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Knowledge Sharing Behavior among the Academics in State universities in Sri Lanka: Investigating the Determinants

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Abstract

Universities play a major role in disseminating knowledge. Although the prime duty of academicsin universities is to share the knowledge, it is reported that academics have less intentions to actually share the knowledge they possess.This lacuna among the academics impact adversely as academics are expected to introduce solutions for managerial problems and to promote innovation. Due to this, scholar emphasize on investigating the factors stimulating the interest of academics to share knowledge. On the above backdrop, present study was undertaken under the quantitative methodology to understand the factorsaffecting the knowledge sharing intentions and behaviors of the academics in the state universities in Sri Lanka.Findings of the study suggests that the individual, social and organizational factors affect thewillingness of academics to share their knowledge. The study provides significant insights for the university administrators highlighting importance of shaping personal factors, social factors and facilitating a flexible structure and systems for academics to share knowledge.

Keywords: ***Knowledge sharing, personal factors, social factors, organizational factors***

1. Introduction

Knowledge Management is crucial in the business world as well asinthe organizations of every sector, including higher education (Prahalad & Hamel, 1990 as cited in Ramayah, 2013). Universities and other higher education institutions are in the knowledge business as their core activities are associated with knowledge creation, dissemination and learning (Goddard, 1998). Thus, Knowledge Management is becoming a vital competitive weapon in order to thrive and stay relevant in a knowledge economy (Loh et al., 2010).

Among the knowledge management practices knowledge sharing plays a vital role. Generally knowledge sharing is defined as the act of knowledge provider making knowledge available to others within the organization (Ipe, 2003). Universities are expected to be in places where knowledge is shared freely among academicians(Ramayah, 2013). Knowledge sharing behavior among academicians includes contributing knowledge through written documentation such as publishing books or scholarly articles. According Ramayah (2013) academics engage in knowledge sharing in universities by publishing scholarly work. In addition to informal means of knowledge sharing practiced by individuals, a university as a center of generation and dissemination of knowledge adopts different knowledge sharing practices such as lectures, seminars, research and publications (Ranasinghe &Gamini, 2008).Further, Ramayah (2013) stated that according to the utopian view, universities are considered as a place where academics acknowledge the importance of knowledge sharing and commonly exchange with colleagues in their day to day activities.

Although knowledge sharing is vital, in the present context knowledge sharing is lacking among the academics. Knowledge sharing is barely present within universities these days and it has become a rising concern (Ramayah, 2013).Ridzuan et al. (2008) also highlighted this issue among the academics. Thus, it can be observed that lack of knowledge sharing among the academics is a contemporary global phenomenon.This can be observed in the Sri Lankan context as well. The survey undertaken by Ranasinghe and Gamini (2008) involving 112 academics at different levels such as Professor, Senior Lecturer, Lecturer, Lecturer Probationary from the Faculties of Humanities and Social Sciences, Faculties of Engineering

Technology and Faculties of Natural Sciences of the universities in Sri Lanka, provides evidence for this contemporary issue in Sri Lanka. Findings of this survey revealed that the indicators of generation and sharing of knowledge such as the number of research publications, number of conferences held, the papers presented, annual expenditure on research and the number of courses revised or new courses developed and the performance of the universities during the past few years have not been at a satisfactory level.

Although knowledge sharing is lacking among academics, universities and relevant authorities expect academics to share their knowledge in terms of research and publications. Knowledge sharing of academics is being considered in their performance appraisals as well. Despite of these expectations and requirements to share knowledge, knowledge sharing is lacking among the Sri Lankan academics (Ranasinghe &Gamini, 2008).

Prevalence of unsatisfactory level of knowledge sharing among academics in Sri Lanka is further emphasized in Abeysekara (2012), in relation to the TIMES higher education world university rankings. According to the TIMES higher education World University rankings, extent of knowledge created and shared by academics in universities can be measured through the number of research, publications and citations. In that, thirteen (13) separate performance indicators have been considered to capture the full range of university activities, from teaching, research to knowledge transfer. According to the dimensions more than 60 percent of the overall ranking score has been allocated to research related dimensions such as research and citations in the university.

Further, below table shows the TIMES higher education world university rankings of some of the universities. According to the TIMES higher education world university rankings, none of the Sri Lankan universities is ranked at least among the first 400 universities in the world. Indian Institute of Technology Bombay is the only South Asian University which is ranked among the top 400 universities in the world.

