“They Care, We Share”:
Perceived Fairness in Performance Appraisal Systems on Knowledge Sharing

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ABSTRACT

The strategic importance of knowledge, especially under dynamic business conditions, makes it imperative to primarily understand the creation of the knowledge base. This paper employs mixed-method approach to understand the various triggers that motivate the knowledge sharing behavior of the IT employees working in Indian firms. Firstly, a qualitative study that comprised of 13 in-depth interviews aimed to capture the participants’ understanding of the context and the factors that trigger knowledge-sharing behavior. The fairness in performance appraisal, manager support, and career success were found to be the key triggers. Then, a quantitative study of 105 IT professionals examined the effect of the identified variables. Results suggested a positive relationship between perceived fairness in performance appraisal and knowledge-sharing behavior and the mediating role of career and hierarchical success between perceived fairness in performance appraisal system and knowledge-sharing behavior. The implications for both theory and practice have also been discussed in detail.

KEYWORDS

Career Satisfaction, Hierarchical Success, Knowledge Sharing, Partial Least Square-Based Structural Equation Modelling (PLS-SEM), Perceived Fairness in Appraisal System (PFPAS)

INTRODUCTION

Knowledge sharing refers to the exchange of information and knowledge related to work among employees (Yang, 2004). This creation of knowledge pool within a firm helps knowledge intensive industries like information technology (IT) to gain and sustain competitive advantage (Mahnke, 1998; Willem & Scarbrough, 2006; Jha & Pandey, 2016; Jha & Varkkey, 2017) owing to the very nature of knowledge, being valuable, rare, inimitable and non-substitutable (Barney, 1991; Grant, 1991; Wernerfelt, 1984; Nanda, 1996). Knowledge intensive firms like the IT firms employ knowledge workers and leverage upon the knowledge base created within the organization to explore additional business opportunities available (Jha & Pandey, 2016). IT firms function through projects involving individuals having complementary expertise (Davis, 2009), and their success depends upon the sharing of work-related knowledge with project team members (Muller, 2014). Therefore, knowledge intensive industries, especially the IT industry, strive to retain and maintain a rich knowledge pool within the firm to leverage it for the success of their projects. To achieve this, the employees are encouraged to
share their work-related knowledge with colleagues. This study is an attempt to understand various factors that go on to motivate Indian IT professionals to share their knowledge in project teams.

The Indian IT sector is one of the largest employers, covering around 10 million professionals (Media report, Department of Industrial Policy and Promotion (DIPP) statistics); it is estimated to grow at a Compound Annual Growth rate (CAGR) of 8.3 percent in the coming years. In other words, this sector houses a large percentage of well-educated and skilled working population of the country, and continues to grow. Owing to the phenomenal growth of the industry, there is a substantial impact on the country’s economy in terms of FDI and revenue through outsourcing services (India alone accounts for nearly 67 percent of the total revenue generated in the global outsourcing market) (Media report, of Industrial Policy and Promotion (DIPP) statistics). It becomes thereby prudent to understand the dynamics of various success factors in this sector through knowledge-sharing behavior. A recent study conducted by Jha & Pandey (2016) emphasized the importance and relevance of conducting knowledge sharing studies in the Indian context. To understand the same, one needs to first get a holistic view of the Indian IT sector, which houses a large diverse workforce, which includes professionals from different race, gender, caste, region, socio-economic backgrounds and values, which in turn may have significant impact on their attitude and behavior, including knowledge-sharing behavior. Existing literature corroborates with this fact, and emphasizes thereby the impact of psychological, organizational (Gibbert & Krause, 2002) and cultural (i.e. both organizational & country culture) factors. India being a developing nation has less job opportunities, which makes it difficult for the youth to get suitable jobs and grow thereof as there’s a gross mismatch between demand of educated workforce vis a vis its supply, thereby making the workplace highly competitive. For instance, in a recent study, Jha and Varkkey (2018) found job insecurity to be one of the prime factors that triggers knowledge hiding behavior among Indian R&D professionals in the Pharma industry. Individuals hesitate to share knowledge as that might put its owner into risky situations because s/he may lose advantage over others within the organization by doing so (Hislop, 2003). Therefore, employees do a sub-conscious-level cost-benefit analysis before actually sharing their knowledge at workplace (Connolly et al., 1992). In the Indian context, individuals often incorporate the cost-benefit analysis before they share knowledge (Jha & Varkkey, 2018) but certain organizational factors such as HR practices (e.g. Liu and DeFrank, 2013), work culture etc. have been found to influence the knowledge sharing behavior (Jha & Varkkey, 2018). In other words, knowledge-sharing behavior does get influenced by context, and hence the need this phenomenon has to be studied in different contexts for better understanding. This study therefore looks at factors that motivate Indian IT professionals to share their knowledge with colleagues. The study has been conducted in two phases: phase one involves a qualitative study conducted with IT professionals working for three different IT firms, exploring the context of the study and looking into factors that trigger knowledge-sharing behavior among them. Phase two tests the impact of variables found in phase 1 on knowledge-sharing behavior of individuals with a larger sample.

This paper has been organized in six sections: the first is dedicated to elaborating findings of phase 1-qualitative study. The second section discusses the theoretical background and works towards hypotheses development. The third, includes the method and results of the quantitative study; and the fourth discusses the results. The fifth section highlights the theoretical and managerial contributions based on the findings; and the final section discusses avenues of future research based on the results and limitations of this study.

THEORETICAL BACKGROUND AND DEVELOPMENT OF HYPOTHESES

Knowledge Sharing

Knowledge is one of the greatest sources of gaining and sustaining competitive advantage for organizations (Mahnke, 1998; Willem & Scarbrough, 2006) especially within knowledge intensive
firms, as knowledge is indeed valuable, rare, inimitable and non-substitutable (Barney, 1991; Grant, 1991; Wernerfelt, 1984; Nanda, 1996). Knowledge sharing refers to exchange of information and knowledge among employees (Yang, 2004). The strategic importance of knowledge sharing in knowledge-intensive organizations is undoubted; as mentioned earlier, the knowledge sharing phenomenon has great relevance for the IT industry as its employees are specialized in specific knowledge domains (e.g. software developer, programmer, etc.) and thereby considered as ‘knowledge workers’. The knowledge base is leveraged by the IT firms to explore nouvelle business opportunities. Organizations motivate their employees to discuss their ideas, work methods, and ways to work effectively with colleagues in order to enhance the organization learning at large; but by sharing knowledge places a risk on the owner because s/he may lose advantage over others within the organization by doing so (Hislop, 2003).

The success of a project depends upon the overall knowledge base of the project team, as each member brings his/her own expertise onto the table and thereby contributes towards the creation of a customized product/services for clients, which further gets enhanced if the synergy within the team derived from complementary skills of the members is robust (Davis, 2009). Knowledge sharing may help the project team in achieving synergy (Mueller, 2014) that influences the project success. Liu and Phillips (2011) found sharing of past experiences by R&D team members adding to innovativeness. However, since the contribution to the knowledge repository of an organization is voluntary (Cabrera & Cabrera, 2005), it becomes imperative to understand their underlying motivation to share knowledge (Zhang et al., 2012).

