it is of high need to investigate as what will keep IT professionals in their organizations. Lo (2015)'s review on IT turnover studies revealed that the studies carried out so far had repeatedly used common predictors that are not unique to the profession; as a result, no positive impacts were made on the issue. Thus, use of industry specific predictors was emphasized, which will be served from this study. As Allen, Shore, and Griffeth (2003) stated, employees consider history of treatment to them by organizations, thus, mere existence of supportive HRM practices will not generate immediate positive effects on turnover. Consequently, turnover studies should not overlook employee perceptions on organizational efforts. On the other hand, not all the factors that result in higher turnover intentions inversely act when the situation is reversed.

An investigation of what will weaken IT professionals' turnover intentions will benefit the industry in numerous ways. For instance, knowing how organizational practices are perceived by employees at their personal levels will assist crafting effective retention strategies by IT firms. Awareness on causes for high turnover, contributing factors of their job satisfaction and the role of professional commitment in turnover will assist to obtain a deeper understanding on the turnover phenomenon. For instance, since not all forms of organizational support generate similar effects on employees, finding the most influencing and the predominant POS factors that affect

turnover intention may assist managers to capitalize on such factors in their retention plans. Such understandings may assist managers to predict future turnover behaviours of their employees while guiding to take precautions.

Given the unique workplace behaviour of professionals compared to other employees, from the investigation on the influence of professional commitment on turnover intention will contribute to future knowledge worker behavioural studies in several ways. First, it serves as an empirical investigation on the presumption that professionals leave their companies as they are more committed to the profession than to organizations. Second, it opens up the dialog on the relevance of professional commitment as a variable in knowledge workers' workplace behavioural studies. It may allow scholars to re-look at the relevance of conventional organization commitment concepts. Further, the investigation on professional commitment's influence on job satisfaction may open up new avenues for the scholars to study how professional commitment can be used to stimulate job satisfaction of knowledge workers. In essence, since the current study moves beyond using job related and individual characteristics to predict turnover behaviour, it independently stands among the prevailing turnover studies of knowledge workers. A general review on turnover studies of last 100 years (Hom, Lee, Shaw, & Hausknecht, 2017) provides evidence that no much studies investigated profession-specific antecedents to predict knowledge workers' turnover intentions. Finally, the study will impact the industry by providing a base to managers to acknowledge the changes occurring in commitment patterns of their employees.

Findings on the mediating effect of job satisfaction may provide insights to managements on possible managerial interactions that can be made to increase job satisfaction. Further, given the contradicting results found from previous studies on the effect of gender on job satisfaction and turnover intentions of IT professionals, a study

from Sri Lanka--a different culture context-- may add value to empirical evidence on its moderating effect on job satisfaction and turnover intentions. Thus, understandings may assist managers to acknowledge and appreciate the status quo and to get rid of several stereotypes related to gender. Since female working population is increasing in the industry, gender related findings might provide insights to relevant authorities for necessary actions.

Depending on the career stages of IT professionals, their workplace behaviours and expectations vary. Thus, career stage creates varying effects on their turnover intentions. Conversely, depending on the career stage of the leaving employees, companies have to bear varying replacement and training costs (Zylka & Fischbach, 2017). Thus, findings on career stage's moderating effect will help to understand how employee workplace behaviour changes at times. Consequently, findings will assist managers in IT firms to tailor better HR initiatives considering the career stages of individuals. Furthermore, manager will be able take precautions to control the effect of career stage on pivotal talents' intentions to leave an organization.

The proposed model is based on social capital and social exchange theories. While Suseno and Rowley (2018) pointed on the need to use social exchange theory in turnover studies of service oriented firms, Osman et al. (2016) stressed on the need to used social capital theory in professionals' turnover studies. However, the latest review on IT turnover studies (Lo, 2015) provides evidence as no studies had applied these theories in their turnover studies. Thus, the current study will add value to broaden the application of social capital and social exchange theories in understanding professionals' turnover behaviour.

1.8   Definitions of Terms

A clarity on study-context helps to clearly define the target population and to define the boundary conditions when generalizing the findings (Seddon & Scheepers, 2012). Meantime, context definitions assist to define the boundary conditions of the knowledge claims (Zylka & Fischbach, 2017). Thus, following section defines key terms of the study.

1.8.1   Professional Workers

A profession can be defined as a special type of occupation with member characteristics of expertise, autonomy and belief in the regulations of the profession and the importance of service done by the profession (George, 2009). Professional workers are described as a group of people who consider themselves to be engaged in same sort of work (Maanen & Barley, 1982). The "International Standard Classification of Occupations" issued by (International Labour Office [ILO], 2012) defined professionals as those who:

> … increase the existing stock of knowledge; apply scientific or artistic concepts and theories; teach about the foregoing in a systematic manner; or engage in any combination of these activities (p. 109).

Professionals perform several tasks as:

> …conducting analysis and research, and developing concepts, theories and operational methods; advising on or applying existing knowledge related to physical sciences, mathematics, engineering and technology, life sciences, medical and health services, social sciences and humanities; teaching the theory and practice of one or more disciplines at different educational levels; teaching and educating persons with learning difficulties or special needs; providing various business, legal and social services; creating and performing works of art; providing spiritual guidance; preparing scientific papers and reports. Supervision of other workers may be included (ILO, 2012, p. 109).

1.8.2   IT Professionals

There is an inconsistency in the literature when conceptualizing and using terminologies to refer to IT profession (Zylka & Fischbach, 2017). ILO (2012) mentioned ICT professionals as those who:

> ...conduct research; plan, design, write, test, provide advice and improve information technology systems, hardware, software and related concepts for specific applications; develop associated documentation including principles, policies and procedures; and design, develop, control, maintain and support databases and other information systems to ensure optimal performance and data integrity and security (p. 153).

Further, they are:

> …researching information technology use in business functions; identifying areas for improvement and researching the theoretical aspects and operational methods for the use of computers; evaluating, planning and designing hardware or software configurations for specific applications including for Internet, Intranet and multimedia systems; designing, writing, testing and maintaining computer programs; designing and developing database architecture and database management systems; developing and implementing security plans and data administration policy, and administering computer networks and related computing environments; analysing, developing, interpreting and evaluating complex system design and architecture specifications, data models and diagrams in the development, configuration and integration of computer systems (ILO, 2012, p. 153).

As detailed in the "International Standard Classification of Occupations" (ILO, 2012), IT profession has many job categories. Thus, previous studies used diverse terms to refer IT professionals. In this study, when referring to previous studies, the original terms used in those studies are taken as it is; whereas, this study's focus is limited to programmers and software engineers. Thus, whenever the findings are discussed, it refers to programmers and software engineers. *Programming/software engineering* is the major job category in Sri Lanka which employs more than one fifth

of the total ICT workforce (refer Figure 1.1): their tenure in one organization is less as three years (Wickramasinghe, 2010). They have shown a high tendency to leave companies. Thus, they were selected as the sample of the study.

1.8.3   Turnover and Turnover Intention

There are four types of turnover: involuntary, voluntary, dysfunctional and functional (Zylka & Fischbach, 2017). Turnover happens when employees actually terminate their employment with organizations (Lo, 2015). That is: *"turnover is the last step of a sequence of withdrawal cognition"* (Tett & Meyer, 1993, p. 262). However, an employee initially forms an intention to leave the organization before actually leaves, and such intention has a direct effect on the actual turnover behaviour (Hoonakker et al., 2013; Lo, 2015). Thus, intention to leave is the subjective estimation of leaving the organization in near future (Mowday, Porter, & Steers, 1982).

When an employee initiated the turnover, it is known as voluntary turnover (Bludedorn, 1978). In other terms, when an individual deliberately and consciously willing to leave the formal organization of employment, it is known as voluntary turnover intention (March & Simon, 1958; Tett & Meyer, 1993) or the *"voluntary intention to cease from being employed by his or her current employer"* (Osman et al., 2016, p. 543).

A positive relationship has been observed between turnover intention and the actual turnover unceasingly (Bothma & Roodt, 2013; Byrne, 2005). For instance, from a study of hospital employees, on their determinants of intention to leave and intention to stay has provided evidence as intention to leave has predicted the future turnover (S. Cho, Johanson, & Guchait, 2009). Thus, turnover intention remains as a valid proxy in understanding actual turnover (Bothma & Roodt, 2013; Muliawan, Green, & Robb, 2009; Tett & Meyer, 1993).

1.8.4   Perceived Organizational Support

POS refers to: *"employees' perception concerning the extent to which the organization values their contribution and cares about their well-being"* (Eisenberger, Huntington, Hutchison, & Sowa, 1986, p. 504). POS posits that an employee's commitment to an organization is influenced by the person's perception on organization's commitment on their well-being in return (Eisenberger et al., 1986). POS concept supports the social exchange norm.

1.8.5   Professional Commitment

In commitment literature, occupation, profession and career have used interchangeably (Lee, Carswell, & Allen, 2000). G. Blau (1985, p. 280) defined career commitment as: "one's attitude towards one's profession or vocation". Taking the essence of definitions from several authors (G. Blau, 2003, 2009; Lee et al., 2000; May, Korczynski, & Frenkel, 2002) in commitment literature, recently, Yuan, Yu, Li, and Ning (2014, p. 71) defined occupational commitment as: "employees' attitude toward their professional and vocational careers." Occupational commitment is distinct from organizational commitment (Yousaf et al., 2015), yet those complement each other. As Thornton (1970) posited, cited in G. Blau (1985), earlier, professional commitment has operationalized as an individual's resistance to leave own professional role.

1.8.6   Job Satisfaction

As per Spector (1985), cited in Kowal and Roztocki (2015), job satisfaction is an attitudinal or affective reaction to a job. Chen (2008, p. 106) defined job satisfaction as: "a feeling, attitude or preferences of individuals regarding work". There are a few dimensions of job satisfaction; for example, Chen (2008) identified job satisfaction in three dimensions as social satisfaction, job related satisfaction and self-actualization satisfaction while Job Descriptive Index (JDI) (P. C. Smith, Kendall, & Hulin, 1969)

identified it in five perspectives: satisfaction with pay, promotion, co-workers, supervisor and work design.

1.9   Dissertation Outline

Including the current chapter, this dissertation consists of six chapters: Introduction, Literature Review, Methodology, Results, Discussion and Conclusion.

Chapter two discusses the literature related to turnover issue in general, as well as in particular to the IT industry using selected theories. The chapter discusses unique workplace behaviour of IT professionals and applicability of each predictor variable: POS, professional commitment and job satisfaction in a turnover model to answer the research questions.

Chapter three discuss the research framework followed by development of research hypotheses. The research design is explained at the end of the chapter, which details down the research instrument, sampling, data collection procedure and the data analysis method.

Chapter four has two major sections: evaluation of the measurement model and the evaluation of the structural model.

Chapter five discusses the findings for each hypothesized relationships comparing those with previous findings.

Chapter six starts from a summary of the objectives and the findings, followed by the implications, research limitations and the directions for future research.

1.10   Chapter Summary

Employee turnover is a critical global issue, especially in the IT industry from which the Asian countries suffer most. In Sri Lanka, high employee turnover in the IT industry

limited its competitiveness in the region. Regardless of the continuous studies that provide recommendations, the IT turnover issue remains unsolved. Thus, a novel approach is needed to study the turnover issue. Taking in to account some concerns raised in the recent reviews on IT turnover studies, this study selected predictors that are specific to the IT industry. Five research questions were derived from the aim and the objectives of the study. The scope of the study is presented in order to clarify the context and the target audience of the study. The significance of the study is explained in terms of the importance of the topic to scholars, industry and to the country. Each constructs' definitions and compositions were presented thereafter. A briefing on the forthcoming chapters is also provided in this chapter.

CHAPTER 2:   LITERATURE REVIEW

2.1   Introduction

In this chapter, related previous studies are examined while emphasizing the need of the current study. Chapter starts with an explanation on the turnover issue followed by a review on the cost of turnover and the unique workplace behaviour of IT professionals. A review on alternative turnover theories is presented thereafter. At the end of the chapter a discussion is presented on the influence of each predictor on turnover intention and a summary of the chapter.

2.2   Employee Turnover Issue in the IT Industry

Technical industries record higher turnover intentions compared to other industries (TINYpulse, 2016). Among such, IT industry has been continuously suffering from high turnover rates which drew the attention from information system research community on the issue (Lo, 2015). Since IT workforce is also aging (Lo, 2015), retention of the existing talented workforce is essential to any organization.

IT turnover occurs when an IT employee working in the IT field voluntarily terminates the employment from the organization (Lo, 2015). However, before such a termination occurs, employees form intentions to leave (Hoonakker et al., 2013; Lo, 2015), and an actual turnover is a result of a sequence of withdrawal cognitions (Tett & Meyer, 1993). Therefore, the turnover intention has a direct effect on actual turnover behaviour (Hoonakker et al., 2013; Lo, 2015). In that sense, a turnover intention is defined as an individual's deliberate and conscious willingness to leave the formal organization of employment (March & Simon, 1958; Tett & Meyer, 1993). In other words, turnover intention is a subjective estimation of leaving the organization in near future (Mowday et al., 1982).

Though variations were observed in few occasions, most of the studies continuously concluded that turnover intention is the strongest predictor of actual turnover (Tett & Meyer, 1993). For instance, Bothma and Roodt (2013); Byrne (2005); S. Cho et al. (2009) claimed that there is a positive relationship between the intention and the actual turnover. Consequently, in turnover studies, the turnover intention has been using as a representation of actual turnover (Bothma & Roodt, 2013; Ertürk & Vurgun, 2015; Muliawan et al., 2009; Tett & Meyer, 1993).

2.2.1 Cost of Employee Voluntary Turnover Intention

Previous empirical studies and surveys had identified both direct and indirect costs of employee turnover. For instance, as per The Society for Human Resource Management in USA, cited in TINYpulse (2016), the total employee replacement cost ranges from 90% to 200% of the annual income of companies, which can even be more in technological companies (TINYpulse, 2016). As per the American Management Association, cited in Gurazada and Rao (2013), employee turnover cost accounts for 25% to 250% of the annual salary of the existing employees.

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 et al., 2008). In particular, turnover results in extra client costs in information system offshoring companies (Dibbern et al., 2008). Even in non-IT firms, managements often have to recruit IT personnel than non-IT personnel (Zylka & Fischbach, 2017).

There are numerous indirect costs of employee turnover in the IT industry. For instance, when skilled employees join to competitors, firm's knowledge may flow to the competitors (Aime et al., 2010). From their review on IT turnover studies, Zylka and Fischbach (2017) summarised numerous evidence on cost and knowledge losses in IT

projects due to key personnel's turnover. When the leaving employee's job role involved coordination and communication, some operational disruptions can happen (Mobley, 1982). In development teams, when members leave, the project performances are weakened and knowledge is lost as the joined new member has different experiences (Pee et al., 2008). When senior developers leave, the replaced junior developers require some time to achieve the desired level of productivity such as additional time taken to familiarize with the project or to maintain the codes of the project (Zylka & Fischbach, 2017).

Turnover affects existing employees in numerous ways. For instance, when key employees leave organizations, it makes subordinates an indecision on work continuation and about the incoming leader (Shapiro et al., 2016). Loss of key personnel results work-overload to other team members (Zylka & Fischbach, 2017). Thus, it is a main reason in the industry to increase cost (Agrusa & Lema, 2007; D.-H. Cho & Son, 2012; Pietersen & Oni, 2014). Pee et al. (2008) concluded that there is a relationship between software project success and employee turnover.

Firms that lose key IT talents must bear significant costs of attracting, recruiting, and training new employees in order to replace those who left (Cha & Quan, 2011). Due to differences in skills, personalities and the mindsets of each, the consequences of turnover behaviour of IT personnel are differ from that of non-IT personnel (Zylka & Fischbach, 2017).

2.2.2 Unique Workplace Behaviours of IT Professionals

While drawing conclusions from other sector turnover studies whenever applicable, studies on IT professionals' turnover should start from the question whether they differ from other employees and if so, what effects those differences bring to turnover

behaviour (Lo, 2015). It is therefore important to look in to IT professionals' workplace behaviours before reviewing previous IT turnover studies.

In general, professionals are characterized by high professional commitment to cope with uncertainty (Carson & Bedeian, 1994; Mowday et al., 1982). They are loyal to their colleagues in workgroups and to professions than to working organizations (Mowday et al., 1982) and low in organizational citizenship behaviour (Mithas & Krishnan, 2008). Apart from the general characteristics of professionals, IT professionals demonstrate unique workplace behaviours. They are intrinsically motivated to the work they do (Lam, 2011), have high occupational identifications (Scholarios & Marks, 2004), and experience a threat of professional obsolescence (Fu, 2011; Harden et al., 2016). Software developers are specially characterized by high occupational identification (Scholarios & Marks, 2004). Further, IT professionals' attitudes towards careers at different career stages seem distinct; in fact, it was revealed that senior IT professionals were largely driven by push factors such as career satisfaction (Fu, 2011). In work places, they are in need of autonomy, independence (Igbaria, Greenhaus, & Parasuraman, 1991) and cohesion (Amabile, 1997).

Further, compared to non-IT employees, IT professionals have lower social needs (Zylka & Fischbach, 2017), and their need for growth, personal development and learning are high (Lee et al., 2000). They seek intellectually challenging jobs and have urge to solve problems and to learn new technologies (Bigelow, 2012). It was concluded that older IT personnel are less likely to quit their organizations than younger IT personnel (Igbaria & Greenhaus, 1992a). It was evident that once colleagues leave the organization, the trend is followed by the other IT professionals (Vijayakumar, 2012), due to social pressure they receive (Lo, 2015).

IT industry loses critical talents in two ways: higher turnover within the industry and career shifts to other industries. Mithas and Krishnan (2008) concluded that IT professionals leave companies frequently as they have job alternatives. That is, IT professionals enjoy high skill transferability (Adya & Kaiser, 2005). Evidence revealed that while 52% of the civil engineering graduates remain in the field 20 years after their graduation, among computer science graduates, only 19% remain in the IT field (Cappelli, 2001). Evidence from Brazil revealed that IT professionals move between organizations and to various other fields to acquire new professional experiences and to keep themselves attractive to employers (Ramos & Joia, 2013). Further, they were conscious and prepared for such shifts (Ramos & Joia, 2013). Findings of Ramos and Joia (2013); Sumner, Yager, and Franke (2005) proved that IT professionals who ran away from IT to non-IT companies had long careers in previous IT companies. However, they emphasized on the importance of staying in one organization for long; then, it prevents IT professionals leaving the industry later on. Thus, finding timely solutions for turnover issue may benefit the industry in the long run.

2.3   Reviewing Theories Applied in Turnover Studies

Employees in other industries and work groups such as the nursing industry (H.-Y. Chang et al., 2019; Y.-P. Chang, Lee, Chang, Lee, & Wang, 2019; Labrague, McEnroe Petitte, Leocadio, Bogaert, & Tsaras, 2018), the government (Pietersen & Oni, 2014), non-profit organizations (Knapp, Smith, & Sprinkle, 2017), and universities (Yousaf et al., 2015) have extensively studied turnover. As Ngo-Henha (2017) summarized, altogether, these turnover intention studies were around eight major theories: expectancy, human capital, equity, social exchange, the resource based view, Herzberg's two factor theory, job embeddedness theory and the theory of organizational equilibrium (TOE).

2.3.1 Theory of Organizational Equilibrium

The theory of organizational equilibrium (TOE) is known as the first formal turnover theory (Ngo-Henha, 2017), which was introduced by March and Simon (1958). TOE is the most influential theory of voluntary turnover: on which, many turnover studies were built (Joseph, Ng, Koh, & Ang, 2007). All the traditional rational models of turnover were based on TOE (Lo, 2015). As Lo (2015) summarized on the TOE, employees compare between inducements provided by the organization and the contributions expected from them by the organization: of which, the balance is a function of *desirability of leaving* and *perceived ease of movement* from the organization. In the review, Lo (2015) categorized the antecedents (known as distal factors in the review) in to individual, organizational and external environment factors based on the IT turnover studies which used TOE as the base. Dinger, Thatcher, Stepina, and Craig (2012); Guimaraes and Igbaria (1992); Jiang and Klein (2002) conducted their studies by assessing the antecedents of IT turnover on desirability of leaving and on the perceived ease of movement (two proximal factors).

