Drivers of Employee Engagement and Innovation in Information Technology Industry

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Abstract: Information Technology (IT) is one of the growing sectors that contribute tremendously to the modern society. It has given the ability to process themassive amount of data in a shorter time, mobility, convenience, etc. Hence in order to match the expectation of the customers and to grow business, IT Companies should be in the top of this trend to provide amore innovative solution. This study aimed to establish the empirical evidence on whether employee engagement drivers affects the level of innovation in IT industry. Three main employee engagement drivers namely leadership style, rewards and recognition, and training and development were identified based on the literature review and were tested for the correlation and significance of each employee engagement drivers on innovation. A structured questionnaire was used to collect the research data. The results indicate that the employee engagement drivers such as leadership style, rewards and recognition, and training and development can influence the innovative behaviour in an IT employee.

Keywords: employee engagement, innovation, information technology, transformational leadership, rewards and recognition, training and development.

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I. Introduction

Over the past few years, technology has redefined the connectivity between people, business, consumers and government through the Internet and associated sources. The role of Information Technology (IT) in this transformation is undeniable and it has become the most complex strategic element(Bianclino, Maccari, & Pereira, 2013). Increasing demand in this sector can be seen as the demands from customers and enterprises and the economies of scale that leads to the higher growth in the sector. However, there are still few cases of IT services or projects fail due to low quality, unmet demands, unsatisfied customers, budget issues, etc. (Huanga, Wu, & Chen, 2013) posed greater challenges. One of the reasons for the failure is the existence of poorly engaged workers in the projects. An engaged employee will reflect his or her level of commitment and involvement towards the organisation and its values (Sundaray, 2011). It was also observed that engaged employees are fully involved and enthusiastic about their work (McEwen, 2011).Innovation is a black box that has been investigated for long years. In a survey conducted by "MindMatters", only 5% of the respondent feel motivated to innovate in their organization and 49% recorded lack of recognition as their major concern for their lower contribution (Denning, 2015). Potential new ideas in the business play a crucial role in their success which can help in survival, value addition for the customer and gain competitive advantage. When organisations fail to innovate, businesses may suffer losing to its competitor, experience losing key staff, operate inefficiently and end up in financial loss(Gungor & Gozlu, 2012). Employee engagement can be understood as the extent to which a motivated employee contributes to organizational success by helping the organization to achieve its goal (Swarnalatha & Prasanna, 2013). However, Bassi & Daniel (2007) argued that excess focus on employee engagement becomes detrimental. Employee engagement is one of the challenging areas for many companies, when not managed properly it will produce lethargic employees who are detached from their work (Goffman, 1961). Among the reason for disengagement, a common issue raised was leader's failure to accept and recognize their ideas and suggestions (Bates & Weighart, 2014). Although there is a growing body of literature available on employee engagement (Natti, Tammelin, Anttila, & Ojala, 2011; Ram & Prabhakar, 2011; Chughtai & Buckley, 2011; Anaza & Rutherford, 2012; Yong, Mohamad, Shahida, Shahhar, & Nik Kamaria, 2013; Swarnalatha & Prasanna, 2013; Siddiqi, 2015) there is no notable study that directly link these drivers of employee engagement on innovation at work in IT industry. This study, therefore, provides empirical investigation on three main drivers of employee engagement, namely, leadership style, rewards and recognition, and training and development on the employee's innovation in IT industry.

Employee Innovation

II. Literature Review

Innovation is an important component of any business. Premuzic (2015) mentioned that coordinated group behaviour and interpersonal synergies turn creativity into actual innovation, the practical side of creativity. In the context of service innovation, it can be considered the re-bundling of various resources that can create beneficial novel resources in the context of some actors; this process involves a network of actors, which includes the customer as well (Lusch & Nambisan, 2015). According to Kanter (1983), innovation is the process of bringing any new problem-solving ideas to usewhileVen (1986) defines innovation with respect to both individual and organization.Collating researcher's perception on creativity together, innovation in IT industry may be described susing creative ideas either new or combination of existing resources/information proposed by anindividual or small group of individuals in an organization which when implemented at the right time generates value addition in the product or process for their clients or customer.

