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## **Trust: An *MIS Quarterly* Research Curation**

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Trust is the enabler of social interaction. Although the origins of research on trust traditionally lie outside the Information Systems (IS) domain, the importance of trust for IS research rapidly grew in the late 1990s, and it is still growing with the increasing ubiquity and advancement of technology in organizations, virtual teams, online markets, and user-technology interactions. Theoretically, the central role of trust is tied to the growing social change that Information and Communication Technology (ICT) has always created, a trend increased by the introduction of electronic commerce, and with it the need to interact and commerce with total strangers. This trend is mirrored in major IS research fields, such as virtual teams and technology acceptance, and thus also naturally in the pages of *MIS Quarterly*. The importance of trust for IS research and its impact on the IS literature are also reflected by the fact that a trust-related paper (Gefen et al. 2003) is among the most highly cited articles published in *MIS Quarterly*, together with papers on TAM, knowledge management, and design science. Besides, two trust-related papers have won the *MIS Quarterly* Paper of the Year Award in 1998 (Kumar et al. 1998) and 2009, respectively (Cyr et al. 2009), and a Special Issue on trust was published in 2010 (Benbasat et al. 2010). Coupled with the facts that we have identified 33 papers relevant for this curation, and that these papers account for about 20,000 total citations, it is perhaps safe to argue that trust is one of the popular and well-cited areas of research in the IS literature, especially during the last 20 years.

### **Focus of the Research Curation**

This curation adopts a broad definition of trust based on Gefen et al. (2003) who combined the theoretical background of trust as a behavioral antecedent from the sociology literature along with its antecedent beliefs about the trustworthiness of another party. This was suggested by philosophers as early as Aristotle and also highlighted in management research. According to that definition, trust is a willingness of one party (the trustor) to rely on another party (the trustee), i.e., about setting aside concerns the trustor has about the trustee's taking advantage of the situation in cases that involve risk and potential loss to the trustor. This willingness to rely is based on assessments about the trustee's characteristics, mainly about ability (competence), benevolence, and integrity.

This curation highlights all 33 articles published in *MIS Quarterly* that focus on the study of trust (see Table 1 at the end of this curation). Since the goal of this curation is to provide a starting point for future research on trust, it focuses on papers in which trust plays an important role in the proposed model, hypotheses, or overall study. Thus, the curation

excludes articles in which trust is merely used as part of another construct (e.g., Mithas et al. 2008) or in which trust is used as a synonym for other kindred concepts, such as friendship in peer-to-peer lending (e.g., Liu et al. 2015). Due to the large number of articles on trust, the curation, furthermore, excludes articles that deal with related topics such as risk, privacy and security.

## **Progression of Research in *MIS Quarterly***

Early research on trust in *MIS Quarterly*, starting mainly just before 2000, was closely tied to research in the broader management literature. Perhaps because of those origins, trust research in *MIS Quarterly* initially concentrated on trust relationships where an ICT is a conduit to traditional trust-based relationships, such as buyer-seller relationships in electronic commerce, or where trust is a defining characteristic of the software development process, such as outsourcing relationships among organizations. Representative topics of this initial period include studies of how ICT affects the performance of work teams (e.g., Piccoli and Ives 2003; Paul and McDaniel Jr. 2004), how online markets and channels change the way transactions take place among consumers and businesses online (e.g., Ba and Pavlou 2002; Gefen et al. 2003), and how groups collaborate in virtual settings (Nelson and Coopride 1996). Parallel to that stream, also early on, there was conceptual research on how to increase trust in technology (Gregor and Benbasat 1999). Importantly, right from this initial period on, research tied trust directly to key constructs used in MIS theories, which is probably why trust became a key theme in MIS research. Representative of this integration of trust into the heart of existing theories utilized in MIS are Gefen et al. (2003) who integrated trust into TAM, and Pavlou and Feygenson (2006) who added trust into the theory of planned behavior.

The study of trust in *MIS Quarterly* evolved toward the mid-2000s, showing an increase in research on trust between organizations, especially in the context of IT/IS outsourcing. Trust was shown to be a key construct in successful IT/IS outsourcing relationships (Ågerfalk and Fitzgerald 2008; Gefen et al. 2008; Goo et al. 2009; and Rai et al. 2009).