Further, in these lines, Gibbert and Krause (2002) attributed various psychological and organizational factors, which influence employees’ motivation to share their knowledge. Even Cabrera et al. (2006) for instance confirmed that self-efficacy, openness to experience, perceived support from colleagues, and supervisor, organizational commitment, job autonomy, perception about the availability and quality of knowledge management system motivate employees to share knowledge with their colleagues. Furthermore, existing research suggests that employees do a sub-conscious-level cost-benefit analysis before sharing their knowledge at workplace (Connolly et al., 1992). Many scholars have examined the antecedents of knowledge sharing at workplace and found rewards (Cabrera & Cabrera, 2005; Connolly et al., 1992; Connolly & Thorn, 1990) and psychological variables such as self-efficacy, organizational commitment (Kalman, 1999), and job satisfaction (Jha and Pandey, 2016) to be the main influencing factors for employees towards sharing their knowledge.

Liu and DeFrank (2013) confirmed that self-interest of an individual negatively impacts the intention to share knowledge; this negative relationship is moderated by HR practices, such as team-based job design and knowledge-sharing incentives. Foss et al. (2009) examined the effect of job design on knowledge sharing behavior and confirmed that job related factors like job autonomy, task identity, and feedback determine the engagement level of an individual for sharing his/her knowledge.

The relationship between HR practices on knowledge sharing behavior has been extensively studied (Kaše & Zupan, 2009; Liu & Liu, 2011; Liu & DeFrank, 2013; Lopez-Cabrales et al., 2009; Minbaeva et al., 2012; Shen et al., 2014; Liu and Liu, 2011) for instance studied the antecedents of knowledge sharing behavior of R&D professionals working in different Taiwan’s high-tech industries. They confirmed that there is a positive relationship between HR practices, incentives, training and development, compensation plans, performance appraisal systems and face-to face communication and knowledge sharing. Further, they suggested that employees engage in knowledge sharing behavior based on their perceived benefits associated with it. Similarly, Liu and DeFrank (2013) investigated the impact of HRM practices on employee engagement and knowledge sharing behavior in different Danish multinational corporations (MNCs). The results have been similar to that of Liu and Liu’s (2011) study, whereby a positive relationship was established between perceived organizational commitment and knowledge sharing. Further, this relationship was found to be mediated by intrinsic motivation and engagement in social interaction of an individual.
However, delving deeper into extant literature review reveals that there haven’t been enough studies, examining the relationship between performance appraisal system (PAS) and knowledge sharing behavior of IT employees. This study thereby investigates the effect of perceived fairness in performance appraisal on knowledge sharing behavior among IT professionals; further, this study also examines this relationship through both subjective (career satisfaction) and objective (hierarchical success) career success specifically in the Indian context.

**Perceived Fairness in Performance Appraisal System (PFPAS)**

Performance appraisal system (PAS) is one of the most important aspects for managing the human capital of an organization as they feed critical inputs to various human resource actions and has great impact on related outcomes (Murphy and Cleveland, 1995). As most of the decisions related to an individual’s career (i.e. promotion, pay, rewards, and developmental opportunities), are linked with the appraisal results, fairness in the performance appraisal system (PAS) becomes crucial in deciding its success or failure (Smither, 1988; Taylor et al., 1995). Individuals tend to perceive the effectiveness of an appraisal system as their fate within the organization. Limited studies earlier have looked into this aspect and highlighted an unfavorable reaction of employees to even a well-designed appraisal system (Cardy and Dobbins, 1994; Murphy and Cleveland, 1995).

Perceived fairness in performance appraisal system (PFPAS) includes both distributive (Adams, 1965; Greenberg, 1988) and procedural justice (Thibaut and Walker, 1975; Greenberg, 1986) in appraisal. Individuals care about the fairness in distribution of outcomes (distributive justice) and procedures used to decide these outcomes (procedural justice) (Ambrose, 2002; Bies 2001). This study, as suggested by Colquitt (2001) has used both distributive and procedural fairness in the appraisal system to measure the overall perceived fairness in the performance appraisal system, as it greatly influences both the attitude and behavior of employees (Colquitt et al., 2001; Greenberg, 1993; Taylor et al., 1984). For instance, Jawahar (2006) asserted that being satisfied with an appraisal feedback positively influences job satisfaction, enhances organizational commitment, and negatively influences turnover intentions. As perception of fairness in the appraisal system has great impact on shaping the attitude and behavior of employees, organizations can utilize its human capital to its fullest by bringing fairness in the appraisal system. The authors of this paper have reviewed extant literature on fairness in the appraisal system and found that while job satisfaction (Kampkotter, 2017 Thoresen, & Patton, 2001; Patterson, Warr, & West, 2004; Whitman, Van Rooy, & Viswesvaran, 2010) and performance (DeNisi & Pritchard, 2006; Selvarajan & Cloninger, 2012) have been widely studied as consequences of the performance appraisal system (PAS), limited attention was given to the aspect of ‘fairness in the appraisal system’, and how it affects knowledge-sharing behavior of employees. As the performance appraisal system is designed to align an individual’s goal with those of the organization (Milkovich & Newman, 2004), it may be affirmed that there is indeed a positive impact of perceived fairness in performance appraisal as regards knowledge-sharing behavior of individuals. Performance feedback positively influences employees’ perceived career opportunities (Sommer and Kulkarni, 2012).

Although fairness in the performance appraisal system is very important and relevant (Cheng, 2014) having the potential to influence knowledge sharing behavior among employees. However, existing studies have shown that the rating distortions (may be due to favoritism, punishment, or interpersonal motives (Krzystofiak, Cardy, & Newman, 1988; Murphy & Cleveland, 1991, 1995; Poon, 2004)) in the appraisal results demotivate employees to exert effort at workplace and share knowledge among their colleagues (Kane, Bernardin, Villanova, & Peyrefitte, 1995; Moers, 2005).

This study goes onto examine the influence of perceived fairness in the performance appraisal system on knowledge sharing behavior of IT employees via career success that has strategic importance for organizations.
Career Success

Career success, seen through the lens of career expectations has been ascribed to the real and perceived achievements that an individual has acquired in his/her work environment as a part of their roles, position and responsibilities (Judge, Cable, Boudreau & Bretz, 1995). It has also been seen in the light of the ‘accumulated positive work’ and ‘psychological outcomes’ that one experiences in one’s workplace (Siebert & Kraimer, 2001). Thorndike (1934) maps career success as being extrinsic and intrinsic success; the former (i.e. extrinsic success) is defined in terms of observable objective parameters (e.g. pay, promotion and other tangible benefits). In other words, while extrinsic success broadly encompasses societal perceptions of power and authority i.e. the notion of the occupational status (Judge et al., 1999), intrinsic success deals with subjective career outcomes that an individual perceives in his/her organization or job that gives the individual an innate career or job satisfaction (Judge et al., 1995). The one thing that stands out in career success literature is that the objective career outcomes are quantifiable, and thus can be conveniently mapped to one’s success parameters in terms of career; whereas, subjective career success deals with one’s reactions to events that occur in one’s work experience. Thus, if a person considers his/her career to be successful, it may be implied that his/her job satisfaction was high (Boudreau, Boswell & Judge, 2001); however, it could also be that a person who was satisfied with the job didn’t consider his/her career to be successful (Judge et al., 1999).

While objective measures are closely related with ‘observable’ work experience outcomes such as status, promotions and salary (Seibert and Kraimer, 2001), subjective ones comprise of opportunities for development of new skills, work-life balance, challenge and purpose etc. (Gattiker and Larwood, 1988; Heslin, 2005). It may be worthwhile noting here that initially researchers predominantly focused on objective career success (Gattiker and Larwood, 1988; Hall and Chandler, 2005). For better and complete understanding of role of career success on relationship between perceived fairness in performance appraisal on knowledge sharing behavior of employees, this study factors both aspects viz. objective and subjective (career satisfaction) career success. This study specifically uses hierarchical success as a proxy for measuring the objective component of career success.