Employee Engagement

Abraham (2012) says employee engagement is the degree to which the employees are satisfied with their job. According to Siddiqi (2015), employee work engagement is about making the employees attentive and focused at work to reach some common goal.Work engagement is a distinct and unique construct consisting of cognitive, emotional and behavioural components associated with individual role performance. It creates positive influence among the employees and would further enhance the interest of their workplace.Kahn (1990)who studied on physiological impact of personal engagement states that physiological engagement and organizational behavior plays a vital role in the cognitive and emotional engagement. The author also indicates engagement occurs when the employees are cognitively aware and/or connected emotionally with others. We can also say that the employees who are aware of what is expected out of them, having a strong relationship with their superiors and peers are likely to be more engaged at work. According to Nawaz, Hassan, Hassan, Shaukat, & Asadullah (2014), when employees are given values by empowerment and training, the employees feelasense of consideration tend to show engaged behaviour. The engaged employees are motivated to become more creative and innovative in their job. Some of the components of employee engagement identified byVance (2006)are enthusiasm for work, long-term commitment, organizational pride, alignment to organizational goals, flexibility, job satisfaction, etc. While Brown (1996)mentioned that motivation, supervisor participation and consideration, career commitment and work involvement hasastrong relationship with job involvement. Hewitt's (2013) specified the drivers of engagement, namely, quality of life, work, people, opportunity, total rewards and company practices. Global drivers of employee engagement according to Swarnalatha & Prasanna (2013), confident in the future of the organization, work-life balance, enthusiasm towards work, career growth opportunity, work safety, corporate responsibility efforts, support and opportunity knowledge and skills, rewards and recognition, trust and confidence on the superiors, and co-workers give their very best. These drivers were unified into four main macro drivers, namely, leadership, management skills and recognition, skill improvement opportunity and exciting work and genuine employee welfares provided by the organization. In this research, leadership style, rewards and recognition and training and development were considered.

Leadership Style and Innovation

A commonly accepted perception of leadership is the ability of the superior to bring the subordinates to a common ground and work towards predetermined organization goals (Kacem & Harbi, 2014). Often it is viewed as power, position, influence, and status but it is not restricted to top management, it can be at all levels. Mills (2005) mentioned that, in the absence of effective leadership, effective implementation of change in organization level would be difficult. Studies say that leadership can act as a catalyst to achieve sustained change and better effectiveness in business(Ghasabeh, Soosay, & Reaiche, 2015).In a study on followers engagement,Burch& Guarana (2014) mentioned that followers tend to exhibitahigher level of personal commitment to a job when the relationship between the leader and the follower is good. According to Yukl (2010), when leaders provide valuable benefits to the followers, loyalty coupled with higher physical, emotional and cognitive efforts can be expected out of them.

Higher job satisfaction and lower employee turnover rate are achieved when leaders exercise employee-centric or considerate behaviour while the performance is greater in the other type (Huczynski & Buchanan, 2013; Ghasabeh, Soosay, & Reaiche, 2015).Burns (1978) classified leadership styles as transactional and transformational. Many studies were carried out on transformational style as it creates a better workplace by emphasizing on meeting the basic needs and influences the followers by creating an emotional bond with the organization to achieve beyond the contract i.e. achieve greater good beyond self-interest (Babcock-Roberson & Strickland, 2010; Pradhan & Pradhan, 2015). The term "beyond the contract" or "greater good" according to Effelsberg,Solga& Gurt (2014) will increase the willingness of employees to engage in unethical proorganizational behavirour. We can interpret from the author's study that transformational leadership style can

significantly influence their followers. The four dimension of transformational style is the influence, inspirational motivation, intellectual stimulation and individualised consideration (Bass, 1985;Huczynski& Buchanan, 2013). Intellectual stimulation is an important topic that contributes to our study as it could drive knowledge sharing to generate new and innovative ideas in an organization by broadening their perception of the followers (Zhu, Avolio, & Walumbwa, 2009; Ghasabeh, Soosay, & Reaiche, 2015). Hence it is proposed:

Hypothesis 1: The employee engagement driver leadership style positively influences innovative work behaviour in IT industry.

