

Knowledge as Predictor of Trust

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Abstract

Trust can be defined as a psychological state comprising the intention to accept vulnerability based on positive expectations of the intentions or behavior of another (Rousseau, Sitkin, Burt & Camerer, 1998). A trust interaction always involves two parts: the trusting party (i.e. the trustor), and the party to be trusted (i.e. the trustee). Previous scholars have often treated trust as static, arguing that one person either completely trusts or completely distrusts another (Gabarro, 1990). In this static view, the level of trust reflects a single point, rather than a distribution along an intra- or interpersonal continuum. Nevertheless, literature of trust in organizations has shown that trust starts, grows, declines and even resurges after repair (Miles & Creed, 1995; Tomlinson & Gillespie, 2009; Tomlinson & Mayer, 2009).

This study is aimed at helping to understand the future evolution of trust between trustors and trustees. To achieve this goal, we seek to investigate knowledge factors as antecedents of future trust. More concretely, we analyze the influences of initial knowledge and experiential knowledge on trusting behaviors and trusting outcomes. (i.e. betrayal, reciprocity and reward). While most prior studies adopts an *ex post* perspective, e.g. how to repair trust when it was previously damaged (Tomlinson & Gillespie, 2009; Tomlinson & Mayer, 2009), our work takes an *ex ante* approach, and it focuses on predicting the evolution of trust, more specifically on forecasting future trusting behaviors and trusting outcomes (e.g. how to avoid a betrayal). While the role of the different sources of knowledge in a trust relationship has been highlighted as relevant in the trust literature (Holsapple & Wu, 2008), the analysis of knowledge factors as predictors of future trust has not yet been addressed. We propose that while initial knowledge predicts trustor behavior (trust), experiential knowledge generated throughout a trust relationship better predicts future trusting outcomes.

In this study, we theoretically develop and empirically test two groups of hypotheses referring to initial knowledge (i.e. knowledge existing between a trustor and a trustee previously to the first interaction under analysis) and experiential knowledge (i.e. knowledge that is gained throughout the trust relationship between a trustor and a trustee), respectively.

The first group of hypotheses is made up of the following components addressing the influences of initial knowledge on trusting behavior and trusting outcomes:

Hypothesis 1a. The level of initial knowledge between a trustor and a trustee influences the trusting behavior displayed by such trustor in future interactions with the trustee.

Hypothesis 1b. The level of initial knowledge between a trustor and a trustee influences the type of trusting outcome resulting from future interactions between them.

Additionally, the second group of hypotheses is related to the influence of experiential knowledge on trusting behaviors and trusting outcomes.

Hypothesis 2a. Experiential knowledge gained by a trustor from past interactions with a trustee influences the trusting behavior displayed by such trustor in future interaction with the trustee.

Hypothesis 2b. Experiential knowledge accumulated by a trustor from past interactions with a trustee influences the type of trusting outcome obtained by this trustor in future interactions with that trustee.

To test the hypotheses mentioned above, we carry out an experimental study. We chose to use the trust game (Berg, Dickhaut & McCabe, 1995). This game is played by pairs of individuals. Each pair is made up of a trustor and a trustee. In the trust game two actors, a trustor and a trustee, are each given an endowment. The trustor is told he can send some, all, or none of his or her endowment to his or her anonymous partner, the trustee. Any money sent is tripled. The trustee then chooses how much of his or her total wealth (her endowment plus the tripled money) to return to the trustor. We carried out a modified version of the trust game. In our setting, each trustor played the game with three trustees with whom he or she kept different initial trust levels: a friend, a friend of a friend, and a stranger. Each trustor received 4 euros for playing with each one of the three trustees. We played this procedure twice and participants were paid during the following week. The sessions had 66 participants: thirty three trustors playing with thirty three trustees. Since each trustor (trustee) played the game with three trustees (trustors), we reached 99 pairs of observations per round; as we ran two rounds, we got 198 observations.