Perceived Fairness in PAS and Knowledge Sharing

We have employed the social exchange theory (Blau, 1964) to explain the relationship between perceived fairness in performance appraisal system and knowledge sharing behavior; as knowledge sharing within an organization is a voluntary exercise (Cabrera & Cabrera, 2005), whereby employees can only be motivated to share knowledge and cannot be coerced into it. Many scholars have examined the antecedents of knowledge sharing at workplace and found rewards (Cabrera & Cabrera, 2005; Connolly et al., 1992; Connolly & Thorn, 1990) and psychological variables such as self-efficacy, organizational commitment (Kalman, 1999), and job satisfaction (Jha and Pandey, 2016) to greatly influence the inclination of sharing knowledge.

Inclusion of justice and fairness in the appraisal system makes knowledge sharing meaningful and more effective (Cheng, 2014; Lau, Wong, & Eggleton, 2008: Selvarajan and Cloninger, 2012) as justice and fairness have been found to be positively related to job satisfaction (Colquitt, Conlon, Wesson, Porter, & Ng, 2001), job engagement (Gupta & Kumar, 2013) and organizational commitment (Cheng, 2014). In other words, fairness in the performance appraisal system ensures individuals that their performance and contribution have been evaluated accurately and hence, they are rewarded adequately based on their performance. On the contrary, when employees perceive their performance appraisal system being faulty, they naturally resist to share knowledge, as they fear that by doing so, they may forego their competitive advantage within the organization. Fairness in the appraisal system only puts employees under obligation to exhibit ‘expected behavior’ at workplace by the way of exhibiting their knowledge sharing behavior. The knowledge sharing with a supportive manager renders a facilitative environment for the sharing of tacit and explicit knowledge sharing (Farooq, 2018; Vij & Farooq, 2014a, Vij & Farooq, 2014b). Thus, based on this argument, and using the
social-exchange theory, the authors do expect a positive association between fairness in performance appraisal vis a vis knowledge sharing behavior, leading them to their first hypothesis:

**H1:** Perceived fairness in the performance appraisal system is positively related to knowledge sharing behavior of employees working in project teams.

**Perceived Fairness in Performance Appraisal System and Career Success**

Career satisfaction has been defined as the extent to which an individual perceives consistency between career progress vis a vis their own goals, values, and preferences (Erdogan et al., 2004; Heslin, 2003; Seibert and Kraimer, 2001). Researchers have extensively studied the relationship between career satisfaction and important organizational outcomes, such as organizational commitment (Carson, Carson, Phillips, & Roe, 1996; Igbaria, 1991), turnover intentions (Igbaria, 1991; Chan & Mai, 2015), support for organizational change (Gaertner, 1989), work-family conflict (Martin, Eddlesten & Veiga, 2002), and career adaptability (Chan & Mai, 2015) etc.

As discussed, results of performance appraisal are linked with career related decisions such as promotion, salary, incentives, development opportunities, and thus negative effects on the career might make employees anxious and skeptical about the evaluation of their performances. They tend to perceive the appraisal system to be punitive and doubt the fairness of the system. For instance, large Indian IT firms tend to use the ‘forced distribution system’ to evaluate its employees, which also lead to large scale termination. Under such scenarios of negative presumptions about the effectiveness of the system and given the consequences of the appraisal results, they are prone to evaluate the appraisal system as being faulty or attribute their failure to the unfairness associated with the appraisal system. Given the fact that IT employees are skilled knowledge workers, the more experienced ones have had the bitter taste of forced distribution appraisal system, and therefore any ambiguity in the appraisal system can drastically change their perceptions about its fairness, and ‘severely’ impact the levels of ‘career satisfaction’. Unlike objective career success, since career satisfaction is based on perceived achievements that an individual has acquired through his/her work environment either as a part of their roles, positions and/or responsibilities (Judge, Cable, Boudreau & Bretz, 1995) and thus perception of fairness in performance appraisal becomes a crucial determinant of subjective career success. Fair and transparent evaluation of performance, constructive and timely feedback during appraisal cycle gives positive experience to the employees, thereby strengthening their perceptions about fairness in the appraisal system. Under such situations, individuals can easily map their career success as the evaluation criteria are clear, and through regular feedback, they are updated on their progress. Joo & Park (2010) discuss that developmental feedback enhances career satisfaction of individuals, and it is known that justice and fairness have been found to be positively related with job satisfaction (Colquitt, Conlon, Wesson, Porter, & Ng, 2001). Thus, based on existing studies and the inclusion of the justice and fairness argument, the authors of this study expect to see a positive relationship between perceived fairness appraisals in career satisfaction, going onto to their second hypothesis:

**H2a:** Perceived fairness in performance appraisal system is positively related to career satisfaction of employees.

Similarly, the authors also expect a positive association between perceived fairness in the performance appraisal system and the objective aspect of career success, i.e. hierarchical success that is visible through pay, promotion and other tangible benefits.

Hierarchical success is visible and can easily be mapped with the effective evaluation of performance during appraisal cycle. The linkage between outcome of performance appraisal and reward influences the perception of fairness associated with the appraisal system. Within the work domain however, POS may emanate either from the supervisor (perceived supervisor support), peers
or other senior managers and is associated with greater recognition, pay and promotion (Rhoades and Eisenberger, 2002). Allen (2003) found fairness in the rewards & recognition system to be positively associated with perceived organizational support, which in turn was related to organizational commitment. Ideally, fairness in the performance appraisal system should lead to some tangible outcomes (pay, promotion, incentive); if it is missing, or that rewards are loosely lined with appraisal results, employees start perceiving the performance system to be unfair.

Supportive and constructive feedback is one of the main aspects of fair performance appraisal system. Supportive supervisors affect an individual’s willingness to engage in development activities (Noe, 1996) and are crucial for subordinate performance and success. In other words, subordinates’ careers may be enriched by supportive relationships with supervisors or peers (Zhou, 2003). Based on the feedback, an individual could objectively assess oneself as his/her performance has been measured against certain fixed objectives and clear standards. The individual thereby gets to understand about his/her current hierarchical standing in the organization. The authors of this study thus expect a positive association between perceived fairness in performance appraisal and hierarchical success, leading to their next hypothesis:

**H2b:** Perceived fairness in PAS is positively related to hierarchical success of employees.

**Career Success and Knowledge Sharing Behavior**

The social-exchange theory (Blau, 1964) has been employed to explain the relationship between career success (career satisfaction and hierarchical success) and knowledge sharing behavior. Employees who are satisfied with their careers, tend to perceive the organization as favorable, and therefore feel obligated to reciprocate by displaying knowledge sharing behavior (Jha & Pandey, 2016). Like job satisfaction, career satisfaction too is a subjective assessment of the job and related work-environment. Again, based on the assumptions drawn from the social-exchange theory, it could be affirmed that there is a positive relationship between career success and knowledge sharing behavior. However, what is important to note in here is that unlike hierarchical success, which is more objective in nature, career satisfaction is very subjective, and is solely based on perceived achievement(s) that an individual has acquired in his/her work environment as part of their roles, position and responsibilities (Judge, Cable, Boudreau & Bretz, 1995). Thereby, based again on the social-exchange theory and extant literature, the authors hypothesize:

**H3a:** Career satisfaction is positively related to knowledge sharing behavior of employees working in project teams.

**H3b:** Hierarchical success is positively related to knowledge sharing behavior of employees working in project teams.

**Perceived fairness in PAS, career satisfaction, hierarchical success and knowledge sharing**

Going by the arguments used in the earlier sections and hypotheses H2a, H1 and H3a, the authors of this study expect to see a mediating role of career satisfaction between perceived fairness in performance appraisal system and knowledge sharing behavior, leading to their next hypothesis:

**H4a:** Career satisfaction mediates the relationship between perceived fairness in PAS and knowledge sharing behavior among employees.
Going by the arguments used in the earlier sections and hypotheses H2b, H1, H3b, the authors of this study expect to see a mediating role of hierarchical success between perceived fairness in performance appraisal system and knowledge sharing behavior, leading to their next hypothesis:

H4b: Hierarchical success mediates the relationship between perceived fairness in PAS and knowledge sharing behavior among employees.

