How to Measure and Build Intra- and Inter-Organizational Trust

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Abstract

If intra- and inter-organizational trust is truly important then it must be measured and managed to build sustainable competitive advantage.

The Framework for Trust Management (FTM) integrates the Theory of Planned Behavior as a model for organizational change with the Integrative Model of Organizational Trust and the Interdisciplinary Model of Trust Constructs. Following an action research agenda, the framework is designed as a practical tool and addresses several known limitations of prior research: it addresses multi-level analysis issues, resolves the unidirectional limitations of prior models, recognizes that trust building is a dynamic process, and provides a guide to action so that management may intervene when trust violations occur.

A Trust Management Inventory scale is developed and practical application of the framework is discussed.

Keywords

trust; measure; scale; survey; theory of planned behavior; trustworthiness; institutional trust; intention; reciprocity; entrepreneurship; management; model; intra-organizational; inter-organizational; action research.

Why is Trust Important?

Traditional inter- and intra-organizational and legalistic mechanisms designed to regulate and enforce interdependent collaboration include organizational structures, legal contracts and punishment/reward systems (e.g. Ouchi, 1979). Within an organizational context, trust has a central role in reducing the information and monitoring required for these complex principal-agent relationships and court-based enforcement mechanisms (Burchell and Wilkinson, 1997).

Trust is widely recognized as a critical element in all organizations to promote cooperation, communication and productive relationships (Tschannen-Moran and Hoy, 2000). As such, trust is the “lubricant” that makes organizations more efficient (Arrow, 1974).

Trust improves organizational performance through a wide variety of mechanisms including reduced transaction costs (Chiles and McMackin, 1996), improved employee motivation (Dirks, 1999; Stine, et al., 1995), and a superior ability to collaborate with external organizations (Newell and Swan, 2000). Trustworthiness can be a significant source of competitive advantage (Barney and Hansen, 1994).
Despite the many positive benefits of trust, however, it necessitates a willingness to risk vulnerability (Rousseau, et al., 1998). Sometimes this trust is rewarded. In the case of elicitative trust, taking the initiative to trust and make oneself vulnerable is done with the expectation that others will be induced to reciprocate (Kramer, et al., 1996). When trust is violated, distrust results (e.g. Elangovan and Shapiro, 1998), reputation is damaged and the organization may suffer (Burt and Knez, 1996). Building, repairing and managing trust is difficult, but worth the effort (Dyer and Chu, 2003).

Entrepreneurs and the organizations they create may be even more heavily reliant upon trust to survive and grow. Trust is used to reduce risk and uncertainty and the need for control in complex entrepreneurial situations (Höhmann and Malieva, 2005). Trust is also required to build new company legitimacy and enables entrepreneurs to access social capital through networks (Anderson and Jack, 2002). The need for interpersonal trust is also critical in regional entrepreneurial contexts where institutional trust is low or absent (Welter and Smallbone, 2006).

Trust is also the single greatest factor affecting an entrepreneur’s ability to access the financial capital of angel investors (Gedeon, 2011). In this action research study (Brydon-Miller, et al., 2003), a structured trust-building due-diligence process was used to assess the multi-dimensional aspects of an entrepreneur’s trustworthiness as it relates to valuing and growing the firm’s human, social, financial and intellectual capital (Watson, et al., 2012).

The current article extends this line of action research from building personal trust to creating a more generalized ability to measure and build trust between individuals within and between organizations ("intra- and inter-organizational trust").

Trust has become an increasingly important topic of research and this importance is even more acute in entrepreneurial contexts. However, trust is not an end in itself. Trust is a fundamental factor involved in making interdependent collaboration more efficient and effective in order to achieve sustainable competitive advantage.

If trust is truly important, then it must be built, measured and managed. With this purpose in mind, I explore the trust construct and models of trust to build a Framework for Trust Management (FTM). This FTM is used to construct a Trust Management Inventory (TMI) scale that may be used by entrepreneurs to build trust and enhance their competitive advantage.

**What is Trust?**

Although researchers agree that trust is important, they have struggled to define it (McKnight, et al., 2002; Shapiro, 1987). There has been significant confusion over the term and whether it was a personality trait, belief, social structure, interpersonal relationship, rational choice, or behavioral intention (e.g. McKnight and Chervany, 2001 for a good review). Bigley and Pierce (1998) have provided an excellent overview of the historically divergent definitions and have identified several shared meanings among the differences using a problem-centered categorization approach.