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Table ITIMES Higher Education World University Ranking

Rank	Name of the university	Overall	**Teaching**	**Research.**	**Citations**	Industry Income	International Outlook
601–800	National University of Sciences and Technology Pakistan	21.5–30.6	20.3	8.7	39.9	32.6	37.0
801–1000	University of Agriculture, Faisalabad Pakistan	15.6–21.4	17.7	12.4	20.2	31.9	27.1
801–1000	Bandung Institute of Technology (ITB) Indonesia	15.6–21.4	20.8	11.8	8.1	83.0	31.0
801–1000	Universitas Gadjah Mada Indonesia	15.6–21.4	18.9	10.4	18.1	60.6	38.9
74	Kyoto University	64.9	71.8	78.6	50.9	93.8	28.8
251-300	Indian Institute of Science	45.2–48.2	53.8	48.6	44.4	49.5	19.5
351-400	Indian Institute of Technology Bombay	40.0–42.3.	43.1	37.6	47.8	53.4	19.9
400	University of Malaya	40.0–42.3	31.2	26.6	54.4	49.5	77.0
1001+	University of Dhaka Bangladesh	9.2–15.5	20.4	6.8	9.0	31.7	41.9
801-1000	University of Colombo	15.6–21.4	25.0	7.9	12.9	0.6	38.2

According to the above table it is clear that Sri Lankan universities are not in a good position in relation to knowledge sharing. Research led teaching and citations of Sri Lankan universities are at a lower level compared with the other regional universities. Thus, it is a puzzle which warrants an investigation as to why knowledge sharing is lacking among academics in state universities in Sri Lanka.

In response to this the present study examined the factors affecting the knowledge sharing intention and behavior of the academics in the state universities in Sri Lanka. This study is significant as there is a lacuna in the extant literature which explains the reasons for knowledge sharing. Wu and Zhu (2012) stated that amidst the extensive research conducted

in the knowledge sharing area, factors which influence knowledge sharing are understood poorly. Further, extensive amount of research has been done on knowledge sharing in the commercial environments (Brown &Brudney, 2003; Suppiah& Sandhu, 2011; Roger et al., 2013). However, research into knowledge management in universities is very limited (Fullwood, Rowley &Delbridge,2012; Donate &Canales, 2012).

Further, majority of the studies investigating knowledge sharing in universities are not based on a proper theory (Fullwood et al., 2012; Donates &Canales, 2012). Thus, by addressing this lacuna present study contributes to the existing theory, investigating knowledge sharing behavior of academics in light of the Theory of Planned Behavior (Ajzen, 1991).

Theory of Planned Behavior identify the personal and social factors affecting individual's intention and behavior. However, according to Ajzen (2001; 2011), Theory of Planned Behavior leaves substantial unexplained variance in the intention which is not explained by its three predictors.Ajzen (1991; 2001; 2011) emphasized the three predictors of intention account on average for only 50 percent of the variance in intention, and intention accounts for an average of 26 percent of the variance in behavior. Many scholars in their meta-analysis have also questioned the sufficiency of Theory of Planned Behavior (Greenwald &Banaji, 1995; Aarts&Dijksterhuis, 2000; Uhlmann &Swansnon, 2004; Bargh& Chartrand, 1999; Brandstatter, Lengfelder, & Gollwitzer., 2001; Conner & Armitage, 1998, as cited in Ajzen 2011). Therefore, in addressing the identified theoretical gap present study considers other determinants to better explain the knowledge sharing behavior of academics.

Moreover, the study provides significant insights for managers and other authorities. As per Roger et al. (2013) academics link the universities with the industry. They involve in sharing of knowledge through teaching, research, trainingprogrammes, support innovation, problem solving and decision making in the industry (Roger et al., 2013). Thus, the findings of the present study would facilitate the industry with comprehensive knowledge which will enable them to solve the managerial issues.

On this back drop the present paper investigates the determinants of knowledge sharing intention and behavior of academics to provide a better understanding of what makes academics to share their knowledge. More specifically, this paper investigates attitudes, perceived behavioral control, organizational commitment, personality, personal expectations

as individual factors, subjective norms as social factors and management systems as organizational factors.

2. literature review

2.1 Knowledge sharing

Davenport and Prusak (2000) defines, knowledge as a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. Knowledge possess by Faculty is considered as a special form of knowledge (Quinn, Anderson &Finkelstein, 1996). Faculty can possess both tacit and explicit knowledge, as defined by Nonaka and Takeuchi (1995).

