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## **Building an Inclusive Talent Pipeline: A Study on Women of the Indian Informational Technology Sector**

By Swati Alok<sup>1</sup>, Sudatta Banerjee<sup>2</sup> and Mohammed A. Rahman Khan<sup>3</sup>

### **Abstract**

Of the many women that are a part of the Informational Technology (IT) workforce, very few make it to senior roles. Occupational commitment measured as affective (AC), normative (NC), and continuance (CC) as well as career satisfaction (CS) are considered to be crucial in understanding this pattern of women not making it to senior roles. AC explains one's emotional attachment to their career, NC is the obligation to stay the course in a career, and CC explains the opportunity cost to transfer from one career to the next. This study aims to understand the role of individual determinants (career identity, career adaptability) and occupational culture fit (the concept of screening potential candidates that is focused on aligning employees and employers with shared values, beliefs, and attitudes). This study also focuses on forms of organizational support (managerial support, job autonomy) that either act as enablers or barriers to sustaining commitment and satisfaction in IT occupations. Data collected from 200 IT women with at least 5 years of experience working in top 20 NASCOM companies were regressed to test the hypotheses. The result indicated that women with high scores in occupational culture (i.e., greater congruence with IT occupational demands) show higher career satisfaction (CS), affective commitment (AC), and normative commitment (NC). This indicates that there is a chance for organizations to actively improve women's occupational demand of long, late, and erratic work schedules by looking at their safety and providing flexi-timing to help them manage a work-life balance. A performance evaluation system that focuses on results, rather than hours of effort, and that allows women flexibility to attend to certain late-night commitments at home could go a long way in helping them

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achieve a better culture fit. Women with strong career identities show higher AC and CC. Women that have high career identities are intrinsically motivated and place a high value on their work; hence, they continuously seek skill improvement opportunities. Employers can utilize this knowledge to proactively identify female employees with high career identities early in their professional journey then engage them in tasks that are meaningful and aligned with their interests and values. Further, results indicated that job autonomy—a person's ability to have an influence over what happens in their work environment, in particular, the ability to influence matters that are relevant to their personal goals—led to higher CC; higher managerial support leads to career satisfaction, thereby indicating that managers can provide support by providing a participative decision-making mechanism and flexible timing for better work-life balance.

*Keywords:* Career commitment, Affective commitment, Normative commitment, Continuance commitment, Career satisfaction, Indian women, Information Technology

## Introduction

Economically, we are convinced that gender equality and the retention of women in occupations can significantly boost the output of a country in terms of GDP. One of the challenges of most occupations, these days, is to retain the workforce of women. A recent report (*The Power of Parity: Advancing Women's Equality in Asia Pacific* | McKinsey, n.d.) states that Asia Pacific could boost its GDP by 4.5 trillion USD by 2025, which is a 12% boost from its expected trajectory. However, studies that convince us feminism should exist as a means to boost GDP are based on the fundamentals of capitalism, and capitalism and feminism cannot co-exist (Oksala, 2018). Women ability to work should be about equality and not about making working women tools to increase a country's GDP. This is a movement that is rooted in making the patriarchy understand and accept that women are just as good as men at the jobs they do and should therefore be given equal opportunities. The changes must begin with men taking on a more flexible role in a society that supports women being able to work without significant opportunity cost (Oláh et al., 2018).

The primary step to retain the female workforce and prevent wasting female talent is not through convincing corporations of the benefits financially, but rather through making them understand that women are not a liability and that the responsibilities of being a mother—at present or sometime in the future—is not an obstacle to their efficiency (Lawrence et al., 2018). In order to be able to convince corporations of this, men need to take up a part of the domestic labour and support the women in their lives (Lyonette & Crompton, 2015). This change of domestic atmosphere, along with companies understanding the importance and capability of the working woman, is a more permanent solution to the retention of the female workforce than an approach rooted in boosting GDP (Servon & Visser, 2011).

We are now in the year 2021, but the retention of women has not grown nearly as quickly as it has for men. This nearly stagnant rate of retention needs to be addressed in order to see the representation of females in the workplace increase to a number that reflects the capabilities of working women (Tapia & Kvasny, 2004). The proportion of women on Asia Pacific organizations' boards is still at a meagre 15%, ahead of only Latin America (8.3%) and Middle East North Africa (MENA) (3.7%) (*2020 CWDI Report*, n.d.). An increase in GDP through the employment of women should not be perceived as the primary goal, but instead should be looked at as a perk of creating a more women inclusive workforce. The goal should be to retain women in the workforce

and representation in senior roles through an abolishment of patriarchal constructs in the workplaces.