Also beginning in the mid-2000s and lasting until today, there has been an increase in research on trust and the IT artifact as well as a more nuanced look into the construct of trust. This period saw a shift from understanding the importance of trust toward more interest in how to design trustworthy systems (e.g., Komiak and Benbasat 2006) and better understand how cultural and gender differences affect the relationships between trust and other constructs (e.g., Cyr et al. 2009; Sia et al. 2009; Riedl et al. 2010). Another stream of research in this period includes the application of neuroscience methods to better measure trust constructs (Dimoka 2010; Riedl et al. 2010) and to investigate whether trust and distrust are distinct constructs (Dimoka 2010).

The richness and diversity of the study of trust is reflected in the many methodologies used to study trust (please see Table 1 for details). These methodologies include theoretical reasoning (e.g., Gregor and Benbasat 1999), literature reviews (e.g., Xiao and Benbasat 2007), a single case study (Kumar et al. 1998) or many case studies (e.g., Watson-Manheim and Bélanger 2007), different experimental approaches (e.g., Ba and Pavlou 2002; Piccoli and Ives 2003; Sia et al. 2009), surveys and field studies (e.g., Gefen et al. 2003; Paul and McDaniel Jr. 2004; Kankanhalli et al. 2005; Kanawattanachai and Yoo 2007), fMRI (e.g., Riedl et al. 2010), archival data (e.g., Gefen et al. 2008; Burtch et al. 2014), as well as combinations of these approaches, e.g., a lab experiment including qualitative interviews, quantitative surveys and eye-tracking methods (Cyr et al. 2009), or lab and fMRI experiments (Dimoka 2010).

## Thematic Advances in Knowledge

Four overarching clusters of trust-based relationships were investigated in the studies listed in Table 1: (1) between people or between groups, (2) between people and organizations, (3) between organizations, and (4) between people and technology. Within each of these clusters, different research themes were investigated.

The first cluster of studies focuses on trust relationships between people or between groups. These studies can be further divided into studies that focus on trust within virtual teams (Nelson and Coopride 1996; Piccoli and Ives 2003; Paul and McDaniel Jr. 2004; Kankanhalli et al. 2005; Stewart and Gosain 2006; Watson-Manheim and Bélanger 2007; Kanawattanachai and Yoo 2007; Iacovou et al. 2009; Thomas and Bostrom 2010), and studies focusing on trust in buyer-seller-like relationships in online markets (Ba and Pavlou 2002; Dimoka 2010; Riedl et al. 2010; Burtch et al. 2014; Ou et al. 2014). With regards to trust in virtual teams, multiple studies have shown the importance of trust among team members as an antecedent of team success. Nelson and Coopride (1996), for example, showed that mutual trust between members of the IS group and line groups of an organization increases shared knowledge, and thus performance. Paul and McDaniel Jr. (2004) showed a direct positive effect of trust among team members on team performance in telemedicine, while Iacovou et al. (2009) showed that the absence of trust between IS project managers and executives can lead to biases in their communication. With regard to online markets, research shows that feedback mechanisms have an impact on how buyers rate the trustworthiness of sellers and that buyers were willing to pay price premiums to sellers they trust more (Ba and Pavlou 2002).

The second cluster focuses on trust relationship between people and organizations. These studies focus mainly on (potential) customer trust in internet businesses (Gefen et al. 2003; Pavlou and Fygenson 2006; Pavlou et al. 2007; Sia et al. 2009; Fang et al. 2014), with one study focusing on trust in web-based channels in general (Choudhury and Karahanna 2008). Choudhury and Karahanna (2008) showed that informational trust is a driver of the relative advantages of web-based channels. Research also embedded trust into well-established models of human behavior, such as the technology acceptance model (Gefen et al. 2003) and the theory of planned behavior (Pavlou and Fygenson 2006), showing that trust in web vendors drives online shopping behavior.