**METHODOLOGY**

**Qualitative Study**

We started this research project interacting with IT employees to gain insights into their knowledge-sharing behavior. We conducted in-depth interviews with thirteen employees working for three different IT organizations to understand their notion of the knowledge-sharing phenomenon; what factors effectively trigger knowledge sharing among the IT employees working in different project teams.

The average age of the respondents was 27 years, and the average work experience was 6.5 years. There were two basic criteria that we incorporated to filter our sample of key informants: (a) The individuals should have a minimum of 3 years of experience of working in project teams (b) they had worked in multiple project teams across different clients. During the interviews, the participants highlighted the importance of knowledge sharing within project teams, stressing that knowledge sharing is vital for a project team, as individuals with diverse backgrounds (personally as well professionally) come together to work on the project; their experience and knowledge can be leveraged for delivering quality service to the clients. Through our interviews, we first tried to understand the context of the study.

**Quantitative Study**

The data for the study was obtained using a survey questionnaire consisting of established scales, administered on individuals working in six IT firms located in the southern, eastern and western parts of India. Data has been collected from individuals at two different time points: at time T1, an individual’s response on knowledge fairness in performance appraisal system, career satisfaction, hierarchical success and demographic variables (age, gender, work experience etc.) were collected. At time T2 (i.e. after eight weeks), participants were contacted again to collect information on knowledge sharing behavior. Totally 340 questionnaires were distributed to individuals at time T1, out of which 200 (response rate of 58.82%) actually responded. Unique codes were used to identify the participants as we needed to get back to them at T2. At time T2, the same 200 respondents of T1 were contacted again; a questionnaire seeking information on their career satisfaction and perceived fairness in PAS were distributed. This time, out of 200, only 119 respondents returned the filled questionnaire (response rate of 59.5). After checking for missing values and data cleaning, we found only 105 responses were actually usable for the study.

The average age of the participants was 26.41 years (S.D =3.741 years) with an average work experience of 44.392 months (S.D. =36.565 months). While twenty five percent of them were postgraduates, the remaining seventy five percent were engineer graduates. Among them, sixty five percent were male and thirty five percent female. The respondents were informed about the purpose of the study and the participation was voluntary; complete anonymity was assured and ensured by not disclosing the results to the organizations and/or supervisors.

We have used the Likert scale which takes care of the Acquiescence Bias. We declared as part of our research ethics that we shall maintain anonymity while presenting our results, which reduces the Demand Characteristics Bias and Social Desirability Bias.
Sample Size

We constructed partial-least square-based structural equating modelling (PLS-SEM) using Smart PLS 3.0 tool. Cohen’s (1992) statistical power analysis has been used to calculate the minimum sample size, provided that the measurement models have outer loading greater than .70. All constructs had outer loading greater than .70. To detect minimum R-square values of around 0.25, at significance level of 5% and a statistical power of minimum 80%, 65 observations are required (Cohen, 1992). We collected N=105 data points, so our sample size is adequate to construct PLS-SEM. Another frequently cited method for calculating sample size is 10 times rule (Barclay, Higgins, & Thompson, 1995). It states sample size should be equal to or greater of 10 times the maximum number of structured path directed at a particular construct in the structured model or 10 times the largest number of formative indicator used to measure a latent construct. In this study, maximum of three structured paths were directed towards knowledge-sharing behavior; so the minimum sample size should be 30 (10*3=30). Our sample size (N=105) is more than the minimum required observations. We checked for common method bias using the Harman’s test and found that the total variance explained by a single factor was not more than 50% for any of the factors.

Measures

Responses were collected using well-established scales, and the questionnaire/s was anchored on five point Likert scale ranging from 1= strongly disagree to 5= strongly agree. Career satisfaction of an individual has been measured using a 5-item scale developed by Greenhaus et al. (1990). Questions/points like “I am satisfied with the success I have achieved in my career” were given. Hierarchical success of the individual has been measured using a 4-item scale developed by Gattiker & Larwood (1986). Questions/points like “I am pleased with the promotions I have received so far” was given. Perceived fairness in performance appraisal system has been measured using two fairness measures procedural fairness (5-item scale) and distributive fairness (7-item scale) developed by Colquitt (2001). Questions/points like “I have been fairly rewarded considering the responsibilities” and “In my organization the raters collect accurate information necessary for making decisions” respectively was given. Knowledge-sharing behavior has been measured by 8-item scale developed by Wilkesmann, Fischer & Wilkesmann (2009). Questions/points like “I am happy to share my specific professional skills with others so that they can learn them” was given. Age, gender and total work experience of the participants were controlled in the study.

Descriptive Statistics and Correlations

Statistical package for social sciences (SPSS) was used to assess the correlations and calculate descriptive statistics of constructs. Detailed analyses of the correlations of each construct along with descriptive statistics have been included in Table 1. Bi-variate analysis was conducted, wherein a significant positive co-relationship among the dependent variables knowledge sharing and other variables was found, viz., career satisfaction (r = 0.444, p < 0.01), hierarchical success (r = 0.497, p < 0.01), and perceived fairness in PAS (r = 0.471, p < 0.01). Similarly, perceived fairness in PAS has been seen to be positively related to hierarchical success (r=.804, p<0.01) and career satisfaction (r=.771, p<0.01); additionally, hierarchical success has also been positively related to career satisfaction (r=.851, p<0.01).

FINDINGS

Phase 1: Qualitative study

From the interviews, we gathered that the ‘type’ of the project played a crucial role in determining the level of knowledge sharing among team members. For instance, in product development projects that demanded unique and customized solutions, pooling of knowledge-based resources within the
teams was required as there was a high level of interdependence among the team members. On the other hand, support projects that primarily constituted of ‘maintenance’ jobs, the individuals had set protocols for handling the issues raised by the client/user once a product was operational. These ‘support’ jobs being routine in nature, required typical functioning within the team, and thus did not require much sharing. It is interesting to note that most of the participants did agree to the fact that the success/failure of a project largely depended upon the extent to which knowledge was shared; however, they also acceded to the fact that individuals voluntarily do not prefer to share knowledge unless it is deemed mandatory.