India is the farthest away from gender parity in work, and a quarter of working women, especially those in private sectors in different positions, would rather quit their jobs than go through inconvenient working hours, gender bias, workplace harassment, poor working conditions, or family or maternal responsibilities. Clearly, women have a significantly higher number of deterrents that can hinder their occupational commitment, most of which are rooted in patriarchal values and behaviors (McLaughlin et al., 2012). This needs to be acknowledged in order to be dealt with.

For women in IT, leaving their occupations early is a huge loss to the sector and economy, but most importantly, it adversely affects the independence of the women themselves. It is argued that since most companies are now promoting working from home, women can boost their employment without running the costs of providing for safety or the risk of workplace harassment. What needs to be understood is that women are not a part of the problem. They should be able to continue working at the workplace without the fear of harassment and without the fear of calling out men on their actions (MacIntosh et al., 2010). Women should not have to choose to work at home for these problems to be solved; moreover, as the pandemic has shown, women's double work burdens do not make working from home any easier; child care and other domestic labor still falls largely on women, leading to psychological and physical stress (Power, 2020).

A lot of women decide to either shift occupations from IT or leave their career altogether in the early stages of their careers. An analysis spanning 1,100 organizations across the world found a leak in the women leadership pipeline ("Female Business Leaders," n.d.). Women were heavily underrepresented in the higher roles of companies, with only 23% of executives being women, 29% being senior managers, and a staggering 47% in support staff. The case in Asia Pacific is even worse with women comprising only 17% of CEO or business head roles.

The impetus for change must be placed on men to be inclusive and on companies to address societal issues such as childcare and other domestic labor. The atmosphere within most companies is corrosive to women and must change. Preconceptions regarding females harbored by male senior managers are so profoundly rooted that many men are not even aware of them. The businesses that embrace their duty to make radical changes—both in the care of women and in the support of the family—can significantly boost their bottom line (F.N, 1992).

This way, the IT sector can retain women employees by effecting changes in the workplace atmosphere and establishing the safety of those at all levels, ensuring women that their workplace is inclusive and recognizes and addresses the value of domestic labor. It also sends a strong message of the importance of studying the measures that are retaining the women workforce and the measures that still need to be taken to encourage women to stay employed at companies that respect their values and have opportunities for women beyond entry level jobs. This persistence is in turn dependent on career satisfaction and occupational commitment.

The Theory of Planned Behaviour (TPB) model (Ajzen, 1991) states that attitudes and intentions are highly correlated with stronger attitude strengthening behavioral intentions. In the context of career research, the intention to persist in one's occupation will be strongly influenced by their attitude towards an occupation. This attitude is strongly determined by the level of respect, safety, and importance they are given in the workplace, which translates to commitment and satisfaction. According to Meyer and Allan (1997), occupational commitment can be further explained through commitments of affective continuance and normative continuance. Affective continuance explains one's emotional attachment to their career, normative as obligation to stay in

one career, and continuance commitment explains opportunity cost to transfer from one career to the next. Occupational commitments & career satisfaction depend on disparities between people and compliance with work demands, in addition to organizational support (Guzman *et al.*, 2009).

Accordingly, based in the aforementioned context, this paper seeks to explain the effect of individual variations and cultural differences in the workplace, as well as occupational support, if any, on affective, normative, continuing commitments, and career satisfaction. In India's IT sector especially, building a more inclusive workforce is necessary and important because of the need for equality, the huge impact this move will have economically, and—most importantly—the increase in safety and respect for women in the workplace that would come from this. This paper describes i) a literature review, leading to designing the proposed model and ii) data analysis and results, followed by a conclusion and implications in the succeeding sections.

### **Selection of Themes from the Literature**

Gender imbalances, characterized by unequal representation in senior roles, are prevalent in IT occupations. This means a large proportion of women in IT serve lower and intermediate rates (Ahuja, 2002; Beise *et al.*, 2003; Sumner and Niederman, 2004; Trauth *et al.*, 2003). Economically, women play a huge role in the development and boosting of the country's progress; having women on board in senior roles and ensuring them an equal part in the success of a company is a sure way of achieving high increments in a short amount of time (Mukarram *et al.*, 2018). The issue of women being under-represented in IT has a public interest because of IT's rapid growth in recent years, IT's effects on growth and profitability, IT staff shortage, and equality between the sexes in IT (Varma, 2002). IT also holds promise as an enabler for women to emerge in the middle groups' management of decision-making. Access to information has the potential for expert and referent power development via information sharing (Klein, 2000). Even these levels are then discouraged from pushing further due to the low representation in higher levels. NASSCOM-Mercer (2009) reports that the percentage of women in Indian software services is 30%, distributed to 72% at entry level, 14% managerial, and 7% director level and above, which is extremely concerning.