Knowledge sharing is a key enabler of knowledge management process (Alavi&Leidner, 2001)**.** Several researchers define knowledge sharing as the act of knowledge provider making knowledge available to others within the organization (Ipe, 2003; Mooradian et al., 2006; Szulanski, 1996, as cited in Wickramasinghe&Widyaratne, 2012). As Goh (2000) states, sharing of best practices and lessons learned depends on the willingness of employees to engage in sharing activities of individuals. Therefore, according to Joalee, Nor and Khani (2014), from both a research and a practical standpoint it is important to understand what make individuals to share their knowledge and how an organization can facilitate this type of intention and behavior.

2.2 Factors affecting knowledge sharing intention and behavior

Previous studies have examined factors influencing knowledge sharing in various environments (Bartol& Srivastava, 2002; Bresmen et al., 2010; Davenport &Prusak, 1998; Ipe, 2003; Kim et al., 2000; Kim, Kim & Lee, 2006; Michailova& Husted, 2003). These factors include attitude (So &Bolloju, 2005; Bock et al., 2005), extrinsic rewards (Bock et al., 2005; Kim & Lee, 2006), organizational climate with fairness and trust, innovativeness and affiliation (Bock et al., 2005; Sun & Scot, 2005), subjective norm (Bock et al., 2005), social networks (Kim & Lee, 2006), fear of loss of control and ownership of knowledge (Sun & Scot, 2005), and anticipated reciprocal relationships and co-operative behavior (Bock et al., 2005; Lu et al., 2006).

2.2.1 Individual factors

Attitude is a main factor affecting one's behavioral intentions. Attitude refers to the degree to which a person has favorable or unfavorable evaluation of the behavior (Ajzen, 1991). An individual tends to possess a favorable attitude when the outcomes are positively evaluated and, thus, he/she is likely to engage in that specific behavior (Ajzen, 1991; Yardly et al., 2006).Perceived behavioral control is another factor affecting one's behavioral intentions. It is ''the perceived ease or difficulty of performing the behavior'' (Ajzen, 1991). "It has two aspects, how much a person has control over the behavior and how confident a person feels about being able to perform or not to perform the behavior (Ajzen, 1988).

Organizational commitment also decides one's behavioral intentions. Porter et al., (1974, p 604) describe organizational commitment as "an attachment to the organization, which is characterized by an intention to remain in it; an identification with the values and goals of the organization; and a willingness to exert extra effort on its behalf". Organizational commitment can be identified in light of "side-bet" theory (Becker, 1960; Alluto, Hrebiniak& Alonso, 1973). According to the side-bet theory individuals are committed to the organization as far as they hold their positions, irrespective of the stressful conditions they experience (Porter et al., 1982, p 26).

Personality is another factor which decides one's behavioral intentions. Big five personality model describe the personality with five dimensions namely extraversion, agreeableness, conscientiousness, neuroticism and openness. Extraverted personalities are sociable, assertive, active and talkative. Burger, & Caldwell (2000). described that extraversion is characterized by self-confident, dominant, active and excitement seeking. Witt et al., (2002) described agreeableness represent the individual characteristics like cooperativeness, helpfulness, tolerance, generosity and trust. Broges (2013) described Conscientiousness as the tendency to be responsible, persistence, punctual, hardworking and work oriented. According to Gupta (2008) and McCrae and John (1992) neuroticism explains anxious, unstable, concerned, worried and unsecured individual personalities. Digman (1990) explained that the traits commonly associated with this dimension include being imaginative, cultured, curious, original, broad minded, intelligent and artistically sensitive.

Personal expectationsis another individual factor which affects behavioral intentions. This refer to the expected consequence of one's own behavior (Bandura, 1997; Compeau& Higgins, 1995b). Previous studies have also provided empirical support suggesting that individuals' benefits (e.g., expected association, organization reward, enjoyment in helping others) may act as motivators of knowledge sharing (Bock & Kim, 2002; Kankanhalli et al., 2005).

2.2.2 Social Factors

Ajzen (1991) outlined that, subjective norm is the perceived social pressure to perform or not to perform the behavior. Subjective norms are being determined by the "belief about the extent to which the important others want them to perform a behavior". (eg- Most people important to me think that I should engage in the behavior"). Further, multiplied by the motivation to comply with those people's views (Rivis& Sheeran, 2003).