Hosmer (1995) evaluated different contexts of trust-based research and identified five areas of agreement, namely, that trust: (i) is an optimistic expectation about the behavior of a person; (ii) occurs under conditions of vulnerability; (iii) is associated with willing cooperation resulting in benefits; (iv) is difficult to enforce; and (v) assumes an accepted duty to protect the interests of others (often identified as “benevolence” by others). A factor-analytic study by Hoy and Tschannen-
Morran (1999) identified a consensus around the following facets of trust: willingness to risk vulnerability, confidence (measured as a degree of likelihood), benevolence, reliability/predictability, competence, honesty and openness.

While there is no agreement on a universal definition, a convergence is emerging of trust as a multi-level, multi-disciplinary, multi-dimensional construct (Rousseau, et al., 1998). Although much of the early research viewed trust as a static character trait (e.g. Rotter, 1967), it is now widely recognized that trust is a dynamic process with fundamental differences between initiating, sustaining and repairing trust as the relationship grows and experiences accumulate (Tschanen-Moran and Hoy, 2000). Evaluating trust formation in new organizational relationships, McKnight, et al., (1998) found that different aspects of trust will dominate during the various distinct stages of the trust-building process.

Although much early trust research focused on using simulations such as the prisoner’s dilemma, there is also now widespread agreement that trust is a socially embedded phenomenon that does not take place in a vacuum (Misztal, 2002). As a result, trust research must incorporate the effect of social contexts such as organizational culture, hierarchical relationships, sanctioning mechanisms, and the presence of monitoring institutions (Tyler and Kramer, 1995; Welter and Smallbone, 2006).

Two leading multi-disciplinary models of trust have emerged from the field of management science that may be used to describe the inter-relationship among the different dimensions or facets of trust. Mayer, et al., (1995) proposed the Integrative Model of Organizational Trust (IMOT). This model takes as its unit of analysis the dyadic relationship between individuals within an organizational setting. Various constructs that were previously seen as sub-dimensions of trust are conceptualized as “perceived trustworthiness” and viewed as antecedents to trust. Trust itself is defined by the authors as an intent or willingness to trust the other person in the dyad. Aspects of trust that were previously viewed as a character trait, (e.g. Rotter, 1967) were recast as a generalized “disposition to trust”. Other aspects of trusting behavior were re-cast as trust outcomes (Mayer, et al., 1995).

Although the IMOT model is unidirectional (i.e. it only deals with the trustor half of the dyad) and neglects reciprocity, it explicitly recognizes the dynamic nature of the trusting relationship by incorporating a feedback loop so that the outcomes of prior trust behaviors modify the perceived trustworthiness over time as the trustor gains more knowledge about the trustee.

In their twelve year retrospective analysis of the IMOT, the authors note the success of this model and suggest several new directions including the need for improved scale development; context-specific applications of the model; and the ability to integrate reciprocity as well as trust violations and repair into the model (Schoorman, et al., 2007).

The other leading model has appeared in varying incarnations and contexts (e.g. McKnight, et al., 1998 or McKnight, et al., 2002), but is parsimoniously depicted as the Interdisciplinary Model of Trust Constructs (IMTC) by McKnight and Chervany (2001). In this model, a more detailed trust typology is incorporated that includes an expanded range of trusting beliefs. For example, whereas IMOT uses ability, benevolence and integrity, IMTC uses competence, benevolence, integrity, predictability and other characteristics. IMTC also incorporates situational/structural/institutional trust, which is entirely absent in the IMOT. Both models use a generalized disposition to trust based on Rotter (1967) as an antecedent construct. However, IMTC’s typology-based emphasis explicitly identifies
trust intention as a construct (whereas IMOT simply calls this “trust”) and identifies trust-related behavior as a construct (whereas IMOT calls this “risk taking in relationship”). IMOT does not account for the dynamic nature of the trusting relationship and does not incorporate a feedback loop.

These competing models of trust have significantly enhanced researchers’ understanding of the role of trust in an organizational context. However, they do not fully address the dynamic nature of trust and incorporate the element of time to account for building trust and/or re-building trust once trust violations have occurred (Schoorman, et al., 2007). They do not incorporate both sides of the dyadic relationship – they only look at the attitudes, beliefs, intent and behaviors of the trustor and do not incorporate the element of reciprocity by incorporating the behaviors of the person being trusted (Schoorman, et al., 2007). Finally, neither model provides entrepreneurs with a guide to action.