Rewards and Recognition on Innovation

According to Siddiqi (2015), reward system has an influential effect on the employee's job attitude. For the employees to work better and consistently improve in their area of work, recognition and feedback play a significant role. The author also mentions that compared to negative feedback; positive feedback from the service manager to the employees improves the cooperation and desire to work. According to Klein (1991), Goal theory suggests that the employees are more likely motivated to their goals, which are linked to some rewards (Presslee, Vance, & Webb, 2013). In contrast, to these authors, Amabile (1997) argued that for an employee to be innovative, it is necessary that they are intrinsically motivated than the extrinsic motivation given by the management in the name of rewards. Incentives can easily undermine intrinsic motivation, including creativity if they reward the wrong outcomes or behaviours. But if they reward the right ones, they certainly can reinforce creativity(HBR, 2015).

However, an empirical study conducted by Sauermann & Cohen (2010) showed a positive relationship between rewards and intrinsic motivation in employees and the companies jeopardize their competitive advantage when they ignore the investment for their employees (Bassi & Daniel, 2007). Google and 3M have a management system that rewards its employees financially for innovative ideas that help them to be more profitable (Baumann & Stieglitz, 2014). Baumann & Stieglitz (2014) in their empirical research found that lowpowered rewards are more beneficial than high-powered rewards as it tends to increase the competition among the employees and more project proposals will be submitted which can de-motivate employees. However, the incentives depend on organization and environment i.e. smaller firms may follow high incentive as efforts of each employee can make the difference.

Zenger & Hesterly (1997) report that high-powered rewards motivate employees towards innovation and performance. While many authors argue that the rewards are directly propositional to the innovation and performance.Hellmann & Thiele (2011) found that the efforts of employees are inversely propositional to the number of contestants. Higher the rewards greater will be the employee's efforts towards the goal but with higher the number of contestants lower will be the employee's efforts. Hence, it is proposed:

Hypothesis2: The employee engagement driver rewards and recognition positively influenceinnovative work behaviour in IT industry.

Training and Development on Innovation

Training is one of the ways in which an organization can help its employees be aware of new technologies, process effectiveness (Aragón-Sánchez, Barba-Aragón, & Sanz-Valle, 2003; Chen & Jing-Wen, 2009) and is also a gesture of expressing care for the employees. Various authors (Glaveli & Karassavidou, 2011; Castellanos & Martín, 2011) have performed empirical studies on the impact of training and development on productivity, financial gain and employee motivation. Two key factors that improve entrepreneurial competitiveness are technology and training. Though it puts greater pressure on the organization (Drejer & Riis, 1999), it encourages the innovative working style that helps achieve organizational goals. Whenever cost-saving strategy has to be adopted in companies, for most of them the first and easier choice will be to reduce the cost incurred on training (Glaveli & Karassavidou, 2011). A study conducted by a company which favors training and makes the investment in it has recognized greater benefits in their business (Horwitz, 1999). However, the amount of training depends on the need and willingness of the organization to invest in it (Huerta, Audet, & Peregort, 2006). Training helps to increase emotional attitudes toward an organization that in turn helps to motivate the employees to well behave and act towards the organizational goals. Additionally, it also increases the loyalty, desire to stay in the organization, provides better work life and an opportunity to socialize with others (Rucci, Kirn, & Quin, 1998; Hajdin, 2005; Glaveli & Karassavidou, 2011). Sung & Choi (2014) mentioned that financial aid like reimbursement of tuition fee, certification fee has influence over the positive attitude of the employees and decreases the intention of turnover. The author also indicated that rather than just individual learning, collective organizational learning i.e. distributed expertise and connection between people aids in innovation. Hence, it is proposed:

Hypothesis3: The employee engagement driver training and development positively influences innovative work behaviour in IT industry.