Career satisfaction and occupational commitment represent one's clear and positive attitude towards advancing one's career (Vandenberghe and Ok, 2013). Occupational commitment refers to one's motivation to work in a certain occupation and stay in said occupation (Hall, 1971), or a motivation for one's profession (Blau, 1985). Mayer & Allen's model of occupational commitment comprises of affective, continuance, and normative commitments, which correspondingly stand for emotional attachment to one's career, individual's assessment of cost as part of one's leaving the career, and the sense of obligation to remain in same career, respectively. Career satisfaction, on the other hand, refers to self-assessment of one's own job, subjectively suggesting career success (Nemack, 2007), (Abele, 2011), (Ng, 2005). It is reflected as progress in terms of achieving the goals related to income, development, and advancement (Hoffmans, 2008). Similar to job satisfaction (Carmela R. Wilson-Styles, *et. al.*, 2012), career satisfaction demonstrates how a happy employee feels towards her current profession; that is, it is the optimistic attitude of the employee towards her job (Blau and Luntz, 1998). The higher the career satisfaction, paired with high occupational commitment, the higher the intention to persist higher careers will be (Dickey, *et. al.*, 2009).

In addition to one's own convictions and ideals attached to the job, safety at the workplace, respect and credit for work, compliance with professional requirements, encouragement from

family, financial independence and security, are determinants of job commitment and satisfaction. Socio-demographic factors primarily affect the specific stage of the lives of women when decisions such as children and marriage are given priority. Marriage and motherhood along with difficulties in juggling work and family life result in a steep decrease in the entry level of working women to higher levels (Morikawa, 2015). This should not be the case and should be addressed through a revised division of labour. A marriage or having a child should not leave a woman any more encumbered than a man. If gender roles were not rooted in patriarchy, women would be just as productive as men through marriage and childbirth because the responsibilities would be more equally shared and would not make women quit (Hakim, 2006). Long hours of work, an unpredictable workload, and the need to keep up to date on new skills also impact a software professional's work-family balance (Valk and Srinivasan, 2011) termed as ITOC (Informational technology Occupational Culture) by Guzman et al (2009).

Occupational culture is the ideologies, behaviors, and unique cultural forms associated with a certain occupation (Guzman et al., 2009). "Cultural fit" is the level of congruence between IT women and expected behaviors, and challenges and demands embedded in the IT occupational culture. Based on the results of qualitative studies, two factors, namely, self-efficacy (extreme demand) and self-efficacy (challenges), have been operationalized (Guzman et al., 2009). Self-efficacy (extreme demand) is the employees' confidence to adapt themselves to new problems, long hours, challenges, and constant IT change, which is characteristic of IT occupations. On the other hand, self-efficacy (challenges) refers to the employees' confidence in meeting the demands of an IT occupation. Hence, we postulate that women with high self-efficacy (extreme demand) as well as self-efficacy (challenges) will demonstrate stronger career satisfaction and career commitment; that is, the stronger a woman shows occupational culture fit, the higher her commitment and satisfaction with her IT career will be. With self-efficacy significantly influencing career commitment and satisfaction (Ahmed 2019), and based on Holland's (1985) Person-Congruent Environment Theory (PCET), we predict that, for women working in the IT industry:

*H1: High occupational fit to fulfill IT demand as well as IT challenges will lead to higher career commitment and career satisfaction.*

Career related research indicates that organizational support substantially contributes to one's career commitment and satisfaction. Employees with higher work autonomy exercise more control in their jobs and exude higher levels of job satisfaction (Poulin and Walter 1992). High job autonomy positions tend to have high job satisfaction and productivity, with fewer absences (Hackman & Lawler, 1971). Higher perceived autonomy is associated with high career satisfaction among employees working in government run community health centers (Jin et al., 2013), banking salespeople (Saragih, 2011), and other full-time employees (Wu & Zhou, 2020). Further, studies indicate that high job autonomy leads to high career and organizational commitment (Park & Searcy, 2012), high engagement levels (Jose & Mampilly, 2015), and less turnover intention (Dysvik & Kuvaas 2013). Therefore, we postulate that for women working in the IT industry:

*H2: High job autonomy leads to higher career commitment and career satisfaction.*

Similarly, managerial support like mentoring, acknowledging deserving women as role models, resolving harassment complaints, and ensuring safety in the workplace significantly

contribute to one's career persistence. Mentoring should assist both men's and women's career advancement and should specifically help women who may encounter barriers to their advancement more than men do (Wanberg, 2003). Those who benefit from patriarchy are the creators of these barriers. Mentor career-support raised women protégés' advancement more than it did for men, whereas psychosocial approach reduced women's advancement more than it did for men. Female mentors had the strongest effects, both in helping and hindering their protégé's advancement (Tharenou, 2005). Therefore, for women in the IT sector, it is postulated:

