

# IT Service Management Employee Compensation: Determinants and Outcomes

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## **ABSTRACT**

*Information technology (IT) service management (ITSM) is a critical function of an IT organization and it is important to recruit, manage, and retain qualified ITSM employees who are responsible for providing IT services to an organization. Organizations rely on their in-house ITSM team and the outsourced IT systems (or business processes) to deliver high quality IT services. While IT outsourcing has become a norm in many organizations, its potential impact on in-house ITSM employee compensation and job outcomes, such as job satisfaction and turnover intentions, has remained under-examined. We develop a model that examines the interplay between human capital factors such as educational qualifications, employee compensation, employee job outcomes, and two organizational factors – IT outsourcing and ITSM size. We conducted a survey of ITSM employees from 423 organizations and found support for the model. Our findings have important theoretical and practical implications.*

**Keywords:** *IT Service Management, Compensation, Job Outcomes, Outsourcing, IT Professionals*

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## 1. INTRODUCTION

Information Technology (IT) is crucial to the operational and strategic success of organizations. IT departments<sup>2</sup> in organizations have transformed from a simple support unit (e.g., helpdesk) to a fully-functional business unit with an appropriate governance and leadership structure supporting a wide variety of technologies and processes in organizations. IT within organizations has evolved from stacks of individual software and hardware components to a comprehensive assemblage of interrelated and integrated technologies—ranging from bring your own devices (BYOD) to complex enterprise systems—and processes to help organizations achieve critical business goals (Weill and Woerner, 2013). Organizations heavily invest in technologies to find effective and innovative solutions to their business problems and seize new opportunities. More importantly, with the constantly changing business needs, it is imperative that organizations need high quality IT services that cater to various dynamic requirements. It is vital for organizations to provide and manage high quality IT services to its stakeholders (Slaughter et al., 2007; Weill and Woerner, 2013).

IT services refers to the application of business and technical expertise that enables organizations to create, manage, optimize, and access information and business processes (Ang et al., 2002; Rai and Sambamurthy, 2006). IT organizations facilitate the implementation and management of high quality IT services to the key stakeholders (Slaughter et al., 2007; Weill and Woerner, 2013). IT service management (ITSM) is a process based approach to aligning the delivery of IT services with the needs of the organization that uses them. Rai and Sambamurthy (2006) define ITSM as a set of distinctive organizational functions that provide customers, both internal and external to the organization, with high quality IT services. ITSM in an organization comprises of a set of processes and associated practices, activities, and job functions with the sole objective of providing high quality value added IT services. With organizations realizing the role of ITSM and the value it provides to the organization's key stakeholders, they are allocating approximately 70 percent of their IT budget either directly or indirectly to ITSM practices (Rai and Sambamurthy, 2006). Thus, it is important to understand ITSM practices in organizations.

An indicator of the increasing value of ITSM in organizations is the organization's ITSM size, which is the total number of IT professionals in the organization that have specialized knowledge and expertise in ITSM. The need for high quality IT services requires organizations to hire and retain ITSM employees with unique skillsets to manage the dynamic IT infrastructure, functions, and capabilities (Ang et al., 2002; Weill and Woerner, 2013). Consequently, it has also become imperative for ITSM employees in

2. In this article, we use the terms "IT departments," "IT organizations," "IT functions," and "IT units" interchangeably to represent the business unit or department of an organization responsible for providing and managing IT-related systems, services, and processes.

organizations to keep abreast with continual changes and rising complexities in IT (Joseph et al., 2007; Weill and Woerner, 2013). For new ITSM employees, it is essential to get educational qualifications and relevant IT certifications that would help them get jobs with commensurate compensation packages. Employees who fail to do so struggle to find a fit between their skills and changing organizational IT complexities, thus affecting the nature of their job and compensation.