III. Methodology

As the primary objective of this study is to understand the innovative behaviour in the IT industry, the target audience for this study were employees in the IT Companies. The research data were collected from employees from various organizations located in different parts of the world like United States, Malaysia, Singapore, India, Canada and Australia. The total population of employees in the IT industry is unknown as it is difficult to get employee information from every company in each country in the world. Hence based on the margin of error, Z-score (obtained from confidence level) and standard deviation which is assumed to be 0.5, 1.28 (80%) and 0.8 respectively for this study, a necessary sample size required for this study werecalculated as 200. Finally, 284 successful responses were collected from the respondents. The research instrument used a selfadministered questionnaire. The participants were reached via authors' personal and professional network and were contacted through Facebook, LinkedIn, and WhatsApp.The survey questionnaire was hosted in "Google forms" and the links were provided to the participants through various social media tools which allow them to participate at their convenient time. The survey questionnaire consists of two sections, the first section on demographic details of the respondents includes age, gender and experience in IT industry. The second section consists of 19 questions related to leadership style, rewards and recognition, training and development and innovation. Leadership style was measured by the 5-item scale that is adapted from various literature (Kacem & Harbi, 2014; Burch & Guarana, 2014; Zhu, Avolio, & Walumbwa, 2009) and customised to this study. An example of the items for this measuring scale is "My supervisor is up-to-date with the latest software tools and technologies and shares with the team helps me to be more creative". Rewards and recognition were measured by the 5-item scale that is adapted from a study carried out by Presslee, Vance, & Webb (2013) and customised to this study. An example of items for this measuring scale is "When I deliver a project on time with good quality, my company gives meanextra day off which increase my willingness to work more". Training and development were measured by the 5-item scale that was adapted from the research study carried out by Aragón-Sánchez, Barba-Aragón, & Sanz-Valle (2003) and customised to the current study. An example of the items for this measuring scale is "training offered by my company is strongly linked to my job scope helps me to give superior ideas at work". The innovative behaviour of the employees was measured by the 4-item scale that was adapted from various literature (Kacem & Harbi, 2014; Burch & Guarana, 2014; Zhu, Avolio, & Walumbwa, 2009; Aragón-Sánchez, Barba-Aragón, & Sanz-Valle, 2003) and customised to the current study. An example of the items for this measuring scale is "I try to come up with ways of solving problems which are somehow different from most people".Respondents were required to measure all items by rating on the fivepoint Likert's Scale with answers ranging from Strongly Disagree to Strongly Agreeand dichotomous scales (yes or no) are given a value ranging from 1 to 5 based on the participant's response.Descriptive analysis was carried out to find out mean, standard deviation and correlation between different variables used in this study. Pearson correlation and simple linear regression analysis were carried out to test the hypotheses.

Results

In this section the raw data obtained from the 284 IT employees are tested for reliability, identifying the relationship between variables through correlation, linear regression, and finally, with the calculated values, proposed hypothesis is tested for the fit.

Table 1 Cronbach Alpha coefficient for this study						
	Cronbach's Alpha	N of Items				
Leadership style	.82	5				
Rewards & Recognition	.76	5				
Training & Development	.89	5				
Innovative Behaviour	.81	4				

Reliability Testing

For this study, the calculated Cronbach's Alpha for all survey questionnaires is above 0.7 as represented in Table1 and it can be inferred that the responses are reliable.