*H3: Better managerial support leads to higher career commitment and career satisfaction.*

Besides organizational climate and occupational culture fit, one's values are considered important in career planning and career satisfaction (McMurtrey et al. 2002). Among them, career identity and career adaptability are considered critically important in career research from the perspective of the employee. Career identity speaks about how central one's career is to their identity (London, 1983). Career identity refers to the centrality of work in employees' lives; it indicates how highly employees regard their career in their lives (Ishikawa, 2007). This is not just an individual attitude, but it is also strongly related to cultural attitudes that affect women's views. Employees with a strong career identity choose to identify with their work, which reflects their overall commitment to their career (Judge et al., 1995). Therefore, for women in the IT sector, it is postulated:

*H4: High career identity leads to higher career commitment and career satisfaction.*

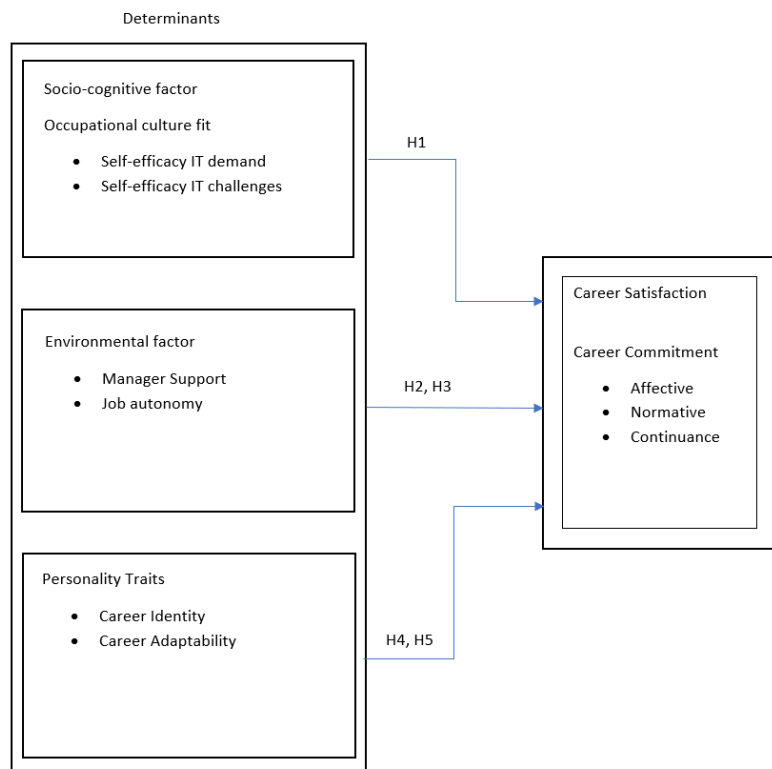
Savickas (1997) defines career adaptability as “the readiness to cope with the predictable tasks of preparing for and participating in the work role and with the unpredictable adjustments warranted by the changes in work and working conditions”. Higher scorers on career adaptability are associated with higher work engagement (Rossier et al., 2012), lower work stress (Johnston et al., 2013), and higher career satisfaction. Previous studies have demonstrated that career adaptability has an effect on career or job satisfaction (Chan and Mai, 2015) and commitment (Savickas and Porfeli, 2012). Based on Career Construction Theory (CCT), which focuses on developing competencies for managing career paths and places importance on career adaptability as a precursor for success, satisfaction, and development (Xuhui, 2019), we postulate that for women working in the IT sector:

*H5: High career adaptability leads to higher career commitment and career satisfaction.*

To summarize, we use the Social Cognitive Career Theory (SCCT) (Lent & Brown, 2002) which focuses on the dynamic interplay between social cognitive factors, environmental attributes, and personality traits, thereby promoting or deterring career adaptive behaviours, such as career choice, commitment, and/or satisfaction. It is important to note that the conceptual model (Figure 1) is based on the study that was carried out among career persistent women who have overcome the injustices and adversity that they face in their careers. We have focused our studies on women between the ages of 21 and 45, where factors like motherhood and marital status play a crucial role.



**Figure 1: Determinants that Break Patriarch Beliefs among Career Persistent IT Women Employees and Its Trickledown Effect on Career Satisfaction and Commitment**



The determinants under each of the three factors were chosen based on the relevance in the context of Indian women working in the IT sector, considering the various patriarchal belief structures that prevail in the Indian social setting. For example, the determinant “occupational culture fit” measures women’s ability to manage occupation specific challenges and demands such as belief in their capabilities to manage projects that require long work hours, constant upgrades in technical skill, erratic schedules, and deadlines (Guzman and Stanton, 2009). However, there needs to be an emphasis that, in Asian countries like India, technical fields like the IT sector are still viewed as male centric areas, and women in these areas are often perceived as being out of place (O’Brien et al., 2015). Only women who believe that they are capable enough to surpass the requirements of IT overcome the gender specific stereotypes and redefine themselves from traditional gendered roles to the “equalizing” job roles (Kelkar and Nathan 2002) to persist in their careers, thereby developing strong career commitment and satisfaction.