IT outsourcing, a popular trend that has emerged and widely pursued in the last two decades, is relevant to ITSM employees as they work in many organizations that fully or partially outsource IT functions, systems, and business processes. With many organizations outsourcing multiple IT functions or even entire business processes, IT outsourcing has become an integral part of an organization's IT strategy (Larsen et al., 2013). To stay competitive and cost effective, organizations are outsourcing IT functions that otherwise require the expertise of in-house ITSM employees. Consequently, ITSM employees may have fewer or limited responsibilities in many organizations. In addition, the possibility of overall reduction in in-house ITSM workforce cannot be ignored. The increased spending on IT outsourcing is indicative of two critical trends: (a) organizations are continuously investing in improving the quality of their IT services and adopting new ITs to remain competitive in the market (Gilley and Rasheed, 2000; Slaughter et al., 2007), and (b) given the considerable amount of IT budget spent on IT outsourcing, outsourcing organizations are finding it difficult to appropriately compensate in-house employees with their constrained resources.

While ITSM is a comparatively new research area in information systems (IS), the literature on outsourcing is quite extensive, focusing on its impact on social, organizational, and financial issues. However, there has been little or no research that integrates these two important areas and offers a nomological network of ITSM employees' human capital factors (e.g., education and IT certification), their job outcomes (e.g., job satisfaction and turnover intention) and IT outsourcing. Given the tight IT budgets and the dynamic nature of organizational IT, it is important to examine the relationships among ITSM employees' human capital factors, their compensation packages, organizational conditions (IT outsourcing and ITSM size), and ITSM employees' job outcomes. We focus on two specific research questions to address this important research gap:

- (a) How do human capital factors (i.e., education and IT certification) influence ITSM employee compensation and their job outcomes (i.e., job satisfaction and turnover intention)?
- (b) What role do ITSM size and IT outsourcing play in the relationship between human capital factors and ITSM employees' job outcomes?

We developed a model that posits that ITSM employees' human capital factors (i.e., education and IT certification) will influence their compensation and this

relationship will be moderated by IT outsourcing and ITSM size. We suggest that this model provides a framework for understanding how organizations should manage their ITSM size and IT outsourcing practices effectively, and at the same time ensure that their in-house ITSM employees are overall satisfied with their job and compensation. We build on key prior research on human capital, ITSM, and IT outsourcing to develop our research model and hypotheses. We conducted an empirical study to examine our hypotheses and found support for the model.

The rest of the paper is organized as follows. First, we discuss the existing academic and practitioner literature related to ITSM and IT outsourcing. Next, we discuss our model and the hypotheses followed by the discussion of our methodological approach and data collection procedure. Next, we discuss the results of our data analysis. Finally, we discuss the theoretical contributions, practical implications, and limitations of our study.

## **2. THEORETICAL BACKGROUND**

### **2.1 IT Service Management**

Information is recognized as an important strategic resource by organizations (Levina and Xin, 2007). IT in organizations has become increasingly complex in recent times, consisting of an assemblage of infrastructure, systems, process, and service components. This poses a challenge to organizations to effectively and efficiently manage their IT landscape. Organizations typically embrace one or more ITSM frameworks developed by industry consortia as a solution to manage IT services. Such frameworks may help organizations ensure that the IT services are aligned with the business needs and actively support them (Cartlidge et al., 2007). ITSM consists of activities that are defined by certain policies, incorporated in processes and procedures that are performed by an organization to plan, deliver, operate, and control high quality IT services offered to employees and customers. Today, some of the ITSM frameworks have received recognition from international standards bodies such as International Organization of Standardization (ISO) and the United Nations (Bala and Ramesh, 2014). Some of the most popular examples of ITSM framework are ITIL (Information technology Infrastructure Library) and ISO 20000.

Research has shown that a well-managed IT in an organization can positively influence organizational outcomes measures such as profits and sales (e.g. Mithas et al., 2011, 2012). In addition, organizational IT capabilities are crucial for developing and supporting other organizational capabilities such as customer management, process management, and performance management. However, a critical challenge that organizations face related to the management of IT functions is the quality and consistency of IT services provided by IT units. In this regard, the various IT management frameworks noted above can offer guidelines related to ITSM processes, activities, roles, and capabilities required to deliver high-quality IT services in an organization. This can eventually

lead to increased efficiency of organizational business processes, reduced costs, and increase in revenue.