2.2.3 Organizational factors

Management systems is considered as an organizational factor which affect individual's behavioral intention. Nonaka and Takeuchi (1995) indicated that a combination of a formal organizational structure and a non-hierarchical, self-organizing organizational structure would improve knowledge creation and sharing capabilities. Organizational Management Systems are significantly influenced the knowledge-sharing, as identified in previous studies (Earl, 2001; Liebowitz, 1999; O'Reilly &Pondy, 1980; Quinn et al.,1996). Nonaka &Tekuchi (1995) emphasized that organizational structure has often had the unintended consequence of inhibiting collaboration and sharing of knowledge across internal organizational Boundaries. Creed and Miles (1996) also note that a hierarchical structure limits active knowledge sharing activities and communication between employees or between employees and supervisors.Following conceptual framework has been developed based on the extant review of literature.

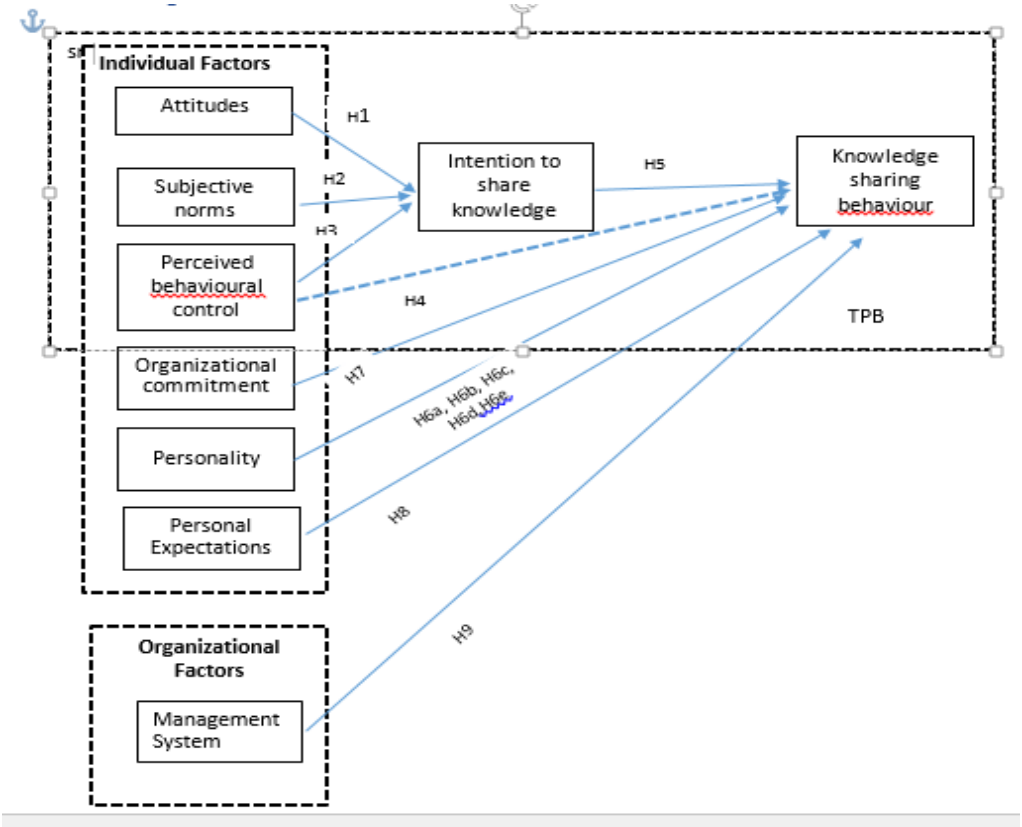

Figure 1: Individual, social and organizational factors affecting the knowledge sharing intention and behavior of academics

3. Methodology

Present study is governed by the positivistic research philosophy and follows quantitative method. The factors affecting for the knowledge sharing intentions of academics was investigated to proceed towards a conclusion by adapting the survey strategy. Complying with the rule of thumb of Roscoe (2003), a sample size larger than 30 and fewer than 500 was considered appropriate in the present study. Therefore, 359was determined as the sample size.The unit of analysis selected in the present study is the individual academic. Sample was selected from fifteen (15) government universities all over the country under different categories such as Lecturer (probationary), Lecturer, Senior Lecturer Grade I and II, Professor and Senior Professor, following stratified random sampling strategy suggested by Ramayah et al. (2009).

The measurement instrument for this study is divided into two sections. First section measuring demographic factors and second section measuring other variables. The measures for the independent variables, namely attitudes towards knowledge sharing, subjective norms, perceived behavioral control, organizational commitment, personality, personal expectations of knowledge sharing, and organizational management systems were taken from previously validated items of Ryu, et al. (2003), Williams and Anderson (1991), Agyemang et al. (2015) andCheng et al. (2009).