On further probing about the triggers of knowledge sharing, we found support from managers, who reiterated that perceived fairness in performance appraisal, career success, hierarchical success and project type greatly influenced knowledge-sharing behavior. Further exploration with the participants about relevance of these factors for knowledge sharing suggested that the dynamic and highly competitive nature of the industry itself reflects that the career success plays the role of the chief trigger to joining IT sector. Therefore, career success is seen as one of the prime factors that influence the ‘desired behavior’ at workplace, whether it is helping colleagues, or performing efficiently one’s own task, or sharing knowledge with colleagues of the organization. This trigger (i.e. career success) is further aggravated by the demographic dividend of the employees working in the IT sector. For instance, the average age of IT employees is comparatively less as compared with employees from other industries, say manufacturing. Interestingly, ‘designation’ in the IT sector reflects the importance of achieving career success in short time. Companies strategically choose the nomenclatures for different hierarchal positions. It should be noted in here that as IT firms house thousands of young dynamic knowledge professionals having long career to progress and grow driven by the dynamic work culture, catchy titles effectively satisfy their ambitions, inducing them in turn to stick on to that organization. Being knowledge workers, they often have multiple options to switch, and by switching, they leave behind ‘knowledge holes’ within their project teams as they take with themselves their tacit knowledge. Therefore, it is very important for firms to motivate employees to share their knowledge. During our interactions, we found that IT professionals often tend to exploit the knowledge resources available to them, and seek demanding roles in order to develop a portfolio comprising of various skillsets and knowledge. This in turn, helps them move both horizontally and vertically in their career; thus, hierarchical success was found to be very important and relevant to motivate IT professionals. However, individuals also remarked that apart from an increase in salary or designation, and other forms of objective career success, individuals also sought for value-addition to their career i.e. subjective notion of career success or career satisfaction, and looked for meaningful jobs that could enhance their knowledge base as they considered it as a pre-requisite for a sustainable career growth.

Table 1. Descriptive statistics and correlations

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<th>Variables</th>
<th>Mean</th>
<th>SD</th>
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<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<tr>
<td>Knowledge sharing (KS)</td>
<td>3.53</td>
<td>.97</td>
<td>------</td>
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<td>Career satisfaction (CS)</td>
<td>2.97</td>
<td>.93</td>
<td>.444**</td>
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<td>Hierarchical success (HIS)</td>
<td>3.07</td>
<td>.91</td>
<td>.497**</td>
<td>.851**</td>
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<td>Perceived fairness in PAS (PFPAS)</td>
<td>2.99</td>
<td>.88</td>
<td>.471**</td>
<td>.804**</td>
<td>.771**</td>
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<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Age</td>
<td>26.41</td>
<td>3.74</td>
<td>.040</td>
<td>.174</td>
<td>.156</td>
<td>.035</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Gender</td>
<td>.65</td>
<td>.47</td>
<td>.056</td>
<td>.072</td>
<td>.068</td>
<td>.115</td>
<td>.165</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Total work experience</td>
<td>44.39</td>
<td>36.56</td>
<td>.074</td>
<td>.232*</td>
<td>.200</td>
<td>.061</td>
<td>.924**</td>
<td>.168</td>
<td>------</td>
</tr>
</tbody>
</table>

N=105. Correlations shown with asterisk (**) & (*) signs are statistically significant at p = .01, & .05 significance level (two-tailed); # Correlation is significant at p=.10 significance level (two-tailed).
We found individuals were very sensitive towards the effectiveness and fairness in performance evaluation as the performance appraisal manifests the efforts they put in a project, and thus it is also linked to career success. Thus, fairness in performance appraisal could motivate an individual to share knowledge as that would help him/her advance in their career. Our qualitative study suggested, fairness in performance appraisal brings transparency in career related decisions such as promotion, increment, transfer, etc. Basically, career satisfaction and hierarchical success in the truest sense mostly depend upon the fairness of performance appraisal system. If knowledge sharing is part of appraisal,
then employees prefer to share knowledge with fellow members of the organization. Informed by the findings of our qualitative study, and based on the lacuna in extant literature, we found three variables viz. fairness in performance appraisal, career satisfaction, and hierarchical success to be relevant for assessing knowledge sharing behavior of the employees in IT sector.

Hence, further we conducted qualitative study to test hypothesized model (Figure 2) using large sample from IT sector.

**Phase 2: Quantitative Study**

*Analytical Approach: Partial Least Square Structural Equation Modelling (PLS-SEM)*

Structural equation modelling (SEM) is a second-generation multivariate data analysis method, which gained popularity among social science researchers in the past two decades (Hair et al., 2011; Chin, 1996) owing to its ability to evaluate the measurement of latent variables (e.g., construct reliability & validity) along with testing the relationship between latent variables. PLS is flexible modelling approach to SEM, as it discounts the normality assumption of data distribution (Vinzi et al., 2010). PLS-SEM is preferred over CB-SEM when predictive accuracy is important; sample size is not large; and there’s an absence of theory or little available theory (Hair et al., 2011; Wong, 2013). Another reason of using PLS-SEM was its efficient performance in estimating parameters even with small sample sizes and complex models (Chin & Newsted, 1999; Hair et al., 2011, Hair et al., 2012; Reinartz et al., 2009). We have used SmartPLS a statistical tool developed by Ringle, Wende and Will (2005), for testing our research model. SmartPLS is widely used software applications for Partial Least square Structural equation Modeling (PLS-SEM).

We followed multi-stage process viz. specification of model, evaluation of measurement and structural model as suggested by Hair et al. (2014) for applying PLS-SEM. In the model specification stage, we created a path model by connecting all variables (perceived fairness in PAS, hierarchical success, career satisfaction and knowledge sharing behavior) with each other based on existing theory and logic (Hair et al., 2014). Knowledge sharing was endogenous variable and all arrows pointed towards this construct in our path model. Perceived fairness in PAS acted as exogenous latent variable and no arrow was drawn pointing towards it.
Measurement Model Results

The assessment of measurement model includes validity and reliability test of measures used for the evaluation of latent variables in the study.

We assessed the reliability of construct that is measured through Composite Reliability (Bagozzi and Yi, 1988; Hair, Sarstedt, Ringle, & Mena, 2012) and Cronbach’s alpha (α). Composite reliability values should be equal to and greater than 0.70, and establish the reliability (Bagozzi and Yi, 1988; Hair et al., 2012). Composite reliability values varying between 0.70 and 0.90 were considered satisfactory (Nunally & Bernstein, 1994). All constructs used in this study have composite reliability in range of 0.876 to 0.954 (see Table 2), thereby establishing an internal consistency. Cronbach’s alpha (α) of all constructs is between 0.811 and .952 (see Table 2) and is greater than cutoff value 0.70 (Cronbach & Meehl, 1955); thus, measures of all constructs in our study have good internal consistency reliability.

Convergent validity has been established by measuring the average extracted variance of construct indicators. AVE indicates the extent to which the construct explains the variance of its indicators. The acceptable value of AVE has been suggested to be 0.50 for the establishment of construct validity (Hair et al., 2011; Hair et al., 2014). Average variance extracted (AVE) have been used to establish the construct validity (Hair et al., 2011). Acceptable value of AVE has been suggested at 0.50 for the establishment of construct validity (Hair et al., 2011). All the constructs have AVE of more than 0.50 (see Table 2), thereby establishing construct validly too.

We have used two measures: Fornell-Larcker criterion (1981) and cross loadings of indicators, for establishing discriminant validity of constructs in this study. Fornell and Larcker (1981) suggest that the square root of AVE in each latent variable can be used to establish discriminant validity, especially if this value is larger than other correlation values among latent variables. Square root of AVE of each variables such as knowledge sharing (SQT 0.724=.851), career satisfaction (0.853), hierarchical success (0.800), perceived fairness in PAS (.809)) has been seen to be greater than the correlations among the latent variables (see Table 3). Hair et al. (2011) suggested outer loadings of associated indicators of given construct should be greater than all of its loadings on other constructs in the model. Table 4 shows all constructs have greater loadings (bold faced loadings) than its loadings on other constructs. Henseler et al. (2015) have discussed that the Fornell Larcker criterion is not adequate for determining the discriminant validity. To buttress the findings from the Fornell Larcker criterion, in the lines of Henseler et al., (2015) we also conducted the Hetero-trait Mono-trait correlations to determine the discriminant validity (Franke and Sarstedt, 2019). HTMT is “defined as the mean value of the item correlations across constructs (i.e., the heterotrait–heteromethod correlations) relative to the (geometric) mean of the average correlations of the items measuring the same construct (i.e., the monotrait–heteromethod correlations)” (Lyn & Muthuveloo, 2019). We found that the HTMT values of all the constructs, which ranged from 0.45 to 0.78, which were less than 0.85 (which is the threshold value). Therefore, using both criteria, discriminant validity of constructs used in this study has been established.

