

# Psychological Contract and Knowledge Sharing among Academicians: Mediating Role of Relational Social Capital

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## Abstract

This study examines the mediating role of relational social capital in the relationship between psychological contract and knowledge sharing. This study collected data from 145 academicians in Malaysian public universities using questionnaires. Data was analyzed using Structural Equation Modeling. The findings suggest that trust and collaboration fully mediate the relationship between relational psychological contract and knowledge sharing. The study supports the call for more empirical evidence concerning the role of social capital in understanding the relationship between psychological contract and knowledge sharing. This study contributes to the literature by linking psychological contract and knowledge sharing through the lens of social capital.

**Keywords:** Psychological contract, Knowledge sharing, Malaysia, Social capital, Structural Equation Modeling

## 1. Introduction

Organizational survival in the public universities in Malaysia has been increasingly challenged due to the progressive tightening of financial regimes, closer monitoring of organizational performance through the introduction of apex and research universities, and increasing competition from private universities. The traditional employment features of a public university such as job security, promotion based on seniority and stable career path have all been threatened due to the changes in the academic landscape. The pressures following tightening of work practices and intensification of responsibilities among academicians in public universities are affecting the employment relationship, and the protective support associated with the public universities are further severed by the attractive remuneration offered by private universities.

The intellectual network in public universities offers a great vehicle to address the escalating pressures from the ministry and the society which aspires to attain a world standard higher education. Nonaka and Takeuchi (1995) suggested knowledge sharing as a prerequisite for developing new technology and products. This is further supported by Unselt *et al.*, (2005) that knowledge sharing is suggested to have potential impact on organizational

competitiveness because of its potential in transforming individual knowledge into group organization knowledge (Hendriks, 2004). Knowledge sharing involves a set of behavior which aids the exchange of acquired knowledge. An organization can be considered as a social community in creating, sharing and transferring explicit and tacit knowledge. It is the ability of organizations' members to combine and exchange knowledge that will determine the rate at which new products and services are introduced (Smith *et al.*, 2005). The ability to share knowledge within an organization such as the sharing of knowledge and expertise to deal with complex tasks (Cummings, 2004) will contribute to organizational performance (Argote *et al.*, 2000).

Bartol and Srivastava, (2002) argued that in knowledge-intensive professions, sharing of knowledge is especially critical. Yet our understanding of the factors that contribute to employees' propensity to share knowledge continues to lag (Bartol, Liu, Zeng & Wu, 2009). For example, although scholars are focusing an increasing amount of research on factors that influence the knowledge sharing of employees (e.g. Renzl, 2008; Argote *et al.*, 2000; Hansen, 1999), they have not yet directed sufficient interest towards the potentially promising link between the psychological aspect of employment relationship and knowledge sharing. Although relational component of psychological contract is suggested to influence knowledge sharing amongst the employees (Lester *et al.*, 2007), a more comprehensive framework that integrates social capital dimensions to explain the relationship between knowledge sharing and psychological contract is still lacking.

As argued by Grimmer and Oddy (2007), effective knowledge sharing requires a positive environment in the form of intact psychological contract which offers an opportunity to evaluate the fundamental aspects in the exchange relationship between employees and employers. The cognitive scheme that is formed in the mindset of the employee regarding employee-organization relationship will eventually be translated into the development of social capital to form the implicit expectations stemming from psychological contract (Unsel *et al.*, 2005).

This paper attempts to provide empirical evidence on the relationship between knowledge sharing and psychological contract through the lens of social capital based on the argument that trust and collaboration which are dimensions of relational social capital influence knowledge sharing among academicians in Malaysian public universities. More specifically, in addition to testing a direct relationship, it also examines the mediating role of trust and collaboration in the relationship between relational psychological contract and knowledge sharing. This study contributes to the literature by linking knowledge sharing and psychological contract through the lens of social capital theory.

## 2. Literature Review

### 2.1 Knowledge sharing and psychological contract

Knowledge sharing is defined as the flow of knowledge from someone who has it, to someone who wants it (Kang & Kim, 1999). It was further refined by Natarajan and Shekhar (2001, p. 29-30) as the process of acquiring knowledge from internal sources such as existing documents and human repositories, and external sources such as technology expertise and market intelligence. Van den Hooff and de Ridder (2004) further elaborated that knowledge sharing is a process where individuals mutually exchange their knowledge and jointly create new knowledge.