2.3.2 Job Embeddedness Theory

The aim of some studies were to discover the factors that lead to an employee to stay with the organization, instead of factors that drive the person to leave the organization. This is because, some factors prevent employees leaving from their organizations. Most of these studies were rooted in job embeddedness theory--developed by Mitchell, Holtom, and Lee (2001). In relation to turnover, job embeddedness theory suggests that employees are connected or embedded to their organizations and to their communities (Mitchell et al., 2001). The integrations to professional and to social environment make employees feel not to sacrifice those connections for unknown new jobs and to unfamiliar environments (Mitchell et al., 2001). The extent of embeddedness depends upon the employee's link with several factors: other employees or community or

organizational activities, how much the employee's life is attached with the job and the community, and the ease of breaking those links (Mitchell et al., 2001). As per this theory, if an employee feels as embedded to the organization, profession and to the environment around the organization, and feels as it difficult to break such embeddedness, the employee stays in the current job (Ngo-Henha, 2017). However, IT professionals demonstrate a lack of organizational citizenship behaviour (Mithas & Krishnan, 2008) and plan for deliberate moves between organization (Ramos & Joia, 2013). Also, job embeddedness theory is more applicable in studies that target intentions to stay instead of intentions to leave. For instance, George (2015) studied the factors that led IT professionals to stay with their organizations which is different from the current study's objective.

2.3.2.1 Herzberg's two factor theory

Among motivational theories, Two Factor Theory (Herzberg, 1966) has been widely used in turnover studies. As the theory proposes, the two sets of factors in organizations--hygiene and motivation--separately contribute to job satisfaction and to job dissatisfaction (Herzberg, 1966). The theory assumes that satisfaction (motivation) and dissatisfaction (hygiene) are not reverse of each other (Herzberg, 1966). For instance, an employee who was unhappy due to an unpleasant working conditions will not necessarily be motivated when those conditions become pleasant (Ngo-Henha, 2017). Accordingly, an employee begins to think of leaving an organization when motivation factors are negatively affected (Ngo-Henha, 2017).

The theory had listed down generally accepted motivation and hygiene factors that differentiate between satisfaction and dissatisfaction. However, as per the understanding on IT professionals' distinct workplace behaviour as explained earlier, Two Factor Theory's application to understand the IT turnover is unclear. This could possibly be

because of the difficulty of generalizing IT professionals' motivation factors due to their complexity of behaviours and expectations.

2.3.2.2   The resource based view/theory

The resource based theory (Barney, 1991) is aimed to explain what makes an organization to gain a competitive advantage. The theory identifies all assets, organizational processes, information, knowledge, capabilities and firm's attributes as resources (Barney, 1991). Further, it believes that these resources generate competitive advantages to a firm when those perform better than competitors (Barney, 1991). In relation to turnover, the theory suggests that employees stay with their organizations when they feel that they are being valued as special and as a source of competitive advantage of the organization (Ngo-Henha, 2017). If not, employees positively respond to turnover intention appeals (Ngo-Henha, 2017). Thus, as Ngo-Henha (2017) explains, the turnover studies that used this theory suggestions to organizations to make efforts so as employees will feel their usefulness. In essence, concerning turnover intention, the theory explains employee feeling of usefulness as a source of competitive advantage.

2.3.2.3   Expectancy-confirmation theory

The Expectancy theory (Vroom, 1964) suggests that prior to any event, an expectation is formed, and when it is positively met, the person will be satisfied and if not, dissatisfied. Consequently, in deciding satisfaction or dissatisfaction, an event is evaluated before and after the occurrence of it. Expectancy theory has identified as one of the fundamental theories in turnover and retention studies (Ngo-Henha, 2017). For instance, Rathakrishnan, Imm, and Kok (2016) stated that employees join organizations with different expectations, and when those are not met, they are dissatisfied and demonstrate negative behaviours such as absenteeism and intentions to turnover. Further, from their evidence of the application of expectancy theory in turnover,

Rathakrishnan et al. (2016) concluded that when peers or superiors work hard and achieved key performance indicators and resulted in advancements, it promotes other staff members also to work hard to enjoy those benefits (Rathakrishnan et al., 2016). This is due to the expectations formed after observing the relationship between efforts and the benefits achieved (Rathakrishnan et al., 2016).

2.4 Social Capital and Social Exchange Theories in Conceptualizing Turnover Intention

2.4.1 Social Capital Theory in Conceptualizing Turnover Intention

In general, turnover intention studies were around above discussed eight major theories (Ngo-Henha, 2017). IT turnover studies in particular, were anchored in few theories: equity, utility, psychological contracts, human capital, planned behaviour, and motivation theories (Lo, 2015). Those studies were conducted at individual, organizational, and environmental levels (Lo, 2015).

Despite the organization is knowledge based or not, preserving the social capital, retaining highly skilled employees and controlling replacement costs are vital (Dess & Shaw, 2001). Social capital theory has been widely using to understand social networks, relationships and resources in work places (Suseno & Rowley, 2018). Given its multifaceted nature, the concept of social capital has been used in numerous forms. Its application as a theory and as a concept lasts from individual level to organizational level.

Organizational social capital which is then applied at the organizational level, is important in improving performance at work (Ahearne, Lam, & Kraus, 2014; Andrews, 2010; Hollenbeck & Jamieson, 2015). Similarly, at individual level, it always relates to favorable outcomes (Suseno & Rowley, 2018). Social capital has been used as a job resource which can interact with job demands in relation to turnover intentions

(Strömgren, 2017). The application of social capital as a concept can be widely seen in studies related to healthcare professionals. For instance, Strömgren (2017) used it as a resource in relation to employees' intention to leave, and found that high level of social capital was associated with low level of intention to leave among Sweden hospital employees. Overall, previous studies have proven that social capital leads to higher organizational commitment and lower turnover (Hauser, Perkmann, Puntscher, Walde, & Tappeiner, 2016; Watson & Papamarcos, 2002). It boosts corporation, learning (Dhanaraj, Lyles, Steensma, & Tihanyi, 2004; Hollenbeck & Jamieson, 2015) and knowledge networks at workplaces (Phelps, Heidl, & Wadhwa, 2012; Yu, Hao, Dong, & Khalifa, 2013). Further, social capital is found to be associated with lower emotional exhaustion and burnout (Kwon & Adler, 2014).

Previously, Oksanen et al. (2008) and Strömgren, Eriksson, Bergman, and Dellve (2016) emphasized the importance of social capital for health care professionals' well-being, job satisfaction and work engagements in relation to clinical improvements and to general work engagements. In their study on the relationship between social capital and turnover intention of healthcare professionals, Strömgren (2017) used four indices to construct social capital: recognition, trust on management, mutual trust between peers and reciprocity.

It was evident that social capital is a vital concept in understanding turnover behavior of professionals, which often time taken as a job resource in a work setting. A similar approach is used in the current study when social capital theory is applied in identifying the predictors of IT professionals' turnover intention. That is, when applied at individual level analyses, since social capital leads to positive outcomes (Lin, 1999), and enhances efficiency within a social structure (Camps & Marques, 2014;

Hollenbeck & Jamieson, 2015), in this study the concept of social capital is used as a job resource in a work setting of an IT firm.

A deep investigation on social capital in terms of its definitions, applications and outcomes is found in the review by Suseno and Rowley (2018). In that review, Suseno and Rowley (2018) had summarized the applications and the effects of social capital theory at three levels: individual, organizational and societal. As they posit, maintenance and utilization of social capital generate numerous positive outcomes to employees and to organizations (Suseno & Rowley, 2018); for example, social ties in organizations result in ties between knowledge workers (Mowday et al., 1982). Dess and Shaw (2001) advocated that voluntary turnovers' consequences on long-term performances are more attributable to social capital than to human capital (skills). Thereby, Dess and Shaw (2001) emphasized on the applicability of social capital over human capital in knowledge based organizations and in relation to professional workers.

Social capital outcomes improve organizational performances (Ahearne et al., 2014; Andrews, 2010; Hollenbeck & Jamieson, 2015) by increasing organizational commitment and reducing turnover rates (Suseno & Rowley, 2018). Therefore, social capital theory is useful in turnover intention studies. For instance, Dess and Shaw (2001) emphasized the growing importance of studying social capital theory in voluntary turnover studies. This is due to the changes occurring in organizational structures, nature of work and the inter-organizational competitiveness (Dess & Shaw, 2001).

However, the social capital theory had not much studied in service oriented firms; calling for future studies to explore its application in service sector firms (Suseno & Rowley, 2018). Likewise, Payne, Moore, Griffis, and Autry (2011) stated that scholars have not yet extensively studied management and organizational issues

using multi-level research based on social capital. Recently, Strömgren (2017) noted a deficiency of application of social capital as a job resource in turnover intention studies, and concluded it as an important factor in employee turnover. Regardless of the continuous emphases on the application of social capital theory in turnover studies (Dess & Shaw, 2001; Strömgren, 2017) and its rare application in service oriented firms (Suseno & Rowley, 2018), no study could be found using social capital theory in conceptualizing IT professionals' turnover intentions. It was evident from the recent review on IT turnover intention studies by Lo (2015). Based on the social capital theory, as Paré and Tremblay (2007) explained, when an organization demonstrates a helpful atmosphere, employees tend to motivate to stay with it. However, regardless of the attractive compensation packages and other benefits and supports IT professionals enjoy, their turnover remains high. Thus, it is interesting to study how social capital theory's posits apply for IT professionals.

Compared to other professionals, IT professionals require to keep their knowledge up to date, and sometimes, staying in one organization may limit their opportunities to get exposed to different technological advancements. Thus, they purposefully move between organizations to acquire new professional experiences in order to keep themselves attractive to employers (Ramos & Joia, 2013). Thus, inducements must be provided within organizations for them to sense high opportunity costs of moving to other organizations. Meantime, such inducements should create positive feelings about the organization. If not, mere remaining in organizations will not generate productive results, as happy employees only demonstrate extra role performances. Willingly remaining in organizations is especially important for the IT industry, as performances in the industry are highly depend upon individuals.

Employees who perceive higher supports from the organization tend to demonstrate higher job related efforts resulting to higher job performances and extra role performances due to felt obligation to organizations (Kurtessis et al., 2015). Similarly, regular helping behaviours at workplaces enable interpersonal contacts and relationships among peers and with superiors (Bolino, Turnley, & Bloodgood, 2002). Therefore, in an organizational environment where strong social capitals exists, employees are motivated to stay (Paré & Tremblay, 2007).

Though social capital theory was not directly used to conceptualize, on their study on IT professionals' turnover intentions, Paré and Tremblay (2007) used *helping behaviour* as a construct, which is related to the formation of social capital at work. They concluded that IT professionals who help their peers and superiors develop close relationships with each other and receive support in return, resulting such employees to voluntarily remain with organizations (Paré & Tremblay, 2007). Thus, the helping behaviour found a significant negative relationship with turnover intentions (Paré & Tremblay, 2007). Inversely, higher turnover may reduce social capital and reciprocal support within groups and the helping behaviours in organizations (Paré & Tremblay, 2007). Therefore, organizations must be able identify different forms of supports and inducements that are helpful to create social capitals within organizations. Consequently, organizations will be able to generate positive outcomes from the generated social capital. Thus, organizations will be able to differentiate between who willingly remain and who are trapped in the organization due to unease of moving.

Following the reasoning of those previous studies and based on the understanding on the relationship between social capital and employee reactions to social capital (in terms of performance, loyalty and motivation), this study proposes that in supportive

environments, employee turnover intention is low. However, since organizational practices' influences on employees are decided based on how employees perceive them at their personal levels (Wayne, Shore, & Liden, 1997), a predictor that captures employee perception on support is needed to predict turnover intentions. Since POS represents employee perception on organization's care and wellbeing for them, in the proposed model, it was predicted to have a negative association between POS and turnover intentions.

In their deep investigation on theories of capital, Lin (1999) compared and contrasted between various forms of capital including social and human capital. The comparisons were based on theorists contributed to the development of each theory, definition of each capital and the level of analysis of each type of capital. As per this analysis, human capital is identified as an investment in technical skills and knowledge of an individual in contrast to social capital which perceives capital as an investment in social networks (Lin, 1999). In that sense, human capital also perceives capital as an investment (Lin, 1999). In other terms, both human capital and social capital shares some similarities as both emphasize on investments, which at a time for an individual (human capital) or investments among individuals (social capital). This is because, the sum of individual returns benefit the collective too (Lin, 1999, p. 30). However, the four elements in social capital—information, influence, social credentials and reinforcement makes it different from human capital in the form of social capital's ability to works in instrumental and expressive actions (Lin, 1999).

2.4.2 Social Exchange Theory in Conceptualizing Turnover Intention

Social exchange theory (P. M. Blau, 1964) has used to study numerous relationships in organizations such as among the organization and the employees and between co-workers (Harden et al., 2016). As per Cropanzano and Mitchell (2005)'s review, the

relationship between an organization and its employees is decided based on the extent to which the parties explicitly and implicitly respect to agreed social rules and norms of exchange. Trust, loyalty and commitment are some of the examples for the attributes that define the extent of such relationships (Ngo-Henha, 2017). The theory presumes that the rule of reciprocity is involved in those social rules and norms of exchange (Ngo-Henha, 2017). Reciprocity norm assumes a natural obligation to each parties in a social relationship when they care for each other (Gouldner, 1960).

Consequently, as per the social exchange theory, employment is regarded as a trade of employees' efforts and loyalties to the organization in return of tangible benefits and social resources from the organization (Cropanzano & Mitchell, 2005). Social exchange theory focuses on the quality of exchange relationships between the organizations and the employees, and suggests that employee perception on the quality of the exchange relationships decides their well-being and motivation at work (Avanzi et al., 2014). The theory posits that workplaces develop social exchange relationships (Cropanzano & Mitchell, 2005), one such is POS, which represents the relationship between an employee and the organization (Eisenberger et al., 1986; Ertürk & Vurgun, 2015).

If managers are concerned on their employees' commitment to the organization, employees in return concerned on the organization's commitment to them (Eisenberger et al., 1986; Rhoades & Eisenberger, 2002; Shore & Shore, 1995). Therefore, it can be suggested that when social exchanges are not met as expected, employees positively respond to turnover intention appeals. That is, when the treatment from the organization is reverse of what had expected, in return employees demonstrate negative or poor behaviours instead of kind and positive responses (Huang et al., 2016). Therefore, social exchange theory is useful in understanding and explaining how an intention to turnover emerges in a person's mind.

By acknowledging the application of social exchange theory to understand exchange relationships at work, from their findings Wayne et al. (1997) concluded that both types of exchanges: with the leaders and with the organization should be incorporated in models that predict employee attitude and behaviour. After their study on social exchange theory for healthcare professionals, Biron and Boon (2013) stressed the need to investigate social exchange relationships on turnover intentions from other industries. Particularly, Osman et al. (2016) substantiated the definite need to empirically prove the relationship between social exchanges and turnover intentions of professional workers. Therefore, a turnover intention study that is rooted in social exchange theory from IT industry fills a gap in the social exchange theory literature.

Since social exchange theory laid the foundation for the concept of POS (Avanzi et al., 2014; Kurtessis et al., 2015), it is expected that an employee with higher POS demonstrates higher job related efforts resulting in extra role performances (Kurtessis et al., 2015). Employees do so, due to obligations to organizations and in return expect organizations to notice the enhanced performance and to reward for them accordingly (Kurtessis et al., 2015). If the organization demonstrated high involvement HRM practices such as competence development, recognition and empowerment, then professionals tend to feel their importance, be responsible and demonstrate their creativity and competencies (Paré & Tremblay, 2007). As per the social exchange theory, such organizational practices will signal the employees about the organization's supportive behaviour, and that the organization seeks to maintain social exchange relationships with employees (Eisenberger et al., 1986). In IT industry, the social exchanges between supervisors and their subordinates and among co-workers create sense of obligation to be committed to the organization and to decrease turnover intentions (Harden et al., 2016). Earlier, Wayne et al. (1997) also posited that when

organizations invest in employee developments, it encourages to develop strong social exchange relationships at work.

In the case of IT professionals, as they are of high concern on own employability over organizational commitment, it is understandable that they seek for opportunities within the organization to get their professional advancement needs fulfilled. Thus, instead of conventional organizational commitment concept (continuous commitment), it is important to investigate the influence of professional commitment on their turnover intentions. As IT professionals are in need of autonomy, independence (Igbaria et al., 1991), have growth needs, personal developments, learning (Lee et al., 2000), and seeking intellectually challenging jobs to learn new technologies (Bigelow, 2012), it is presumed that in a supportive organizational environment where above needs are stimulated and social exchanges are maintained, IT professionals remain.

Based on the understanding developed on social capital and social exchange theories, in this study two aspects of employee perceptions: perception on organizational support (POS) and professional commitment are used to predict turnover intention. As explained before, since POS and professional commitment increase social capital and social exchange relationships at work, it is expected the predictors to negatively influence the turnover intention.

2.5   Concept of Perceived Organizational Support (POS) in Turnover

While organizations are interested in knowing employees' commitments to them, in return, employees too concerned about organizations' commitments to them. POS captures this phenomenon as POS is "employees' perception concerning the extent to which the organization values their contribution and cares about their well-being" (Eisenberger et al., 1986, p. 504). *Inducement–contribution perceptive* (March & Simon, 1958) suggested that employee participation and contribution in organizations

are decided after balancing the contributions expected from them and the inducements provided for them by the organizations. Consequently, when employees perceive that organizations care for them and value them, those are remarked as high inducements, and they obliged to contribute back to the organization (Allen et al., 2003; Eisenberger et al., 1990; Eisenberger et al., 1986) by remaining with it (Allen et al., 2003). This is because, the *reciprocity norm* creates a natural obligation to each other when they care for each other (Gouldner, 1960). The norm of reciprocity (social exchange) allows striking a balance between concerns for each other. Therefore, based on the reciprocity of concerns and care for each other, when employees feel high obligations to repay the organization, the strengthened POS results in high affective commitments (Rhoades & Eisenberger, 2002). POS reflects employee belief of organization's commitment toward them. Consequently, whenever a high support is perceived, the employee is reluctant to voluntarily withdraw from the organization (Allen et al., 2003; S. Cho et al., 2009). Inversely, when employees perceive that the work environment is stressful and unsupportive, turnover is an escape strategy for them (Avanzi et al., 2014). Hence, turnover reflects a failure of the relationship between employees and the organization (Avanzi et al., 2014).

Thus, managers must understand that employee turnover intention does not get directly affected from HR practices (Allen et al., 2003), but actual turnover occurs through individual employee perception and feeling on the extent to which employer values and cares about them (Wayne et al., 1997). Therefore, POS is comprehensive and best suited in explaining employee behaviour than conventional commitment concepts (Shore & Wayne, 1993) which plays an important role in turnover studies (Allen et al., 2003). On the other hand, employee willingness to remain with the organization should be differentiated from the feeling of discomfort of being trapped in an organization due to high costs of leaving (i.e. continuance commitment) (Rhoades &

Eisenberger, 2002). Therefore, POS as a predictor in a turnover intention study may assist to distinguish between employees who willingly staying and those who stay due to other unavoidable conditions.

Individual's perceptions drive their behaviour, and perception is important in understanding turnover phenomenon (Ajzen, 1991). Previously, Cha and Quan (2011) emphasized the importance of incorporating organizational support as a predictor in IT professionals' turnover studies. Further, there is a high need to empirically prove the relationship between POS and turnover for a better understanding on the POS concept and their relationships (Griffeth, Hom, & Gaertner, 2000). Recently, Knapp et al. (2017) stated that POS has undervalued in employee satisfaction and turnover studies, yet it is a critical predictor.