Descriptive Analysis

61% of the participants agree their superiors engage transformational leadership at work. The average mean for leadership related questions is 3.54, and the standard deviation is 0.96 which indicates that 68% of the responses fall between 2.57 to 4.50.58% of the participants agree that they are rewarded for their work and among them, only 27% of the employees' preferred monetary rewards. The average mean calculated for rewards related questions is 3.42 and standard deviation of 1.02 which indicates that 68% of the responses fall between 2.39 to 4.44.84% of the employees responded that their company organizes training for them, and 70% feel that they have enough knowledge and skills required to perform their day-to-day tasks at work. Only 55% of the employees feel that the training offered strongly linked to their job scope, and 84% of them are strongly

motivated to learn and implement new things at work. The average mean calculated for training and development related questions is 3.64 and standard deviation of 0.76 which indicates that 68% of the responses fall between 2.88 to 4.41.77% of the respondents have mentioned that they enjoy being innovative at work and tend to propose multiple solutions for a problem that is different from other employees. The calculated average mean for innovativeness inanemployee is 3.8907.Based on the calculated mean values, the employee engagement in IT industry is moderate with an average mean of 3.53 and the innovativeness in the employees is comparatively higher with an average mean of 3.89. Though the significance of the value is very less, the actual relationship between the employee engagement and innovation in the IT industry can be understood clearly using other statistical tools like correlation and linear regression.

Impact of Leadership Style on Innovation

The Pearson correlation calculated for leadership style and innovation is provided in Table2. It is indicated that the leadership and innovation are positively correlated with Pearson's coefficient of 0.230 and is significant at 0.05.

		Innovation	Leadership
Innovation	Pearson Correlation	1	.230*
	Sig. (2-tailed)		0.011
	N	284	284
Leadership	Pearson Correlation	.230*	1
	Sig. (2-tailed)	0.011	
	N	284	284

 Table 2 Pearson Correlation Coefficient for Leadership and Innovation

* Correlation is significant at the 0.05 level (2-tailed).

In order to understand the impact of leadership on the innovation in IT industry, simple linear regression analysis was performed. The R-value in Table 3provides the correlation coefficient for the leadership and innovation in IT industry. The R Square value indicates that 5.3% of the variance in innovation can be accounted from the leadership.

1 au	e 5 Linear re	gression model summar	y for Leadership at	
				Std. Error of the
Model	R	R Square	Adjusted R Square	Estimate
1	.230 ^a	.053	.045	.736

 Table 3 Linear regression model summary for Leadership and Innovation

Table 4 Linear regression coefficient for I	Leadership and Innovation
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Model		Unstandard	ized Coefficients	Standardized	t	Sig.	
				Coefficients			
		В	Std. Error	Beta			
1	(Constant)	2.954	.368		8.037	.000	
	Leadership	.264	.102	.230	2.591	.011	
a. Dependent Variable: Innovation							

According to Table4, the beta of 0.230 represents the correlation coefficient and is significant at 0.011 using the t distribution. Also for a unit increase in leadership, innovativeness in employees will increase by 0.264. The data shows that 61% of the participants agree that their supervisor's leadership style influences them to be innovative at work. However, the correlation between leadership and innovation using Pearson's Coefficient reveals that the correlation is significant at 5% level. The significance value calculated is less than 0.05 hence it can be inferred that there is a significant relationship between leadership and innovation exists and a unit change in leadership can influence 0.264 innovativeness of employee at work. Based on the statistical analysis hypothesis (H_1) is accepted. Therefore, it is inferred that the employee engagement driver leadership style has a positive influence on employees to innovate in IT industry.

Impact of Rewards and Recognition on Innovation

The Pearson correlation calculated for rewards & recognition and innovation is provided in Table5. The analysis indicates that there exists apositive linear relationship between the two variables and is significant at 0.05.

		Innovation	Rewards and Recognition
Innovation	Pearson Correlation	1	.179*
	Sig. (2-tailed)		0.049
	Ν	284	284
Rewards and Recognition	Pearson Correlation	.179*	1
	Sig. (2-tailed)	0.049	
	Ν	284	284

 Table 5 Pearson coefficient for Rewards and Innovation

* Correlation is significant at the 0.05 level (2-tailed).

Table6provides the linear regression results conducted on the dependent variable (innovation) and independent variable (rewards). The R-Value between the innovation and rewards is 0.179 and from R Square, it can be inferred that 3.2% variance in innovation can be accounted for the rewards and recognition.