Another focus of knowledge sharing is the human element involved in the process. According to Dyer and Nobeoka (2000), knowledge sharing is the activities of helping communities of people working together, facilitating the exchange of their knowledge, enabling a learning orientation, and increasing the ability to achieve individual and organizational goals. Consistent with this, Storey (2001) defined knowledge sharing as the exchange of ideas and information among people who share a common purpose and experience similar problems. This is further supported by Chow and Chan (2008) who describe knowledge sharing as involving a set of behavior that assists the change of acquired knowledge.

Sharing of quality resources and expertise is more compelling in academic institutions. The recognition given to public universities based on the quality research and publications have increased the importance of knowledge sharing among academics. Since collaboration and knowledge sharing are more crucial in academic institutions, the perceptions and attitudes of academics toward knowledge-sharing are a fundamental part of knowledge management process.

According to Kim and Ju (2008), a systematic structure to facilitate academics in sharing knowledge and collaborating effectively is necessary towards producing new knowledge which results from processing existing knowledge. According to them, a campus-wide knowledge repository that acquires, organizes, and distributes new knowledge will enable the exchange and reuse of knowledge for collaboration. Such collaboration is pertinent to successful execution of duties and responsibilities of an academic, which is clearly outlined by Kim (1982) as follows:

*"Fundamental obligations of faculty are teaching, conducting research and consulting. They teach undergraduate and graduate courses, interact with students individually or in a group, guide degree-related individual studies,*

*design and conduct research project, develop and design courses, become involve with various committees on and off campus, and participate in consulting jobs in public and private organizations (Kim, 1982)."*

The effectiveness of knowledge sharing in organizations can be a significant factor to successful organizational management. From knowledge management perspective, knowledge sharing is the most difficult process to manage due to the "sticky" nature of knowledge that lead to slow, costly and uncertain transfer of knowledge (Kogut & Zander, 1992). The way employees perceive the relational component of psychological contract will influence future attitudes and behavior towards the organization which includes the sharing of knowledge (Atkinson, 2007; Brown & Woodland, 1999).

Psychological contract is defined as an individual employee's beliefs and expectations regarding the reciprocal obligations between an individual employee and his or her employer (Morisson & Robinson, 1997; Parks & Kidder, 1994; Roehling & Boswell, 2004; Rousseau, 1989). These beliefs are based on the employee's perceptions regarding his organization's obligations to him as well as his own obligations to the organization (Rousseau, 1989). The individual's belief is more of a perceived promise that covers several aspects including expectations of future return and obligation, as well as expected contribution. Therefore, psychological contract has been found to be significant within the employment context because psychological contract helps employees to frame the expected relationship and this framing serves as a guide to their future behavior (Kingshott, 2006).

Rousseau (1990) has categorized psychological contract into two forms: transactional and relational contract. Transactional contract focuses on economics terms, and is on short term basis with explicit performance criteria, whereas relational contract concerns the exchange of personal, socio-emotional, and value-based considerations as well as monetary elements. Shapiro and Kessler (1998) argued that employees who placed more importance on relational obligations to their employer did a better job of fulfilling their commitment compared to those with transactional obligations. Relational elements revolve around trust, loyalty and mutuality, and these elements develop overtime (Atkinson, 2007; Lester *et. al.*, 2007). Trust which is a key component of psychological contract, greatly influence the attitudes and behaviours of employees (Renzl, 2008).

There are two underlying theories in psychological contract, i.e the norm of reciprocity (Gouldner, 1960) and social exchange theory (Blau, 1964). Reciprocity is important in maintaining the stability and commitment within the social system since reciprocity establishes mutual, enduring associations where both parties have concurrent obligations and rights (Gouldner, 1960). On the other hand, social exchange theory posits that when an individual voluntarily provides a benefit to another, this action will invoke an obligation of the other party to reciprocate by providing something in return (Blau, 1964). These two perspectives highlight the dynamic element of the exchange relationship and provide a useful lens for examining the motivational mechanisms underlying the initiation of trustworthy behavior such as the sharing of knowledge in the organization.