The ITSM group in an organization comprises of individuals with specialized skills and expertise in ITSM practices and potentially have relevant IT certifications. Getting ITSM certification enhances the skills of employees to support key areas in business. Using the knowledge about best practices gained through ITSM certification, ITSM employees are equipped to provide necessary support towards operating IT services for the business and support business change. Certified ITSM experts can play a key role in instilling organizational practices that improve customer satisfaction and develop strategies for building and maintaining positive business relationships with customers. Prior literature suggests that certifications play a key role in determining individuals' compensations in areas, such as healthcare, management, and education (Goldhaber and Brewer, 2000). In other words, individuals with specialized certifications have a higher compensation than those without such certificates. Organizations recognize the value addition and increase in quality of work resulting from specialized knowledge and training that certification programs provide. Consequently, they reward such employees with appropriate compensation (Wade, 2009). With IT being a dynamic and rapidly evolving field, ITSM employees are required to learn, manage, and support complex IT systems and processes. Consequently, they need to constantly update their existing knowledge and acquire new skills (Quan et al., 2007). IT organizations have regarded education, skills, specialized knowledge, and IT certificates as determinants to justify an individual's compensation (Quan et al., 2007).

## **2.2 IT Outsourcing**

For many organizations, a critical aspect of their IT strategy is IT outsourcing (Dibbern et al., 2004). IT outsourcing is defined as the use of a third party vendor to provide IT services that were previously provided in-house within the organization (Han and Mithas, 2013). According to Gartner, a reputed market research firm, the IT outsourcing revenues exceeded \$288 billion in 2014 and are expected to grow at a steady pace in the next few years (Gartner, 2014). Organizations have increased their investments in IT outsourcing because they believe that IT outsourcing will significantly reduce the cost of developing and delivering IT (Han and Mithas, 2013). This has resulted in organizations attributing over 14 percent of their IT budget to IT outsourcing (Vallis and Murphy, 2008). In the 1980's when outsourcing was a new trend, organizations outsourced peripheral capabilities (Grover et al., 1996), which provided the advantages of an almost immediate impact on the organization's financial performance due to cost cutting, reduced costs in manufacturing, a reduced need for large capital investments in manufacturing plants and equipment (Grover et al., 1996). This also allowed organizations to focus on their core

competencies. Such outsourcing of peripheral functions that were traditionally performed in-house by low to mid-skilled labor had a negative impact on the available jobs of such labor in the outsourcing countries (Gilley and Rasheed, 2000).

Recently, outsourcing has gone beyond peripheral business functions (Quinn, 1999) and has expanded to the enterprise business processes (Hoecht and Trott, 2006). Organizations are even willing to outsource entire IT functions to countries, such as India, where they find skilled labor at a much cheaper cost. A recent study showed that the outsourcing industry has a net worth of US\$250 billion, which is a fivefold increase over the past decade (Shrestha and Sharma, 2013). In addition to the traditional outsourcing of low-skilled jobs such as data entry workers, organizations are also outsourcing mid to high level jobs such as computer programmers, software engineers, and IT analysts (Chung and Khan, 2012). Recent research has shown that IT outsourcing has an impact on the demand and supply of skilled IT workforce, cost of producing IT workforce (in terms of vocational training and education), and on the salary of IT professionals (Chung and Khan, 2012).

### 3. MODEL AND HYPOTHESES DEVELOPMENT

Figure 1 presents our research model. We build on prior works on predicting IT employee compensation (e.g., Ang et al. 2002; Levina and Xin 2007; Slaughter et al. 2007) to develop our research model. We hypothesize that ITSM employees' education and certification will influence their compensation, and two organizational factors – IT outsourcing (i.e., whether these employees believe that their organizations outsource IT functions) and ITSM size (i.e., whether these employees believe that their organizations place significant importance on ITSM) will moderate the relationship between education and compensation, and IT certification and compensation. Organizational tenure and age were used as the control variables.