Similarly, managerial support and job autonomy were selected as determinates of the environmental factor because autonomy allows women to have more independence and enables them to balance their personal and professional lives better (De Clercq & Brieger, 2021). Women are more satisfied with larger autonomy because of the confidence it provides regarding the control they have over their lives (Allan, 2019). Having a supporting mentor in the workplace is extremely important because the voices and complaints of women in the workplace often fly under the radar and are left unaddressed (Hill & Laguado, 2019). Having a manager that listens to you and takes action about women’s issues in the workplace goes a long way in retaining women employees (Stoeger et al., 2013).

Personality consists of a relatively stable set of characteristics that indicate individuals' tendencies of thinking, acting, and feeling (Brown and Hirschi, 2013). The selection of career identity and career adaptability as determinants of personality traits is based on the assumption that they are deemed important predictors of adaptive career behaviour, as these traits can facilitate career progression and satisfaction and thereby help women overcome adversity in the workplace (Babalola, 2009). Women that face this injustice and have high adaptability or resilience are the ones that persist in spite of the adversity they face (Digan et al., 2019). Being a working woman in India is no small feat, and strong traits of adaptability are required to be a successful woman in this country (Desai et al., 2011). India has still unfortunately not moved past perceiving women as housewives and caretakers. This makes it very hard for women to identify with their careers and have the people around them recognize them as independent women, working for their livelihoods (Olsson & Walker, 2004). Being able to overcome this stereotype and establish one's identity as a working woman with a career as one's centrality are important personality traits and are required for women to be able to persist in careers in India (White, 1995).

## **Research Design and Methodology**

### *Participants and Procedures*

We conducted a cross-sectional research study among women who have worked in the field of IT for at least 5 years without a break in full-time employment. We selected this sample on the premise that the first five years of the earlier career period are essential for any Indian woman between the ages of 21 and 27 to signify commitment to her field of study, fitness for job requirements, and propensity to cope with external changes such as marriage or motherhood. Women who work through these obstacles for the first five years are expected to pursue their careers in the future (Mary Wentling, 2003). This study's first author herself worked in an IT company in the initial phases of her career, and even with high career identity she opted for a two-year career break for childcare and later became a teacher at a premier institute. Her personal experience prompted a study on the factors that lead some women to persist in their careers despite the various external challenges encountered in the early years. She initially conducted elicitation studies among 10 women, with 5 who persist in their careers in the IT sector and 5 that took a career break and then either changed their profession or became homemakers.

In the words of MR, a woman who is persistent in an IT career, she continues mainly "because of immense job satisfaction" that she gets from her job. She says external enablers in persistence are "the support of my family at home enables me to perform well at office. The support of the Hierarchy as well as colleagues at office motivates me to excel in this industry." Meanwhile, factors internal to MR herself that help her continue: "My expertise helps me to try things in an innovative way, that results help me to perform better, if that trail succeeds it gives me satisfaction, if now it motivates me to go for another trial. All this process gives me immense job satisfaction." However, even for MR, the journey was not always smooth. She states, "in the starting days of my job there were some issues at work and family was also feeling tough to adjust my odd timings at work. But later on, all the things fell in place". She says, regarding the reason she was ultimately accepted by others, "I think it could be my nature and commitment towards work and my ability to sustain work related pressures helped me to gain their confidence."

In the words of UG, who did not persist with a career in IT, the reason was "mainly because of my post pregnancy and delivery, I wanted to take care of my baby. Here I would like to mention that my in-laws and my husband neither forced me to continue the job nor compelled me to resign,

it was purely my decision. I wanted to make my home happy, I myself felt that I should take care of my baby and in-laws. As a woman I feel that nurturing the baby would be the best thing for a mother.” She stated that nothing would have made her persist with her career since domestic responsibilities, according to her, “are the most important things at this point of time.” This is a clear case of personal choice.

The elicitation studies led the authors to determine the factors such as career identity, career adaptability, and managerial support that contribute to career commitment and satisfaction among persistent women. Then with literature review and outcome of elicitation studies, the model was proposed to be tested empirically. We approached women working in the top 20 NASSCOM companies and the participants who gave their consent were briefed on the study. Finally, the questionnaire was administered, ensuring them that the data would only be used for academic research purposes and that confidentiality would be retained. The initial participants were chosen through contacting friends and families of the authors and their colleagues. We used a snowball technique, starting with purposive sampling of the initial participants who in turn helped to obtain more participants. 350 respondents were approached for the survey out of which 200 participated. The response rate was 57.14%.