Previous research which suggest for knowledge sharing to take place, activities that emphasise interactions such as discussions and frequent meetings through the development of personal networks, work groups and routines should be encouraged (Lubit, 2001; Mascitelli, 2000). In a simulation study by Cowan, Jonard and Ozman (2004), the existence of network structure where employees interact and share knowledge in a certain fixed network will significantly increase the long run knowledge growth rates. This is in line with the conclusion of Kim and Kil (2008) that suggested knowledge sharing involves consulting and producing technical and systematic infrastructure.

Therefore this study posits that the relationship between relational psychological contract and knowledge sharing to be positive.

*H1: There is a positive relationship between relational psychological contract and knowledge sharing in the organization.*

## *2.2 Knowledge sharing and relational capital*

Closely related to knowledge sharing is the concept of social capital. The importance of social capital is manifested in the ability of social capital in creating value through the process of recombining and disseminating knowledge. Social capital is defined as "... the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit" (Nahapiet & Ghoshal, 1998, p.243). The main components of social capital involve relational capital, structural capital and cognitive capital. Relational capital is represented by trust, collaboration, reciprocity, coordination and team orientation that are developed between specific people. Structural capital refers to the network structure or connection between the actors (Nahapiet & Ghoshal, 1998). Finally cognitive capital consists of resources that allow shared interpretations and meaning among a group of individuals (Wasko & Faraj, 2005).

Trust which is a component of relational capital is defined as "a psychological state comprising the intention to accept vulnerability based upon the positive expectations of the intentions or behaviour of another" (Rousseau, Sitkin, Burt & Camerer, 1998, p. 395). Trust is about perception of an individual on how they have been treated by

the organization, management, and fellow workers; whether these parties have been fair, kept their promise and met their obligation, whether the parties can be trusted to fulfill their promises and obligation in the future (Guest & Conway, 2001). Trust is acknowledged to be interrelated to cooperation (Ferrin, Bligh & Kohles, 2008) and an important dimension in organizational citizenship behaviour (Liden, Sparrowe & Wayne, 1997). Robinson and Rousseau (1994) suggest that trust may beget trust, not only by influencing the trusting behavior but also by influencing each party's perceptions of the other's behavior.

Trust and relationship will lead to positive attitudes and behavior among the workers (Gambetta, 1988; Sparrow & Cooper, 2003) and only with trust, they can discharge their obligations effectively. Hence, trust is not only an enabler to increase cooperation but also as a catalyst to improve flexibility, lower cost, coordinate activities, and increase knowledge transfer (Inkpen, 1998; Mat Isa & Ameer, 2007). Hence, trust is very important to facilitate the development of networking and also essential for knowledge sharing (Sharkie, 2005).

Himmelman (1992, p.19) defines collaboration as a "process in which organizations exchange information, alter activities, share resources and enhance each other's capacity for mutual benefit and a common purpose by sharing risks, responsibilities, and rewards". Collaboration can be achieved through assignments of task into groups (Twomey & Kleiner, 1996) which comprises of people who possess complementary skills, committed to a common purpose and performance goals, and hold accountability to the group's action and performance (Katzenback & Smith, 1993). Collaboration enables involving parties to reach a synthesis from arising conflict that incorporates insight and ideas of each party (Cohen & Mankin, 1999), and works best when the activities are directed toward clear, challenging but reasonably attainable goals and supported by appropriate skills among the team members to perform the task.

Sveiby and Simons (2002) suggest collaborative climate is an essential element in promoting knowledge sharing in organizations. This is supported by Janowicz and Noorderhaven (2002) who found that both collaboration and mutual trust among individuals in the organization were crucial factors in knowledge sharing and transfer. Similarly, the findings by Kotlarsky and Oshri (2005) found social ties and knowledge sharing are positively associated with successful collaboration.

As mentioned earlier, relational psychological contract revolves around trust, loyalty and mutuality (Atkinson, 2007; Lester *et al.*, 2007), therefore, in this study, we propose that trust, and collaboration as components of social capital, mediates the relationship between relational psychological contract and knowledge sharing. Based on these arguments, this study proposes the following hypothesis to explain the mediation role of social capital that is explained by trust and collaboration in the relationship between psychological contract and knowledge sharing.