Table o Linear regression model summary for Rewards and mnovation						
Model	R	R Square	Adjusted R Square	Std. Error of the		
				Estimate		
1	.179 ^a	.032	.024	.74479		
a. Predicte	a. Predictors: (Constant), Rewards					
b. Depend	b. Dependent Variable: Innovation					

 Table 6 Linear regression model summary for Rewards and Innovation

Table / Linear regression coefficient for rewards and innovation	Table 7 Linear	regression	coefficient	for re	ewards and	innovation
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Model		Unstanda	Unstandardized Coefficients		t	Sig.
		В	Std. Error	Beta		
1	(Constant)	3.159	.374		8.453	.000
	Rewards	.214	.107	.179	1.992	.049

The beta value of 0.179 represents the correlation coefficient and its significance value is 0.049 using the t-distribution. Also for a unit increase in rewards and recognition, innovativeness in employees will increase by 0.214.Based on the data collected, only 58% of the participants agree that rewards got at work help them to be innovative. The Pearson correlation analysis shows that there exists a positive correlation between rewards and innovation and is significant at 5% level. A change of 0.214 of innovative behaviour can be noticed for an increase of 1-unit rewards according to linear regression analysis. Hence, based on the analysis hypothesis (H_2) is accepted. Therefore, it is inferred that the employee engagement driver rewards and recognition haveapositive influence on employees to innovate in IT industry.

Impact of training and development on innovation

Pearson correlation calculated on the data collected for Training & Development and innovation is provided in Table8. It indicates that the Training & Development and innovation are related to a coefficient of 0.498 and is significant at 0.01. The correlation between training & development and innovation is the greater than the other two independent variables.

		0	
		Innovation	Training & Development
Innovation	Pearson Correlation	1	.498*
	Sig. (2-tailed)		0
	N	284	284
Training & Development	Pearson Correlation	.498*	1
	Sig. (2-tailed)	0	
	N	284	284

Table 8Pearson correlation coefficient for training and innovation

* Correlation is significant at the 0.01 level (2-tailed).

The linear regression model summary in Table9 shows that the R-Value between the dependent variable (innovation) and independent variable (training) is 0.498 and from R Square, it can be inferred that 24.8% variance in innovation can be accounted from the training and development. Among the three drivers, training and development constitute more variation towards innovation.

Table 9 Line	ear regression model	summary for	training and	innovation	
 7	D. (1		1 D G	G 1 E	0.1

Model	R	R Square	Adjusted R Square	Std. Error of the		
				Estimate		
1	.498 ^a	.248	.242	.65633		
a. Predictors: (Constant), Training						
b. Dependent Variable: Innovation						

Model		Unstandardized Coefficients		Standardized	t	Sig.
				Coefficients		
		В	Std. Error	Beta		
1	(Constant)	1.501	.384		3.908	.000
	Training	.655	.104	.498	6.296	.000
a. Dependent Variable: Innovation						

Table 10 Linear regression coefficient for training and innovation

Based on the t distribution, the correlation between training and innovation is 0.498 represents the correlation coefficient and the significance value at 0.00 which is less than 0.01 level as provided in Table10. Also for a unit increase in training and development, innovativeness in employees will increase by 0.655.Based on the survey data, the majority of the participants agreed that training and development help them with innovative ideas and solutions at work, and it is comparatively higher than the other two drivers. Compared to the other drivers, increase in training and development influences a change of 0.655 of innovative behaviour. The correlation between training and innovation is 0.498 and is significant at 1% level. Hence based on the analysis hypothesis (H_3) is accepted. Therefore, it is inferred that training and development have apositive influence on employee's innovativeness at work.