### *Questionnaires Design*

The questionnaire had two parts. The first part captured demographic information such as marital status, parental status, managerial status, working hours etc. The second part captured items measuring various constructs of independent as well as dependable variables, respectively. Constructs that measure career identity (4 items) were adapted from the work of Srinivasan et al., 2013. Items measure degrees to which any individual gives psychological importance to her career and its role in a person’s life, if it defines a person and if it is needed to support the family. Career adaptability consists of three items where each of them respectively is used to measure how good they are at adapting to new work, if they can adjust easily to shifting demands, and if they can overcome potential barriers in their career. These items were based on Rottinghaus et al., (2005). Occupational culture fit, comprising of the subconstruct of self-efficacy demands (5 items) and self-efficacy challenges (4 items) were based on the work of Guzman & Stanton, 2009. Self-efficacy demands measure if participants are confident to solve difficult problems: if they can use technology to handle unforeseen situations, if they have the ability to remain calm when facing problems, if they are capable of finding the best solution to any problem, and if they are confident enough to handle hurdles. Self-efficacy challenges measure their confidence level to adapt to new problems, long hours, and constant change. Construct of “managerial support” consists of three items which measure how the person feels responsible towards their supervisor, how they are comfortable with their supervisor, and whether their supervisor is fair towards all the people. Job autonomy evaluates the freedom the participants get when it comes to their work and the degree to which managers employ a democratic style of decision-making with their employees. It consists of three items, where each of them respectively is used to measure if they have freedom to decide, if they feel responsible to decide, and if they have a say in what they do. Both the constructs of organizational support are based on Thompson et al.’s (1999) work–family culture scale.

Career commitment is comprised of three subconstructs which were all developed by Allen and Meyer (1990) and then revised by Guzman et al. (2009) in the IT context. Affective commitment measures the person’s emotional attachment to their career. It consists of three items where each of them respectively is used to measure if being in IT is important to their self-image,

if they regret being in IT (reverse coded), and if they are enthusiastic about IT. Normative commitment measures a person's sense of obligation to remain in their occupation. It consists of two measures: if they feel responsible to stay in the profession for a reasonable time after training, and if they feel that they shouldn't leave the IT field now. Continuance commitment involves the individual's assessment of the cost associated with leaving one's occupation. It consists of three items; each of them respectively is used to measure if they are not willing to change positions as they have put in a lot of effort, if changing profession is difficult, and if changing profession requires personal sacrifices. Career satisfaction developed by Greenhouse et al. (1990) consists of three items where each of them respectively is used to measure whether they are satisfied with their success achieved, if they are satisfied with the progress they made for their advancements, and if they are satisfied with the progress they made with their career goals. Each scale had Likert-scale components, where 1= strongly disagree, and 5 = strongly agree.

## **Data Analysis and Results**

The hypothesized model was tested using multiple regression analysis. The six assumptions for regression analysis are to be addressed before going forward with the regression analysis as per theory. Field (2005) describes the assumptions as normality, linearity, independence of the error term, absence of multi-collinearity, absence of heteroscedasticity, and absence of outlier and influential observations. Skewness test was performed on the data, and the values obtained were well within the limits of  $\pm 2$ , indicating that data is symmetric and unimodal, satisfying the normality assumption. No heteroscedasticity was observed, and the nature of the distribution is linear. There is also no multi-collinearity in the data (kurtosis  $< 2$ ). Also, there are no outlier observations.

### *Sample Profiles*

Out of the 200 women, 125(62.5%) were married, 66(33%) were single, and 9(4.5%) were divorced. Out of the 125 married women, 35(28%) had no children and 90(72%) had children. Out of the 9 divorced women, 6(66.67%) had children and 3(33.33%) had no children. All the married women spouses were employed. Out of the 200 career persistent women, 92(46%) were in a managerial role. Out of the 200 women, 128(64%) were in core IT and 72(36%) were in support IT function. 20(10%) women supervised less than 4 employees, 28(14%) supervised 4-7 employees, 44(22%) women supervised 8-10 employees, 48(24%) women supervised more than 10 employees, and 60(30%) women did not supervise. 10(5%) women had 6-8 working hours, 132(66%) women had 8-10 working hours, 55(27.5%) women had 10-12 working hours, and 3(1.5%) women had more than 12 working hours. 176(88%) women lived in a nuclear family and 24(12%) women lived in a joint family.