*H2a:* Perception of trust partially mediates the relationship between psychological contract and knowledge sharing

*H2b:* Perception of collaboration partially mediates the relationship between psychological contract and knowledge sharing

Based on the hypotheses presented earlier, the proposed theoretical framework of this study is graphically depicted in Figure 1.

## FIGURE 1 IS ABOUT HERE

### 3. Methodology

This study employed a quantitative approach using mail questionnaire design. The questionnaires were distributed through three methods: on-line, mail and by hand, giving the study a total of 145 usable responses. The study focuses on academicians in public universities in Malaysia as the current challenges faced by these institutions to increase the quality of university education. The heightened pressures from the government and society are affecting the organizational behavior of these institutions and increase the need to share knowledge among its network of intellectuals. Structural Equation Modeling (SEM) was utilized to test the proposed mediation model besides determining the existence of significant relationships to justify the proposed hypotheses. SEM with AMOS (Arbuckle, 1999) was used to test the model. Tanaka and colleagues (1990) suggest that, instead of simply testing how well a specified model fits the data, researchers should put more emphasis on the comparative evaluations of multiple models. While mediation can also be tested through a series of regression models, the testing through the use of latent variables in SEM is considered to be superior (Baron & Kenny, 1986; Kenny, Kashy & Bolger, 1998; Williams, 1995). Changes in Chi-square test (Bagozzi & Yi, 1988; 1991) was employed to establish full or partial mediation between the variables in the model. Finally, a structural model will be presented to depict the link among latent variables involved in the study. The goodness of fit analysis will determine significance of the model.

#### 3.1 Measures

The measurements used in this study were adopted from prior studies on psychological contract and social capital research. Since the measurements were adopted from prior research, a pilot study was conducted for the purpose of external validation. Feedback from the exercise was then incorporated to the questionnaire.

### 3.1.1 Relational Psychological Contract.

Seven items based on Milward and Hopkins (1998) were used to capture an individual's relational psychological contract. Response was measured using 7-Likert scale ranging from 1 = "strongly disagree" to 7 = "strongly agree". Examples of items include "I feel part of a team in this organization" and "I feel this company reciprocates the effort put in by its employees".

### 3.1.2 Trust

Nine item scale developed by Cook and Wall (1980) were used to measure trust in management. Respondents were asked to indicate their agreement on the given statements with 7-Likert scale ranging from 1 = "strongly disagree" to 7 = "strongly agree". Examples of items include "Management at my firm is sincere in its attempts to meet the workers' point of view" and "Our management would be quite prepared to gain advantage by deceiving the workers" (reversed coded).

### 3.1.3 Collaboration

The construct was measured using scale developed by Sveiby and Simons (2002). Response was measured using fifteen 7-Likert scale ranging from 1 = "strongly disagree" to 7 = "strongly agree". Examples of items include "There is much that I could learn from your colleagues" and "My immediate superior encourages me to come up with innovative solution to work related problems".

### 3.1.4 Knowledge Sharing

It was measured by using the scale developed by Van den Hooff and de Ridder (2004). An example of the items is "Most of our knowledge has developed as result of working together with colleagues in this organization and "In this organization, information sharing has increased your knowledge". Respondents were asked to indicate the extent of their agreement with twelve statements using a five-point Likert scale ranging from 1 = "strongly disagree" to 7 = "strongly agree".

## 4. Analyses and findings

An examination of the data indicates support for normal distribution of the data. Table 1 shows the descriptive statistics (mean and standard deviation), reliabilities and zero order correlations between the variables examined in the present study.

### TABLE 1 IS ABOUT HERE

Following Anderson and Gerbing's (1988) two-step procedure, the measurement model was assessed independently before the analysis of the structural model. Since the recommended ratio of sample size to parameter did not achieve the recommended level (Hu & Bentler, 1999) a partial disaggregation approach was employed as a more parsimonious estimation strategy (Bagozzi & Heatherton, 1994). The result of CFA indicates a well fitting measurement model of  $\chi^2_{(29)} = 67.1$ , at  $p < 0.00$ ; GFI = .92; CFI = .96; TLI = .93 and NFI = .93. All factors significantly loaded to their intended factors, and the comparison between the hypothesized four-factor model and other alternative models also demonstrated support for the hypothesized model.