A new model is thus required to address these limitations. The goal of this article is to develop an action research tool that entrepreneurs may use to measure and manage intra- and inter-organizational trust as a way to achieve sustainable competitive advantage.

Managing Employee Attitudes, Intentions and Behavior

The Theory of Planned Behavior (TPB) is one of the most well-known and parsimonious models for understanding human action (Ajzen, 2001). Rooted in the Theory of Reasoned Action (Fishbein & Ajzen, 1975), TPB proposes that human behavior is based on intent, which is guided by: (i) beliefs about the likely consequences of the behavior (“attitude toward the behavior”); (ii) beliefs about the normative expectations of other people (“subjective norms”); and (iii) beliefs about factors that promote or hinder performing the behavior (“perceived behavior control”) (Ajzen, 1991). If people have enough actual control over the behavior in question, they are generally expected to carry out their intentions (Ajzen, 2006).

TPB has found widespread success in its application to a broad range of human actions (Armitage and Conner, 2001). It is perhaps the most widely-researched theory in the field of entrepreneurship and has found significant success as the basis for explaining entrepreneurial intent underlying entrepreneurial behavior (e.g. Kruegar and Carsrud, 1993). TPB has been used to model and predict dishonest behavior (Beck and Ajzen, 1991), economic behaviour (Pavlou and Fygenson, 2006), behavioral change interventions (Hardeman, et al., 2002), behavioral change (Fishbein, et al., 2001; Fishbein and Ajzen, 2009) and organizational change (Jimmieson, et al., 2008).

TPB thus provides a robust theoretical framework on which to develop a tool for entrepreneurs to manage and, where appropriate, change the trusting behaviors of their employees.

In the course of these many diverse applications of the model, the various constructs underlying TPB have been found to be congruent with numerous other constructs. For example, in regards to entrepreneurial intent, “desirability” is congruent with “attitudes toward the behavior” (Kruegar, 1993). “Self-efficacy” (Bandura, 1977) is congruent with “perceived behavior control” (Ajzen, 2006). “Self-identity”, “social identity” and “group norms” are congruent sub-dimensions of “subjective norms” (Terry, et al., 1999).

In a similar vein, I propose that various trust-based constructs from IMOT and IMTC are also congruent with the 5 constructs from the TPB:
1) “Attitude towards the Behavior” is congruent with IMOT’s “Propensity to Trust” and IMTC’s “Disposition to Trust”. These are relatively well-researched constructs with existing scales in harmony with the early research on trust as a generalized character trait (Rotter, 1967). Both IMOT and IMTC use this construct as an antecedent to trust.

2) “Subjective Norms” is congruent with IMTC’s constructs variously known as “System Trust” (McKnight, et al., 1998), “Structural Trust” or “Institutional Trust” (McKnight and Chervany, 2001) depending on the situational context in which trust is occurring. This construct relates to the belief that proper social structures are in place that enable one to anticipate success. Such structures include formal organizations, sanctioning mechanisms, and informal codes of conduct and values (Welter and Smallbone, 2006).

3) “Perceived behavioral control” relates to an individual’s ability to engage effectively in the behavior under consideration. Normally, TPB measures the individual’s own self-efficacy. However, if the planned behavior relates to trusting someone else, it is not the trustor’s trustworthiness that matters, it is his or her perception of the trustee’s trustworthiness. This is congruent with IMOT’s “Factors of Perceived Trustworthiness” which is known in IMTC as “Trusting Beliefs”.

4) “Intent” is modeled in TPB as a likelihood or probability that the individual will engage in the behavior. This is identical with IMTC which explicitly shows this as “Trusting Intentions”, but which has also been conceptualized as a “decision to trust intention” (McKnight, et al., 1998). IMOT’s “trust” construct, which is defined as a willingness to be vulnerable (and is antecedent to engaging in the trusting behavior), is also a probabilistic construct and thus should be viewed as an intention-based construct, as has been done by Gill, et al., (2005).

5) “Behavior” is identical to IMTC’s “Trust-Related Behavior” and is congruent with IMOT’s “Risk Taking in Relationship” construct. However, these constructs only relate to the trustor’s behavior. They do not incorporate reciprocity by addressing the behavior of the trustee (Schoorman, et al., 2007).

The TPB provides a robust theoretical framework that has been validated in a wide variety of applications to understand and manage individual behavior as well as organizational change. Its various constructs appear to be congruent with the trust constructs developed in IMOT and IMTC. As such, a new theoretical framework, based on TPB, may be developed to help entrepreneurs build, measure and manage trust to improve organizational effectiveness.