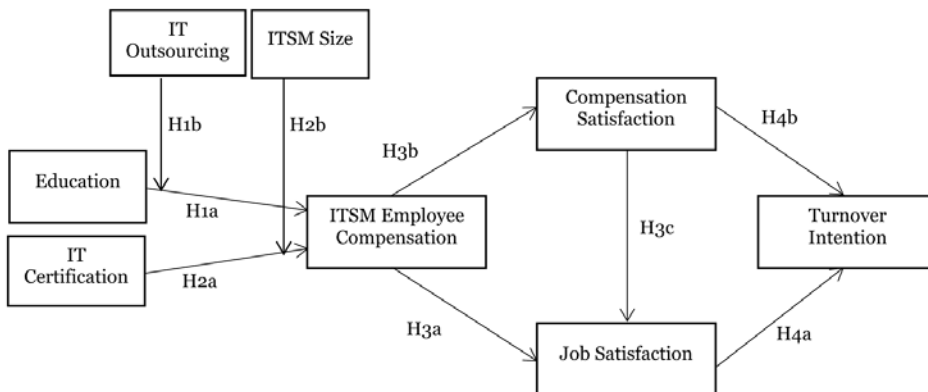


Figure 1: Research Model

### 3.1 Education, Outsourcing, and Compensation

Education has been highlighted in prior research as a significant determinant of compensation (Lee and Wilbur, 1985). As a result of the skills and expertise that individuals achieve through their education, they become valuable resources for organizations (Lee and Wilbur, 1985). Organizations strive hard to hire and retain employees who have received higher education (Lee and Wilbur, 1985). Specialized degrees, such as computer science, information systems, informatics, information science, impart important IT skills that are highly valued by IT organizations. Organizations often recruit IT professionals who have these specialized degrees and offer these individuals attractive compensation packages that are often higher than individuals who do not have these degrees (Dibbern et al., 2004). Consequently, it can be expected that the compensation packages that ITSM employees receive would be commensurate with their educational qualifications. In addition, both industry and academic research has highlighted the overall shortage of ITSM workers that organizations face, especially in the United States (Hickey, 2013; Rothwell, 2014). Consequently, it can also be expected that these employees receive higher salaries in a competitive market where organizations are facing a shortage of such professionals (Rothwell, 2014).

*Hypothesis 1a (H1a): Education positively influences ITSM employees' compensation.*

We posit that for ITSM employees with a certain educational qualification, organizations that have some or a substantial part of their IT outsourced would offer lower compensation as compared to other organizations that do not have any IT outsourced. Prior research has suggested that organizations outsource both low-skilled and high-skilled IT jobs to locations where the compensation packages are significantly less than for US employees with similar educational qualifications (Dibbern et al., 2004). Over the past few decades, organizations have started viewing IT as a commodity that they do not want to manage and prefer having a third party organization that can manage the IT function. Consequently, such organizations seek IT service providers that can provide the required ITSM services at the lowest possible cost (Lacity and Hirschheim, 1993; Lacity and Willcocks, 1998). Since such organizations believe that they can hire an equally qualified individual at a lower compensation package outside the United States (US) and other developed countries, they would offer comparatively lower compensation to their current employees with similar qualifications.

There is an existing apprehension among employees about the outsourcing of their jobs offshore (Bardhan and Kroll, 2003; Lacity and Hirschheim, 1993; Lacity and Willcocks, 1998). This unrest and insecurity among employees may result in them securing jobs at a lower compensation despite their high level of education. As noted earlier, organizations view outsourcing as a cost-cutting mechanism (Lacity and Hirschheim, 1993).

Since such organizations might already have spent a significant proportion of their IT budget for their outsourcing endeavors, there might only be limited budget for paying high compensation to ITSM employees. In contrast, if the organization does not outsource its IT systems and functions, the IT budget could be significantly used for recruiting and retaining ITSM employees. Consequently, the organization would be able to offer a higher compensation to the ITSM employees.

*Hypothesis 1b (H1b): IT outsourcing negatively moderates the relationship between education and ITSM employees' compensation.*

### **3.2 IT Certifications, ITSM Size, and Compensation**

With the increasing adoption of various complex enterprise systems, organizations require individuals that are experienced and/or have specific certifications. In addition to system related certifications, organizations also value certifications related to project management, programming, database administration, and networking. In addition, with the increasing popularity of IT management frameworks, such as COBIT and ITIL, organizations have started hiring individuals that have relevant certificates in these frameworks. Prior research has focused on the importance of appropriate certifications as a strict requirement for entry into a profession in law, accounting, medicine, and engineering (Hunsinger and Smith, 2009).