#### 4.1 Structural Model

Using the procedures recommended by Baron and Kenny (1986), and Kelloway (1995) for testing mediation, the fully-mediated model is tested against the proposed partially-mediated and non-mediated model. The chi-square differences test results indicate a non-significant improvement of fit of the partially-mediated model ( $\Delta \chi^2 = 2.3$ ,  $p > .01$ ). On the other hand, the partially-mediated model was a significant improvement on the non-mediated model ( $\Delta \chi^2 = 122.9$ ,  $p < .01$ ). An examination of standardized coefficients in the partially-mediated model reveals the insignificant direct paths from relational psychological contract and knowledge sharing. Deleting these insignificant paths in essence creates the fully-mediated model. Thus as suggested by the findings in Table 2, the fully-mediated model was the best among the three in explaining the proposed relationships.

### TABLE 2 IS ABOUT HERE

To summarize, the findings from SEM suggests that the fully mediated model was a satisfactory fit to the sample data with  $\chi^2_{(30)} = 69.4$  at  $p = 0.00$ ; GFI = 0.92; CFI = 0.95; TLI = 0.93; NFI = .92 (see figure 2). Relational psychological contract was positively related to trust (standardized coefficient = .44) and collaboration (standardized coefficient = .38), trust was positively related to knowledge sharing (standardized coefficient = .37), and collaboration was positively related to knowledge sharing (standardized coefficient = .53).

### FIGURE 2 IS ABOUT HERE

## 5. Discussion

The purpose of this research is to explain the relationship between psychological contract and knowledge sharing from the perspective of social capital. This study proposes that the relationship between relational psychological contract

and knowledge sharing is being partially mediated by trust and collaboration and therefore indicates the importance of social capital in determining the extent of knowledge sharing in an organization. The initial findings from correlational analysis indicate relational psychological contract to be significantly related to knowledge sharing. However the inclusion of social capital dimensions as mediator in the structural model eliminates the direct relationship observed between psychological contract and knowledge sharing. This resulted in a full mediation model that explains the relationship between psychological contract and knowledge sharing. In other words, the effect of psychological contract on knowledge sharing can be explained by the state of trust and collaboration.

The findings of this study suggest that trust and collaboration play a role in explaining the effect of psychological contract on knowledge sharing. This is in line with the arguments presented by Guess and Conway (2001) that trust is about individual's perception on how they are treated by the organization, the management, and fellow workers; whether these parties have been fair, kept their promise and met their obligation, and whether the parties can be trusted to fulfill their promises and obligation in the future. The strong norm of reciprocity (Gouldner, 1960) that resulted in a positive expectation in the employee-employer relationship will assimilate the belief that their contribution and efforts will be reciprocated by other members and the organization itself. This will act as an impetus for trust and collaboration to take place. Thus, the expectation of the relationship between employee and employer will determine the extent of trust and collaboration, which in turn will contribute to the density of knowledge sharing prevail in the organization.

In terms of the relationship between social capital and knowledge sharing, the findings from this study indicate that among academicians in Malaysian Universities there is a positive relationship between social capital in the form of trust and collaboration and knowledge sharing. Trust is found as an important factor in influencing knowledge sharing. This suggests that academicians in Malaysian universities are not individually oriented. It is a common practice in most faculties among academicians to share and exchange teaching materials with their colleagues. The findings of this study are also supported by Renzl (2008) which found trust to have a positive impact on knowledge sharing not only in management within teams, but also between teams.

In addition, the study by Bakker *et al.*, (2006) concluded that trust is more prevalent at team level in the context of knowledge sharing as individuals tend to share more knowledge with others if they believe that the others are honest and embrace the same principles (Bakker *et al.*, 2006). Moreover, a qualitative study by Ardichvili *et al.*, (2003) have provided further support as they reported that trust, ranging from knowledge-based and institutional-based is an important factor that will eliminate the barriers in knowledge sharing (Ardichvili *et al.*, 2003). Based on these findings, trust is seen as an important element in establishing and sustaining knowledge sharing culture in the organization.