The third cluster focuses on trust relationships between organizations. These studies can be divided into studies focusing on IT/IS outsourcing (Ågerfalk and Fitzgerald 2008; Gefen et al. 2008, Goo et al. 2009; Rai et al. 2009), and studies focusing on trust in other forms of inter-firm relationships (Kumar et al. 1998; Klein and Rai 2009). Comparable to the results about virtual teams, research on IT/IS outsourcing highlights the necessity of trust as a basis for a mutually beneficial outsourcing relationship across different types of outsourcing, such as open sourcing (Ågerfalk and Fitzgerald 2008), IT outsourcing (Goo et al. 2009), and IS offshoring (Rai et al. 2009). Furthermore, Gefen et al. (2008) showed that trust influences what type of contract is used in software development outsourcing. Research also showed that trust can often reduce the positive effects of new systems, leading to acceptance problems (Kumar et al. 1998), and that trust is an important antecedent of strategic information flows within inter-firm logistics relationships (Klein and Rai 2009).

The fourth cluster focuses on trust relationships between people and technology. These studies can be divided into studies focusing on trust in systems, such as recommendation systems or decision-support systems (Gregor and Benbasat 1999; Komiak and Benbasat 2006; Xiao and Benbasat 2007; Han et al. 2015) and studies focusing on trust in websites (Cyr et al. 2009; Xiao and Benbasat 2011). Also in this cluster is the study of trust in the nation-wide initiative Trust: An *MIS Quarterly* Research Curation

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to introduce identity smart cards in Nigeria (McGrath 2016). Studies focusing on user trust in systems showed the importance of trust in the context of using or relying on those systems (e.g., Komiak and Benbasat 2006; Han et al. 2015). Research in this stream also provided insights into how systems should be designed so that their users perceive them as being more trustworthy. In that regard, Gregor and Benbasat (1999) conceptualized the importance of suitable explanations to increase trust in systems. Komiak and Benbasat (2006) highlighted the need for personalization of systems to increase user trust. Cyr et al. (2009) showed how user trust across different cultures can be influenced by varying image appeals and perceived social presence in the context of building trust in websites. Finally, Xiao and Benbasat (2011) propose that people perceive potential deception on an e-commerce website differently depending on whether they interact with a trusted website or not.

## Conclusion

The extensive research on trust and the broad range of methodological approaches in *MIS Quarterly* shows the centrality and complexity of trust in contexts of interest to the MIS community. It is our intent that this curation will contribute to the continued interest and development of the study of trust in the MIS discipline through this curation.

## *MIS Quarterly* References beyond the Papers Included in Table 1

- Benbasat, I., Gefen, D., and Pavlou, P. A. 2010. "Introduction to the Special Issue on Novel Perspectives on Trust in Information Systems," *MIS Quarterly* (34:2), pp. 367–371.
- Liu, D., Brass, D. J., Lu, Y., and Chen, D. 2015. "Friendship in Online Peer-to-Peer Lending: Pipes, Prisms, and Relational Herding," *MIS Quarterly* (39:3), 729-A4.
- Mithas, S., Jones, J. L., and Mitchell, W. 2008. "Buyer Intention to Use Internet-Enabled Reverse Auctions: The Role of Asset Specificity, Product Specialization and Non-Contractibility," *MIS Quarterly* (32:4), pp. 705–724.

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**Table 1. MIS Quarterly Papers on Trust**