Results reveal that the level of initial knowledge between a trustor and a trustee positively influences the trustor's trusting behavior towards such trustee in both rounds. Therefore, hypothesis 1a is supported. Moreover, we find that there are statistically significant differences among the trusting behaviors displayed by trustors to each type of trustee (i.e. friend, friend of a friend, and stranger). Nonetheless, we find that the initial level of knowledge does not influence the type of trusting outcome emerging in future interactions between trustors and trustees. Thus, hypothesis 1b is not supported. Additionally, while experiential knowledge does not predict trusting behavior –which does not provide support for hypothesis 2a, we find that trustors' experiential knowledge directly affects the type of trusting outcomes resulting from future interactions between them. This last result supports hypothesis 2b and provides interesting theoretical contributions to the previous literature

We contend that several contributions can be gained from our analyses. First, this work stresses the differences between trust (i.e. behavior) and trusting outcome (i.e. result). While most of previous literature had assumed trusting behaviors to be reciprocal between trustors and trustees (Serva *et al.*, 2005), we point out that this does not necessarily happen in every occasion and that trustors' expectations play a key role for understanding the trusting outcomes arising from interactions between trustors and trustees. Second, this paper

contributes to the literature about knowledge by shedding light on the different roles of initial knowledge (i.e. previous to the first interaction under analysis) and experiential knowledge (i.e. developed through the interaction itself). While the first helps explaining trusting behavior, the second constitutes an accurate predictor for trusting outcomes. Third, previous literature on trust had placed special emphasis on identifying the factors affecting agents' trusting behavior (Mayer *et al.*, 1995). Studies conducted in several areas have identified national culture, gender, and group membership due to their potential to influence individuals' trusting behavior (e.g. Buchan, Croson & Solnick, 2008; Doney, Cannon & Mullen, 1998; Williams, 2001). Our results complement prior studies by investigating the inclusion of initial knowledge into the analysis.

Some implications for managers and regulators can be drawn from this analysis. Our results show that managers who want to foster the achievement of certain types of trusting outcomes (e.g. rewarding or reciprocal ones) when dealing with other members of the organizations should consider relying on their experiential knowledge with those members as predictors of the type of future trusting outcomes. As a consequence, managers should develop and promote frequent interactions among all the members of the organization, since those exchanges constitute a fundamental source of knowledge and learning about the others. Experiential knowledge reveals as a useful tool for predicting the type of trusting outcomes resulting from future interactions.

Experiential knowledge is a key issue for many firms. For example, firms facing price-elastic demand, if they are to grow in profitability or sales volume, must learn to produce more efficiently. Firms facing direct price competition have a strong incentive to learn how to increase efficiency or differentiation faster than their competitors. Similar competitive pressures affect firms in markets with substitute products and firms in shrinking markets. This paper links the experiential knowledge to the variable trust, more concretely, to trusting outcomes, in an interpersonal setting. Nonaka & Takeuchi (1995) state that collective knowledge creation is the capability for an entire organization to create new knowledge, disseminate it throughout the organization, and embody it in products, services, and systems. In this line, previous studies have adopted a knowledge-based trust approach to analyze the cycles and phases that lead to the creation of new knowledge in firms (Camelo-Ordaz, Fernández-Alles, Martín-Alcázar, Romero-Fernández & Valle-Cabrera, 2004).

At an organizational level, managers should be aware of the importance of fostering an adequate collective knowledge creation as an antecedent for developing a proper organizational learning, which can help an organization to build accurate guesses about the outcomes arising from interactions with other agents. For example, forecasts about how competitors will behave in the market and about what will be the results. When doing so, managers can lead their organizations to occupy a leadership position in a certain segment of the market. This achievement will be additionally translated into higher benefits to the company.

Additionally, regulators can benefit from some implications drawn from this analysis. For example, if regulators wish to raise the level of neutral (i.e. reciprocity) and positive (i.e. betrayal) over the negative (i.e. betrayal) trusting outcomes, they need to know the determinants of these outcomes. This paper provides some insight about the strong influence of experiential knowledge on determining the type of future trusting outcomes arising in forthcoming interactions.

Regulators should be also interested in the heterogeneity of the experiential knowledge accumulated by trustors. If there are differences in how the knowledge based on previous experiences develops between demographics groups, group-specific policy interventions are asked for. For instance, people with a dense social network may have developed a wider capacity to accurately predict others' behaviors than people with a smaller social network. Hence, this capacity, based on accumulated knowledge from a big amount of previous experiences, may lead them to obtain more successful trusting outcomes in the future.