### *Descriptive Statistics*

Table 1 shows means, standard deviations, and correlations between each construct. Also, diagonal shows reliability (Cronbach alpha). As all the values are greater than 0.6, this indicates good reliability and internal consistencies of the construct.

### *Multiple Regression*

Table 2 captures the results of the four separate multiple regressions modelling the effect of six factors on career satisfaction (model-1) and three subcomponents of career commitment

namely, affective commitment (model-II), normative commitment (model-III) and continuance commitment(model-IV). The model leveraged was as follows:  $Y_i = \beta_0 + \beta_1 SE\_D + \beta_2 SE\_C + \beta_3 CAD + \beta_4 CI + \beta_5 JA + \beta_6 MS + u_i$ . Where  $Y_i$  = Career satisfaction for model -I; Affective commitment for model -II; Normative commitment for model-III; Continuance commitment for model-IV and, SE\_D = self-efficacy demands; SE\_C = self-efficacy challenges; CAD = career adaptability; CI= career identity; JA= job autonomy; MS= managerial support.

**Table 1: Descriptive Statistics and Correlations between the Constructs**

	MEAN	STD	SE_D	SE_C	CAD	CI	MS	JA	CC	NC	CS	AC
SE_D	3.9813	.71708	<b>.852</b>									
SE_C	3.8478	.83231	.474**	<b>.644</b>								
CAD	3.9789	.68582	.120*	.190**	<b>.751</b>							
CI	3.9859	.66417	.229**	.256**	.378**	<b>.746</b>						
MS	3.9536	.53306	.199**	.329**	.213**	.421**	<b>.761</b>					
JA	3.4696	.98356	.140**	.192**	.164**	.291**	.456**	<b>.918</b>				
CC	3.6799	.99113	.549**	.399**	.146**	.195**	.206**	.172**	<b>.603</b>			
NC	3.7981	.79824	.186**	.262**	.182**	.277**	.308**	.192**	.211**	<b>.783</b>		
CS	3.6682	.92634	.131**	.301**	.225**	.304**	.310**	.165**	.174**	.308**	<b>.775</b>	
AC	3.9625	.71190	.208**	.229**	.108*	.226**	.006	.129**	.265**	.078	.115*	<b>.691</b>

**Notes:** Mean (M), Std deviations (SD); <sup>a</sup>Diagonal (bold) represents the Reliability. \*\* p<0.05, \*

**Table 2: Determinants of Career Satisfaction and Career Commitment**

<b>Independent Variables</b>	<b>Model I</b>	<b>Model II</b>	<b>Model III</b>	<b>Model IV</b>
	<b>Career Satisfaction</b>	<b>Affective Commitment</b>	<b>Normative Commitment</b>	<b>Continuance Commitment</b>
<i>SE Demands</i>	0.219** (0.099)	-0.148* (0.062)	-0.117 (0.091)	-0.038 (0.082)
<i>SE Challenges</i>	0.256*** (0.101)	0.422*** (0.064)	0.204** (0.094)	-0.047 (0.085)
<i>Managerial Support</i>	0.256*** (0.100)	-0.103 (0.063)	-0.039 (0.092)	0.121 (0.083)
<i>Career Adaptability</i>	0.058 (0.077)	0.002 (0.049)	-0.141** (0.072)	-0.037 (0.065)
<i>Career Identity</i>	0.072 (0.108)	0.125* (0.069)	0.024 (0.100)	0.263*** (0.091)
<i>Job Autonomy</i>	0.132 (0.080)	-0.096 (0.051)	0.013 (0.074)	0.147** (0.067)
<b>R<sup>2</sup></b>	0.096	0.156	0.046	0.076

\*\*\*  $p < 0.01$ ; \*\*  $p < 0.05$ ; \*  $p < 0.1$ ; Values show the  $\beta$  weights, Values in the brackets indicate standard error.

## Results

The result of each model is explained in detail below:

### *Model-I: Determinants of Career Satisfaction*

From column I of Table 2, it is shown that SE Demands ( $\beta = 0.219$ ), SE\_Challenges ( $\beta=0.256$ ), and Managerial Support ( $\beta=0.256$ ) have significant effect on career satisfaction. This explains that occupational culture fit and organizational support contribute to career satisfaction among IT women. Women who are confident of their capabilities and believe that they are capable enough to meet the extreme IT demands and challenges tend to be satisfied in their career. Also, women with supportive managers tend to be satisfied with their career.

### *Model-II: Determinants of Affective Commitment*

Results displayed in Table 2, column II indicate that Affective Commitment has been best predicted by SE Demands ( $\beta = -0.148$ ), SE Challenges ( $\beta=.0422$ ) and Career Identity ( $\beta=0.125$ ). The result indicates that women who expect the erratic time schedule and dynamic environment of IT occupations and who identify themselves with an IT career (career identity) are emotionally attached to the IT occupation. However, negative beta weight of SE\_ demand indicates that lack of self-belief regarding one's technical capabilities can prevent them from remaining in this occupation.