Continuing Allen et al. (2003)'s perspective, the current study understands the turnover issue from employee-perspective on organizations' efforts rather than investigating the effectiveness of HRM practices from organization's point of view. As Campbell (1999) explained, it is difficult to explain how organizational HR practices generate results at individual levels. Thus, employee perceptions need to be studied separately for each scenario. This is because; the findings from previous studies cannot be generalized across the world due to individual differences in perceptions. Therefore, a turnover intention study should not overlook POS as a predictor.

2.6   Concept of Professional Commitment in Turnover

As explained before, professionals bear unique workplace behaviours which lead to the presumption that IT professionals leave their companies frequently due to their high professional commitment. Furthermore, lifetime employment is no longer a promise by organizations (Hall et al., 2005). Thus, employees experience insecure feelings

regarding their current jobs (Cicek et al., 2016). Meantime, organizations maintain a transactional relationship with their employees based on employee short term contributions (Hall et al., 2005; Rai, 2017). As a result, for individual employees, occupational commitment is more important than organizational commitment (A. Cohen, 2007). Thus, individuals are more concerned about their occupational goals (Yousaf et al., 2015). Consequently, the attachment to the organization is weakened (Yousaf et al., 2015). Due to all these changes, it is important to understand the role of professional commitment in organizational turnover intention (Yousaf et al., 2015).

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 perceived cost of leaving the organization, as per the human capital theory, when an organization has invested in developing specific skills in employees, possibility of they 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). Moreover, in the IT industry, the performance and the quality of work highly depend on individuals' commitment, skill advancements and updates. The concept of professional commitment assists in capturing high performers in the industry. Biron and Boon (2013) figured out that the findings are inconsistent on whether satisfied high performers are likely to stay or positively respond to alternative job offers. Lo (2015) highlighted the need to study the influence of IT professionals' unique workplace behaviours in their turnover. Further, Lo (2015) stressed on the need to incorporate

industry-specific and IT professionals-specific predictors in IT turnover studies instead of repeating common predictors. Also, highly professionally committed people are less covered in the commitment literature (X. Wang & Armstrong, 2004).

In previous studies, professional commitment has been proven to have a positive relationship with organizational commitment (Aryee & Tan, 1992; A. Cohen, 2000; Wallace, 1993). As Yousaf et al. (2015) explained, this is due to the employment setting an organization provides to an individual to consistently engage with his/her occupational values and goals. Professional commitment's influence on turnover intention has two competing arguments. First, on the notion that simultaneous commitments to the organization and to the profession are impossible (P. M. Blau & Scott, 1962; Gouldner, 1957), it is argued that professional commitment positively influences turnover intention. Cavanaugh and Noe (1999) supported this argument stating that outside opportunities would be opened for employees who are committed to the profession, and the success in the career would result in short stays in current organizations. In essence, as per the first argument, it is assumed that a professionally committed person would not be committed to the organization as dual commitments are difficult; thus, higher turnover intentions. Similar results were found by E. Chang (1999); Silliker (1993).

In contrary to the first argument, supporting on the notion that simultaneous commitments to the profession and to the organization are possible, Yousaf et al. (2015) argued that employees who are committed to the profession would seek more opportunities within organizations, resulting to weaken turnover intentions. Similarly, employees who are not committed to the profession would make turnover decisions easily as for such employees, no much opportunities would be opened in current

organizations (Yousaf et al., 2015). Consequently, it is probing to investigate the impact of their professional commitment on turnover intentions.

2.7 Concept 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 et al., 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 the 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, etc.), opportunities to spend time on professional work than administration work and work autonomy should be provided adequately (Chen, 2008). IT professionals experience high job satisfaction when supervisor support is high and opportunities are offered for career development (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, a work nature 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", S. 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 mainly 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. In 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). Further, IT professionals working in one organization for longer periods had experienced less job satisfactions and intended to leave current working organizations (Wickramasinghe, 2009).

Previously, several studies found significant negative relationships 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. Furthermore, job satisfaction mediates relationships at individual, group and organization levels (Tongchaiprasit & Ariyabuddhiphongs, 2016) and mediates the relationships with withdrawal cognitions (Hom & Griffeth, 1995).

2.8   Chapter Summary

In this chapter, the cost of employee turnover is analysed in terms of its effect in general and specially to the IT industry. Thereafter, the unique work place behaviour of IT professionals is discussed in detail. After reviewing the theories applied in the existing turnover studies, the chapter discussed the selected two theories of the current study: social capital and social exchange theories. The chapter ends with a detailed discussion on each variable of the study along with theoretical explanations.

CHAPTER 3: METHODOLOGY

3.1 Introduction

At the beginning of this chapter, the research framework is presented. Thereafter, hypotheses are proposed while highlighting the gaps in the previous literature. Later in the chapter, the research design is detailed down with the tests and procedures used to develop the research instrument, to conduct the pre - test and the pilot study. Thereafter, sampling and data collection procedures are presented. The chapter ends with a discussion on the selected statistical data analysis method and a summary of the chapter.

3.2 Research Framework

Based on the theoretical understanding developed in previous sections, in this study, perceived organizational support (POS) and professional commitment are used as main predictors of IT professionals' turnover intentions. Out of the two independent variables, POS intends to capture an individual's feelings on the extent of support received from the organization while professional commitment is intended to capture how much the individual is committed to the profession and thereby its influence on turnover intention. As per the understandings developed on the theories of social capital and social exchange, it is evident that both theories are related and useful in explaining turnover behaviours, especially in relation to professionals.

Both social capital and social exchange theories received influences from *reciprocity norm* and *inducement-contribution norm,* and those highlighted that employees expect support from organizations and prefer to develop social ties at work. Here the support can be either organizational support in general--represented by POS--or the inducements to fulfil professional advancement needs--represented by professional commitment--in the proposing model. Professionals expect support from organizations. When high involvement HRM practices are seen, those signal organization's care for

employees (Eisenberger et al., 1986); Thus, they feel their importance and responsibility (Paré & Tremblay, 2007).

As per the social capital theory, when strong social capitals exist in organizational environments, employees are motivated to stay (Paré & Tremblay, 2007). Similarly, social exchange theory suggests that social exchange relationships are developed in organizations (Cropanzano & Mitchell, 2005), and employment is a trade of employees' efforts and loyalties for the benefits and social resources from the organizations (Cropanzano & Mitchell, 2005). This is because in such an environment, interpersonal contacts and relationships are enabled between peers and with superiors (Bolino et al., 2002). In essence, professional commitment's behaviour is predicted in the model based on the theoretical understanding that when organizations demonstrate helpful atmospheres and promote social ties among peers and with superiors, professionally committed employees tend to negatively respond to turnover intention appeals. Further, the second predictor—professional commitment investigates the claim that IT professionals frequently leave organizations due to high commitment to the profession than to working organizations.

Further, to make it more inclusive, this study attempts to capture the effect of job satisfaction on IT professionals' turnover intentions. Earlier, it was found that job satisfaction primarily determines IT professionals' turnover (Igbaria & Greenhaus, 1992b; Korunka et al., 2008) and turnover intentions (Guimaraes & Igbaria, 1992). Further, job satisfaction is an important mediator between variables (Knapp et al., 2017): Turnover research should not overlook job satisfaction (Allen et al., 2003). Therefore, this study investigates the mediating effect of job satisfaction on the relationships between POS, professional commitment and turnover intention.

Further, gender is vital to explain differences within a group. Previous studies revealed contradicting results on gender's effect on various relationships in individuals' workplace behaviours (Hoonakker, Carayon, Schoepke, & Marian, 2004; Kowal & Roztocki, 2016; Ryan & Harden, 2014). Thus, the study conceptualizes the effect of gender on turnover intention.

On the other hand, based on their career stages, employee turnover intention vary (A. Cohen, 1991). Similarly, the company that loses employees has to incur varying training and replacement costs, depending on the career stage of the leaving employee (Zylka & Fischbach, 2017). Thus, the proposed conceptual model consider its effect in understanding the turnover phenomenon. The proposed conceptual model is depicted in Figure 3.1.
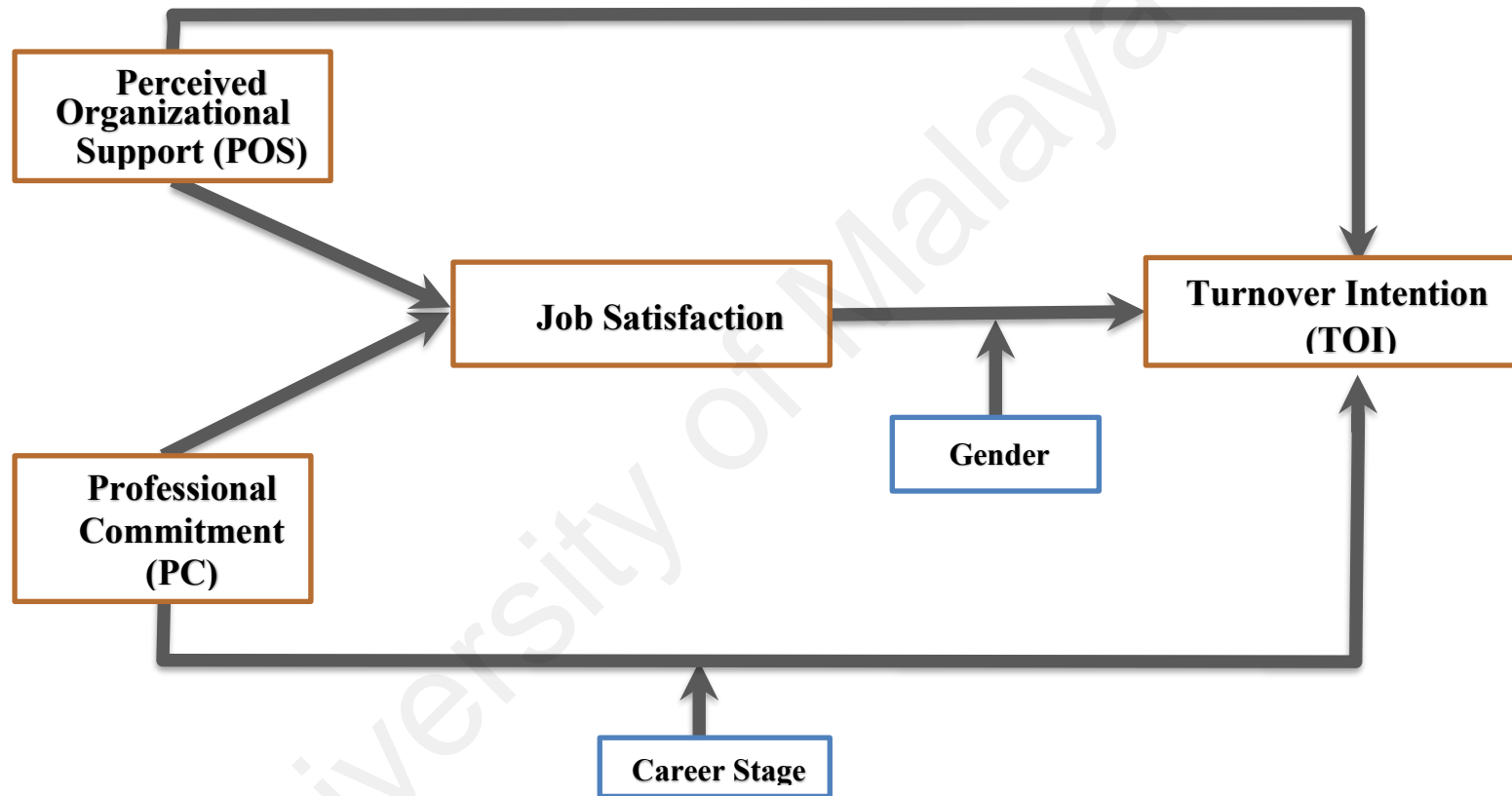
Figure 3.1: Proposed Conceptual Model

3.3 Hypotheses Development

Predictors have been repeating in IT professionals' turnover studies and those predictors were not unique to IT profession either (Lo, 2015). Thus, IT turnover studies must incorporate individual and psychological factors to understand the turnover issue (Korsakienė et al., 2015). In this study, drawing from social capital and social exchange theories, it is proposed that turnover intentions of IT professionals have effects from their perception on organizational support (POS), commitment to the profession, job satisfaction. Further, it is predicted that gender and career stages will influence turnover.

3.3.1 Employee Voluntary Turnover

The decision to turnover can be categorized as *permanent*, if the employee left the organization or as *horizontal mobility*, if an employee accepted a transfer to another department within the organization (Kirpal, 2004). Employees form expectations about their employment and display behaviours and attitudes after comparing such expectations with actual experiences at work places (Porter, Steers, Mowday, & Boulian, 1974). Literature provides evidence as when it is easy for an employee to move from one organization to another, it tempts the person to quit (Trevor, 2001) or at least to search for other alternative jobs outside (Swider, Boswell, & Zimmerman, 2011). Therefore, companies look for strategies to increase the switching cost to their employees. However, an organization can be more benefited if employees willingly remain with the organization than trapped due to unease of leaving it. Thus, turnover studies need to divert to investigate the predictors that are capable to create such situations. Thus, in this study, turnover intention is the endogenous variable for which the influences are predicted through two main predictors: perceived organizational

support and professional commitment. It further considers the influence of job satisfaction, gender and career stage.

3.3.2 Perceived Organizational Support and Turnover Intention

As per the explanations on *inducement-contribution perspective* by March and Simon (1958), employees decide on their continuation of participation to organizations after balancing inducements offered by organizations and the contributions expected from them. Employees who perceive higher levels of care and values by organizations perceive those as high inducements and feel obligations to repay in terms of remaining (Allen et al., 2003; Eisenberger et al., 1990; Eisenberger et al., 1986). Recently, Biron and Boon (2013) concluded that workplace social exchange relationships are related to employee turnover intentions. That is, when high quality exchange relationships are perceived, employees are obliged to remain; have lower turnover intentions (Avanzi et al., 2014). Conversely, when employees are dissatisfied due to poor exchange relationships such as poor support or contract breach, they are likely to quit from the organizations (Avanzi et al., 2014).

On the basis of *reciprocity norm*, when an employee perceives an obligation towards the organization, the strengthened perceived organizational support (POS) creates a higher affective commitment   (Rhoades & Eisenberger, 2002). Professionals feel their importance and be responsible when organizations demonstrate high involvement HRM practices (Paré & Tremblay, 2007). Such supportive HRM practices signal organization's care for them (Eisenberger et al., 1986). As a result, individuals who perceive higher support from organizations are less likely to voluntarily withdraw from organizations (Allen et al., 2003), and they demonstrate lesser intentions to leave the organizations (Avanzi et al., 2014; S. Cho et al., 2009; Eisenberger, Armeli, Rexwinkel, Lynch, & Rhoades, 2001). However, an exception can be found on the relationship

between POS and turnover intention from Indian generation Y employees, where POS was positively related to turnover intention (Rai, 2017). The explanation for the contradicting result was given based on the fact that the thought process of generation Y cohort is more in the present than in the future (Rai, 2017). Unlike other previous generations, generation Y people who belong to the age of 19-29 are more in to short term transactional relationships with their organizations, also in particular, Indian generation Y employees lack confidence on organizational support from their employers (Rai, 2017). In essence, the contradicting results can be due to the sample of generation Y cohort and due to India's distinct culture which influences their workplace behaviours. Therefore, the application of this contradicting finding to other sample of employees and to regions need to be studied and confirmed.

Recently, Knapp et al. (2017) studied the application of POS as a predictor of turnover intention of non-profit employees, and concluded that POS is one of the overlooked, yet critical predictors of employee satisfaction and turnover. Recent studies with respect to IT professionals have shown strong negative associations between POS and turnover intentions (Ertürk, 2014). Earlier, Cha and Quan (2011) emphasized the importance of incorporating organizational support as a predictor in IT professionals' turnover studies. Recently, after evaluating turnover studies of last 100 years, in their suggestion for future research directions, Hom et al. (2017) stressed on the need to incorporate POS as a predictor in future turnover studies. Drawing from social exchange theory, Cropanzano and Mitchell (2005) stated that POS is a successful predictor of turnover intentions. It is hypothesized that;

> *[H1]: turnover intentions of IT professionals are negatively influenced by the degree of their perceived organizational support.*

3.3.3 Professional Commitment and Turnover Intention

As explained in the literature review, regarding the relationship between professional commitment and turnover intention, contradicting results are observed. Consequently, there are two opposite arguments. Cavanaugh and Noe (1999) argued that when an employee is professionally committed, the person would be succeeding 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, E. Chang (1999); Silliker (1993) found that higher the professional commitment, higher the intention to leave the organization. For this positive relationship, explanations had 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 (P. M. 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, Yousaf et al. (2015), from a sample of both professionals and non-professionals revealed that they can be 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 organizations to fulfil the professional goals; as a result, it would not be easy to leave the current organizations. Their study thus 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 make 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. Recently, H.-Y. Chang et al. (2019); Y.-P. Chang et al. (2019) on their studies on

hospital nurses found that professional commitment negatively influences turnover intention.

Further, occupational/professional commitment is a strong predictor of organizational turnover and a deeper understanding on the construct will assist to craft better management strategies to increase favourable outcomes (Yousaf et al., 2015). Formerly, Bartol (1979); G. Blau (1989); Lu, Lin, Wu, Hsieh, and Chang (2002) found a negative relationship between professional commitment and intention to leave the organization. Based on the recent studies, drawing from social exchange and social capital theories, it is therefore hypothesized that;

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

3.3.4 Perceived Organizational Support and Job Satisfaction

Job satisfaction is an important variable that should not be omitted in turnover research (Allen et al., 2003). POS and job satisfaction are related to each other, yet distinct (Eisenberger, Cummings, Aemeli, & Lynch, 1997; Shore & Tetrick, 1991). As Shore and Tetrick (1991) explained, job satisfaction is more vulnerable to recent changes in job conditions, on which organizations have less control over, whereas POS is a long term perspective. POS is one of the disregarded, yet critical predictors of employee satisfaction and turnover (Knapp et al., 2017). When an individual is perceived higher support from the organization, the increased feeling of responsibility and the feeling of care and well-being results in a higher satisfaction about the current job. That is, when high quality exchange relationships are perceived, employees perceive higher inducements (Avanzi et al., 2014). Though studies on POS in relation to IT professionals are limited, results from other types of employees such as employees in non- profit organizations (Knapp et al., 2017), sales people and insurance agents (Allen

et al., 2003) and university graduates (Eisenberger et al., 1997) revealed a positive relationship between POS and job satisfaction. Similarly, a recent study from Indian generation Y employees demonstrated a positive significant relationship between POS and job satisfaction (Rai, 2017). Therefore, it is hypothesized that;

> *[H3]: job satisfactions of IT professionals are positively influenced by the degree of their perceived organizational support.*

3.3.5 Professional Commitment and Job Satisfaction

Previous studies provided evidence on the strong relationship between professional commitment and job satisfaction: especially in healthcare sector (Brewer & Nauenberg, 2003; Hsu, Wang, Lin, Shih, & Lin, 2015; Kuokkanen, Leino-Kilpi, & Katajisto, 2003). From their study about nurses, Hsu et al. (2015) revealed that professional commitment explained 32% of the variance in job satisfaction. They have identified that professional commitment influenced both intrinsic and extrinsic job satisfaction of nurses. In that study, professional commitment was captured from few aspects: willingness to make an effort, appraisal of continuing one's career, and belief in goals and values. It was found that individuals who were higher in those aspects experienced higher levels of job satisfaction; thus, concluded as professional commitment is a critical predictor of job satisfaction (Hsu et al., 2015). While empirical evidences on the relationship between job satisfaction and professional commitment can be found in other industries such as sports referees (Kim, 2017), veterinary doctors (Deepak, 2016) and nurses (Hsu et al., 2015), a paucity of studies was observed in the IT industry. However, based on the positive relationship found between professional commitment and job satisfaction for other professionals, it is hypothesized that;

> *[H4]: job satisfactions of IT professionals are positively influenced by the degree of their professional commitments.*

3.3.6   Job Satisfaction and Turnover Intention

Employee job satisfaction determines their workplace behaviour (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 et al., 2008; Lu et al., 2002; Poggi, 2010; Rai, 2017). Findings in relation to IT professionals follow the same inverse relationship between job satisfaction and turnover intention (Baroudi & Igbaria, 1994; Igbaria & Guimaraes, 1999; Korunka et al., 2008; Poggi, 2010). Thus, it was concluded that job satisfaction mainly determines IT professionals' turnover (Igbaria & Greenhaus, 1992b; Igbaria, Meredith, & Smith, 1994; Igbaria & Siegel, 1992; Korunka et al., 2008), and it has a great influence on turnover intention (Guimaraes & Igbaria, 1992). This is because, when organizational environments maintain social ties and invest in social capitals, the increased job satisfaction creates a reciprocity which then force an individual to negatively respond to withdrawal cognitions. It is hypothesized that;

> *[H5]: turnover intentions of IT professionals are negatively influenced by the degree of their job satisfactions.*

3.3.7   The Mediations and Moderations

3.3.7.1   Mediating role of job satisfaction in turnover intention

It is presumed that the effects of POS and professional commitment on turnover will be mediated by job satisfaction. Consequently, POS and professional commitment will have both direct and indirect effects on turnover intention.