**Framework for Trust Management (FTM) and the Trust Management Inventory (TMI)**

The Framework for Trust Management (FTM) integrates the trust-based constructs from IMOT and IMTC into the TPB model as described in the previous section. It incorporates the element of reciprocity by adding the trusting behaviors of both individuals in the dyadic relationship. It incorporates a temporal aspect by adding a feedback loop so that management may build trust over time, address trust violations and implement policies, structures or training as required. The resulting FTM model is shown in Figure 1. [Note that this simplified diagram does not show arrows for all the relationships between constructs. For example Propensity to Trust and Other’s Trusting Behaviors will both affect Perceived Trustworthiness.]

----- Insert Figure 1 about here -----
The FTM level of analysis is the dyadic relationship between two specific employees. Thus the level of analysis is congruent with both affective trust (McAllister, 1995) and identity-based trust (Coleman, 1990). The two employees may be in the same department, different departments, or different companies. To simplify the level of analysis, I have assumed that the two employees are “peers” and that neither has a significant management role in either organization. Trust in managers is conceptualized as a sub-domain within the Institutional Trust construct.

The FTM is meant to be a management tool for building, managing and repairing trust between employees. I have thus conceptually separated any construct related to management from any construct related to the two employees under consideration. This is in contrast to the majority of organizational trust research where the unit of analysis is the trusting relationship between managers and employees (Mayer and Davis, 1999).

The FTM says that three things affect an employee’s trusting intent toward the other employee: (i) their own general attitudes toward trust (“Propensity to Trust”); (ii) social factors that might impact on whether or not the other person lives up to his or her side of the relationship such as company policy, culture, management trustworthiness, reward/punishment systems, and/or contractual obligations (which I have termed “Institutional Trust” as in IMTC); and (iii) the trustor’s perception of the trustee’s “Perceived Trustworthiness” (which incorporates subdomains such as competence, integrity, benevolence and predictability).

In order to ensure reciprocity and track the behaviors of both parties in the dyad, the trusting behaviors of both trustor and trustee are assessed under Trusting Behavior. Thus one employee might trust the other because (i) the trustor trusts other people in general; (ii) the trustor believes there are proper institutional systems in place to ensure that trust is not violated; (iii) the trustor believes the trustee is trustworthy; or (iv) some combination of the above. Once the trustor exhibits trusting behaviors, the trustee may or may not reciprocate and may or may not live up to expectations.

From management’s point of view, a lot can go wrong. An employee may be too trusting, thus making the company vulnerable to risk. The company’s systems and policies may not be perceived as being effective, so employees may be unwilling to trust. If the company’s systems do not properly manage trust violations, internal gossip and rumor can destroy trust and reputations. Untrustworthy employees must be trained, disciplined and/or fired. Trustors may intend to trust the trustee, but the trustee may not realize that he or she is being trusted and/or may not reciprocate or live up to expectations.

The Trust Management Inventory (TMI) is the scale developed for managers to survey their employees in order to implement the FTM (most likely during regular performance reviews).

**Propensity to Trust**

Although “Disposition to Trust” and “Propensity to Trust” have been used interchangeably (e.g. Gill, et al., 2005), widely divergent scales have been developed for these constructs.

McKnight, et al., (2002) have provided a 12-item validated scale for this construct which is defined as “the extent to which a person displays a tendency to be willing to depend on others across a broad
spectrum of situations and persons”, (p. 339). They used several sub-constructs including “Faith in Humanity” and “Trusting Stance” to develop the scale.

In contrast, Mayer and Davis (1999) have developed an 8-item scale that is based on Rotter’s (1967) trust character trait scale. As this scale is shorter and has also been validated by other researchers (Gill, et al., 2005), I have decided to adopt this construct name and scale for use in the TMI (see Appendix 1).

**Institutional Trust**

Zucker (1986) described institutional trust as the most important mechanism to create trust in an impersonal economic environment. She described two dimensions of institutional trust: third party certification and escrows. McKnight, et al., (2001, p. 37) significantly broadened the concept and defined Institutional Trust as “one believes, with feelings of relative security, that favorable conditions are in place that are conducive to situational success in a risky endeavor or aspect of one’s life”. They included two sub-constructs, Structural Assurance (Shapiro, 1987) and Situational Normality (Misztal, 2002), which both arise from the sociology tradition.