### *Model-III: Determinants of Normative Commitment*

The factors best predicting Normative Commitment are SE Challenges ( $\beta=0.204$ ) and Career Adaptability ( $\beta= -0.141$ ). The negative  $\beta$  weight of career adaptability indicates that women who think they can switch easily and adjust to another career do not feel obligated to stay in an IT occupation. At the same time, women who self-evaluate themselves as having high technical capabilities feel obligated to stay in the same occupation.

### *Model-IV: Determinants of Continuance Commitment*

Continuance Commitment is predicted by Career Identity ( $\beta= .263$ ) as well as job autonomy ( $\beta= 0.147$ ). Continuance commitment measures employee's trade-off between two career choices and is motivated by extrinsic rewards like payment, benefits, perks etc. as well as intrinsic motivational factors such as pride to be a part of that particular career. Women in India feel proud to be a part of the IT field and do not wish to trade-off this identity with another career. Also, the autonomy provided by the IT field stops them from moving to another career.

## Discussion and Implications

This study attempts to explore the predictors that are important for career sustainability and concludes that the dimension of occupational culture played a significant role in predicting career satisfaction as well as affective commitment. Women who showed confidence and highest congruence with IT occupational demands and challenges seemed to be satisfied with their career. In addition, women who are confident in catering to the dynamics of IT, especially in terms of adapting themselves to newer problems, long hours of working, and recurring changes, show normative commitment to an IT career. This indicates that there is an opportunity for organizations to actively improve women's occupational demand of long, late, and erratic work schedules by looking at their safety and providing flexi-timing to manage work-family balance. A performance evaluation system that focuses on results rather than hours of effort and the flexibility to attend to

certain late-night commitments from home could go a long way in helping women achieve a better culture fit. At the same time, women who are aware of the realistic view of IT job features become more engaged in the occupation. It is essential that parents also communicate the dynamic and challenging nature of IT-related careers and the need for adaptability to their daughters when they are choosing a job or related education. Good preparation is a good starting point to resolve these issues. Although, it must be understood that changing women's roles in the workplace is much deeper than parents advising their daughters on the difficulties of work. The true change that is required will only happen when men accept and understand the need for change in their attitudes and mentalities at home and at the workplace and when companies start ensuring safety to their women employees, crediting their contributions, and respecting their work, including their domestic responsibilities.

Our research further showed that women with a strong career identification display high interest in their careers, are emotionally committed to their careers (affective commitment), and think critically before moving on to another profession (continuance commitment). This finding provides practical consequences for both workers and employers alike. People with a strong career identity need to be evaluated early in the career, and the content-oriented work-centered tasks that people consider important should be offered. People who see employment as an integral part of their lives should be given jobs that will boost their skills and work ability, to keep them for the long term. Similarly, women working at an early stage should be aware of the level of their own career identity and choose the career that focuses on career development that requires ongoing learning to remain in the career for a longer period of time.

Our finding also suggested that higher career adaptability has a negative impact on normative commitment. In other words, women who feel they can easily adjust and change their profession do not feel motivated and continue in the same profession. This result seems to be aligned with Zikic and Klehe's 2006 studies which state that higher adaptability to occupations predicts the level of reemployment. HR managers should also recognize women with high workplace adaptability for successful job transitions and diverse career directions, which are the requirements of the IT industry in a competitive environment.

Finally, our outcome indicated that women who receive strong management support and job autonomy show greater signs of career satisfaction. This outcome enhances the role of mentor, occupational support, and empowerment in enhancing women's career commitment. A strong managerial support system means being listened to and being taken seriously. Women face a lot of problems in the workplace, and managers and mentors need to discuss and address these problems and not just dismiss them as trivial workplace behavior. Misdemeanor in the workplace has been going on forever, but that does not make it acceptable.

Some of the limitations of this analysis is the use of self-reported tests and the inability to generalize the results until studied in other settings too. Future research may concentrate on the role of predicting factors at various stages of the women's life cycle: earlier, middle, and top levels. We are also limited by the absence of a quantifiable measure of the effect of patriarchy at home and in the workplace, which affects women's willingness to persist with their careers. Also, the effects of these predictors between persistent and non-persistent women in professions can be investigated. Future works could also compare women employees across different industries with high, medium, and low levels of female participation.

To conclude, women can be committed to their careers and thereby retain talent pipeline especially at middle and higher levels by enhancing job autonomy, offering timely mentoring,



identifying appropriate fit in jobs, and the much-required occupational training which helps them deal with challenges and demands of the future.

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