This study found that collaboration is also an important factor influencing knowledge-sharing among academicians in Malaysian universities. This could be explained that faculty tends to achieve scholarly goals and objectives dependently on its academicians. They work together and are familiar with pursuing common goals and visions. With regards to practical implications, the findings of this study suggest that employees' expectations towards organization's fulfillment of their needs must first be translated into the development of trust and collaboration. Only after trust and collaboration are established can knowledge sharing perpetually flourish within the organization.

Thus, to enhance knowledge sharing among academicians, we suggest that academic organizations should fulfill relational psychological contract expectation by constantly reviewing the needs of the academicians to enhance their expertise and skills. The management must also be supportive in providing conducive environment that encourages collaboration and trust that will lead to knowledge sharing. In addition, the findings also suggest the importance of rewarding individuals to ensure ongoing contribution in the form of knowledge sharing among organizational members. With this incentive, individuals will be more willing to share knowledge when networks are dense, and consist of a large proportion of strong, direct ties between members. Therefore, this study suggests that a performance evaluation system that recognizes collaborative work and acknowledge intellectual yield based on knowledge sharing should be developed.

## 6. Research Limitations

Although this study offers valuable insights into knowledge sharing, it bears some common limitations of a field survey. Firstly, the study is limited to academicians and therefore the different properties of other professionals may have been unintentionally overlooked. This limits the generalizability which it may render to overall knowledge sharing behavior prevalent in varying organizations. Secondly, the nature of cross-sectional design disregards the fact that trust increases over time. Therefore, this study is not able to gain insights into whether individuals in different stages of time perform different knowledge sharing behavior.

## 7. Suggestions for future research

Limitations of this research provide opportunities for future research. Future research can investigate the impact of time to understand the development of trust and collaboration behavior and its impact on knowledge sharing

activities. The generalizability of this research can be extended by exploring this phenomenon in other industries especially in knowledge based and services industry. This research can also be strengthened by incorporating other social capital dimensions such as structural and cognitive in the research framework to provide a comprehensive understanding of the relationship between psychological contract and knowledge sharing.

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Table 1. Means, Standard Deviations, Alpha Reliability and Zero-order Correlation

Variable	Mean	S.D	1	2	3	4
1. Relational PC	5.80	.869	<b>(.776)</b>			
2. Trust	3.81	.633	.371**	<b>(.844)</b>		
3. Collaboration	4.64	1.13	.793**	.672**	<b>(.93)</b>	
4. Knowledge sharing	5.09	.91	.301**	.573**	.690**	<b>(.90)</b>

Notes: \*\* Significance at  $p < .01$ ; Figure in brackets represent Alpha Reliability coefficient

Table 2. Comparison of the Alternative Models

Model	$\chi^2$	d.f.	$\Delta \chi^2$	GFI	CFI	TLI	NFI
Model 1 (hypothesized full mediation)	69.4	30		.92	.95	.93	.92
Model 2 (partial mediation)	67.1	29		.92	.96	.93	.93
Differences (Model 1 – Model 2)			<b>2.3</b>				
Model 3 (non-mediation)	192.3	32		.94	.97	.98	.95
Differences (Model 3 – Model 2)			<b>122.9**</b>				

\*\* Significant at  $p < .01$ . The significant level of chi-square differences test is set at  $p < .01$  (for 1 d.f.,  $\chi^2$  corresponds to 6.63) in order to be more confident that any modification to the hypothesized model is less likely to be an artifact of the sample used in the study.