Certifications are viewed by organizations as an instrument to assess the extent of expertise an individual has in a particular area. For example, it is a usual practice in many management consulting, IT consulting, and auditing firms to ensure that their employees have specific certifications such as Certified Accounting Professional (CPA) or Six Sigma Certification. These certifications are often used by organizations as selection criteria while recruiting or even while employing individuals on certain projects. Similarly, in the ITSM area, certifications related to the ITSM frameworks such as COBIT and ITIL are valued by organizations and are considered a value-add for their ITSM workforce. Organizations focus on certifications since they believe that certified employees would be a valuable asset in successful execution of relevant projects. Consequently, it has become crucial for organizations to hire and retain certified individuals and spend on getting relevant certifications for their existing workforce. The rising demand for certifications in the IT domain has made it imperative for ITSM employees to consider appropriate certifications as an essential component of their career path and an opportunity for higher wages (Hunsinger and Smith, 2009).

*Hypothesis 2a (H2a): IT certification positively influences ITSM employees' compensation.*



ITSM size not only represents the number of ITSM employees in the organization, but also indicates the breadth of IT functions of an organization. We hypothesize that ITSM size would negatively moderate the relationship between IT certification and compensation such that for organizations with large ITSM size, the relationship between IT certification and compensation is weaker. An organization that has a large ITSM size can be expected to have many personnel that have various IT certifications. For such an organization, hiring someone with many certifications would neither be a priority nor a highly paid job position. Having an in-house ITSM workforce would allow such organizations to hire IT certified professionals only if necessary. Since such an organization might already have invested significantly in employing and retaining their current ITSM workforce, there would be limited budget for hiring more professionals. In addition, the organization would only need new employees with IT certificates in only specific knowledge areas that their current ITSM employees lack. Even if the newly recruited employee has many certifications, the organization would not offer a high compensation package. In contrast, an organization with limited number of ITSM employees might want to hire individuals who have more certifications so that they do not need to hire more employees. Such organizations might also have limited budget for hiring ITSM employees. Consequently, the organization would prefer hiring a few individuals who have most of the skillset that the organization needs and offer them higher compensation.

*Hypothesis 2b (H2b): ITSM size negatively moderates the relationship between IT certification and ITSM employees' compensation.*

### **3.3 Compensation, Compensation Satisfaction, and Job Satisfaction**

The relationship between compensation and job satisfaction has been hypothesized and empirically validated in research in various domains including management, information systems, and organizational behavior (Lee and Wilbur 1985; Porter et al., 1974). Building on the findings from research, we hypothesize:

*Hypothesis 3a (H3a): Compensation of ITSM professionals positively influences job satisfaction.*

Similarly, the relationship between compensation and compensation satisfaction has been empirically validated in prior research (e.g., Carraher, 1991; Williams et al., 2008). In line with the findings from prior research, we hypothesize:

*Hypothesis 3b (H3b): Compensation of ITSM professionals positively influences compensation satisfaction.*

Prior research has suggested that compensation satisfaction positively influences job satisfaction (Igalens and Roussel, 1999; Williams et al., 2008). In line with the findings from prior research, we hypothesize that employees that are satisfied with their compensation packages would also be satisfied with their job. If the employees believe that their compensation is appropriate for the work they perform, they would feel satisfied about their work. They would feel that they get compensated appropriately for the work they perform. In contrast, employees who are not satisfied with their compensation might feel that their job involves too much work for the pay they get. Consequently, such employees might feel that their compensation is not adequate for the amount of effort they have to expend at work. As a result, the employees would feel dissatisfied about their job.

*Hypothesis 3c (H3c): Compensation satisfaction positively influences job satisfaction.*

### **3.4 Compensation Satisfaction, Job Satisfaction, and Turnover Intention**

Prior research has suggested that employees that are satisfied with their job are less inclined to change their job or look for opportunities elsewhere (Igalens and Roussel, 1999; Lee and Wilbur 1985). These employees are happy with their work in their current organization(s). In line with the findings of extensive prior research, we hypothesize:

*Hypothesis H4a (H4a): Job satisfaction negatively influences turnover intention.*

Similarly, prior research has suggested that employees that are satisfied with their salaries tend to stay with their current organization (Igalens and Roussel, 1999; Williams et al., 2008). These employees expect their compensation in the organization to increase in proportion to their organization tenure and experience. Overall, these employees feel that their compensation packages are appropriate for their qualifications and experience. Consequently, they do not feel a need to look for job opportunities in other organizations.