Table 2. Composite Reliability (CR), Cronbach’s Alpha (α) & Average Variance Extracted (AVE)

<table>
<thead>
<tr>
<th>Variables</th>
<th>CR</th>
<th>α</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge sharing (KS)</td>
<td>0.954</td>
<td>0.945</td>
<td>0.724</td>
</tr>
<tr>
<td>Career satisfaction (CS)</td>
<td>0.930</td>
<td>0.905</td>
<td>0.728</td>
</tr>
<tr>
<td>Hierarchal success (HS)</td>
<td>0.876</td>
<td>0.811</td>
<td>0.640</td>
</tr>
<tr>
<td>Perceived fairness in PAS (PFPAS)</td>
<td>0.958</td>
<td>0.952</td>
<td>0.655</td>
</tr>
</tbody>
</table>
As a rule of thumb, we need to have a variance inflation factor (VIF) of 5 or lower to avoid the collinearity problem (Hair et al., 2011). Each set of exogenous latent variables (e.g., knowledge-sharing behavior, career satisfaction, and hierarchical success) of structural (inner) model have been tested for potential co-linearity problem (to see if any variables should be eliminated, merged into one, or simply have a higher-order latent variable developed) and all set of exogenous latent variables have been found to have VIF of fewer than 5. For instance, CS->KS (4.566); HS->KS (4.032); perceived fairness in PAS->KS (3.152). Hence, models’ variables are free from collinearity problem.

### Structural Model Results

**Co-efficient of determination (R²-value)** and significance level of path co-efficient have been suggested as two important criteria to evaluate the structural model (Hair, Ringle, & Sarstedt, 2011; Henseler, Ringle, & Sinkovics, 2009). Co-efficient of determination (R²) value shows perceived fairness in PAS (PFPAS) explains 78.1 percent variation in career satisfaction. Career satisfaction and perceived fairness in PAS explain 60.7 percent variation in hierarchical success at p=0.01 significant level. Perceived fairness in PAS, career satisfaction and hierarchical success explain 27.8 percent variation in knowledge sharing behavior.

Significance level of path-coefficient (β) has been assessed through non-parametric bootstrapping process (as PLS-SEM does not presume distribution of data a normal) in SmartPLS (Davison and Hinkley 1997; Efron and Tibshirani 1993). Bootstrapping creates large pre-specified (say 3000) bootstrap sample from original sample through repeated random sampling with replacement to assess standard errors for hypothesis testing (Henseler, Ringle, and Sinkovics 2009). PLS-SEM results are evaluated from each bootstrap sample (e.g., 3000 PLS-SEM estimations). Repeated estimation of parameter from each bootstrap result in empirical sampling distribution for each parameter and standard deviation of sampling distribution, which can be used as proxy for the empirical standard error for parameter (Hair et al., 2011). Bootstrapping provides co-efficient or results with p-values (significance level) that helps in rejecting null hypothesis (e.g., all co-efficient are zero) or accepting alternative hypothesis (e.g., co-efficient are not equal zero).

Path co-efficient (β) of perceived fairness in PAS and career satisfaction (PFPASàCS) is positive and significant (β=0.364, p<.01). Additionally, path co-efficient of perceived fairness in PAS and hierarchical success (PFPASàHS) is also positive and significant (β=0.779, p<.01). In other words, perceived fairness in PAS is positively related to career and hierarchical success, therefore, hypothesis H2a, H2b is supported (see Table 5). Perceived fairness in PAS is positively related to knowledge sharing behavior as path-co-efficient is positive and significant (β=0.221, p<.10), hence, hypothesis H1 is supported. Hierarchical success (β=0.355, p<.10) and career satisfaction (β=0.444, p<.01) has positive and significant path-coefficient with knowledge sharing behaviour, so hypotheses **H3a** and **H3b** are supported. In addition, we found hierarchical success is positively related to career satisfaction (β=0.570, p<.01).

### Table 3. Inter-construct correlations and square root of AVE measure

<table>
<thead>
<tr>
<th>Constructs</th>
<th>KS</th>
<th>CS</th>
<th>HS</th>
<th>Perceived fairness in PMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge sharing (KS)</td>
<td>0.851</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Career satisfaction (CS)</td>
<td>0.445</td>
<td>0.853</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hierarchal success (HS)</td>
<td>0.502</td>
<td>0.854</td>
<td>0.800</td>
<td></td>
</tr>
<tr>
<td>Perceived fairness in PAS (PFPAS)</td>
<td>0.489</td>
<td>0.808</td>
<td>0.779</td>
<td>0.809</td>
</tr>
</tbody>
</table>

Note: The diagonal element, which shows the square root of AVE on each construct, is in italics and bold font.
As suggested by Henseler et al. (2009) we have reported significance of path-co-efficient along with its effect size ($f^2$). Effect size measures the contribution of exogenous variable in $R^2$ (or explained variance) value of endogenous latent variable. In other words, values of $f^2$ indicate the strength of relationship between two latent variables. Effect size values of 0.02, 0.15 and 0.35 or above represent small, medium and large effect (Cohen, 1988). Following Cohen’s (1988) criteria, we found perceived fairness in PAS has low effect on knowledge sharing behavior ($f^2=0.035$) moderate effect on career satisfaction ($f^2=0.237$), strong effect on hierarchical success ($f^2=1.547$). Hierarchical success ($f^2=0.002$) and career satisfaction ($f^2=0.043$), have low effect on knowledge sharing behavior. Hierarchical success has strong effect on career satisfaction ($f^2=0.583$).