<b>ID</b>	<b>Author(s)</b>	<b>Title</b>	<b>Year Vol. (I.)</b>	<b>Trust relationship (Cluster-#)</b>	<b>Methodological approach(es)</b>	<b>Key trust-related insights</b>
1	Kay M. Nelson and Jay G. Coopriider	The Contribution of Shared Knowledge to IS Group Performance	1996 20 (4)	IS groups and line customers (1)	Cross-sectional field study (DC) & path analysis (DA)	Mutual trust impacts shared knowledge which impacts IS performance
2	Kuldeep Kumar, Han G. van Dissel and Paola Bielli	The Merchant of Prato – Revisited: Toward a Third Rationality of Information Systems	1998 22 (2)	Organizations of the Prato textile district (3)	Single case study including interviews and archival data	Existence of trust made a new IS irrelevant, and lead to its failure
3	Shirley Gregor and Izak Benbasat	Explanations from Intelligent Systems: Theoretical Foundations and Implications for Practice	1999 23 (4)	Users and intelligent systems (4)	Theoretical reasoning	Explanations that conform to Toulmin’s model of argumentation should lead to greater trust
4	Sulin Ba and Paul A. Pavlou	Evidence of the Effect of Trust Building Technology in Electronic Markets: Price Premiums and Buyer Behavior	2002 26 (3)	Buyers and sellers on electronic (auction) markets (1)	Online field experiment and field data (DC) & regression analysis (DA)	Properly designed feedback mechanisms can influence trust, and trust impacts buyers' willingness to pay price premiums
5	David Gefen, Elena Karahanna and Detmar W. Straub	Trust and TAM in Online Shopping: An Integrated Model	2003 27 (1)	Consumers and online vendors (2)	Field study (DC) & CBSEM (DA)	Trust impacts perceived usefulness and intended use
6	Gabriele Piccoli and Ives Blake	Trust and the Unintended Effects of Behavior Control in Virtual Teams	2003 27 (3)	Between members of temporary virtual student teams (1)	Longitudinal experiment (DC) & Case and statistical analyses (DA)	Behavior control mechanisms for traditional teams have a negative effect on trust in virtual teams
7	David L. Paul and Reuben R. McDaniel Jr.	A Field Study of the Effect of Interpersonal Trust on Virtual Collaborative Relationship Performance	2004 28 (2)	Between different physicians in virtual telemedicine teams (1)	Interviews (DC) & case analysis and POSAC (DA)	Interpersonal trust among physicians increases team performance
8	Atreyi Kankanhalli, Bernard C. Tan and Kwok-Kee Wei	Contributing Knowledge to Electronic Knowledge Repositories: An Empirical Investigation	2005 29 (1)	Between users of an electronic knowledge repository (1)	Survey (DC) & moderated multiple regression analysis (DA)	If there is no generalized trust among users, codification effort hinders system usage
9	Paul A. Pavlou and Mendel Fygenson	Understanding and Predicting Electronic Commerce Adoption: An Extension of the Theory of Planned Behavior	2006 30 (1)	Consumers and web vendors (2)	Longitudinal study (DC) & PLS (DA)	Trusting beliefs influence both, the attitude to getting info and the attitude to purchasing from a vendor

10	Katherine J. Stewart and Sanjay Gosain	The Impact of Ideology on Effectiveness in Open Source Software Development Teams	2006 30 (2)	Between members of large OSS development teams (1)	Two surveys and archival data (DC) & PLS (DA)	Cognitive trust impacts affective trust and affective trust influences both, team size and team effort
11	Sherrie Y. X. Komiak and Izak Benbasat	The Effects of Personalization and Familiarity on Trust and Adoption of Recommendation Agents	2006 30 (4)	Users and recommendation agents (4)	Online experiment (DC) & PLS (DA)	Personalization and familiarity impact cognitive trust which impacts emotional trust that has an impact on intention to adopt
12	Paul A. Pavlou, Huigang Liang and Yaijong Xue	Understanding and Mitigating Uncertainty in Online Exchange Relationships: A Principal-Agent Perspective	2007 31 (1)	Consumers and web vendors (2)	Two surveys (DC) & PLS (DA)	Trust mitigates uncertainty antecedents
13	Bo Xiao and Izak Benbasat	E-Commerce Product Recommendation Agents: Use, Characteristics, and Impact	2007 31 (1)	Users and recommendation agents (4)	Literature review	Different configurations of recommendation agents are proposed to influence trust
14	Mary Beth Watson-Manheim and France Bélanger	Communication Media Repertoires: Dealing with the Multiplicity of Media Choices	2007 31 (2)	Between members of virtual sales teams (1)	Multiple case study including interviews and archival data	Low trust can lead to decreased communication effectiveness, frustration, and wasted effort and resources
15	Prasert Kanawattanachai and Youngjin Yoo	The Impact of Knowledge Coordination on Virtual Team Performance over Time	2007 31 (4)	Between members of virtual student teams (1)	Three surveys and archival data (DC) & PLS (DA)	Cognition-based trust impacts task-knowledge coordination across all time periods
16	Vivek Choudhury and Elena Karahanna	The Relative Advantage of Electronic Channels: A Multidimensional View	2008 32 (1)	Consumers and web channels in general (2)	Survey (DC) & PLS (DA)	Informational trust impacts the relative advantage of web-based channels
17	Pär J. Ågerfalk and Brian Fitzgerald	Outsourcing to an Unknown Workforce: Exploring Open sourcing as a Global Sourcing Strategy	2008 32 (2)	Commercial companies and open source communities (3)	Multiple qualitative sources and survey (DC) & coding techniques and Mann-Whitney tests and regression (DA)	Trust is a key requirement for building a successful open sourcing relationship
18	David Gefen, Simon Wyss and Yossi Lichtenstein	Business Familiarity as Risk Mitigation in Software Development Outsourcing Contracts	2008 32 (3)	Between organizations in software development outsourcing (3)	Archival data (DC) & multiple linear and logistic regressions (DA)	Trust reflected in business familiarity leads to more time and materials outsourcing contracts