Job satisfaction mediates relationships with withdrawal cognition and thus, many turnover models suggest its mediation (Hom & Griffeth, 1995). A mediation is best occurred in a case of a strong relation between the predictor variable and the criterion

variable (Baron & Kenny, 1986). When an individual perceives a higher support from the organization, the attachment to the organization and to the job increases. The created pleasant emotions about the organization and about the job are represented by a higher level job satisfaction. Thus, the intention to leave the organization is weakened. In other terms, the perceived organizational support stimulates the satisfaction at work, resulting for an employee to re-think about leaving the organization. Regardless of the strong relationship between POS and turnover intention, studies displayed that such relationship is mediated by job satisfaction (Allen et al., 2003; Eisenberger et al., 1997; Knapp et al., 2017). Recently Rai (2017) found that job satisfaction had mediated the positive relationship between POS and turnover intention. In the light of those literature, it can be expected that job satisfaction mediates the effect of POS on turnover intention.

Further, a similar mediation is expected 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 increase; as a result, 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 forth. Job satisfaction is a feeling experienced by individuals, which converts experiences into behavioural

outcomes. 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 job satisfaction's mediating effect between independent and dependent variables. Consequently, it is hypothesized that;

[H6]: job satisfaction mediates the effects of perceived organizational support and professional commitment on turnover intention.

3.3.7.2 Moderating effect of gender

Demographic characteristics of individuals influence their perceptions, feelings, reactions to their job conditions, experiences, satisfaction (Lim & Teo, 1996; Wickramasinghe, 2009), and to turnover intentions (Lo, 2015). Out of many demographic variables, gender made most of the studies to generate different results. For example, Clark (1997) empirical evidence on job satisfaction of men and women in two different scenarios. In male dominating workplaces, men and women with identical jobs and expectations reported identical job satisfactions while among young, educated and professionals, women had less expectations compared to men on average, so, different in satisfactions (Clark, 1997). Gender differences were observed in several aspects of the IT industry; for example, on visibility: males were more visible than females, as men involve in more work groups, and are different in how they value organizational benefits (Ryan & Harden, 2014). Further, female IT professionals who considered to leave their current organizations had perceived higher sacrifices than males (Ryan & Harden, 2014). From their study, Lim and Teo (1996) found that limited upward mobility was the main source of job dissatisfaction among female IT personnel. Further, the study found that females experienced lack of support and encouragement at workplaces, which also contributed to their dissatisfaction (Lim & Teo, 1996). From a sample consisted of executives, managers and professionals, Miller

and Wheeler (1992), cited in Biron and Boon (2013) found that when satisfaction was reduced, females had higher intentions to turnover from their organizations, thus, concluded as females are more sensitive to low job satisfaction than males.

Hoonakker et al. (2004) revealed that for female IT employees, supervisor matters the most in their job satisfactions. Recently, Kowal and Roztocki (2016) found that females are typically less satisfied with their pay and promotions. Biron and Boon (2013) have controlled the effect of gender in their study due to the influence that gender brings on to the strength of the effect of social exchange relationship in turnover intentions.

However, depending on where the studies were conducted, gender's effect on job satisfaction had generated varying results. For example, females in developed countries were generally more satisfied with their jobs than males (Zou, 2015), or as per Ghazzawi (2010), gender has no effect in the IT profession. Female IT professionals were less satisfied in transitional economies (Kowal & Roztocki, 2016) and in developing economies (Wickramasinghe, 2009). Conversely, from Taiwan (Kuo & Chen, 2004) and Poland IT industries (Kowal & Roztocki, 2015), it was found that gender has no effect on job satisfaction among IT professionals.

However, in the recent past gender differences were observing among IT professionals in their satisfaction and turnover intentions (Hoonakker et al., 2013; Thatcher, Stepina, & Boyle, 2002). Most of the gender related turnover studies are from the West (Guimaraes & Igbaria, 1992; Igbaria & Siegel, 1992).

Wickramasinghe (2009) concluded that in Sri Lanka, gender was a significant measure of job satisfaction among IT professionals, where female IT graduates were less satisfied than their male counterparts while men enjoy IT as a profession compared

to women. However, females remain in current working places than men (Wickramasinghe, 2009). Before this, it was concluded that there is no difference among male and female IT employees in Sri Lanka in their turnover intentions and job fits (Jinadasa & Wickramasinghe, 2005).

IT workforce characteristics are evolving and female IT professionals are increasing in the industry (Lo, 2015). Thus, the influence of gender cannot be excluded from a turnover model. On the other hand, companies must be effective in attracting and retaining female IT professionals to meet the increasing workforce needs (Annabi & Lebovitz, 2018). For this purpose, an understanding on the workplace behaviour of female IT professionals is essential. Moreover, female IT professionals remain longer in their current workplaces than men (Wickramasinghe, 2009), and they have more years of service in their current IT job (Ryan & Harden, 2014). Thus, gender differences must be studied in turnover models.

With special focus on barriers to retention of female IT professionals, Annabi and Lebovitz (2018) studied some policy interventions to be made in order to encourage female IT professionals to retain in companies. Armstrong, Riemenschneider, and Giddens (2018) focused on gender differences to determine not only how to retain female IT professionals, but also to create an occupational culture within the profession that includes women. While Hoonakker et al. (2013) concluded that male and female IT professionals are different in their turnover intentions, Harden et al. (2016) highlighted further need to study gender differences in IT professionals' turnover intentions. Previous contradicting findings and recent emphases on gender differences compelled the current study to consider gender differences in job satisfaction and turnover intentions among IT professionals. Therefore, it is hypothesized that;

[H7]: Gender moderates the effect of job satisfaction on turnover intention.

3.3.7.3 Moderating effect of career stage

IT professionals had demonstrated different attitudes about work at different career stages (C. L.-H. Chang, Jiang, Klein, & Chen, 2012). Previous studies provide evidence as employee intentions to leave organizations depend upon their career stages (A. Cohen, 1991; Lynn, Cao, & Horn, 1996; Ornstein, Cron, & Slocum, 1989). For example, A. Cohen (1991) revealed that early-career employees have higher turnover intentions. Lynn et al. (1996) concluded that turnover intention is negatively related to career stage. Thus, the influence of career stage must be considered in IT turnover studies (Zylka & Fischbach, 2017). This study investigates as how career stage influences the effects of professional commitment on turnover intention.

Depending on the emphasis and the sample of the study, several studies had used measures to represent the concepts that are hand in hand such as how long employees stay in organizations (organizational tenure), in the profession (professional tenure) and in what stage of the career.

(a) *Organizational tenure and turnover intention*

IT employees' intentions to leave organizations found to be strongly influenced by the length of the time within organizations (Guimaraes & Igbaria, 1992; Igbaria & Siegel, 1992). While Igbaria and Siegel (1992) concluded that when organizational tenure increases IT professionals are less likely to leave their organizations, controversially, Wickramasinghe (2009) on Sri Lankan IT industry concluded that those who worked in one organization for longer period intended to leave current working places as they experienced less job satisfaction.

From a study of four countries, Cha and Quan (2011) found contradicting results for the global perspective and for the country level analysis on the influence of organizational tenure on turnover intention. As per the global perspective analysis,

when IT professionals stay longer in one organization, their firm specific knowledge increases, which then becomes less applicable to other firms; consequently, stay in current firms (Cha & Quan, 2011). In contrast, at the country level analysis for India displayed a positive relationship between company tenure and IT professionals' turnover intentions.

(b) Career stage, professional tenure and turnover intention

Employees' intentions to leave organizations depend upon the career stage in which they are in (Ornstein et al., 1989), and organizational turnover intention is negatively related to career stage (Lynn et al., 1996). That is, individuals at late career stages (i.e. maintenance) demonstrated lower intentions to leave their current organizations. Similarly, the meta-analysis by A. Cohen (1991) revealed that when employees are at early career stages, they have higher intentions to leave organizations and vice versa.

In previous studies, professional tenure has been using as the measure of career stage. For instance, Lynn et al. (1996) used professional tenure as the measure of career stage of accounting professionals with three categories: establishment stage, advancement stage and maintenance stage. Similarly Cha and Quan (2011) used professional tenure (known as total IT experience) to measure the career stage of IT professionals.

Higher professional tenure (known as total IT experience) resulted in lower turnover intention (Cha & Quan, 2011). In those studies, the explanations on the relationship between professional tenure and turnover intention were given based on the social capital theory. As Cha and Quan (2011, pp. 13-14) explained, "… for every one year increase in IT experience, the probability of turnover intention is reduced by 0.3%,". In essence, scholars used professional tenure as a measure of career stage (Lynn et al.,

1996); also, turnover intentions vary depending on the career stages of employees (Ornstein et al., 1989) [also see the meta- analysis of A. Cohen (1991)].

On the relationship between organizational tenure and career commitment, contradicting results were observed. Some studies revealed that high work experiences resulted in strong career commitments (G. Blau, 1985; Lu et al., 2002) while Benligiray and Sonmez (2013) recently found that among professional nurses, when tenure increases, occupational commitment decreases. Thus, the study concluded as younger professional nurses are more committed to their profession.

On the other hand, previous studies revealed that professional commitment negatively related to professional tenure (Lynn et al., 1996), and higher professional tenure results in lower turnover intention (Cha & Quan, 2011). Zylka and Fischbach (2017) emphasized on the importance of considering career stage in overall IT turnover studies: with special attention on subsequent training cost of new employees. For example, as Zylka and Fischbach (2017) explained, when mid and late career staged employees leave, employers have to incur higher replacement costs compared to the cost of replacing early career employees and training newcomers. Considering the unavoidable influence that career stage brings to turnover studies through organizational tenure, professional tenure and professional commitment, it is hypothesized that;

[H8]: *Career stage moderates the effect of professional commitment on turnover intention.*
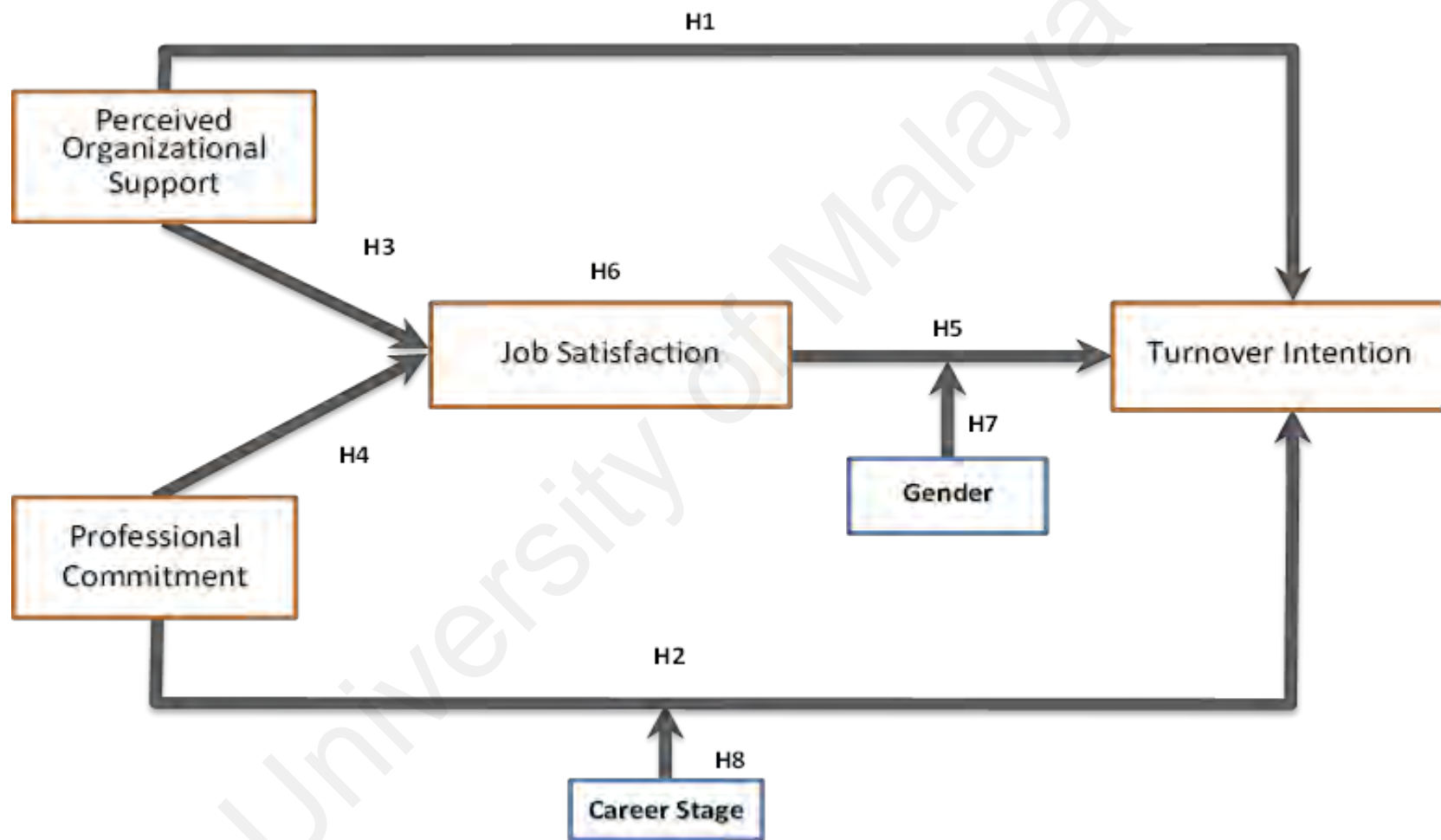
Figure 3.2: Research Framework

As shown in Figure 3.2, following hypotheses are developed to answer the research questions in order to examine IT professionals' turnover intentions.

[H1]: Turnover intentions of IT professionals are negatively influenced by the degree of their perceived organizational support.

[H2]: Turnover intentions of IT professionals are negatively influenced by the degree of their professional commitments.

[H3]: Job satisfactions of IT professionals are positively influenced by the degree of their perceived organizational support.

[H4]: Job satisfactions of IT professionals are positively influenced by the degree of their professional commitments.

[H5]: Turnover intentions of IT professionals are negatively influenced by the degree of their job satisfactions.

[H6]: Job satisfaction mediates the effects of perceived organizational support and professional commitment on turnover intention.

[H7]: Gender moderates the effect of job satisfaction on turnover intention.

[H8]: Career stage moderates the effect of professional commitment on turnover intention.

3.4   Research Design

3.4.1   Overview of the Research Design

The study intends to find out the influences of POS and professional commitment on turnover intentions of IT professionals who demonstrate unique workplace characteristics. It plans to measure actual experiences, perceptions, commitment levels, efforts and feelings to gauge respondents' on-going intentions to leave the working organizations. A study that measures individuals' perceptions, feelings and especially intentions related to future that may negatively perceive by the current working

organizations, should maintains a high level of anonymity and confidentiality throughout the study. Further, it should obtain and maintain trust from the respondents. Meantime, the respondents have to be reached through a formal procedure in order to gather considerable amount of data and to increase its validity. In addition, when a quantitative data analysis is used, some conditions need to be fulfilled in collecting data. Several alternative methods were available in such a context: face-to-face interviews, survey method, experiments, and so forth. Given the operating nature of the IT industry, sensitivity of the questions and the need of maintaining an anonymity, a survey design is best suited for the study

3.4.2 Survey Research Design

Depending on the requests of the sample companies, this study used both online (web based) and offline questionnaires. However, more than 80% of the data were collected from online survey. As Couper, Traugott, and Lamias (2001) explained, web based surveys are capable to maintain respondents' interest due to rich multimedia capabilities: graphics, colours, typography, and so forth. Features like graphical progress bar and multiple item screens are useful in encouraging respondents to complete the survey (Couper et al., 2001). Further, it helps to maintain anonymity and confidentiality of responses while allowing the respondents more time to respond to questions with quick response turnaround and the freedom to leave the study voluntarily. It also allows to collect a significant amount of data in a cost effective manner during a short period of time.

3.4.3 Tests and Procedures

3.4.3.1 Research instrument development

The questionnaire had five sections; one for each predictors-- followed by a section for demographics. Turnover intention scale items were adapted from the study by

Cammann, Fichman, Jenkins, and Klesh (1979). The four items assessed plan, intentions and desire to leave the current organization or the job which were measured on a five point Likert-type scale ranging from *Yes I feel so all the time* to *I do not feel so at all*. The scale has reported high reliability in one of the previous studies on IT professionals; the study by King, Xia, Campbell Quick, and Sethi (2005). Table 3.1 depicts the turnover intention scale.

Table 3.1: Turnover Intention Scale

Number	Items (1= Yes I feel so all the time and 5= I do not feel so at all)
TOI1	I will probably look for a new job in the next year
TOI2	It is likely that I will actively look for a new job next year
TOI3	If I had the chance, I would take a different job within this organization
TOI4	I always think about quitting this organization

Perceived organizational support was measured using a 16-item survey scale developed by Eisenberger et al. (1986). The items were measured on a five point Likert-type scale ranging from *Yes I feel so all the time* to *I do not feel so at all*. Considering the possible issue of getting low responses due to the length of the questionnaire, it was decided to use the 16-item scale over 36-item original scale. However, the shorter version had been reporting a high internal reliability same as 36-item scale, and had not been appeared problematic (Rhoades & Eisenberger, 2002). Referring to the original 36-item scale, the selected 16- items were identified for each aspect of POS*: satisfaction with performance, consideration of goals and opinions, employee's wellbeing, requested special favour, responses to employee's possible improved performance, appreciation of extra effort, replacing the employee with a lower paid new employee, responses to employee's possible complaints, employee's satisfaction on the job and job enrichment* (Eisenberger et al., 1986). One of the objectives of the study was to identify the predominant POS factors for IT professionals. Thus, identifying each aspect of POS helped to understand the predominant POS factors at the factor analysis stage. Table 3.2 lists down POS items. The reverse code items are marked in *.