<table>
<thead>
<tr>
<th></th>
<th>CS</th>
<th>HS</th>
<th>KS</th>
<th>PAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS1</td>
<td>0.896</td>
<td>0.806</td>
<td>0.388</td>
<td>0.738</td>
</tr>
<tr>
<td>CS2</td>
<td>0.924</td>
<td>0.793</td>
<td>0.319</td>
<td>0.755</td>
</tr>
<tr>
<td>CS3</td>
<td>0.789</td>
<td>0.660</td>
<td>0.396</td>
<td>0.637</td>
</tr>
<tr>
<td>CS4</td>
<td>0.879</td>
<td>0.727</td>
<td>0.342</td>
<td>0.670</td>
</tr>
<tr>
<td>CS5</td>
<td>0.767</td>
<td>0.642</td>
<td>0.459</td>
<td>0.636</td>
</tr>
<tr>
<td>HS1</td>
<td>0.479</td>
<td>0.713</td>
<td>0.561</td>
<td>0.593</td>
</tr>
<tr>
<td>HS2</td>
<td>0.757</td>
<td>0.835</td>
<td>0.367</td>
<td>0.595</td>
</tr>
<tr>
<td>HS3</td>
<td>0.726</td>
<td>0.799</td>
<td>0.341</td>
<td>0.603</td>
</tr>
<tr>
<td>HS4</td>
<td>0.750</td>
<td>0.847</td>
<td>0.357</td>
<td>0.699</td>
</tr>
<tr>
<td>KS1</td>
<td>0.337</td>
<td>0.444</td>
<td>0.885</td>
<td>0.411</td>
</tr>
<tr>
<td>KS2</td>
<td>0.293</td>
<td>0.387</td>
<td>0.878</td>
<td>0.393</td>
</tr>
<tr>
<td>KS3</td>
<td>0.422</td>
<td>0.465</td>
<td>0.730</td>
<td>0.452</td>
</tr>
<tr>
<td>KS4</td>
<td>0.379</td>
<td>0.382</td>
<td>0.911</td>
<td>0.438</td>
</tr>
<tr>
<td>KS5</td>
<td>0.297</td>
<td>0.337</td>
<td>0.903</td>
<td>0.385</td>
</tr>
<tr>
<td>KS6</td>
<td>0.441</td>
<td>0.488</td>
<td>0.870</td>
<td>0.476</td>
</tr>
<tr>
<td>KS7</td>
<td>0.425</td>
<td>0.439</td>
<td>0.838</td>
<td>0.420</td>
</tr>
<tr>
<td>KS8</td>
<td>0.401</td>
<td>0.432</td>
<td>0.779</td>
<td>0.314</td>
</tr>
<tr>
<td>PFPAS1</td>
<td>0.724</td>
<td>0.714</td>
<td>0.470</td>
<td>0.809</td>
</tr>
<tr>
<td>PFPAS2</td>
<td>0.714</td>
<td>0.734</td>
<td>0.488</td>
<td>0.835</td>
</tr>
<tr>
<td>PFPAS3</td>
<td>0.643</td>
<td>0.586</td>
<td>0.493</td>
<td>0.797</td>
</tr>
<tr>
<td>PFPAS4</td>
<td>0.614</td>
<td>0.641</td>
<td>0.512</td>
<td>0.791</td>
</tr>
<tr>
<td>PFPAS5</td>
<td>0.621</td>
<td>0.626</td>
<td>0.423</td>
<td>0.772</td>
</tr>
<tr>
<td>PFPAS6</td>
<td>0.670</td>
<td>0.652</td>
<td>0.361</td>
<td>0.790</td>
</tr>
<tr>
<td>PFPAS7</td>
<td>0.622</td>
<td>0.562</td>
<td>0.221</td>
<td>0.799</td>
</tr>
<tr>
<td>PFPAS8</td>
<td>0.654</td>
<td>0.659</td>
<td>0.308</td>
<td>0.861</td>
</tr>
<tr>
<td>PFPAS9</td>
<td>0.646</td>
<td>0.658</td>
<td>0.420</td>
<td>0.851</td>
</tr>
<tr>
<td>PFPAS10</td>
<td>0.558</td>
<td>0.485</td>
<td>0.227</td>
<td>0.745</td>
</tr>
<tr>
<td>PFPAS11</td>
<td>0.675</td>
<td>0.603</td>
<td>0.404</td>
<td>0.823</td>
</tr>
<tr>
<td>PFPAS12</td>
<td>0.676</td>
<td>0.589</td>
<td>0.337</td>
<td>0.831</td>
</tr>
</tbody>
</table>
Test for Mediation

Mediation effect of independent variable on dependent variable has been measured using Baron and Kenny’s (1986) approach. As suggested by Baron and Kenny (1986), Sobels’ (1982) test has been conducted to assess the significance of mediation effect. First, direct path co-efficient (c) was obtained without including mediator in model and then mediator was included in the same model to get other path co-efficient (a = path coefficient between independent variable and mediator, b = path coefficient between mediator and dependent variable, and c' = path coefficient between independent
and dependent variable with mediator). Path co-efficient were obtained by bootstrapping process using SmartPLS 3.0 version software. After getting all these co-efficients, Sobel’s statistics was calculated.

Mediator 1: Career satisfaction as mediator between perceived fairness in PAS and knowledge sharing behavior

After running PLS-SEM, we found path coefficient between perceived fairness in PAS and knowledge sharing behavior (PFPAS ®KS) without mediator is, c= 0.508** and path co-efficient between PFPAS®KS, after inclusion of mediator, career satisfaction (CS), is c’= 0.374* (see Figure 4). Path-coefficient between PFPAS and mediator, CS is equal to a=0.809** (SEa= 0.00538), and between CS and KS is b= 0.144 (SEb =0.01732). Sobel test (Z = 8.301>1.96, p<0.01), suggests career satisfaction mediates relationship between perceived fairness in PAS and Knowledge sharing.

Direct effect of PFPAS on KS decreased from c=0.508** (without mediator) to c’=0.374* (with mediator) and it is significant, hence, career satisfaction partially mediates the relationship between PFPAS®KS. Therefore, hypothesis H4a, proposing a mediating role of career satisfaction between perceived fairness in PAS and knowledge sharing behavior is supported.

Figure 4. Mediation effect of career satisfaction on relationship between PFPMS and KS

Mediator 2: Hierarchical success as mediator between perceived fairness in PAS and knowledge sharing behaviour

After running PLS-SEM, we found path coefficient between perceived fairness in PAS and knowledge sharing behavior (PFPAS ®KS) without mediator is, c= 0.508** and path co-efficient between PFPAS®KS, after inclusion of mediator, hierarchical success (HS), is c’= 0.232 (see Figure 5). Path-coefficient between PFPAS and mediator, HS is equal to a=0.784** (SEa= 0.00620), and between HS and KS is b= 0.334* (SEb =0.0182). Sobel test (Z = 18.112>1.96, p<0.01), suggests hierarchical success mediates relationship between perceived fairness in PAS and Knowledge sharing.

Direct effect of PFPAS on KS decreased from c=0.508** (without mediator) to c’= 0.232 (with mediator) and it is non-significant, hence, hierarchical success fully mediates the relationship between

Figure 5. Mediation effect of hierachal satisfaction on relationship between PFPMS and KS
PFPAS®KS. Therefore, hypothesis H4b, proposing mediating role of hierarchical success between perceived fairness in PAS and knowledge sharing behavior is supported.

All the proposed hypotheses have been supported in this study and results from assessment of structural model have been summarized in Table 6.

Table 6. Summary of results

<table>
<thead>
<tr>
<th>Sr. no.</th>
<th>Hypotheses</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>H1:</strong> Perceived fairness in PAS is positively related to knowledge sharing behavior of employees working in project teams.</td>
<td>Supported</td>
</tr>
<tr>
<td>2</td>
<td><strong>H2a:</strong> Perceived fairness in PAS is positively related to career satisfaction of employees</td>
<td>Supported</td>
</tr>
<tr>
<td>3</td>
<td><strong>H2b:</strong> Perceived fairness in PAS is positively related to hierarchical success of employees.</td>
<td>Supported</td>
</tr>
<tr>
<td>4</td>
<td><strong>H3a:</strong> Career satisfaction is positively related to knowledge sharing behavior of employees working in project teams</td>
<td>Supported</td>
</tr>
<tr>
<td>5</td>
<td><strong>H3b:</strong> Hierarchical success is positively related to knowledge sharing behavior of employees working in project teams.</td>
<td>Supported</td>
</tr>
<tr>
<td>6</td>
<td><strong>H4a:</strong> Career satisfaction mediates the relationship between perceived fairness in PAS and knowledge sharing behavior of employees.</td>
<td>Partial mediation</td>
</tr>
<tr>
<td>7</td>
<td><strong>H4b:</strong> Hierarchical success mediates the relationship between perceived fairness in PAS and knowledge sharing behavior of employees.</td>
<td>Full mediation</td>
</tr>
</tbody>
</table>

Model Fit Measures

After testing hypotheses, we also assessed the goodness of fit measures. Model fit measures (indices) assess how well hypothesized structural model fits the empirical data. Standardized root mean square residual (SRMR) has been suggested as goodness of fit measure for PLS-SEM (Dijkstra & Henseler, 2015; Henseler et al., 2014). Model having SRMR value less than 0.10 or equal to 0.08 (conservative version see Hu and Bentler, 1999) is considered as a good fit.