Prior scale development for Institutional Trust has focused on situations involving ecommerce (e.g. Pavlou and Gefen, 2004). Pavlou (2002) posited five sub-constructs (perceived monitoring, perceived accreditation, perceived legal bonds, perceived feedback and cooperative norms) to create a 16-item scale. McKnight, at al., (2002) posited five completely different sub-constructs (situational normality – general, situational normality – benevolence, situational normality – integrity, situational normality – competence, and structural assurance) to create a 15-item scale.

This construct, when used in the FTM, is designed to capture beliefs and attitudes related to social norms within the employee’s organization (and, if the dyadic relationship under consideration is with someone from another organization, then that other person’s organization too). It must also function as a catch-all construct that captures all attitudes related to the situation outside of the dyadic relationship between the two employees. It should thus address attitudes related to cultural norms, organizational norms, local norms, contractual obligations, reward and punishment systems, organizational structure, and management’s trustworthiness and ability to measure and intervene when required. Thus, as used in the FTM, the construct scale must be broader than that used to study ecommerce issues of trust.

The following eight sub-constructs thus all apply to the FTM construct of “Institutional Trust” – 4 of 5 from Pavlou (2002) and 4 of 5 from McKnight, et al., (2002): Perceived Monitoring, Perceived Legal Bonds, Perceived Feedback, Cooperative Norms, Situation Normality – Management Benevolence, Situation Normality – Management Integrity, Situation Normality – Management Competence and Structural Assurances. The resulting 25-item TMI scale (See Appendix 1) modifies the previous scales to make the questions appropriate outside the context of an ecommerce transaction.

**Perceived Trustworthiness**

This construct refers to the trustor’s “Perceived Trustworthiness” of the other employee (the “trustee”) in the dyadic relationship. It is one person’s perception of whether or not the other is worthy of trust and has the capacity, willingness and intention to carry through on commitments.
There have been many scales developed over the years ranging from a single item (Ohanian, 1990) to a 44-item scale (Butler, 1991). Tschannen-Moran and Hoy (2000) performed an extensive literature review of the wide range of sub-domains of trustworthiness proposed over the years and condensed this research into five sub-domains: benevolence, reliability, competence, honesty, and openness. IMOT has three sub-domains: ability, benevolence and integrity; whereas IMTC has five: competence, benevolence, integrity, predictability and other.

More recently, McKnight, et al., (2002) consolidated 15 different sub-domains into a three sub-domain version of the original IMTC. Their 11-item scale uses competence, benevolence, and integrity (McKnight, et al., 2002) which I have adapted for use in the TMI (see Appendix 1).

**Trusting Intentions**

Intention has been found to be the single greatest predictor of planned behavior (Ajzen, 2006). The simplest way for managers to understand the future behavior of their employees is to ask them (Kim, 2006). Stating a future intent, similar to setting a goal or making a commitment, also has a powerful effect on ensuring that the resulting behavior is, in fact, performed (Koestner, et al., 2002). So directly asking employees about their intent allows managers to both predict and reinforce their future behavior.

Normally viewed as a uni-dimensional construct, IMTC conceptualizes intent as having two sub-dimensions: “willingness to depend (volitional preparedness to make oneself vulnerable to the trustee) and subjective probability of depending (the perceived likelihood that one will depend on the other)” (McKnight and Chervany, 2001, p. 337). In scale development related to ecommerce, subjective probability of depending is further broken down into specific intentions such as intent to follow advice, intent to give information, and intent to make a purchase, thus making ecommerce intent into a 16-item scale (McKnight, et al., 2002).

Since the TMI developed in this paper is designed to have general applicability, it is inappropriate to subdivide subjective probability of depending into specific intentions. Thus, I have created a general 6-item scale (see Appendix 1). Managers implementing the TMI may wish to incorporate a wider range of specific intentions.

**Trusting Behaviors**

Researchers have almost exclusively focused on the trusting behaviors exhibited by the trustor (“Own Trusting Behaviors”). The key aspect of such behavior is dependence and a willingness to accept risk (Gill, et al., 2005). There is a wide array of different trusting behaviors depending on the specific circumstances. McKnight and Chervany (2001) provide a number of potential exemplar trusting behavior sub-constructs including cooperation, information sharing, informal agreements, reducing controls, granting decision-making power and transacting business. Several of these sub-constructs have been operationalized and scales developed in an ecommerce context (e.g. McKnight, et al., 2002). I have adapted these five sub-constructs for use in the TMI in Appendix 1.