Table 3.2: POS Scale

Number	Items (1= Yes I feel so all the time and 5=I do not feel so at all)
POS1	My company values my contribution to its well-being
POS2	My company fails to appreciate any extra effort from me*
POS3	My company strongly considers my goals and values
POS4	My company would ignore any complaint from me*
POS5	My company disregards my best interests when it makes decisions that affect me*
POS6	My company really cares about my well-being
POS7	My company is willing to help me when I need a special favour
POS8	My company cares about my general satisfaction at work
POS9	My company shows very little concern for me*
POS10	My company cares about my opinions
POS11	My company takes pride in my accomplishments at work
POS12	My company tries to make my job as interesting as possible
POS13	If my company could hire someone to replace me at a lower salary it would do so*
POS14	Help is available from my company when I have a problem
POS15	Even if I did the best job possible, my company would fail to notice*
POS16	If given the opportunity, my company would take advantage of me*

*Reverse questions

Professional commitment was measured on a five point Likert-type scale ranging from *Yes I feel it all the time* to *I do not feel so at all* using a seven-item scale developed by G. Blau (1985). The scale has shown a high correspondence with withdrawal cognition (Carson & Bedeian, 1994). Table 3.3 presents professional commitment scale items, and the reverse code items are denoted in *.

Table 3.3: Professional Commitment Scale

Number	Items (1= Yes I feel it all the time and 5= I do not feel so at all)
PC1	If I had a chance, I would take a different job paying me the same salary*
PC2	I want my career in the field of IT/ Software engineering
PC3	If could do it all over, I would not choose this profession*
PC4	Even if I had all the money I needed, still I want to be in this vocation
PC5	This is an ideal profession too good to give it up
PC6	IT/ Software engineering is an ideal vocation for life time work
PC7	I disappointed ever entered IT/ Software engineering profession*

*Reverse questions

Based on the similarity of the subject of interest-- IT professionals-- the 20 item scale was selected to measure job satisfaction as used by Kowal and Roztocki (2015),

which was originally adapted from job descriptive index (JDI) (P. C. Smith et al., 1969). The scale included items related to *satisfaction with pay, promotion, co-workers, supervisor and the design of work*. Each of these sub constructs had five items that were measured on a five point Likert-type scale ranging from *Yes I feel so all the time* to *I do not feel so at all*. In Kowal and Roztocki (2015)'s study, these items reported statistically significant alpha and average variance extracted (AVE) values. The items are presented in Table 3.4. The reverse code items are denoted in *.

Table 3.4: Job Satisfaction Scale

Code	Items (1= Yes I feel so all the time and 5= I do not feel so at all)
JS1	My company pays better than competitors
JS2	My pay is adequate, considering the responsibilities I have
JS3	I am underpaid for what I do*
JS4	My fringe benefits are generous
JS5	I do not like the basis on which my company promotes people*
JS6	Promotions are infrequent in my company*
JS7	If I do a good job, I am likely to get promoted
JS8	I am satisfied with my rate of advancements
JS9	The people I work with do not give me enough support*
JS10	When I ask people to do things, the job gets done
JS11	I enjoy working with the people here
JS12	I work with responsible people
JS13	The manager I work for backs me up
JS14	The managers I work for are "top notch"(excellent)
JS15	My superiors don't listen to me*
JS16	My management doesn't treat me fairly*
JS17	My job is interesting
JS18	I feel good about the amount of responsibility in my job
JS19	I would rather be doing another job*
JS20	I get little sense of accomplishment from doing my job*

Reverse questions *

Following Lynn et al. (1996) and Cha and Quan (2011), professional tenure was used to determine the career stage, and it had categorized as establishment, advancement, and maintenance stages. Professional tenure, less than or equal to two years had categorized as establishment stage while advancement stage had defined as between two to 10 years and maintenance stage as greater than 10 years.

As English is used for most of the Sri Lanka's business and commercial IT activities (SLASSCOM, 2014), the survey questionnaire was prepared in English. It starts with a short description on the objectives of the study and a briefing on the theoretical and practical implications it intended to fulfil. The questionnaire had five sections for each of POS, professional commitment, job satisfaction, turnover intention and demographic information. Questions on possessing professional qualifications and IT certifications were included with the intention to complement the findings on professional commitment.

3.4.3.2 Defining population

IT industry has different job categories (ILO, 2012). Thus, IT professionals are not a homogeneous group (Zylka & Fischbach, 2017). Based on the types of jobs, they differ in their job related attitudes, turnover intentions and personalities (Zylka & Fischbach, 2017).

As shown in Figure 1.1 in Chapter 1, jobs in Sri Lankan IT industry are categorized in to fourteen major groups according to key technical functions (ICTA, 2013). As per the latest available ICT workforce survey (ICTA, 2013), programmers and software engineers accounted for 21% (15, 772) of the total ICT workforce (75, 107). While the average tenure in the IT industry is less as five years (ICTA, 2013), the tenure of software engineers who accounted for more than one fifth of the total ICT workforce is even less than three years (Wickramasinghe, 2010). Considering their high turnover rate, composition in the ICT workforce, significance in terms of the contribution to the industry, and due to the uniqueness in their workplace behaviours as stated before, the target population of this study was defined as *programmers and software engineers in Sri Lankan IT industry*.

3.4.3.3 Sample size calculation

According to the latest available ICT workforce survey (ICTA, 2013), the population was estimated as 15, 772 which is shown in Table 3.5. The margin of error was decided as 5%. Following the sample size calculation table by Krejcie and Morgan (1970), the minimum sample size was decided as 375 responses. Adding a 10% allowance to the minimum sample size, the target sample was decided as 412 responses. However, 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 individual level is around 57.2 %. Thus, in order to ensure receiving the target sample of 412, it was decided to approach 800 respondents.

Table 3.5: Sample Size Calculation

Total ICT Workforce (based on latest available survey:2013)	75, 107
Programmers and Software Engineers	21%
Total Population	15, 772
Margin of Error	5%
Sample Size as per Krejcie, R. V., & Morgan, D. W. (1970)	375
Allowance	10%
Target Sample	412
Approached Respondents	800
Received Responses	397
Response Rate	49.6%

3.4.3.4 Sampling framework

Once the population was defined, in order to draw the sampling framework, a proper representing body of the population was looked at. From a background study, it was found that Sri Lanka Association of Software and Service Companies (SLASSCOM) is the national chamber for the IT/BPM industry in Sri Lanka that has member companies employing a greater number of programmers and software engineers. SLASSCOM had listed its member categories in terms of core business focus and the sector in which they

operate. Under the core business focus, members had categorized into few groups: IT/software products, IT/software services, Business Process Outsourcing, Knowledge Process Outsourcing, Legal Process Outsourcing, IT hardware vendors, academic institutes, industry associations, IT consultants and other companies (SLASSCOM, 2016a). A background study revealed that the highest number of programmers/software engineers work in IT/software products companies and IT/software services companies category. Therefore, it was decided to draw the sample from those two categories. As per the member directory, in total, there were 100 companies in the selected two categories.

3.4.3.5 Pre-test

After preparing the questionnaire, a pre-test was conducted to establish the face validity of the questionnaire on its content and wordings. A senior IT professional from a global IT firm in Sri Lanka and three academic experts assisted the pre-test procedure. A briefing about the study and the expected tasks was provided to the industry evaluator (Appendix C). Based on the comments received from the pre-study (Appendix D and E), changes were made to the questionnaire: for example, adding similar words to difficult words in parentheses for the respondents to understand the questions easily. Further, on demographic characteristics, the industry expert suggested to keep some of the questions open ended instead of allowing the respondents to select from a list. For example, instead of listing down all job titles to select between, the question kept open ended as companies use different titles for the same job position. At the data collection stage, all the provided job titles were categorized by following the ILO job title categorization for software engineering (ILO, 2012). The categorization was re-confirmed by the industry expert on its applicability to Sri Lankan IT industry.

3.4.3.6 Pilot study

A pilot study was conducted using 36 randomly selected software engineers from a company that could easily be accessed through a personal contact. It was conducted during June 2017. The objective of the pilot study was to assess how the respondents understand the research instrument from their own perspective before reaching it to the actual respondents of the study. The length of the questionnaire was the common concern among the pilot study respondents, which was managed during the final study. As shown in Appendix F on the reliability statistics of the pilot study, the Cronbach's alpha values for POS, professional commitment, job satisfaction and turnover intention were 0.776, 0.747, 0.859 and 0.822 respectively. The composite reliability recorded as 0.846 for POS followed by 0.836, 0.891 and 0.889 for professional commitment, job satisfaction and turnover intention respectively. The average variance extracted (AVE) for the constructs were 0.528, 0.566, 0.510 and 0.727 for POS, professional commitment, job satisfaction and turnover intention respectively. Since these statistics exceeded the respective thresholds, it was concluded that the pilot study has achieved its reliability and validity. A detail explanation on reliability and validity measures along with the respective thresholds are presented in Chapter 4.

After incorporating the modifications found from the pre-test and the pilot study, the research instrument was finalized (Appendix A).

3.4.3.7 Sampling procedure

A two stage random sampling was used to select the sample of the study. After writing to 100 companies, 46 companies agreed to assist the study. Following the categorization by Wickramasinghe and Perera (2012) on globally distributed software development firms in Sri Lanka, agreed 46 companies were categorized into small, medium and large, based on the total number of employees. Companies with less than

50 employees were categorized as small while 51 to 200 as medium, and more than 200 as large. There were 28 small companies followed by 16 medium and two large companies. Thereafter, from each company, the total number of software engineers were obtained which was accounted as 1107 in total. As shown in Table 3.6, the total number of software engineers was then distributed among the three sizes of companies as proportionate to the target responses of 800. Thus, from small companies, the target responses were 197 followed by 333 from medium and 270 from large companies.

Table 3.6: Sample Distribution

	Categorization of companies based on total number of employees			Total
	Small	Medium	Large	
	28	16	2	46
Total number of software engineers in each category	272	461	374	1107
Number of software engineers needed from each category	197	333	270	800

Thereafter, individual respondents were selected. They were reached both on line and off line depending on the preferences set by each company. Companies that preferred online data collection had provided lists of email addresses to generate random numbers while companies that preferred it offline had provided employee codes to generate random lists. Altogether, seven companies preferred it offline. Email addresses were arranged according to the alphabetical order. Using the random number generation formulae in excel (with no repeating numbers), a list of random numbers was generated for each size of the firms depending on the required number of respondents from each category. For instance, by following the generated random numbers for small firms, 197 email addresses were picked out of 272. The same procedure was applied for medium and large size firms, and compiled a list of 800 emails out of 1107.

3.4.3.8 Data collection procedure

Data were collected during July to September 2017. A contact person was identified from each company to facilitate the data collection process. In order to increase the response rate, the objectives of the study was explained to the contact person via telephone. A request letter along with copies of the letters from the working university (which is an IT faculty) and from the studying university (Institute for Advanced Studies, University of Malaya) (Appendix B) were submitted to the management of each company through the contact person before reaching the individual respondents.

While online questionnaires were directly emailed to the randomly selected respondents, for the offline respondents, the contact person had ensured that the questionnaires reached to the identified random individuals. In offline data collection, the objectives of the study were communicated to the respondents through the contact person and from the questionnaire itself. In online data collection, the individual respondents were provided with a note about the respective company's consent and a request on voluntary participation along with the link to the questionnaire. Thus, their consents were represented from their decision to voluntarily participate for the study and from the freedom given to exit from the study at any point of time. Further, along with the link to the questionnaire, the objectives of the study were communicated from the body of the email and the scanned letters from the two universities. An exit button was introduced to every page for them to exit from the study at any point of time, in order to ensure that they voluntarily participate for the study. Several reminders were sent to the respondents to fill in online questionnaires.

As shown in Table 3.5 above, the questionnaires were sent to altogether 800 individuals, and 397 responses were received. The response rate was 49.6%. Baruch and Holtom (2008), using 1607 studies published during 2000-2005 reported that the

average response rate for studies that collect data at individual level is 57.2 %. Thus, the response rate of this study is comparable to the average of the similar studies.

3.4.4   Statistical Data Analysis

This study uses partial least square (PLS), a variance based structural equation model (SEM) as the data analysis technique. Structural equation model has now become a widespread statistical tool in business and social science research (Henseler, Hubona, & Ray, 2016). SEM is a combination of two perspectives: econometrics that focuses on prediction and the psychometric approach that models concepts from manifest variables (Chin, 1998a). It allows modeling relationships among multiple exogenous and endogenous variables, and it allows combining and testing prior knowledge and hypotheses using empirical data (Chin, 1998a).

Henseler et al. (2016) differentiated between the two types of SEM: variance based and co-variance based (CB-SEM) as follows;

"Covariance-based SEM estimates model parameters using the empirical variance-covariance matrix, and it is the method of choice if the hypothesized model consists of one or more common factors. In contrast, variance-based SEM first creates proxies as linear combinations of observed variables, and then estimates the model parameters using these proxies. Variance-based SEM is the method of choice if the hypothesized model contains composites".

Hair, Ringle, and Sarstedt (2011) list down the comparisons between PLS-SEM and CB-SEM as if the goal of the study is to identify the key drivers in the target construct, PLS-SEM is more suitable. One of the objectives of this study is to identify the predominant POS factors for IT professionals; thus, PLS-SEM is more appropriate. Further, PLS is useful for predictions and explanations of the target constructs which

allows examining simultaneous relationships (Hair, Hult, Ringle, & Sarstedt, 2013). PLS-SEM is better in a situation where a theory is explored (Hair et al., 2013).

PLS path modeling is considered as a silver bullet for social science research (Hair et al., 2011) and regarded as the full-fledged SEM method as it can deal with both factor models and composite models for construct measurement, estimates recursive and non-recursive structural models, and measures model fit (Henseler et al., 2016). Thus, PLS-SEM was appreciated by researchers across disciplines (Henseler et al., 2016).

PLS path model has two linear equations--for measurement model which specifies the relationship between constructs and its indicators--and for structural model which specifies the relationship between the constructs (Henseler et al., 2016). The arrows in a PLS path model represents a directional linear relationship between the constructs and proxies in the measurement model (Henseler et al., 2016). Backed by previous literature, the hypotheses developed in this study are directional. The conceptual model in this study is a factor model. As Henseler et al. (2016) pointed out, for behavioural models such as attitude and personality traits, the factor models are used predominantly. Further, Henseler et al. (2016) explained the data requirement to use PLS path modeling such as metric data for the dependent variables and the possibility of using categorical variables. Data collected from a Likert type scale like in the current study generates interval scale data, a type of metric data which do not have "true zeros".

As Chin (1998b) suggested, PLS is suitable in few scenarios: the constructs are modeled as determinate, the measures are linked to constructs in the theoretical model, and the study is prediction oriented. The current study intends to find the associations between constructs and to figure out the most influencing path from alternative paths.

Practically, researchers use PLS-SEM when they intend to investigate the direct effects and the intervening effects simultaneously. For instance, in this study, the research questions are aimed to investigate the mediated and moderated effects. PLS-SEM allows for better interpretations for moderations through the multi-group analysis (MGA). Further, the study does not hypothesize correlations in order to use the co-variance based SEM (CB-SEM). Taking together all of the above considerations, it is convincible that PLS-SEM is more appealing to use in this study.

3.5   Chapter Summary

In this chapter, based on the research framework, the hypothesized relationships are presented while emphasizing the gaps in the literature. On turnover intention, negative influences were hypothesized from POS, professional commitment and job satisfaction. On job satisfaction, positive influences were hypothesized from POS and professional commitment. Job satisfaction is expected to mediate the major relationships of the study while gender and career stage were to moderate the two main relationships in the model.

Altogether, there are eight hypothesized relationships in the proposed model. The research instrument was validated from a pre-test and a pilot study. The data were collected from a survey questionnaire, and PLS- SEM was used to analyze the data.

CHAPTER 4: RESULTS

4.1   Introduction

This chapter details down the evaluation of the measurement model and the structural model. The measurement model evaluates the research instrument through reliability, validity and quality criteria. Thereafter, the research hypotheses are tested under the structural model.

4.2   Preliminary Data Screening and Cleansing

The respondents who were founders of companies and trainee software engineers were excluded from the study. The responses of CEOs and co-founders who work as software engineers might have produced biased responses as those were their own companies. Similarly, trainee software engineers, who were internship undergraduate students, may have had legal bonds to stay with companies; as a result, the responses may have some biases. Furthermore, trainee software engineers might have not exposed to their working organizations as the other employees do. Thus, their responses might not represent the true picture of the company. After the data cleansing process was completed, no critical outliers were identified from the QQ plot analysis (Appendix G).

There were 37 missing values in the data set. Since the data were categorical, the missing values were replaced by looking at the median of the particular respondent for the construct. This seems more logical than replacing by the mean value of the item, as the median better represents the respondent's possible answer to the missed item considering the tendency along the construct. Finally, there were 383 completed responses remained for the final analysis.

Unlike CB-SEM, PLS-SEM is flexible on its assumption about data. For instance, it deals with not normally distributed data (Hair et al., 2011). Thus, data normality

checking was not a pre-requisite to use PLS-SEM. However, a normality test was conducted to obtain an idea about the behaviour of the data. As per the QQ and box plots for POS, professional commitment, job satisfaction and turnover intention, it was evident that the data were normally distributed.

4.3   Profile of the Respondents

As depicted in Table 4.1, majority of the respondents were male (71.8%). The female respondents accounted for 28.2%. More than 76% (76.2%) of the respondents were aged of 26 to 35. Majority of the respondents were from medium sized firms who accounted for 45.69% followed by 34.46% from small firms and 19.84% from large firms. Out of the total respondents, 297 possessed bachelor's degrees, and the highest educational qualification recorded as a master's degree. Of the respondents, 58% had 2 to10 years' experience in the IT industry while 16.4% had been in the industry for more than 10 years. Job titles and job roles were also observed to understand the sample.

Table 4.1: Profiles of the Respondents

Variable	Description	Frequency (N=383)	Proportion (100%)
Gender	Male	275	71.80%
	Female	108	28.20%
Age	<25	44	11.50%
	26-35	292	76.20%
	36-45	41	10.70%
	> 45	6	1.60%
Size of the company	Small	132	34.46%
	Medium	175	45.69%
	Large	76	19.84%
Education	Master's Degree	50	13.10%
	Postgraduate Diploma	20	5.20%
	Bachelor's Degree	297	77.50%
	Higher Diploma	14	3.70%
	Other	2	0.50%

Table 4.1: Continued

Variable	Description	Frequency (N=383)	Proportion (100%)
	Middle	130	33.90%
	Higher	11	2.90%
Job Role	Pure software engineering work	167	43.60%
	More managerial responsibilities	42	11.00%
	Other	13	3.40%
Work Experience	< 2 years	98	25.60%
	2-10 years	222	58.00%
	> 10 years	63	16.40%

4.4 Evaluation of the Measurement Model

PLS path model consist of two components as measurement model and the structural model (Henseler et al., 2016). The measurement model specifies the relationship between the constructs (Henseler et al., 2016) and it evaluates the operationalization of manifest variables through establishment of reliability and validity. The reliability and validity of the instrument were assessed from internal consistency, convergent validity and discriminant validity.

4.4.1 Reliability and Validity

In a PLS-SEM context, a common method bias (CMB) can occur due to the measurement method used in a study. For instance, indicators may display a common variance among them when the introduction to a questionnaire causes the respondents to answer in the same general direction or due to the social desirability of the responses for a questionnaire (Kock, 2015). In order to assess CMB, variance inflation factor (VIF) values at factor level were looked at. Any factor-level VIF value (inner VIF) greater than 3.3 is considered as an indication of CMB (Kock, 2015). As depicted in Table 4.2, the inner VIF values were less than 3.3: The measurement model is free from CMB.

Table 4.2: Collinearity Statistics - Inner VIF

	Inner VIF values	
Construct	Job Satisfaction	Turnover Intention
Job Satisfaction		1.714
POS	1.039	1.483
Professional Commitment	1.039	1.204

Altogether, reliability is known as a measure of how far a set of variables measures what it intends to measure. Internal consistency was evaluated from the Cronbach's alpha values and composite reliability. As depicted in Table 4.3 below, the Cronbach's alpha values for POS, professional commitment, job satisfaction and turnover intention were 0.863, 0.738, 0.851 and 0.806 respectively. The Cronbach's alpha value estimates the reliability based on the inter-correlations of indicators, assuming that all indicators are equally reliable (Hair, Hult, Ringle, & Sarstedt, 2014). Conversely, the composite reliability accounts the differences of loadings in each item when evaluating the reliability; thus, Cronbach's alpha value is a conventional measure (Hair et al., 2014). The composite reliability values (POS: 0.893, professional commitment: 0.834, job satisfaction: 0.886, turnover intention: 0.909) exceeded the acceptable cut off of 0.7 (Hair et al., 2014). Thus, it was concluded that the measurement model is reliable.