The measures for the mediator and the dependent variable, namely intention to share knowledge and knowledge sharing behavior were taken from Ryu, et al. (2003).All continuous variables were measured using five point Likert scale (1= strongly disagree; 5= strongly agree).

4. Findings and Discussion

The data was analysed by using the SPSS 20 statistical package to test the hypotheses. Content validity, criterion validity and construct validity of the measuring instrument was assessed and ensured before proceeding to hypotheses testing (Cooper & Schindler, 2003).Data was checked for normality and multicollinearity. The values for asymmetry and Kurtosis were between the acceptable range of -2 and +2 which proved univariate distribution (George & Mallery, 2010). Cronbach's alpha which measures the reliability of the scale measurements for all the variables were above 0.70, exceeding the suggested value of 0.70 (Hair et al., 2010).Thereby the reliability of the measures used was ensured. A Multiple Regression model was used for this study specifically to test how all independent variables considered in the study affect knowledge sharing behavior of an academics. R^2 value was used to give a comment about the overall influence from all the factors to the knowledge sharing behavior of academics.

Based on the results, 39.7% of the respondents were males while 60.3% were females. Most of the respondents (30.9%) were from the Management discipline and with less than five years of experience (29.7%). Among the respondents 31.7% reported that they belongs to lecturer (probationary) category.

According to the conceptual framework developed in the study, there are seven (07) independent variables, one mediator and one independent variable. In this study Pearson correlation has been used to identify the relationship between independent and dependent variables.

Firstly, the model was tested without the mediator, intention to share knowledge. The regression model indicated a significant positive relationship between the independent variables (attitude, subjective norms, organizational commitment, personality and personal expectations) andknowledge sharing behavior. Wheremodel is significant (F value= 39.092, P value< 0.05). R square of the model is 44.2% which demonstrates that the, 44.2% variation of knowledge sharing behavior is explained by the independent variables (attitude, subjective norms, organizational commitment, personality and personal expectations). However, in this regression model management systems of the university is insignificant where P>0.05.

In the next step, the model was obtained with the mediator, intention to share knowledge. According to the model a significant positive relationship represent between organizational commitment, personality, personal expectations and management systems of the university and knowledge sharing behavior. Where model is significant (F value= 53.927, P value< 0.05).The R square of the model is 55.6%, which demonstrate that 55.6% of the variation of knowledge sharing behavior is explained by the independent variables.

However, a special behavior of attitude and subjective norms was observed in the regression analysis. When the intention to share knowledge (mediator) is not present, attitude and subjective norms are significant to the regression model. However,when the intention to share knowledge (mediator) is present in the regression, attitude and subjective norms become insignificant to the model. Therefore it is clear that the relationship between attitudes, subjective norms and knowledge sharing behavior is mediated by intention to share knowledge. This finding confirms theTheory of Planned Behavior of Ajzen (1991).
However, the results of the present study revealed that the relationship between perceived behavioral control and knowledge sharing behavior is partially mediated by intention to share knowledge where in both regression models perceived behavioral control remain significant.

This finding is confirmed by previous empirical findings of Rapaport and Orbell (2000). Therefore, it is clear that the findings of the present study ison par with the previous scholarly work.

According to the table 2, 55.6% of the variations of variable is explained through the model. According to Moksony (1990) 50% or more than prediction of a regression model can be accepted in social science research. Further, this model can be considered as an acceptable model for this study as the aim of this study is to identify the relationships among variables.

According to the findings of the study it is confirmed that attitudes of academics are positively related to knowledge sharing intention. Which suggests that when academics evaluate knowledge sharing as a positive behavior they are more likely to engage in sharing knowledge. Further, relationship with subjective norms suggests that academics perceive pressure from their department heads and important others such as colleagues to share knowledge.

Table II Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.746[a]	.556	.546	.34194

These findingsare consistent with the previous studies (Roger et al., 2013; Harper &Makatounai, 2002; Hall et al., 2006; Eagly&Chailen, 2007). Further, partial mediation of intention to share knowledge,with the relationship between attitudes, subjective norms and knowledge sharing behavior suggests that positive attitudes and perceived social pressure to share knowledge influence academics to directly engage in actual knowledge sharing behavior, or it can influence them to first form the willingness to share knowledge then that willingness can impact them to engage in actual knowledge sharing behavior.