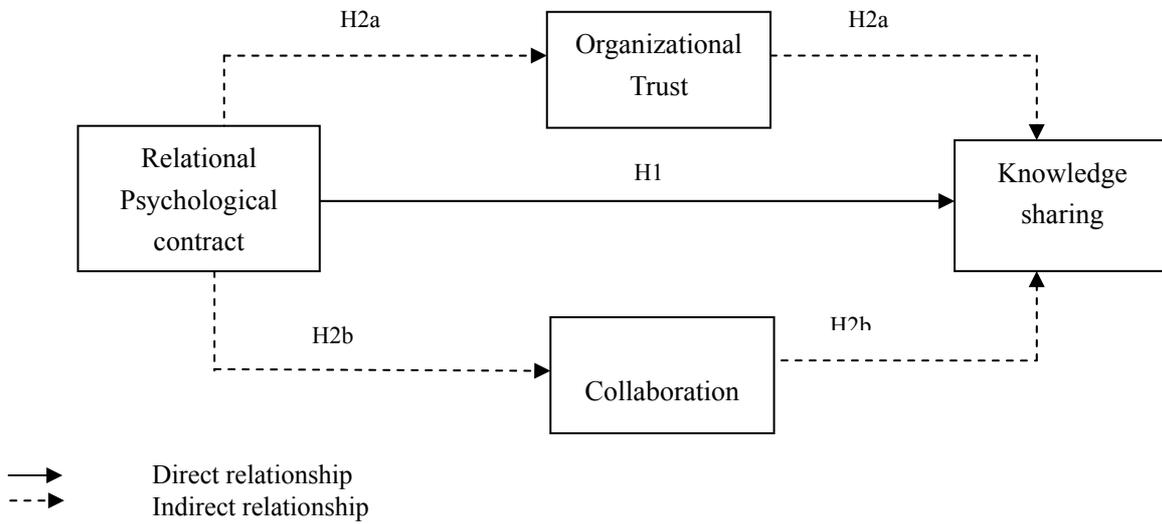


Figure 1. Research Framework

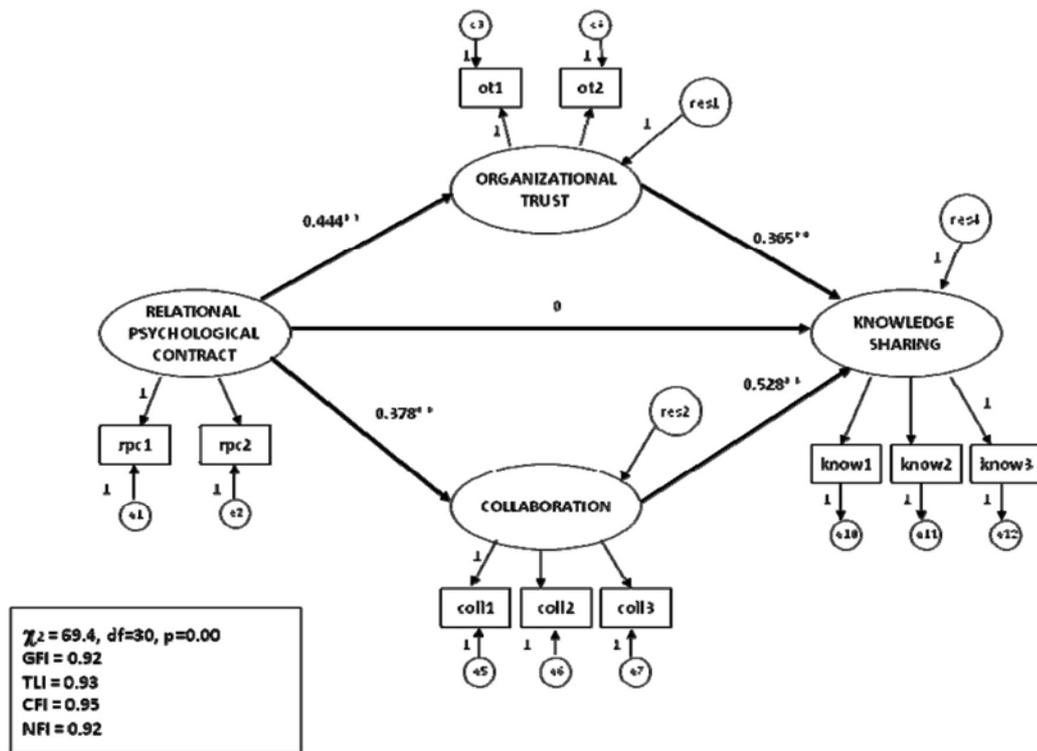


Figure 2. Standardized path coefficients for hypothesized model