Table 4.3: Construct Reliability and Validity

Latent Constructs	Items	Loadings	Cronbach's Alpha	Composite Reliability	AVE
POS	POS1	0.680			
	POS2	0.712			
	POS3	0.647			
	POS4	0.771	0.863	0.893	0.511
	POS5	0.739			
	POS6	0.687			
	POS7	0.699			
	POS8	0.775			
Professional Commitment	PC1	0.788			
	PC2	0.637	0.738	0.834	0.559
	PC3	0.736			
	PC4	0.816			
Job Satisfaction	Sat1	0.829			
	Sat2	0.868			
	Sat3	0.840			
	Sat4	0.774			
	Sat5	0.902	0.851	0.886	0.500
	Sat6	0.895			
	Sat7	0.777			
	Sat8	0.890			
Turnover Intention	TOI1	0.885	0.806	0.909	0.834
	TOI2	0.941			

The convergent validity was measured from the outer loadings (also known as indicator reliability) and the average variance extracted (AVE). Convergent validity examines the correlations among alternative measures of the same construct. The item-level convergent validity was measured from the outer loadings. The outer loadings reflect whether an item is a component of the particular construct or not. As illustrates in Table 4.3 above, the outer loadings were higher than 0.708 (Hair et al., 2014) in most cases. The lowest loading recorded as 0.637. Following the recommendations by Hair et al. (2014) on item removal, the lowest outer loading item (PC2=0.637) has been kept in the measure, considering its contribution to the content validity of the professional commitment construct. Meantime, its continuation seemed not an issue, as loadings of at least 0.5 might be acceptable when the other items in the

construct have greater alpha values (Barclay, Higgins, & Thompson, 1995; Chin, 1998b), which was achieved in the study. Thus, the items of the measure share more variance between the constructs and its measures, than the error variance (Barroso, Carrión, & Roldán, 2010). In other terms, the items share high proportion of variances and the indicators have much in common, which were captured by the constructs; as a result, converged (Hair et al., 2014).

The AVE was used to evaluate the construct-level convergent validity. AVE is similar to the *communality* of a construct, as AVE is obtained from: sum of the squared loadings of the indicators divided by the number of indicators (Hair et al., 2014). The accepted cut off is 0.5 (Fornell & Larcker, 1981); as a result, on average, a construct explains more than 50% of the variance of its indicators (Hair et al., 2014). The AVE for job satisfaction was exactly 0.5 followed by 0.511 for POS, 0.559 for professional commitment and 0.834 for turnover intention. The composite reliability values were greater than 0.6 (Fornell & Larcker, 1981) as it recorded 0.893 for POS, 0.834 for professional commitment, 0.886 for job satisfaction and 0.909 for turnover intention. Thus, the convergent validity was established for the measurement model.

The discriminant validity was established through cross loadings, the Fornell-Larcker criterion coefficients, Heterotrait-Monotrait Ratio (HTMT) and the inner and outer VIF values in collinearity statistics. The discriminant validity measures how far a construct is different from the other constructs in the model. As per the cross loadings, shown in Table 4.4 below, the outer loadings of the items to their own constructs were greater than their loadings to other constructs: The items were loaded to their own constructs.

Table 4.4: Loadings and Cross Loadings

	Job Satisfaction	POS	Professional Commitment	Turnover Intention
Sat1	**0.829**	0.403	0.377	-0.350
Sat2	**0.868**	0.420	0.332	-0.294
Sat3	**0.840**	0.403	0.273	-0.253
Sat4	**0.774**	0.437	0.194	-0.225
Sat5	**0.902**	0.472	0.483	-0.443
Sat6	**0.895**	0.427	0.315	-0.355
Sat7	**0.777**	0.235	0.021	-0.117
Sat8	**0.890**	0.378	0.177	-0.270
POS1	0.346	**0.680**	0.139	-0.207
POS2	0.362	**0.712**	0.154	-0.255
POS3	0.290	**0.647**	0.130	-0.169
POS4	0.419	**0.771**	0.164	-0.327
POS5	0.320	**0.739**	0.029	-0.227
POS6	0.308	**0.687**	0.121	-0.240
POS7	0.380	**0.699**	0.179	-0.243
POS8	0.411	**0.775**	0.170	-0.293
PC1	0.296	0.134	**0.788**	-0.404
PC2	0.252	0.175	**0.637**	-0.170
PC3	0.189	0.120	**0.736**	-0.276
PC4	0.316	0.158	**0.816**	-0.315
TOI1	-0.241	-0.252	-0.325	**0.885**
TOI2	-0.364	-0.370	-0.407	**0.941**

Note: Bold figures reflect that loadings are higher than 0.5 and loaded to their own constructs

As per the Fornell-Larcker criterion coefficients depicted in Table 4.5 below, the highlighted diagonal values are greater than the values under them. Thus, the constructs shared more variances with own indicators, over the other constructs (Hair et al., 2014). Discriminant validity was further established through Heterotrait-Monotrait Ratio (HTMT) and the inner and outer VIF values in collinearity statistics. Proving the Fornell-Larcker criterion's weaknesses, Henseler, Ringle, and Sarstedt (2015) introduced the HTMT approach to measure the discriminant validity in variance based structural equation modeling. Referring to Tables 4.5, all the HTMT values were less than its limit of 0.90 (Henseler et al., 2015).

Table 4.5: Discriminant Validity Statistics

	Job Satisfaction	POS	Professional Commitment	Turnover Intention
Fornell-Larcker Criterion				
Job Satisfaction	**0.707**			
POS	0.569	**0.715**		
Professional Commitment	0.409	0.193	**0.747**	
Turnover Intention	-0.422	-0.349	-0.406	**0.913**
Heterotrait-Monotrait Ratio (HTMT)				
POS	0.656			
Professional Commitment	0.486	0.245		
Turnover Intention	0.485	0.401	0.497	

Further, as per the inner and outer VIF values in collinearity statistics (Table 4.2 and 4.6), the discriminant validity was established, as VIF values are less than 3.3 (Kock, 2015). Thus, the measurement model demonstrated a high discriminant validity, as constructs were unique in their own measurements, which were not captured by other constructs in the model.

Table 4.6: Collinearity Statistics - Outer VIF

Item	Outer VIF Values
Sat1	2.204
Sat2	2.480
Sat3	2.109
Sat4	1.773
Sat5	1.611
Sat6	1.611
Sat7	1.196
Sat8	1.196
POS1	1.547
POS2	1.663
POS3	1.468

Table 4.6: Continued

Item	Outer VIF Values
POS4	1.820
POS5	1.761
POS6	1.584
POS7	1.643
POS8	1.884
PC1	1.369
PC2	1.243
PC3	1.510
PC4	1.649
TOI1	1.836
TOI2	1.836

4.4.2   Quality Criteria

Before testing hypotheses, the quality criteria were looked at: path coefficients, variance explained values (R^2) and model fit. The main objectives of PLS-SEM method are prediction and fitting the model (Chin, 1998b). The 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). As shown in Figures 4.3,Appendeix H and Table 4.7, the explained percentage of variance for job satisfaction and for turnover intention were 41.7% (R^2= 0. 417) and 26.5 % (R^2= 0. 265) respectively; as a result, all the R^2 values were greater than 0.1.

Table 4.7: R Square Values of the Measurement Model

	R^2	SE	t	P Value
Job Satisfaction	0.417	0.042	9.925	0.000***
Turnover Intention	0.265	0.041	6.515	0.000***

Note: ***p<0.05

A bootstrap procedure using 5000 samples was used to assess the significance of the weights in the paths. Referring to the effect size categorization by J. Cohen (1988)

depicted in Table 4.8 below, large effect sizes were recorded for the relationships between POS and job satisfaction and professional commitment and job satisfaction. The interactions between job satisfaction and turnover intention; POS and turnover intention; professional commitment and turnover intention recorded medium effects.

Table 4.8: Effect Sizes (f^2) of the Measurement Model

	Effect Size	SE	t	P value	Conclusion on Effect Size
Job Satisfaction -> Turnover Intention	-0.203	0.063	3.203	0.001	Medium
POS -> Job Satisfaction	0.509	0.057	8.959	0.000	Large
POS -> Turnover Intention	-0.178	0.057	3.127	0.002	Medium
Professional Commitment -> Job Satisfaction	0.311	0.051	6.082	0.000	Large
Professional Commitment -> Turnover Intention	-0.289	0.051	5.604	0.000	Medium

To assess how well the model predicts the population, predictive relevance was looked at using blindfolding procedure. The omission distance was set at seven (7) (Chin, 1998b). As shown by the construct cross validated redundancy statistics in Table 4.9, the model well predicted the population, as Q^2 values for both job satisfaction (0.190) and turnover intention (0.196) are greater than 0 (Chin, 1998b).

Table 4.9: Construct Cross Validated Redundancy

Construct	SSO	SSE	Q^2 (=1-SSE/SSO)
Job Satisfaction	3,064.000	2,482.278	0.190
POS	3,064.000	3,064.000	
Professional Commitment	1,532.000	1,532.000	
Turnover Intention	766.000	615.892	0.196

An understanding on the relationships between sample size, effect size, statistical power and the significance level help researchers to generate re-producible results. A large sample size decreases the chances of biasness by a researcher

(McNeish & Stapleton, 2016). Similarly, achieving a high statistical power is a goal of a researcher. A low statistical power decreases the opportunity to sense a true effect and reduces the possibility that a statistically significant result reflects a true effect (Button et al., 2013). The statistical power is calculated for all the endogenous variables in a model: job satisfaction and turnover intention in this study. In order to assess the statistical power of the study, the post–hoc achieved GPower was calculated using G*Power software (Faul, Erdfelder, Lang, & Buchner, 2007). Results indicated that for both job satisfaction (power=1, f^2=0.7138227) and for turnover intention (power=0.999, f^2=0.3608000), the post–hoc achieved statistical power values were above 0.8 (Faul et al., 2007); as a result, it was concluded that the study had the power to detect all the significant effects. The post–hoc achieved GPower results are shown in Figure 4.1 and 4.2.

I. Job satisfaction (power=1, effect size f^2= 0.7138227, number of predictors =2, error prob=0.05)
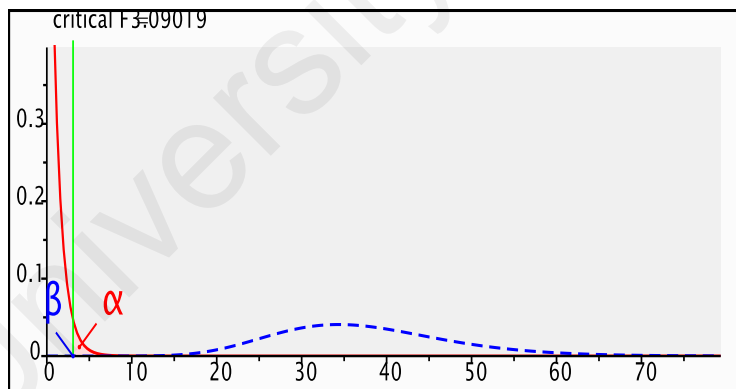
Figure 4.1: Statistical Power Calculation for Job Satisfaction

II.   Turnover Intention (power=0.999, effect size f^2= 0.3608000, number of predictors =3, error prob=0.05)
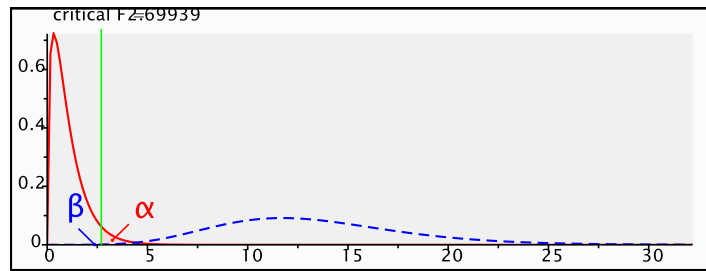
Figure 4.2: Statistical Power Calculation for Turnover Intention

4.5   Evaluation of the Structural Model

The structural model evaluates the causal relationship between latent variables that were hypothesized in the theoretical model. The structural model reveals the unexplained variances (Barroso et al., 2010).

After conducting a bootstrap procedure of 5000 samples, the hypotheses were tested. Referring to Table 4.10, as it was hypothesized, POS (β= -0.178, $p<0.05$), professional commitment (β= -0.289, $p<0.05$) and job satisfaction (β= -0.203, $p<0.05$) were significantly negatively influencing turnover intention. Further, POS (β=0.509, $p<0.05$) and professional commitment (β=0.311, $p<0.05$) were significantly positively related to job satisfaction. Thus, hypotheses H1, H2, H3, H4, H5 were supported. The probability or the critical distance was limited to 5%.

Table 4.10: Results of Hypotheses Testing

Paths	Beta	SE	t	P Value
POS -> Turnover Intention	-0.178	0.058	3.090	0.001***
Professional Commitment -> Turnover Intention	-0.289	0.051	5.664	0.000***
Job Satisfaction -> Turnover Intention	-0.203	0.063	3.197	0.000***
POS -> Job Satisfaction	0.509	0.056	9.050	0.000***
Professional Commitment -> Job Satisfaction	0.311	0.050	6.214	0.000***

Note: ***$p<0.05$

Figure 4.3: Results of PLS-SEM Analysis
Note: *** $p<0.05$; ^{ns}: not significant

Perceived Organizational Support (POS)

H1: -0.178***

H6: POS to TOI: -0.103***

PC to TOI: -0.063***

H3: 0.509***

Job Satisfaction

$R^2 = (0.417)$

H5: -0.203***

Turnover Intention (TOI)

$R^2 = (0.265)$

Professional Commitment (PC)

H4: 0.311***

H7: 0.039^{ns}

Gender

H2: -0.289***

H8:
Advancement and Maintenance: 0.265***
Establishment and Maintenance: 0.300***
Establishment and Advancement: 0.035^{ns}

Career Stage

4.5.1 Testing Mediation

The mediation effect of job satisfaction was evaluated by comparing the direct and the indirect effects. A mediation best occurs in the case of a strong relation between the predictor variable and the criterion variable (Baron & Kenny, 1986). Therefore, before arriving at a conclusion on the mediation, the direct relationships were looked at. As depicted in Table 4.10 and in Figure 4.3 above, the relationships between predictor variables and turnover intention were significant [(POS t=3.090, p<0.05), (professional commitment t=5.664, p<0.05)]. Also the relationship between the mediator (job satisfaction) and turnover intention (job satisfaction t=3.197, p<0.05) also was significant. Further, the relationships between predictor variables and job satisfaction [(t POS=9.050, p<0.05), (t professional commitment=6.214, p<0.05)] were also significant; as a result, the model qualified to test for a mediation.

As shown in Table 4.11, since both direct effects [(POS t=3.090, p<0.05), (professional commitment t=5.664, p<0.05)] and the indirect effects [(POS t=3.170, p<0.05), (professional commitment t=2.601, p<0.05)] were significant, it was concluded that job satisfaction partially mediates the effects of POS and professional commitment on turnover intention: The hypothesis H6 was supported.

Table 4.11: Mediation Results

	Beta	SE	t	P Value
Total Direct Effect				
POS -> Turnover Intention	-0.178	0.058	3.090	0.001***
Total Indirect Effect				
POS -> Turnover Intention	-0.103	0.033	3.170	0.001***
Total Direct Effect				
Professional Commitment -> Turnover Intention	-0.289	0.051	5.664	0.000***
Total Indirect Effect				
Professional Commitment -> Turnover Intention	-0.063	0.024	2.601	0.005***

Note: ***p<0.05

4.5.2   Testing Moderations

To test the moderating effects of gender and career stage, the multi group analysis (MGA) was performed. MGA is used for discrete moderating variables such as gender, stakeholder groups, where moderating variable is divided in to groups (Vinzi, Chin, Henseler, & Wang, 2010). Referring to Table 4.12, it was found that gender has no moderating effect on the relationship between job satisfaction and turnover intention (β=0.039, p >0.05). Therefore, hypothesis H7 was not supported.

Moderating effect of career stage was evaluated in three pairs, as in the case of more than one pair, groups have to be compared pairwise, before an overall interpretation is given (Vinzi et al., 2010). In this study, career stage was categorized in to three stages: establishment (less than two years), advancement (2-10 years) and maintenance (more than 10 years). Significant differences were observed between advancement and maintenance stages (β=0.265, p<0.05) and between establishment and maintenance stages (β=0.300, p<0.05). Therefore, hypothesis H8 was supported.

Table 4.12: Moderation Results

	Original Path Coefficients	Beta	P Value
Gender			
Job Satisfaction -> Turnover Intention	-0.458 vs -0.497	0.039	0.658
Career Stage			
Advancement and Maintenance	-0.378 vs -0.643	0.265	0.000***
Establishment and Maintenance	-0.343 vs -0.643	0.300	0.001***
Establishment and Advancement	-0.343 vs -0.378	0.035	0.658

Note: ***p<0.05

4.6   Chapter Summary

After the data cleansing process, 383 complete data were left for the final analysis. Measurement model was free from common method biasness. The reliability and the validity were established for the measurement model. The structural model was evaluated using 5000 bootstrapped samples followed by the mediation and moderation analyses. Both POS and professional commitment were significant predictors of job satisfaction and turnover intention. Job satisfaction negatively influenced turnover intention, and had partially mediated the effects of POS and professional commitment on turnover intention. The MGA analysis results revealed that gender had no effect in the model while career stage moderated the effect of professional commitment on turnover intention. Thus, except hypothesis H7, all the hypotheses were supported.

CHAPTER 5: DISCUSSION

5.1   Introduction

In this chapter, the main findings related to each hypothesis are discussed based on the theoretical understanding of the model. An overview followed by a summary of the findings, explanations on each finding are presented. A discussion on similarities and discrepancies compared to previous studies are presented at the end of the chapter followed by a summary of the chapter.

5.2   Overview

Despite the increasing turnover rate and job dissatisfaction among IT professionals, a little is known on the influence of profession related factors and IT professionals' perceptions on organizational support on their turnover intentions. Turnover leads to productivity decline. Thus, companies seek ways and means to reduce it. However, unlike employees in other industries, IT professionals possess unique workplace characteristics, which frame their workplace behaviours. They are more committed to the profession (Benner, 2008; Carson & Bedeian, 1994; Dess & Shaw, 2001; Ross & Ali, 2011) while being loyal to colleagues in workgroups over working organizations (Mowday et al., 1982). Consequently, it is presumed that their unique workplace characteristics are the main causes for the high turnover in the industry.

Empirical studies are needed to investigate as why IT professionals leave their companies more often. Such studies should extend to investigate the prevailing presumptions on IT professionals. Companies are interested in understanding what contribute their employees to remain willingly in their organizations instead of trapped due to unease of movements. 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).

The main objective of this study was to investigate the turnover issue based on individuals' perspective on organizational support (POS) and professional commitment. As per the social exchange theory, reciprocities occur in organizations: employees compare organizations' commitment to them in exchange of their efforts at work. When an imbalance is perceived, a dissatisfaction occurs which may result in a withdrawal cognition. POS better reflects employees' exchange relations with the organization as it measures employee perception on organization's care and well-being for them in exchange of their efforts at work. As organizational support is a sensitive matter to knowledge workers, this study intended to measure the influence of POS on their turnover intentions.

Since the study is on professional workers, it anticipated the influence of professional commitment in turnover intention. Professional commitment is more relevant than organizational commitment in knowledge workers' behavioural studies. Further, a myth has been developing as professionals leave their organizations due to high commitment to professions. The study also assessed the influence of job satisfaction, gender and career stage in predicting turnover intention.