*Hypothesis H4b (H4b): Compensation satisfaction negatively influences turnover intention.*

## **4. METHODOLOGY**

We conducted a field study of ITSM employees from different industries to test our research model. A request to participate in the study was sent to about 6,000 active members of itSMF USA, a chapter of itSMF International, an independent organization for ITSM professionals. We received a total of 423 usable responses. Participants were primarily senior ITSM professionals (78 percent), such as ITSM architects, directors, process owners and managers. The participants had an average of 20.84 years of work experience in IT (S.D. = 8.92) and their average organizational tenure was 8 years (S.D. = 7.53).

We used pre-validated constructs and measures in the survey. For education, participants were asked to enter their highest educational qualification such as “Bachelor’s Degree” or “Doctoral Degree”. To capture the number of IT certificates, participants selected the certificates they had from a list of 28 certificates, such as COBIT® Foundation, Cisco Certifications, and ITIL® v3 Expert. IT outsourcing was measured as a categorical variable by asking participants if their organization outsourced any of its functions. The participants could respond in “yes” or “no”. ITSM size was measured by asking participants the number of employees (approximately) that managed ITSM responsibilities in the organization. For compensation, participants were asked to specify their annual base compensation. Both compensation satisfaction and job satisfaction were measured using a five point Likert scale with 1 being “Very Dissatisfied” to 5 being “Very Satisfied” (Lee and Wilbur 1985; Scapello et al., 1988). Turnover Intention was measured as a categorical variable by asking participants if they anticipate a job change within the next 12 months. The participants could respond in “yes” or “no”.

**5. RESULTS**

We used multiple regression to analyze our data. Since our dependent variable (turnover intention) was categorical, we used logistic regression to analyze the effect of compensation satisfaction and job satisfaction on turnover intention. Table 1 shows the correlations among the study variables and Table 2 presents the regression results.

We found support for H1a - education has a significant positive influence on compensation (B = 0.383, p=0.007). About 78 percent of the respondents had a Bachelor’s degree or above. The result support the argument that organizations value the skills,

**Table 1: Correlations among Study Variables**

	Education	IT Certification	Compensation	Compensation Satisfaction	Job Satisfaction	Turnover Intention	Out-sourcing
IT Certification	.197**						
Compensation	.170**	.256**					
Compensation Satisfaction	-.044	.004	.202**				
Job Satisfaction	.011	-.027	.173**	.325**			
Turnover Intention	-.156**	-.096*	.059	-.294**	-.328**		
Outsourcing	-.014	.009	-.016	-.115*	-.040	.043	
ITSM Size	.022	.077	.074	-.009	-.015	-.043	-.006

\*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001

Table 2: Regression Results

	Compensation		Compensation Satisfaction	Job Satisfaction	Turnover Intention
	Model 1	Model 2			
	Standard Coefficient	Standard Coefficient	Standard Coefficient	Standard Coefficient	Standard Coefficient
Control Variables					
Age	0.247***	0.221***	0.017	-0.01	0.009
Organizational Tenure	0.013	0.008	0.011	0.08	0.017
Independent Variables					
Education	0.124**	0.383**			
IT Certification	0.232***	0.421***			
Moderators					
Outsourcing		0.365*			
ITSM Size		0.258***			
Outsourcing* Education		-0.467*			
ITSM Size*IT Certificates		-0.321**			
Dependent Variables					
Compensation			0.202***	0.112*	
Compensation Satisfaction				0.303***	-0.435***
Job Satisfaction					-0.661***
R <sup>2</sup>	0.101	0.119	0.051	0.128	N.A

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

Note: Logistic regression was used for Turnover Intention

knowledge, and expertise that an individual gains through their education. Hypothesis 1b is supported - outsourcing negatively moderates the relationship between education and compensation ( $B = -0.467$ ,  $p = 0.049$ ). Approximately 55 percent of the respondents reported that their organization is engaged in IT outsourcing. The result implies that if the organization is engaged in outsourcing, they can hire equally qualified individuals at a much lower compensation at the outsourcing location as compared to in-house

employees who have similar educational qualifications. This results in a limited in-house IT budget, which results in organizations hiring employees with high educational qualifications at a lower compensation package.