It was further revealed that there is a negative relationship between knowledge sharing intention and perceived behavioral control. Previous empirical evidence (Rapaport & Orbell, 2000; Eagly&Chailen, 2007) also validated this finding. This suggests that academics perceive more barriers in sharing knowledge which leads them to demonstrate less willingness to share knowledge. Analysis of the study further confirmed the argument built in the literature (Morrow, 1993; Meyer et al., 1990) regarding knowledge sharing, where commitment is significantly positive correlated with knowledge sharing behavior. This suggests that when academics are more committed towards their university they intend to share more knowledge.

In the present study personality has been tested as one variable with the knowledge sharing behavior rather than five factors which are elaborated in the Big Five model. It is justified through the confirmatory factor analysis in data analysis. Findings of the present analysis is consistent with the previous studies (Agyemang et al, 2016; Gupta,2008; Radcanu,2012), which agree with the positive significant relationship between knowledge sharing behavior and personality. The analysis of this study also in line with the literature which confirmed that personal expectation of knowledge sharing is positively related. Which means, when academics perceive more positive physical, social and self-evaluation effects, they have high willingness to share knowledge.

5. Implications, limitations and recommendation for future research

Present study attempts to extend the limited existing knowledge about the determinants of the knowledge sharing intention and behavior among academics by exploring the seldom explored arena in the knowledge sharing literature (Brown &Brudney, 2003; Sandhu et al., 2011; Roger et al., 2013). This studytried to examine the knowledge sharing behavior of academics in Sri Lankan context from a theoretical lens using the Theory of planned behavior

(Ajzen, 1991), as the existing theoretical and empirical knowledge suggests that there could be other factors which determine the knowledge sharing intention among the academics (Ajzen, 1991; Roger et al., 2013). It is stated in the extant literature that due to the insufficiency of Theory of planned behavior, adding more determinants to Theory of planned behavior would increase the predictive capacity of the intention and behavior (Ajzen, 1991). Thus, the study provides a valuable theoretical implication by providing a better explanation for the personal, social and organizational factors affecting knowledge sharing intention and behavior of academics.

Apart from the theoretical implications present study has significant implications for theadministrators of the universities. This, study provides significant insights for the university administrators to focus more on shaping positive attitudes on knowledge sharing among the academics, having formal expectation for knowledge sharing through the department and faculty heads, and performance appraisals, facilitating with more opportunities to share knowledge such as monthly discussions, forums. Also, this suggests that university administrators need to focus on developing organizational commitment among the academics and convincing academics about the personal benefits of sharing knowledge such as any positive performance evaluations. In addition, developing a positive personality through training programmes is essential as personality determines the knowledge sharing intention and behavior of academics. Further, this study provides insights on the importance of making the management systems, structure more flexible and making open networks available to increase knowledge sharing intention and behavior among the academics.

Since academics bridge the gap between academia and the industry through knowledge transfer and working with businesses and other organisations to support innovation, social and cultural enterprise (Roger et al., 2013), it is vital to increase knowledge sharing behavior of academics. Thus, in essence the findings of the study regarding the determinants of knowledge sharing behavior provides significant insights to the practicing managers.

The scope of this study was limited to the academics. It is possible that the findings are unique to this particular group of professionals, due to factors relating to specific employment conditions such as flexible working hours and working from home. Therefore, the findings may have limited applicability beyond this professional group. Findings of the study revealed that only relationship between attitudes, subjective norms and knowledge sharing behavior is partially mediated by the knowledge sharing intention. Future researches are encouraged investigate the underlying reasons through a qualitative study.

6. Conclusion

The findings of the study shed lights on the individual, social and organizational factors affecting knowledge sharing intention and behavior of academics. Accordingly, findings revealed that academic's attitude, subjective norms and knowledge sharing behavior is fully mediated by intention to share knowledge, where perceived behavioral control is partially mediated. The findings showthat personality, personal expectationsalso determines knowledge sharing intention and behavior of academics. Similarly, organizational management systems as an organizational factor also determines knowledge sharing behavior of academics.

The findings of this study are much significant as the lack of knowledge sharing intentions and behaviors among the academics have not been sufficiently investigated,even thoughit is a pertinent issue among academics in Sri Lanka. This study has significant managerial implications particularly, for the university administrators in paying their attention on shaping personal, social and organizational factors to facilitate knowledge sharing intention and behavior among academics. Overall such managerial implications will be important to fulfill the vital role of universities working with businesses and other organisations to support innovation, and to provide solutions for the managerial problems through knowledge transfer.

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