Drawing from social exchange and social capital theories as explained in early chapters, it was proposed that employee perception on organizational support and commitment to the profession influence turnover intentions. Furthermore, these factors influence turnover intention directly and through job satisfaction. Further, it was proposed that career stage buffers the effect of professional commitment on turnover intention. It was expected gender to generate different results for the effect of job satisfaction on turnover intention.

5.3 Summary of the Findings

As hypothesized, it was found that both POS and professional commitment contribute to weaken turnover intentions among IT professionals in Sri Lanka. Further, the said relationships were mediated by job satisfaction. Between the two direct relationships from main predictors, professional commitment had the highest influence on turnover intention. Job satisfaction negatively related to turnover intention. Furthermore, both POS and professional commitment were positive stimulus to increase job satisfaction. Between the two predictors--POS and professional commitment--POS highly influenced job satisfaction. Gender had no effect on the relationships hypothesised in the proposed model. Career stage moderated the effect of professional commitment on turnover intention, concluding; at higher career stages, turnover intention is low.

5.4 Discussion on Findings

5.4.1 Influence of Perceived Organizational Support on Turnover Intention

As per the findings of this study, POS influences turnover intention in two ways: directly and through the stimulated job satisfaction. Job satisfaction mediates the strong relationship between POS and turnover intention (Strömgren, 2017). The mediation effect is discussed at the end of this chapter.

As per social capital and social exchange theories, when an organization demonstrates a helpful atmosphere, employees feel to repay through higher job related efforts and extra role performances (Kurtessis et al., 2015) or by remaining with the organization (Paré & Tremblay, 2007). Thus, a felt higher support always result in positive outcomes, one such is the weakened turnover intention. The negative relationship found between POS and turnover intention ($\beta = -0.178$, $p<0.05$) is consistent with the findings from a recent study on IT professionals (Ertürk, 2014) and

non-profit employees (Knapp et al., 2017). However, the finding is contradicting with a study from India (Rai, 2017), where POS was positively influenced on Generation Y employees' turnover intentions. It is evident that IT professionals' workplace behaviours should not fall under the same bracket of general employee workplace behavior due to their differences in attitude and expectations. The indirect path of POS to turnover intention is explained through the relationship between POS and job satisfaction toward the end of this chapter.

5.4.2 Influence of Professional Commitment on Turnover Intention

From the negative relationship found between professional commitment and turnover intention (β= -0.289, $p<0.05$), it was revealed that professional commitment does not contribute IT professionals to leave their organizations: instead, it positively stimulates their longer stay in organizations. In other words, from the findings, it was evident that professional commitment is not a threat to organizations, but it is a complement, which acts as a positive stimulus to increase job satisfaction; whereby, reduce the turnover intention. Accordingly, employees with high professional commitment tend to stay longer with organizations, which however, moderated by their career stage. Conversely, employees who are less committed to the profession may easily make leaving decisions.

Unlike other employees, professionals are more committed to their profession (Benner, 2008; Carson & Bedeian, 1994; Dess & Shaw, 2001; Ross & Ali, 2011). Thus, it leads to a presumption that high turnover is due to IT professionals' high professional commitment. The findings of this study challenged this prolonged myth about IT professionals.

The finding contrasts with some earlier studies (Cavanaugh & Noe, 1999; E. Chang, 1999; Silliker, 1993), which generated positive relationships between professional commitment and turnover intentions. Cavanaugh and Noe (1999) reasoned their finding

as those who are committed to their profession and worked hard to achieve career goals had consequently more opportunities, which caused higher turnover in their current organizations. By contrast, this study postulates that this positive relationship is not always assured, as the availability of opportunities depend on the success of such efforts. In summary, the positive relationship found from previous studies was justified from the notion that once committed to the profession, it is impossible to be committed to the organization; as a result, higher turnover intentions.

In contrast, the negative relationship found in this study is consistent with studies from few other industries (H.-Y. Chang et al., 2019; Y.-P. Chang et al., 2019; Lu et al., 2002; Yousaf et al., 2015). The negative relationship found in this study can be explained by following the sequence of reasoning by Aryee and Tan (1992). Highly occupationally committed employees attempt to develop their skills and achieve occupational goals through and within their current organizations. Thus, a negative relationship exists between professional commitment and turnover intentions. Alternatively, Harden et al. (2016) posited that, with skill obsolescence, IT professionals aim to fulfill their career needs within the current organization. In such a situation, employees who are committed to their professional development may remain in organizations. Thus, a negative relationship between professional commitment and turnover intention can be expected.

From their recent finding on university staff, Yousaf et al. (2015) demonstrated and emphasized that it is possible for both professional commitment and organizational commitment to operate simultaneously. That is, one can commit to the working organization by remaining with it, while being committed to the profession and achieving career goals. Previously, it was found that occupational and organizational commitment complement and positively relate to each other (Aryee & Tan, 1992).

This is due to the employment setting an organization provides for an individual to consistently engage with occupational values and goals (Yousaf et al., 2015). That is, when organizational settings complement employees' career advancement needs, employees are committed to the organization while focusing on their own career advancements.

Findings can be further explained using social exchange and social capital theories. Organizational practices of investing on employee growth encourage employees to develop strong social exchange relationships at work (Wayne et al., 1997). Therefore, when professionally committed employees notice organizations' investments in employee developments and on career advancements, they negatively respond to alternative job offers and to withdrawal cognitions. This is due to the operation of exchange relationship. Investing in employee development is something far beyond offering monetary benefits, which would help professionally committed employees to negatively respond to withdrawal cognitions. Earlier, Paré and Tremblay (2007) found that competency development and non-monetary recognitions were directly negatively related to IT professionals' turnover intentions. Similarly, it can be contended that professionals who are less committed to professional advancements may make leaving decisions easily.

The understanding on the importance of career advancement can be further broadened based on social capital theory. When organizations demonstrate helping behaviours, they enables interpersonal contacts and relationships among employees (Bolino et al., 2002), which create strong social capitals. In organizational environments, where strong social capitals exist, employees are motivated to stay (Paré & Tremblay, 2007).

While existing technology being out dated frequently, the increasing technology development in the industry make IT professionals to find it difficult to keep their competencies up to date (Pazy, 1990). Accordingly, they face a threat of professional obsolescence (Fu, 2011; Harden et al., 2016). Consequently, they realized that they either must constantly engage in re-training or seek out another fields of employments (Joseph, Ang, & Slaughter, 2005). Therefore, their needs to fulfil career development objectives from and within the organizations increase. In this case, trainings targeted at career advancements may satisfy employee professional commitment needs. Organizations that facilitate such needs would be able to retain their employees.

Professional commitment reflects one's need for growth and from this study, it was found that professional commitment weakens the turnover intention. Thus, this study's finding challenges Harden et al. (2016)'s assumption: IT professionals with higher growth needs leave their organizations. As commitment literature less covered highly professionally committed people (X. Wang & Armstrong, 2004), this study fills the gap in the literature as it incorporated a profession-specific predictors to investigate the turnover, of which the need was recently highlighted by Lo (2015).

Paré and Tremblay (2007) posited that there can be two main reasons for IT professionals to stay with organizations: *emotional attachment to the organization* and *perceived cost of leaving the organization.* However, from a comprehensive analysis on IT professionals' workplace behaviour, it was clear that, with the time, perceived cost of leaving is less applicable to them. That is because, IT professionals enjoy high skill transferability (Adya & Kaiser, 2005; Cappelli, 2001; Ramos & Joia, 2013).

In general, companies try to increase switching costs to employees by investing in skill development which are less likely to usable in other organizations. Nevertheless, creating a high switching cost is less possible with IT professionals. Thus, creating a

high switching cost alone will not ensure that IT professionals stay in organizations. Furthermore, productive outcomes cannot be expected from those who are trapped in organizations due to cost of moving. Since IT industry's performance has a greater impact from individual performances, employee willingness to remain in organizations is essential. In essence, IT professionals are in need of continuous learning, like to face challenges and in need of skill developments to face the threat of professional obsolescence. Organizations must understand that they should be provided with strong inducements to fulfil those needs. Therefore, increasing switching cost may not yield productive outcomes in IT employee retention.

IT firms are encouraged to understand the importance of employee workplace behaviour and the expectations of their workforce. Since perceived cost of leaving is less applicable for IT professionals, their emotional attachments to the organization must be increased through the increased inducements and felt social capitals. Thus, beyond regular trainings that are focused on updating on technology and procedures, the trainings must be extended to ensure career advancements. In other words, an organizational culture that is inclusive of learning, support and career advancements would ensure IT professionals' retention.

5.4.3 Influence of Perceived Organizational Support and Professional Commitment on Job Satisfaction

Strong, positive relationships were found between POS and job satisfaction ($\beta=0.509$, $p<0.05$), and professional commitment and job satisfaction ($\beta=0.311$, $p<0.05$). Thus, POS and professional commitment clearly stimulate job satisfaction among IT professionals. Although both predictors have large effect sizes, POS had the highest influence in predicting job satisfaction. POS' strong predictive power of job satisfaction is similar to the finding on employees in non-profit organizations

(Strömgren, 2017). The role of organizational support in stimulating job satisfaction is highlighted from this finding.

Professional commitment makes IT professionals to feel more satisfied with their jobs, making turnover decision difficult. Opportunities for competency development must be perceived as a way to influence job satisfaction and thereby to increase organizational attachment (Heilmann, Vanhala, & Salminen, 2015). This is because of the inverse relationship between job satisfaction and withdrawal cognition.

The finding is consistent with studies in the nursing profession (Hsu et al., 2015). The finding bridges a gap in the literature regarding professional commitment's influence as a predictor of IT professionals' job satisfaction.

In conclusion, managers in IT firms must understand that any support and effort to facilitate employee professional advancement needs may result in an increase in job satisfaction. In other terms, high organizational support and professional commitment compel IT professionals to feel more satisfied with their jobs. Thus, it is difficult to make a decision to leave the company. A re-emphasis is placed upon the importance to of viewing professional commitment as a stimulant of job satisfaction. Further, it encourages to abandon the stereotype that professional commitment negatively influences IT professionals' turnover intentions.

5.4.4   Mediating Effect of Job Satisfaction

Job satisfaction partially mediated the effects of POS and professional commitment on turnover intention. Though POS is a strong predictor of turnover intention (Knapp et al., 2017), the relationship was mediated by job satisfaction due to the strong relationship between POS and job satisfaction Strömgren (2017). When IT professionals experience high organizational supports, the increased job satisfaction

tends to decrease the intentions to leave the organization. As per the social capital theory, when employees feel that organizations care for their wellbeing, such feelings increase job related satisfaction, which weakens intentions to leave. This is due to the operation of reciprocity-expectation: one of the dimensions of social capital theory. The results are explainable using social exchange theory as well, which perceives employment as a trade between efforts and benefits. When employees perceive high organizational supports for their efforts and performances at work, a repay occur in terms of further increased performances and or by staying with it. As per the results, the decision to remain in the organization has two alternative and simultaneous paths: directly and through the increased job satisfaction.

Furthermore, job satisfaction partially mediated the effect of professional commitment on turnover intention. Since job satisfaction mediates relationships at individual, group and organizational levels (Tongchaiprasit & Ariyabuddhiphongs, 2016), such an understanding can be used to interpret the results. As IT professionals are more committed to the profession and intend to achieve professional development goals within the organization (direct effect), they build interests on the organization when their career needs are fulfilled (indirect effect). This creates a negative force to turnover intention. Complementing the explanations given by Aryee and Tan (1992) on professional commitment and turnover intention relationship, this study proved that efforts put on professional advancement weaken intentions to leave due to felt needs to stay with the organization. This happens when organizational settings facilitate their career goals, which simultaneously occurs directly and through their felt interest about the organization. In essence, efforts toward professional advancements weaken the intentions to leave organizations due to employees' need to stay with it as organizational settings facilitate their career goals.

In offshore outsourced IT firms in Sri Lanka, employees who had been working for more than five years in the same organization were less satisfied, lost interest in IT jobs and had high intentions to leave the companies (Wickramasinghe, 2009). Further, Wickramasinghe (2009) found that moving between employers had increased their job satisfaction, indicating that companies are at a risk of losing experienced employees and held responsible for diminishing satisfaction. Companies need to identify what interactions would weaken employee dissatisfaction. This study guides companies to understand how POS and professional commitment positively contribute to stimulate job satisfaction. Furthermore, job satisfaction's factor analysis provides more insights on how companies can initiate changes to reverse the situation.

5.4.5 Factors of Job Satisfaction

In contrast with some recent findings (Harden et al., 2016; Korsakienė et al., 2015; Kowal & Roztocki, 2016), in this study, the satisfaction related to *pay and promotion* was the least important factor ($R^2 = 0.380$) (Appendix: H). In early studies, (Hunter, Felix, & Bernard, 2008; Igbaria et al., 1994; Igbaria & Siegel, 1992; Thatcher, Liu, Stepina, Goodman, & Treadway, 2006) pay and benefits were emphasized as important in IT professionals' job satisfactions, career satisfactions and in organizational commitments.

Controversially, in this study, satisfaction related to *co-workers and supervision* was the most influential factor for job satisfaction ($R^2 = 0.867$), followed by *work design* ($R^2 = 0.680$). Taken together, people-related or interaction-related factors were most significant in job satisfaction. One possible reason could be the teamwork behaviour in IT companies where interactions with supervisors and fellow members are frequent. Furthermore, over time, across the industry, the nature of work might have changed rapidly, which resulted in a change of nature of employee satisfaction. Moreover, the

agile work nature that is popular among IT firms need continuous interactions between team members. Recently, Sukriket (2014) also discovered a significant relationship between supervision and turnover intentions of software programmers in Thailand. IT professionals have high needs for work autonomy and independence (Igbaria et al., 1991), for which supervision can have a direct influence. Generally, employees like to work with trusting and supportive supervisors and managements (Lo, 2015). Unfavoured bosses were found as a reason for IT professionals to leave companies (Longenecker & Scazzero, 2003). Thus, allocation of project roles, team members and team leaders must be done bearing in mind the influence of supervision on employee satisfaction and turnover intention.

Further, co-worker influence also should not be overlooked in IT professionals' turnover intentions. In IT industry, once co-workers leave the organization, other members tend to follow the trend (Vijayakumar, 2012). Employees like to work with supportive co-workers who share information (Lo, 2015) and who are competent; consequently, turnover intentions are weakened (Igbaria & Siegel, 1992). Apart from being a reason to reduce turnover intention, co-workers who share information have contributed to increase job satisfaction among peers and proven to be the reason for some IT employees to stay with organizations (Longenecker & Scazzero, 2003). Given the teamwork behaviour in IT companies, some countries have shown higher sensitivity to co-worker relations as a force of job satisfaction and turnover intention. For example, from a study of Singapore and New Zealand IT professionals, Hunter et al. (2008) found that employees from Singapore were more sensitive to share common believes within teams and collaborative teamwork than employees from New Zealand.

Thus, along with the findings of this study, it can be concluded that co-worker influence on job satisfaction and turnover intention is significant to IT professionals in

Sri Lanka. Therefore, attention is drawn to supervision and co-workers as important job satisfaction factors. Findings challenge some contemporary beliefs that flexible working hours (Ross & Ali, 2017) or pay (Wickramasinghe, 2009) satisfy and keep IT professionals with their organizations. Earlier, from their findings on healthcare professionals, Biron and Boon (2013) concluded that firms which intent to retain high performers should develop healthy relationships with subordinates and superiors. For example, support for career development works as a way to improve supervisor-subordinate relationships in IT firms (Ertürk & Vurgun, 2015).

Work design was the second most important job satisfaction factor. Since IT professionals are intrinsically motivated to the work they do (Lam, 2011), they want their jobs to be intellectually challenging in order to grow their knowledge and expertise (Bigelow, 2012). They expect to achieve self-actualization and social satisfaction from their jobs (Chen, 2008), in need of growth, personal development, learning and strong desire to be challenged (Lee et al., 2000; Zylka & Fischbach, 2017). IT professionals expect autonomy (Igbaria et al., 1991) and expect independence and cohesion (Amabile, 1997) in their workplaces. Sukriket (2014) investigated on how the nature of work and job conditions relate to IT professionals' turnover intentions. As Sukriket (2014) explained, for an example, if a programmer's job is not well designed, the value generation is doubtful. It is therefore clear that IT professionals are concerned as how their jobs are designed. Thus, companies must make sure that their expectations are served through inclusive and thoughtful job designs.

Related to *pay and promotion*, earlier, Wickramasinghe (2009) found that in Sri Lanka, female IT professionals were unsatisfied with promotional opportunities available for them while male had a concern on pay. IT professionals who stayed more than five years with the same employer were less satisfied with their jobs and felt loss

of interest in IT jobs in Sri Lanka (Wickramasinghe, 2009). Also, majority of the IT companies did not have separate HRM divisions; so, line managers were responsible for the HRM activities (Wickramasinghe & Perera, 2012). In such a situation, IT companies need to understand line manager role as supervisors in employee job satisfaction. As Davis and Gardner (2004) found, employees who have high-quality exchange relationships with supervisors received greater personal support, interesting tasks and greater responsibilities; therefore, these benefits may create reciprocal responsibilities on the organization: so, negatively respond to alternative job offers. Inversely, Biron (2010) found that employees counter the negative exchange relationships with supervisors to organizations. In other terms, when employees felt poor exchange relationships with supervisors, they return to the organization with negative behaviours such as lying and misusing their leaves. Therefore, IT firms need understand the criticality of the role of supervisor in producing loyal employees, and thereby reduce turnover intentions. On the other hand, if long stayed employees are dissatisfied and felt leaving, companies incur high opportunity costs. Supervisors or line managers held responsible for low satisfactions among subordinates. As a precaution, companies may take initiatives to monitor and evaluate how supervision takes place.

Taken together, it was noted that factors of POS and job satisfaction show similarities. First, POS is a related but an independent concept from job satisfaction (Eisenberger et al., 1997). Within POS factors, support ensuring *job satisfaction and enrichment* was the most prominent factors, which directly related to *work design* perspective in job satisfaction. Therefore, the importance of satisfaction-related factors in retaining IT professionals is further emphasized.

5.4.6 Influence of Gender

Gender found no influence on the relationship between job satisfaction and turnover intention ($\beta=0.039$, $p > 0.05$). Apart from the hypothesized effect, the study further analyzed the effect of gender on all paths in the proposed model and no influence was identified. Therefore, it is vital to understand that female IT professionals possess same level of work attitudes about job satisfaction as their male counterparts. However, previous studies from Sri Lanka produced contradicting results on the influence of gender in IT professionals' job satisfaction (Jinadasa & Wickramasinghe, 2005; Wickramasinghe, 2009). Recently, Ryan and Harden (2014) found that male and female IT professionals are indifferent when fitting with the organizational culture. Hence, the stereotypes related to female IT professionals must be eliminated, and their equal workplace contributions must be acknowledged. Thus, if pay and promotion or any other advancements are to be offered, no discrimination is justifiable. Further, any efforts taken to reduce turnover can be implemented across both gender without any variations.

5.4.7 Influence of Career Stage

Finally, it was found that the turnover intention is lower among IT professionals who have been in the industry for more than 10 years compared to those who are still in the establishment or advancement stages of their careers [($\beta=0.265$, $p<0.05$), ($\beta=0.300$, $p<0.05$)]. The finding can be explained using the unique nature of the IT industry and its workforce.

Establishment stage is more of an exploring stage by early IT professionals, who have not yet specialized in one area. At this stage, they explore career and try to understand own career preferences, talents and skills. Further, they may shift between organizations in order to increase their employability. In doing so, early career

professionals may look for employer branding of companies to claim the work experience later on. Therefore, their loyalty to working organizations may be less, which makes moving decisions easier.

Careerists perceive their current working organizations as stepping stones to find other better opportunities, which result such people to easily leave working organizations which is common among early career IT professionals (Rousseau, 1995). Further, as explained before, the other possible reason for early career IT professionals to leave their organizations could be the need to claim their work experiences to increase the employability.