We found support for H2a - IT certification has a positive influence on compensation ( $B=0.421$ ,  $p=0.000$ ). The average number of IT certificates for the respondents is four. Organizations have realized the value addition due to the knowledge, skills, and expertise of individuals who hold IT certificates, especially ITSM related certificates such as COBIT and ITIL. Consequently, organizations reward individuals who have a large number of IT certificates with higher compensation. H2b is supported - ITSM size negatively moderates the relationship between IT certificates and compensation ( $B= -0.321$ ,  $p=0.003$ ). This implies that if an organization already has a large ITSM size, it will not compensate professionals with multiple IT certificates as compared to an organization that has a small ITSM size.

We found support for H3a - compensation of ITSM employees positively influences job satisfaction ( $B=0.112$ ,  $p=0.017$ ). The average yearly compensation for the respondents is \$105,403. H3b is supported - compensation of IT professionals positively influences compensation satisfaction ( $B=0.202$ ,  $p=0.001$ ). H3c is supported - compensation satisfaction positively influences job satisfaction ( $B=0.303$ ,  $p=0.00$ ).

We found support for H4a - job satisfaction (mean: 3.81, SD: 0.935) negatively influences turnover intentions ( $\beta=-0.661$ ,  $p=0.001$ ). This implies that the probability of an individual changing the job will reduce with an increase in job satisfaction. H4b is supported - compensation satisfaction (mean: 3.46, SD: 1.1) negatively influences turnover intentions ( $\beta=-0.435$ ,  $p=0.001$ ). 49 percent of the respondents replied "Yes" to the question on turnover intention. The results imply that the probability that an individual will consider a job change will reduce with an increase in satisfaction with their compensation.

## **6. IMPLICATIONS**

### **6.1 Theoretical Implications**

This paper contributes to the existing literature on IT personnel and IT compensation. We present a model that integrates IT outsourcing and ITSM related constructs with key job-related constructs used in prior research - job satisfaction, compensation satisfaction, and turnover intention. Although prior studies have examined the impact of IT outsourcing on employees, there has been limited work pertaining to the effect of IT outsourcing in the context of compensation and aforementioned job-related constructs. Our results empirically show the negative effect of outsourcing on the relationship between education and compensation. We were also able to empirically validate our argument about the negative effect of ITSM size in an organization on the relationship between IT

certificates and compensation. This is one of the first studies that examines the antecedents and consequences of ITSM employee compensations and the moderating role of IT outsourcing and ITSM size. Given the recent focus on building organizational ITSM capabilities (Bala and Ramesh, 2014; Hunsinger and Smith, 2009) and the key role of hiring and retaining of ITSM professionals in the process, this study provides a framework that could be of interest to both researchers and practitioners alike.

Second, the research model in this study provides a holistic view of the factors that play a role in influencing ITSM professionals' compensation. We integrate both personal (education and ITSM certifications) and organizational factors (ITSM size and IT outsourcing) in understanding the influence on compensation of ITSM professionals. From the perspective of research on human capital factors in the IT domain, while research has considered importance of certifications and education separately as determinants of compensation (Joseph et al., 2007; Levina and Xin, 2007; Slaughter et al., 2007), this study denotes the first effort to examine these factors in the domain of ITSM. In the ITSM area, specialized certifications for frameworks such as ITIL and COBIT have recently gained popularity and are in high demand in the industry (Bala and Ramesh, 2014; Hunsinger and Smith, 2009). Consequently, given the novelty of ITSM certifications, it was important to validate the known nomological networks for human capital factors, compensation, and job outcomes in the context of ITSM employees. This study addresses this important research gap by examining the role of well-known human capital and organizational factors on ITSM employee compensation.

## 6.2 Practical Implications

The findings of this study have several practical implications. First and foremost, this study highlights the increasing importance of ITSM certifications in organizations. It is evident from the findings of this study that organizations value and compensate for skill-set in the ITSM area. This implies that it is important for professionals in the ITSM area to get specific ITSM certifications that could be of benefit to their career. Various certifications for ITSM frameworks such as ITIL and COBIT are in demand in organizations and professionals with advanced certifications in these frameworks such as ITIL (e.g., ITIL Practitioner, ITIL Service Manager, etc.) receive commensurate compensation packages. In addition, these findings also highlight the importance of investing in ITSM certified professional for organizations. It is important for organizations to hire and retain such employees. Also, it is critical for organizations to offer competitive compensation packages to such employees given their high demand in the market.