IV. Discussion

It is evident from this study that the employees tend to be more committed toworking when their leader's trust, assign challenging work, motivate and appreciate them at work. These qualities of the leaders can be termed as transformational style and under this leadership, employees show more commitment which is the main crux of employee engagement according to Melcrum (2005) and Hewitt (2013). The results also highlight that the value benefits like motivation and appreciation when given to employees at work, increases commitment and improves a positive relationship between the leaders and the employees (Yukl, 2010; Burch & Guarana, 2014). In addition to accommitment to work, more than half the employees agree to generate multiple solutions for a given problem which are different from other peers. The second driver i.e. rewards and recognition according to various authors are one of the vital factors in improving the employee's performance. An unmotivated worker can slowly result in a "domino effect" in the company output and end up in poor performance (Tampu, 2015). From the statistical results obtained in this study, it is evident that rewards and recognition positively contribute to the innovation in IT companies. However, the significance is minuscule when compared to the other driving forces. This could possibly be because only rewards like bonus, flexible work hours and few non-monetary types were concentrated in this study while there may exist other rewards which may be motivating factors for the employees to ensure better efficiency at work. Collected data indicates that employees are less favourable towards monetary rewards like the annual bonus when compared to nonmonetary rewards and about 87% of the employees are motivated to apply their skills when they are rewarded for work. This study agrees with the results of the research conducted by Presslee, Vance, & Webb (2013) which state that the performance of the employee shows positive up growth when rewarded non-monetary terms than when given monetary awards. Another driver that can make the employees engaged at work is through the investment in the training and development. Analysis of training and development related responses yielded a higher correlation with innovation when compared to the other two. The companies that provide training to its employees, which are closely related to their roles and responsibilities, tend to emit higher motivation at work and are willing to contribute to the company with their innovative solutions. The behaviours of the employees to learning new skills and applying them at work as mentioned by various authors like Aragón-Sánchez, Barba-Aragón, & Sanz-Valle, 2003 and Chen & Jing-Wen (2009) were seen in this study as well. A study conducted by Denning (2015) revealed that only 5% of the respondent in a survey felt motivated to innovate in their organization. However, in this study, 72% responded that they have the motivation to innovate at work. Among the other factors listed by the participants, freedom to perform tasks, teamwork and work-life balance was frequently mentioned.

4.1 Recommendation for future research

Knowledge sharing through virtual collaboration helps a lot in problem-solving. Based on few researchers, usage of online forum becomes a habit for programmers (Aarts & Dijksterhuis, 1999) and psychologically they tend to use search engine often for recalling any information (Sparrow, Liu, & Wegner, 2011). In this study, data shows that around 89% of participants useanonline forum to enhance their innovative skills. It can be understood that majority of the employees have the habit of using online forum either to provide solutions or in search of any solutions/codes. This can pavetheway to "cult programming" i.e. using a piece of programming code without knowing why it is being used for(Coffee, 2004). This raises a question whether software engineers are a developer or just googlers and can they perform their daily activities withouttheonline forum. There is a need for empirical analysis on "cult programming" to understand the impact on innovativeness in IT employees.

Additionally, based on the responses obtained from this study, few employees have mentioned that they dislike micro-management and expect freedom at work in order to be innovative. According to Hon (2012), empowerment leads to "autonomous motivation" and it hasapositive relationship with creativity. Can micromanagement hinder innovativeness of employees?

V. Conclusion

Technology is inevitable in this digital economy, and it is getting reshaped in various ways. The rate at which it changes and the disruption it faces due to modern technology and customer demands are increasing. To remain competitive in business, employees in IT industry should be able to provide innovative solutions that help to retain existing customers and attract new clients. The main objective of this research is to understand employee engagement factors that can help increase or willingness of the employee to be innovative at work. Though there are many studies on employee engagement, this study has highlighted useful information with regards to innovation in IT industry through employee engagement. The study revealed that drivers of employee engagement namely leadership style; rewards and recognition; training and development has positive significance on the innovation coefficient which is calculated using Pearson correlation and regression methods. Hence, this study concluded that the employees in IT industry, when engaged through appropriate leadership style, rewards and recognition, and training and development increases their innovativeness at work.

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