Companies in the sample included small and medium-sized firms, where their focal point must be centred to generate more profits at lower costs. This is because; companies too in their growing stages. Consequently, it is likely that such companies may postpone investing in core knowledge of early career employees. Hence, early career IT professionals in those companies may move between organizations, to get development opportunities: therefore, it is concluded that in early career stages, turnover intention is high.

Conversely, at advancement and maintenance stages, employees may have adapted to one organizational culture, settled in their personal lives along with work settings and developing a resistance to change. Also at this stage, they may have figured out their specialization, and continue developing firm specific knowledge to position themselves in the current organization. Therefore, they develop resistance to change. This explanation is supported from further findings of the study. For instance, apart from the focus on turnover intention, an additional question was posted to respondents on their view that *company specific knowledge* compels them to stay with their organizations. Therefore, if they are to leave current organizations, they may have to leave the core

knowledge or the job-specific knowledge, which were tailored, to their current organizations. However, this scenario must be deeply investigated. This is because, IT professionals can transfer their skills to other organizations and to different industries as well.

IT professionals at mature career stages are at the peaks of their learning curves. If decided to leave the current organization, the associated opportunity costs of leaving may outweigh the benefits. Pay and promotion will be indifferent across the industry for a specific position. Even if salary and compensation attracts them to other organizations, cost benefit analyses may compel them to stay with the same. This is due to the efforts they need to put to adapt to new organizational cultures and develop firm specific knowledge for similar or higher levels of job stress. Further, unlike other employees, IT professionals perceive pay and promotion as the least important in their job satisfaction. Thus, to make a turnover decision at advancement and maintenance stages, it should be a strong stimulus than salary and other compensations. Thus, it is concluded that at the mature career stages, the turnover intention is less.

Findings suggest that mangers must understand the influence of career stage on the professional commitment–turnover intention relationship. Further, strategies must be introduced to control the influence of career stage on pivotal talents in order to retain them. For example, providing trainings that are oriented at professional advancements, allow to involve in research and development, sponsorship for IT certifications and other professional qualifications would be helpful in this regard. Generally, managers must understand how important professional advancement to IT professionals at each career stage. Apart from that, depending on the career stage of the leaving employee, companies have to bear varying training and replacement costs. For instance, the

replacement cost of an early career IT professional is much lower compared to that of mid and late career professionals (Zylka & Fischbach, 2017).

5.5   Chapter Summary

The negative influence of POS and professional commitment on turnover intention can be explained based on social capital and social exchange theories: particularly through the operation of reciprocities. POS and professional commitment were positive stimulus to increase job satisfaction among IT professionals. Job satisfaction is an important mediator in a turnover intention model. Supervision and co-workers was the most significant job satisfaction factor. A similarity was observed among factors of POS and job satisfaction. A detailed discussion with relevant reasoning has presented about factors of job satisfaction. Female IT professionals possess equal professionalism as their male counterparts. Depending on the career stage, turnover intentions vary among IT professionals. Many hypothesized relationships were novel to the IT industry, and the discrepancies were explained in the chapter.

CHAPTER 6: CONCLUSION

6.1 Introduction

This chapter is aimed to derive conclusions from the findings discussed in the previous chapter. First, it provides an overview on the study followed by the conclusions derived from the analysis. Thereafter research implications are discussed. Limitations of the study and the directions for future research are presented at the end of the chapter.

6.2 Overview

Given the high turnover rate in Sri Lankan IT industry and in the industry at large, this research was aimed to examine the influence of perceived organizational support (POS): an organization related variable and professional commitment: a profession specific variable in a turnover model. The model was further tested for job satisfaction's mediating effect and the moderations from gender and career stage on main relationships. The study targeted at few outcomes: recommend the industry with strategic interventions to reduce turnover, contribute to turnover and to the commitment literature with empirical evidence, enhance the understanding on social capital and social exchange theories in turnover studies, and contribute to knowledge workers' behavioural investigations. Anchored to social capital and social exchange theories, all the research questions were answered, and all research objectives were achieved. The study proposed and tested eight hypotheses: seven were supported. Taking in to account IT professionals' unique workplace behaviours, the study provides numerous practical and theoretical implications to mitigate their turnover intentions. In conclusion, companies' efforts to support and facilitate IT professionals' professional needs stimulate their job satisfaction; as a result, reduce the intentions to leave, of which the

strength vary depending on their career stages. However, gender had no effect in the model.

6.3   Main Findings and Conclusions

Both perceived organizational support and professional commitment are positive stimulus to increase job satisfaction and to reduce turnover intention. The misconception: knowledge workers leave their organizations due to high commitment to their professions, must be abandoned. Instead, professional commitment is a positive inducement to keep IT professionals longer in organizations. That is, if companies provide opportunities to get professional advancement needs satisfied within the organizations, IT professionals stay. Thus, this study supports the notion that simultaneous commitments to a profession and to an organization are possible. Therefore, as a remedy to the turnover issue, IT firms should facilitate IT professionals' professional advancement needs, and understand its effect on turnover intentions. Further, IT professionals' professional achievements should be acknowledged in evaluations and promotions.

Job satisfaction is an important mediator that weakens turnover intentions; consequently, it should not be excluded from IT turnover models. *Supervision and co-workers* was the most influencing source of job satisfaction, followed by *job design.* Unlike other employees, *pay and promotion* was the least influencing job satisfaction factor for IT professionals. Among POS*, employee satisfaction on the job* was the most felt form of support, followed by *job enrichment* and *company's consideration on goals and opinions*. Factor loadings of POS and job satisfaction had uncovered a similarity, which emphasized the important the role of support and satisfaction in retention strategies.

It was revealed that turnover intention is lower among IT professionals who have been in the industry for more than 10 years (at mature career stages) compared to those who are still at their early career stages. IT professionals at mature career stages may possess several characteristics: at peak of their learning curves, adapted to a specific organizational culture, developing resistance to change, invested on firm-specific knowledge, and settled in personal lives along with work settings. Conversely, early career IT professionals may demonstrate dissimilar characteristics such as concern on gathering more experiences to increase own employability, in the process of developing skills and identifying specialization areas, yet to settle in personal lives, not fixed to a particular organizational culture, and ready to welcome opportunities.

Gender had no influence in the model. Female IT professionals are indifferent in all the aspects in the model, and they possessed equal professionalism as their male counterparts. Consequently, no discrimination is justifiable based on gender. Thus, the glass ceilings of female IT professionals must be dismissed.

6.4   Research Implications and Contributions

Before commencing a turnover study on IT professionals, scholars need to question from themselves: how IT professionals differ from other knowledge workers, and if so, in what aspects (Lo, 2015). Thereafter scholars should think about how to use such uniqueness to motivate them to stay in companies (Lo, 2015). Thus, the current study started from an investigation on IT professionals' unique work place behaviours, followed by its effect on turnover. It was discovered that commitment to the profession is an under-discovered predictor in IT turnover studies. Thus, the findings of this study generate numerous managerial implications on how IT professionals' unique workplace behaviour can be used in return to motivate them to stay in organizations. For instance, it is stressed that IT firms need to find ways to satisfy professional advancement needs

of their employees, and there by yield the positive impact professional commitment brings to work places. In addition, those who possess high professional commitment needs must be given priority when hiring. This is because; such people remain in companies for longer, if their career needs are satisfied within organizations. Thus, selection procedures may incorporate assessments on applicants' professional commitments. After hiring, avenues such as trainings and sponsorships for professional advancements must be provided. Such achievements must also consider in pay and promotions to further facilitate their professional commitment needs.

In essence, IT companies should understand that highly professionally committed employees tend to stay longer in organizations when their professional commitment needs are fulfilled, which acts as a positive stimulus to create higher job satisfaction. Therefore, in retention strategies, companies may invest more on fulfilling professional advancement needs. That is, on human capital development at large. Few possibilities are available to companies in this regard: continuous trainings including overseas trainings and sponsorships for IT certifications and professional educations. Given companies' cost considerations on employee developments, efforts may take to groom at least pivotal talents by perceiving it as an investment. Specially, small companies may postpone investments on employees due to their focal interest of re-investing on business growth. However, they can have no exception to the solution. Previous studies revealed that employees who received any form of a training and development opportunities had perceived higher POS than others (Wayne et al., 1997). Further, employees who had developmental experiences had developed high quality exchange relationships with their superiors (Wayne et al., 1997). Also, an organization's history of treatment to employees in terms of promotion and development is significant in POS (Wayne et al., 1997). Thus, IT firms must understand the importance of creating a

positive memory of history of treatment to their employees by ensuring training and development opportunities. Consequently, employees motive to stay longer.

However, from the demographic details, it was found that 90% of the companies do not provide either sponsorships for professional qualifications or IT certifications, nor consider those individual achievements in advancement/promotion decisions. In other words, IT professionals' personal career advancements have not supported by companies nor acknowledged in formal evaluations. Possessing professional qualifications and IT certifications reflect their professional commitment in one way, and such commitments positively affect job satisfaction and thereby reduce turnover intentions. On other hand, facilitations and acknowledgements of professional advancements are essential as IT professionals face a threat of professional obsolescence; it compels them to be committed to their professional developments. Companies can therefore make use of such efforts to motivate them at least by considering such advancements in promotions and salary increments. Furthermore, IT firms must implement selection tests to sort candidates who demonstrate high professional commitments; for example, select based on their enrolments to professional education and to obtain IT certifications. At large, managers must understand how sensitive the professional advancements at each career stages.

In their retention strategies, IT firms may create supportive and helping organizational cultures that promote mutual learning. Further, individuals who do so must be recognized and rewarded through formal appraisals. As Bigelow (2012) stressed on, IT professionals prefer stimulating work environments; consequently, an organizational culture that is characterized by continuous learning, supporting and advancements must be established. Lo (2015)'s review revealed that a learning organizational culture is a source of job satisfaction to IT professionals.

Instead of the emphasis given on work-life balance issue in previous studies (Igbaria & Siegel, 1992; Sumner & Niederman, 2004; Wickramasinghe & Kumara, 2009), findings of this study emphasize more on organizational support, encouragement and facilities for professional advancements, helpful supervisions, and healthy co-worker cultures as essential in IT turnover strategies. Thus, companies need to train managers on how to develop strong interpersonal relationships and creating healthy social exchanges at work. As it was found that pay and promotion are not strong in job satisfaction, investing in manager trainings on productive supervisions and on social exchange relations at work may yield long lasting benefits to organizations. Creating healthy organizational cultures would not cost companies as pay increments do.

Gender had no effect in the proposed model. That is, there is no difference by gender in the effect of job satisfaction on turnover intention of IT professionals. In other terms, male and female are indifferent it their turnover intentions due to job satisfaction. However, Wickramasinghe (2009) previously concluded that female IT professional in Sri Lanka are less satisfied, but they stay longer in companies. The socio economic changes happened over time might have resulted in female IT professionals to demonstrate equal professionalism at work and to experience same level of job satisfactions as their colleagues, thus, resulting to demonstrate equal levels of turnover intentions by both male and female. Since female population is increasing in Sri Lankan IT industry (ICTA, 2013), the findings provide insights to relevant authorities to acknowledge that male and female are equal in their turnover intentions which may cause from job satisfactions, Thus, it is important to ensure equal work opportunities for female IT professionals and no discrimination is admissible at workplaces assuming that male and female are different in their job satisfactions which result in turnover intentions. Therefore, all avenues must be opened for female IT professionals as well. Further, the stereotypes related to females must be revisited. Their equal contributions

and the equal attitudes at workplaces must be acknowledged. Furthermore, the decision made at the country level to increase IT education to all streams of advanced level students must be viewed as a timely decision that should be continued due to the fact that female population of the country is increasing.

Mangers in IT firms must understand the impact of career stage on the influence of professional commitment on turnover intention, and cluster IT professionals to identify them based on their career stages. As a precaution to the turnover issue, strategies must be introduced to control the influence of career stage on pivotal talents. As explained before, any effort to stimulate IT professionals' career advancement needs such as extensive training on up-to-the-minute technologies, sponsor for IT certifications and to other professional qualifications will help to retain pivotal talents. Companies must develop understandings on IT professionals' unique workplace behaviours before any effort on retention strategies.

This study contributes to advance the understanding of knowledge workers' organizational behaviour. Recently, Hom et al. (2017) highlighted the need to investigate turnover from different industries and to know how their attributes affect turnover. Further, IT professionals' turnover must be studied from many cultural contexts (Ertürk & Vurgun, 2015), thus a study from the South Asian region would contribute to the industry by providing further empirical evidences as what keep IT professionals with their organizations. At large, it would contribute to widen the understanding of the knowledge workers' organizational behaviour. Moreover, the findings would assist IT industry, particularly to Sri Lankan IT firms as what to incorporate in their retention strategies in order to increase the industry's competitiveness.

This study considered IT professionals' unique workplace behaviour in conceptualizing turnover intention. Thus, it contributes to the turnover literature on professionals. The proposed research model contributes to understand what make IT professionals to remain voluntarily instead of trapped in organizations due to high cost of moving between organizations. Similarly, the model eradicated the misconception that IT professionals frequently leave organizations due to high commitments to their professions over to working organizations. Hence, possibilities were opened to accept professional commitment as a vital predictor in turnover models of knowledge workers. Further, the understanding on professional commitment's behaviour in turnover intention contributes to the on-going dialogue on its applicability over continuous commitment in knowledge workers' behavioural studies.

Despite the emphasis on applications and importance of social capital theory in turnover studies (Dess & Shaw, 2001), Suseno and Rowley (2018) observed a paucity of its application in service oriented firms. This was further evident from the most recent review on IT turnover studies by Lo (2015).

On the other hand, there is a definite need to empirically prove the relationship between social exchange and turnover intentions of professional workers (Osman et al., 2016). Conceptually at large, this study contributes to the enduring debate of striking a balance between what to expect from employees and in return what to give them (reciprocity norm) in managing turnover issue.

In their review of 100 years of turnover studies, Hom et al. (2017) stated that in small scale firms, when key employees leave the organization, it may lead to close down the businesses, and thus, turnover studies need to focus on such small firms, and theories need to be tested on their applicability in small firms. The sample of this study had 28 small IT firms, and investigated on the applicability of social capital and social

exchange theories. Thus, it directly contributes to fill in those gaps in the literature. Further, as Hom et al. (2017) stressed under the future research directions, studies need to disperse to variety of populations to create a greater value to practitioners and to users of research.

Recent reviews on turnover studies (Hom et al., 2017; Lo, 2015) suggested to incorporate novel predictors in turnover models to understand the issue from a broader perspective. Meantime, it is believed that studies need to investigate and authenticate conceptions/misconceptions related to certain groups of people on their turnover behaviours. From this study, the misconception--IT professionals leave their companies due to high commitment to the profession--was challenged. Thus, this study's contribution extends up to emphasizing the importance of investigating other perceptions, misconceptions and presumptions related to employees in other sectors; it then would unveil the real reasons of the turnover issue.

6.5   Research Limitations

Present study is limited to POS, professional commitment and job satisfaction as predictors of IT professionals' turnover intentions. The findings must be understood bearing in mind the context of the Sri Lankan IT industry, which is still at its growing stage. Further, the cultural difference of the country should be borne in mind when deriving conclusions. National cultures may influence how people perceive organizational efforts, practices and the attitude towards a profession. Also, even within the respondents, sub cultural differences due to ethnicity of the respondents can influence their perceptions which was not considered in the study.

Instead of investigating effectiveness of HRM practices from organization's point of view, this study investigated the turnover issue from an individual employee perspective based on their perceptions towards organizational efforts. Thus, the readers must

understand the scope and the approach of the study when drawing conclusions. Some limitations of the study are mentioned for the benefit of future research.

First, the data were collected from software engineers whose companies were members of the selected two member categories of SLASSCOM. Other member categories that share different organizational and business settings were excluded. Along with those left off companies, there can be other IT firms outside the selected association--SLASSCOM with unique workplace behaviours, which may alter some conclusions on IT professionals in Sri Lanka. In addition, the sample comprised only software engineers. Therefore, future turnover studies may benefit from a sample of other job categories in the industry: quality assurance, business analytics and so on outside SLASSCOM. Such studies would contribute to make conclusions about Sri Lankan IT professionals in a broad manner.

In data collection, since some companies preferred it offline, there might have some biasness in distributing the questionnaires through the contact persons. However, this biasness was projected at the pilot study stage, and it was tried to collect the data online in all possible scenarios in order to reach the target respondents. As more than 80% of the data were collected online, any effect on the interpretations and the conclusions would be minimal.

As the study used self-report measures, one can argue on the possibility of receiving socially acceptable answers from the respondents, and thereby affected from *social desirability response bias.* Regardless it is unavoidability, Moorman and Podsakoff (1992) argued that *social desirability response* is not a source of biasness in measuring organizational perceptions.

IT industry has several job categories. Depending on the industry niche a company serves, and its technology specialization, the customer base varies. Further, if it is an IT outsourcing firm, the region it serves also vary. Thus, IT professionals may work in new, stagnated or transitional technological areas; so, differ in experiences, exposures, attitudes and perceptions on their working organizations and about the profession. However, this study did capture such influences; instead, it assumed similar contexts and tried to capture their perceptions in a general perspective. Only two sub categories of the Sri Lankan IT industry were selected to draw the sample of the study. Due to likeness in organizational set ups, the respondents were expected to be similar in their experiences and exposures; so, do in their attitudes and perceptions.

This study used a quantitative approach to analyze the data as it conducted a path analysis and dealt with quite large amount of data to better generalize the findings. Since turnover issue is seldom studied in the IT industry, especially in Sri Lanka, a large number of data may facilitate the generalizability of the findings. However, if the research was conducted along with interviews, the findings would have been more inclusive. When used in behavioural studies, pure quantitative methods have own limitations.

6.6   Future Research

From a background study, it was found that the IT industry uses firm-specific technologies: frameworks, operating systems, programming languages, and so on. Eventually, employees master in that technology as they constantly engaged in trainings. However, since the technologies and the platforms employees mastered are distinctive depending on the market niche the company serves, those limit employee mobility to other companies. This was confirmed from an additional question raised from the respondents on their view on company-specific technology as a reason of

entrapment in the present organizations despite the real intentions to leave. However, the additional question did not divert the respondents from the original intention of the study. Future studies may explore the influence of company-specific technology on actual turnover, and unveil useful findings to IT companies. As Lo (2015) spotlighted, IT industry turnover studies need to advance from common predictors to industry-specific variables in order to understand the issue in a comprehensive manner.

This study concluded on *supervision*, *co-workers* and *job design* in a broader manner. Future studies may extend to investigate the effects of job design, team formation, allocation of project roles and team rotations on turnover intentions in a detailed manner. In essence, future studies may incorporate more predictors related to individual behaviour, organizational settings, socio economic factors and generic predictors. For example, turnover studies at individual behaviour level may use factors such as self-esteem, work stress, and how much the employee settled in personal life as the predictors. Similarly, studies on the influence of organizational environment on turnover may include predictors such as allocations of project roles, team structure, employer branding and technology specialization of the company. Studies may investigate the influence of socio economic factors such as how workforce disbursement and company locations affect employee turnover intentions. Further, studies may use generic predictors to study the turnover intentions of IT professionals such as the influence of threat of professional obsolescence, trainings targeted at increasing employee switching cost and the skill transferability.

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LIST OF PUBLICATIONS AND PAPERS PRESENTED

1. Is Professional Commitment the Reason for Turnover Intentions of IT Professionals? Published in *Advances in Business Research International Journal* (ABRIJ), 2019, 5 (1), e-ISSN (2462-1838).

2. Understanding Information Technology Professionals' Turnover Intentions: A Structural Equation Model Approach, Paper presented at *The International Conference of Energy Economics in Administration and Human Resource Management* (ICEEAHRM 2018) (Proceedings), September 2018, Kuala Lumpur, Malaysia: Best Paper Award.