SRMR value of our model is 0.081 > 0.08 (p<0.001), showing good fit. The Normed fit index (NFI) is another model fit measure, proposed by Bentler and Bonett (1980) suggested for better model fit: its value should lie between 0 and 1. Chi-square value (for our model, Chi-square is 911.95) is used as input to assess the NFI of structural model. Our models have NFI equal to 0.642, indicating better fit. Based on these analyses of various model fit measures (viz. SRMR, NFI, R²), our model has good fit.

DISCUSSION

Extant literature discussed that justice and fairness in the appraisal system not only makes the performance appraisal system more effective (Cheng, 2014; Lau, Wong, & Eggleton, 2008; Selvarajan and Cloninger, 2012), but they also relates to positive employee outcomes such as job satisfaction (Colquitt, Conlon, Wesson, Porter, & Ng, 2001), employee engagement (Gupta & Kumar, 2013) and enhanced organizational commitment (Cheng, 2014). The contribution of this study is that it extends this discussion to the aspects of career success (both objective and subjective measures). Further, extending from the social exchange theory, it has been noted that positive employee outcomes do drive employees to exhibit positive behavior. Thus, employees with the perception of fair performance
appraisal systems shall exhibit positive employee characteristics, the prime among them being knowledge sharing.

HR practices play a significant role in determining the knowledge-sharing behavior of employees (Cabrera & Cabrera, 2005; Fong, Ooi, Tan, Lee & Yee-Loong Chong, 2011). While several researchers have discussed the antecedents of knowledge sharing, up to this point, there was some missing links, which looked into the effect of the performance appraisal system on knowledge-sharing behavior. This paper has looked to bridge that gap and has highlighted the relationship between performance appraisal systems and knowledge-sharing behavior. It should be noted in here that while employees do share knowledge, the relationship it has with their career needs more emphasis (Sharratt & Usoro, 2003). Hall (2001) argued that when employees receive support from their organizations in terms of career advancement, it motivates them to reciprocate by sharing knowledge.

Furthermore, results of this study have revealed a positive association between perceived fairness in the performance appraisal system and knowledge-sharing behavior. Using Blau’s (1964) social-exchange theory, the authors have explained this relationship lucidly. It is thereby understandable that employees do a cost-benefit analysis before sharing their knowledge (Cabrera, & Cabrera, 2005; Cabrera et al., 2006), and it is natural that they feel obligated to the organization where their performances are being evaluated fairly and justly, and where they’re being rewarded; spontaneous knowledge sharing under these circumstances is but natural. Justice and fairness have been found to be positively related with job satisfaction (Colquitt, Conlon, Wesson, Porter, & Ng, 2001); this study has found a positive relationship between fairness in performance appraisal system and career success (career satisfaction and hierarchical success). Employees under fair appraisal system get timely and constructive feedback and clarity over their goals, which in turn helps them to measure and see their progress for themselves. While Jha and Pandey (2016) have shown a positive relationship between job satisfaction and knowledge sharing, this study shows a positive association between career success and knowledge sharing.

**IMPLICATIONS FOR THEORY AND PRACTICE**

**Implications for Theory**

An important parameter of assessing one’s career success often comes from the individual’s career locus of control i.e. the factors that an individual attributes to his/her career success (Zhou et al., 2016). Individuals with an internal career locus of control perceive career success as something that is achieved due to one’s own competencies, and thus they exhibit positive intentions in enhancing one’s career by developing competencies. Deducing from this, we feel that individuals with internal career locus of control would involve in greater knowledge sharing behavior. It would thus be interesting to study the effects of career locus of control on the knowledge sharing intentions of individuals.

Since our study is based in service-based industry, the client expectations are given paramount importance. Since challenging projects would provide an avenue for the individuals to showcase their competencies, it could enhance their career satisfaction. Additionally, challenging projects would require a lot of brainstorming within and across teams, and pooling of knowledge based resources; it would thereby increase the knowledge-sharing intentions. Thus, it would also be interesting to study the effects of the type of client projects on the relationship between the career success and knowledge-sharing intentions.

Since the costs and benefits associated with knowledge sharing are often judged before exhibiting the knowledge sharing behaviour. Since a team consists of individuals who might be of varying opinions about sharing knowledge, it would be interesting to conduct a study to understand the overlap of various conflicting interests in a team and the dynamics that inhibit or aid the knowledge sharing in the team.
Implications for Practice

Career success has often been linked with the turnover intentions i.e. employees who develop a sense of satisfaction with their career and feel that they have achieved their set career goals, often tend to exhibit lower tendencies to leave the job. Human capital retention remains an important problem in dynamic industries like IT. Moreover, since the industry also demands rapidly developing human resources, organizations look for individuals that are able to keep pace with the rising obsolescence of technical skills and the emergence of new skillsets. As Chan & Mai (2015) discuss in their paper, employees who find a suitable learning environment within an organization to enhance their skill and knowledge base, feel thrilled as that gives them a platform to rise in terms of career success. When employees feel that there is a promoting environment for knowledge sharing, and that it is enhancing their career prospects, they would naturally be encouraged to share their knowledge. Thus, it is pivotal for HR managers to develop a facilitating environment, where individuals have opportunities for self-enhancement and skill up-gradation. In our paper, we found that the fairness in performance appraisal plays a pivotal role in perception of an enriched career. Thus, not only should the procedure of the appraisal be transparent and fair, but it should also have a detailed review and feedback system between peers, subordinates and supervisors. In the process, individuals would receive a sense of intrinsic fulfilment where they are able to understand their level of utilization of the skillsets they possess, which in turn would give them a sense of achievement and joy (Zhou et al., 2016). Such promoting environment would motivate the individuals to pool in their knowledge resources and contribute to the knowledge sharing culture.

Creativity has been associated with higher perceived job and career satisfaction especially the industries that are driven by skillsets and knowledge that are atypical and unique (Chen, Chang & Lo, 2015). With the advent of AI and automation into the workplace, organizations demand for a creative mindset to harness the potential of technology and develop unique non-prototypical products. If the creativity is ingrained in the team and organizational culture, there is an intrinsic satisfaction among individuals about their careers; thus, they are motivated to enrich the creative space by sharing knowledge in the workplace. As organizations encourage creative and entrepreneurial mind-set within its peripheries, they would naturally be promoting a knowledge sharing space for individuals.

While we discuss about the relationship between the internal factors within an organization and their connection with the enhanced/ diminished knowledge-sharing behavior, we also note from our interviews, meeting the client expectations often played a significant role in the knowledge sharing behaviour of the individuals. While working in stringent deadlines over pre-developed routines, individuals have very little scope to innovate and thus often restrain from sharing knowledge to lose out on their competitive edge (Jha & Pandey, 2015). In other words, in order to place oneself on a higher career position over peers, individuals tend to restrain their knowledge-sharing behavior within organizations. In such situations, organizational reward practices should be tied with the team and individual knowledge sharing to incorporate it as an important part of enhancing one’s hierarchical career success in the organization.

Limitations and Future Study

This study has certain limitations: firstly, it has been conducted on permanent employees in the IT sector; it would be interesting to explore the relationship between perceived fairness in PAS and knowledge sharing and other related studies in case of contract and liquid knowledge workers. We conducted the study at an individual level i.e. at the employee level; a study conducted on multiple levels (team level, organizational level) could bring in certain contextual and team-level dynamics into consideration.
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