There are two aspects of the Other’s Trusting Behaviors. Firstly, does the trustee reciprocate by exhibiting the trust behaviors of dependence on the trustor and a willingness to accept risk (termed “Other’s Reciprocal Trusting Behaviors”). This aspect is measured in the TMI using simple reciprocal wording of the five sub-domain questions for Own Trusting Behavior. Secondly, does the trustee
actually live up to their side of the relationship or violate trust (termed “Other’s Trust Outcome Behaviors”). I have created a new 4-item scale to measure this as is shown in Appendix 1.

Management Intervention

Mayer, et al., (1995) incorporated into the IMOT a feedback loop and proposed that trusting behaviors directly affected perceived trustworthiness. Their model shows this feedback as an essentially automatic process. While, for simplicity, this arrow is not shown in Figure 1, this feedback would also apply to the FTM. However, the FTM does not assume this to be only an automatic process. Instead the FTM shows this as its own construct, under the direct control of management to influence and control the trust within and between organizations.

There are a tremendous number of daily management behaviors that affect trust within and between organizations including communicating, sharing control and exhibiting openness (e.g. Tschannen-Moran and Hoy, 2000). The employee’s cumulative perception of all these normal daily behaviors is captured in the TMI under the Institutional Trust sub-constructs of Situation Normality – Management Benevolence, Integrity, and Competence.

The Management Intervention construct, in contrast, refers to the specific episodic management of trust. It refers to the employee’s perceptions of the process by which management measures and manages trust. Sub-constructs for this episodic intervention include measurement, analysis, and implementation. The 9-item scale developed in the TMI is shown in Appendix 1.

If trust is important, it must be seen to be important and must be measured, analyzed and acted upon if employees are to take it seriously as a core competency meant to provide competitive advantage. The process of management intervention thus becomes a key mechanism by which trust is managed within and between organizations.

Implications of the Trust Management Framework

The assumption of all TPB research is that these planned behaviors are positive values (e.g. exercising, starting a new company, or stopping use of an addictive drug). The implicit assumption is that, in the context of a normal healthy relationship, trust is a good thing and that more trust enhances organizational performance.

Trusting others sets up a self-reinforcing cycle where the more one trusts, the more the other person becomes trustworthy (Tschannen-Moran and Hoy, 2000). Trusting others elicits reciprocal trusting behaviors (Kramer, et al., 1996). In order to reduce the risks inherent in making oneself vulnerable, trust may be given gradually with increasingly important responsibilities granted as trustworthiness is validated and institutional monitoring mechanisms are used to detect and prevent trust violations.

The TMF may be used to articulate a number of specific propositions.

Proposition 1: Trusting Intent will be positively affected by a combination of Predisposition to Trust, Institutional Trust and Perceived Trustworthiness. Different constructs will dominate at different stages of the relationship. Predisposition to Trust and Institutional Trust will dominate in the early stages whereas Perceived Trustworthiness will dominate over time as the relationship grows.
Proposition 2: Although not shown in the figure for simplicity, there will be interaction effects between most of the constructs. For example Propensity to Trust will positively affect both Institutional Trust and Perceived Trustworthiness. The exception is that Propensity to Trust will not be affected by other constructs – as a general attitude it should be relatively stable over time.

Proposition 3: Trusting Intentions will positively affect Own Trusting Behaviors. This is a fundamental proposition that allows the TPB to be used to provide the theoretical foundation underlying the FTM.

Proposition 4: Own Trusting Behavior will positively affect both Other’s Reciprocal Trusting Behavior and Other’s Trust Behavior Outcomes, based on the principle of reciprocity. Although not shown in the figure for simplicity, this effect will be strongly mediated by Institutional Trust. Thus, when a proper trust management system is in place (high Institutional Trust), explicitly trusting someone (high Own Trust Behavior) will significantly increase Peer’s Trust Behavior Outcomes (and thus organizational performance).

Proposition 5: Management Intervention will have a strong positive effect on perceived Institutional Trust. If there are perceived weaknesses in any Institutional Trust sub-constructs and management intervenes to fix them, employees will have a more positive perception of both Management Intervention and Institutional Trust.

Proposition 6: Although not shown in the figure for simplicity, Management Intervention will also have a positive effect on Peer’s Trusting Behavior Outcome, due to the well-known effect that monitoring has on behavior.

Proposition 7: Although not shown in the figure for simplicity, Peer’s Trusting Behavior Outcome will have a strong positive effect on Perceived Trustworthiness. This is essentially identical to the automatic feedback loop shown in IMOT.