Second, this study provides robust guidelines to senior IT executives and upper management in organizations to efficiently manage ITSM employees. Our results indicate that employees with high education in organizations that outsource IT do not feel

that they receive the compensation that is commensurate with their education. This reduces job satisfaction and as a result increases the probability of the employees changing their job. Consequently, organizations must optimize the ratio of outsourcing to in-house IT capabilities so that they have the budget to compensate employees according to their education level and maintain high employee morale and satisfaction. Organizations must be aware of the industry standards of compensation for various education levels and ensure that their employees get compensated in accordance to what other competitor firms are paying employees with similar educational qualifications.

Third, this study also underlines the role of ITSM size. As noted earlier, this study highlights the value that organizations attribute to IT certifications among their employees. While it is clear that the number of IT certificates positively influence compensation, the role of ITSM size is critical. Our results indicate that if the organization has a large ITSM team, there is a possibility of redundancy in the skillset of employees, resulting into lower compensation packages as compared to another organization that has a smaller ITSM team. However, this can result in reduced job satisfaction and an increase in turnover intention among employees. Organizations with a large ITSM team must ensure that the ITSM skills are optimally distributed across various functions and that these skills are effectively utilized. Consequently, organizations would be able to pay commensurate salaries to the employees, at the same time balancing the ITSM size.

### **6.3 Limitations and Future Research Directions**

Our findings should be interpreted in light of the limitations of this study. As noted earlier, the data were collected from the members of a single association (ITSMF USA). It is possible that the members of this association are similar in terms of their work experience and industry background. While this helped us control for possible professional domain differences, it limits the generalizability of our findings. Hence, future research should test the model in other types of organizations and industries.

Second, the analyses of this study is not industry specific. This implies that the research model is validated based on the combined data from various industry domains. It is important to note that various industry domains might value the importance of ITSM certifications differently. Consequently, the research model in this study might only be appropriate for certain industry domains that were a majority in the collected data. It will be critical for future research to specifically investigate the differences between different industry domains in regards to the importance given to the ITSM certifications and the resultant compensation packages of ITSM professionals.

Finally, the model in this study only considered employees' annual compensation. While annual compensation is a well-known representation of the earnings of an employee in an organization, it is possible that ITSM employees might receive significant

performance-based compensations (bonuses, awards, etc.) in certain industry sectors. Future research can investigate if the certification-based skills and expertise of an ITSM professional leads to any additional income apart from the regular annual compensation of an employee. In summary, while this study considered only the annual compensation, it will be important for future research to integrate other forms of income that an employee might receive during the year. This can provide further insights on whether higher level ITSM certifications lead to any implications on the employees' compensation. Future research can also consider factors such as the ITSM intensive nature of an organization in determining the influence on the employee's income. Research in management has found that industries while value a certain aspect of their business also tend provide high compensation to individuals who are experts in that area. For example, knowledge intensive organizations value and compensate employees who are competitive knowledge management professionals (von Nordenflycht, 2010). Similarly, it will be important for future research to examine if organizations that value ITSM practices more than other organizations provide higher compensation to individuals with specialized ITSM skills.

## 7. CONCLUSION

In this paper, we develop a model that focuses on ITSM employee compensation. We posit that IT outsourcing and size of the organization's ITSM function play a moderating role in the relationship between employee skills and compensation. To support our hypothesis empirically, we collected survey data from 423 ITSM employees from various organizations. Our results showed that IT outsourcing plays a negatively moderating role in the relationship between an employee's education level and compensation. Our results also showed that the organization's ITSM size negatively influences the relationship between IT certificates and compensation. Our findings contribute to the IT management literature by highlighting the antecedents and consequences of ITSM compensation. This study can also be used as robust guidelines by practitioners facing the challenge of finding optimal ITSM compensation and effective strategies to retain skilled ITSM employees.

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