Application to Practice

Three practical applications arise from this article. The conceptual framework of the FTM model may be used by entrepreneurs and managers on an ad hoc basis to better understand and manage trust within their organizations. More formally, entrepreneurs and managers may survey their employees using the TMI and formally implement the FTM to utilize trust as a core competency to gain competitive advantage. Researchers may use the FTM and TMI scale to conduct research in the study of intra- and inter-organizational trust.

Entrepreneurs frequently use informal control systems to substitute for formal policies and structures in the early stages of their company. Enhanced trust can be used to strengthen and “lubricate” these informal systems (Arrow, 1974). In this case it is important to understand the various dimensions, causes, and effects of trust provided by the FTM model. Entrepreneurs can create powerful Institutional Trust through informal means such as demonstrating management competency, integrity and benevolence; reinforcing perceived monitoring and feedback of trusting behaviors; and creating structural assurances such as contracts, agreements, and corporate mission statements. These trust-enhancing mechanisms can be reinforced informally through
communication, sharing control and openness (Tschannen-Moran and Hoy, 2000) as well as formally through trust-training and setting ethical guidelines (Bews and Rossouw, 2002).

More formally, particularly as the organization grows, the TMF may be used in conjunction with the TMI during regular employee performance reviews. As shown by Mayer and Davis (1999), episodic performance appraisals can play a vital role in enhancing trust within an organization. If trust is important, it must be measured like any other key success factor. When might it be appropriate to implement a formal process to measure trust?

1) When the company is growing to the size where current informal systems may be breaking down and enhanced trust can be used to maintain informal systems.
2) When the company is dependent on external organizations for vital resources.
3) When trust may be used as a core competency to achieve competitive advantage.
4) When trust is personally important to the entrepreneur and he or she wants to infuse trustworthiness throughout the organization.

Finally, this article provides trust scholars with a new conceptual model, a new scale and specific propositions that may be tested.

**Conclusions and Future Directions**

The TMF provides a new conceptual framework, based on TPB and integrated with trust constructs from the IMOT and IMTC, to measure and manage intra- and inter-organizational trust to achieve sustainable competitive advantage. Following an action research agenda, the TMF is designed to be used not only by scholars, but also by entrepreneurs and managers to improve organizational performance. Trust is not seen as an end in itself, but a means to improving performance.

This model addresses several limitations of prior research. It addresses multiple-level analysis issues by focusing on the dyadic relationship between employees and incorporating the perception of management trust within the Institutional Trust construct. It addresses the dynamic nature of trust and time-related issues by incorporating the new Management Intervention construct and feedback loop. It addresses the one-sided unidirectional limitation of other research by incorporating reciprocity using both halves of the dyad through the Other’s Reciprocal Trusting Behavior and Other’s Trusting Behavior Outcomes sub-constructs. The TMF incorporates and addresses contradictions between the two leading trust models – IMOT and IMTC.

Several limitations of the proposed theory must be acknowledged. Even though TPB has been applied to trust in ecommerce situations (Pavlou and Fygenson, 2006), the validity of importing trust-based constructs into the TPB model in general remains to be proven – in particular using Perceived Trustworthiness in place of Perceived Behavior Control must be tested. Whereas the IMOT and IMTC models may be internally consistent, incorporating certain elements from each model into a new model may not prove to be valid. The role of emotion is not incorporated even though this may be an important factor in certain circumstances (Schoorman, et al., 2007). Although validated scales of various constructs have been incorporated where feasible into the TMI, there remains extensive scale testing to be done. Finally, this model was designed to manage trust between employees within an organizational context and may not be generalizable to other contexts.
Future directions include formal scale testing and validation of both FTM and the TMI. In particular the ability to use these tools to implement training programs (Bews and Rossouw, 2002), measure improvements in trust and improve organizational performance (Dyer and Chu, 2003) must be tested.

References


Appendix 1

Trust Management Inventory

Propensity to Trust

1. One should be very cautious with strangers. (*reverse scored)
2. Most experts tell the truth about the limits of their knowledge.
3. Most people can be counted on to do what they say they will do.
4. These days, you must be alert or someone is likely to take advantage of you. (* reverse scored)
5. Most salespeople are honest in describing their products.
6. Most repair people will not overcharge people who are ignorant of their specialty.
7. Most people answer public opinion polls honestly.
8. Most adults are competent at their jobs.
Institutional Trust

Perceived Monitoring
1. There is an effective authority monitoring this relationship to help resolve conflicts.
2. There is an effective mechanism in place to assure that my peers’ agreements are fulfilled.
3. There is an effective enforcement mechanism in place to assure that all agreements are conducted properly.

Perceived Legal Bonds
1. My company (and the other company) imposes formal agreements regarding my peers’ obligations.
2. There is an appropriate legal agreement in place regarding my relationship with my peers.

Perceived Feedback
1. I have a considerable amount of information about the performance history of my peers.
2. If any peer exhibits misconduct, a reliable feedback mechanism is provided to inform me.
3. There is an effective mechanism to allow me to provide feedback on my experience with my peers.

Perceived Cooperative Norms
1. My company (and the other company) culture promotes cooperative behavior.
2. My peers rarely take advantage of me.
3. Most of my peers are willing to make cooperative adjustments to help me accomplish tasks.
4. My peers and I exchange a considerable amount of information.
5. In general, I can depend upon my peers.

Situation Normality – Management Benevolence
1. I feel that most managers would act in my best interest.
2. If I required help, most managers would do their best to help.
3. Most managers are interested in my well-being, not just their own well-being.

Situation Normality – Management Integrity
1. I am comfortable relying upon managers to fulfill their obligations.
2. I feel fine working with my peers since managers generally fulfill their agreements.
3. I always feel confident that I can rely upon managers to do their part when I rely on them.

Situation Normality – Management Competence
1. In general, most managers are competent at serving my needs.
2. Most managers do a competent job.
3. I feel that most managers are good at what they do.

Structural Assurances
1. My company (and the other company) has enough safeguards to make me feel comfortable relying upon my peers.
2. I feel assured that legal and technical structures are in place that adequately protect me from problems when relying upon my peers.
3. In general, my company (and the other company) is a robust and safe environment in which to rely upon my peers.

Perceived Trustworthiness: (Rate the Trustworthiness of the individual peer named “_______”)

Benevolence
1. I believe that _______ would act in my best interest.
2. If I required help, _______ would do his/her best to help me.
3. _______ is interested in my well-being, not just his/her own.

Integrity
1. _______ is truthful in his/her dealings with me.
2. I would characterize _______ as honest.
3. _______ would keep his/her commitments.
4. _______ is sincere and genuine.

**Competence**
1. _______ is competent and effective in providing the collaboration I need.
2. _______ performs his/her role of collaborating with me very well.
3. Overall, _______ is a capable and proficient person.
4. In General, _______ is a very knowledgeable person.

**Predictability**
1. _______ is predictable.
2. _______ can be relied upon to be consistent in his/her dealings with me.
3. My prior dealings with _______ lead me to believe that he/she will continue to act in a similar way.

**Trusting Intentions**

**Willingness to Depend**
1. When an important issue arises, I would feel comfortable depending on _______.
2. I can always rely upon _______ in a tough situation.
3. I feel that I could count on _______ to help me with a crucial problem.

**Subjective Probability of Depending**
1. If I had a challenging problem, I would want to work with _______.
2. I would feel comfortable acting on the information given to me by _______.
3. I would feel comfortable giving important information to _______.

**Trusting Behaviors**

**Own Trusting Behaviors**
1. I cooperate well with _______.
2. I share important and useful information freely with _______.
3. I work closely with _______ without the need for formal written agreements.
4. I do not need to carefully control _______.
5. I freely share decision-making power with _______.

**Other’s Reciprocal Trusting Behaviors**
1. _______ cooperates well with me
2. _______ shares important and useful information freely with me.
3. _______ works closely with me without the need for formal written agreements.
4. _______ does not need to carefully control me.
5. _______ freely shares decision-making power with me.

**Other’s Trust Outcome Behaviors**
1. I can depend on _______.
2. I can rely upon _______ to live up to expectations.
3. I am more effective in accomplishing company goals by working with _______.
4. My company is more successful as a result of my working relationship with _______.

**Management Intervention**

**Measurement**
1. I think that measuring and managing trust is a good idea.
2. I think the way my company measures trust is appropriate.
3. Trust is too vague and personal for my company to measure (* reverse scored)

**Analysis**
1. I think my company will seriously evaluate the results of this questionnaire.
2. Trust should be carefully analyzed to improve organizational performance.
3. Analyzing trust will improve my ability to be successful in this company.

**Implementation**
1. I believe my company will act on the results of this questionnaire.
2. I think my company will implement any outcomes from this questionnaire.
3. My company “walks the talk” when it says it is serious about managing trust.
Figure 1: Framework for Trust Management (FTM)