19	Jahyun Goo, Rajiv Kishore, H. R. Rao and Kichan Nam	The Role of Service Level Agreements in Relational Management of Information Technology Outsourcing: An Empirical Study	2009 33 (1)	Between organizations in IT outsourcing relationships (3)	Survey (DC) & PLS (DA)	Harmonious conflict resolution and mutual dependence impact trust and in interaction they impact commitment
20	Choon Ling Sia, Kai H. Lim, Kwok Leung, Matthew K. O. Lee, Wayne Wie Huang and Izak Benbasat	Web Strategies to Promote Internet Shopping: Is Cultural Customization Needed?	2009 33 (3)	Consumers and web vendors (2)	Lab experiment (DC) & standard and multigroup PLS (DA)	The way trust in web vendors via their websites can be built differs across cultures (here Australia versus Hong Kong)
21	Dianne Cyr, Milena Head, Hector Larios and Bing Pan	Exploring Human Images in Website Design: A Multi-Method Approach	2009 33 (3)	Users and e-commerce websites (4)	lab experiment including eye-tracking, survey, and interviews (DC) & coding-based theory building, PLS, eye-tracking analysis (DA)	Image appeal and perceived social presence impact trust, and human figures with facial features foster the highest level of trust among all cultures
22	Arun Rai, Likoebe M. Maruping and Viswanath Venkatesh	Offshore Information Systems Project Success: The Role of Social Embeddedness and Cultural Characteristics	2009 33 (3)	Between organizations in IS offshore relationships (3)	longitudinal field study (DC) & random coefficient modeling (DA)	Client trust leads to lower cost overruns and higher satisfaction
23	Richard Klein and Arun Rai	Interfirm Strategic Information Flows in Logistics Supply Chain Relationships	2009 33 (4)	Between organizations in logistics supply chain relationships (3)	Interviews and survey (DC) & PLS (DA)	Trust impacts strategic information sharing
24	Charalambos L. Iacovou, Ronald L. Thompson and H. Jeff Smith	Selective Status Reporting in Information Systems Projects: A Dyadic-Level Investigation	2009 33 (4)	IS project managers and executives (1)	Survey (DC) & PLS (DA)	Executive's knowledge and communication impact trust in executive which has a negative impact on optimistic biasing
25	Dominic M. Thomas and Robert P. Bostrom	Vital Signs for Virtual Teams: An Empirically Developed Trigger Model for Technology Adaptation Interventions	2010 34 (1)	Between members of virtual teams (1)	Critical incident technique including interviews and survey (DC) & interpretive content analysis (DA)	Lack of trust among team members as one trigger of technology adaptations



26	Angelika Dimoka	What Does the Brain Tell Us About Trust and Distrust? Evidence from a Functional Neuroimaging Study	2010 34 (2)	Buyers and sellers on electronic (auction) markets (1)	Lab and fMRI experiment (DC) & EFA, CFA, regression and fMRI analysis (DA)	Trust and distrust are different, since different regions of the brain are active, and both affect price premiums as expected
27	René Riedl, Marco Hubert and Peter Kenning	Are There Neural Gender Differences in Online Trust? An fMRI Study on the Perceived Trustworthiness of eBay Offers	2010 34 (2)	Buyers and sellers on electronic (auction) markets (1)	fMRI experiment (DC) & fMRI analysis and general linear modeling (DA)	Assessment of trustworthiness differs across genders (different brain regions active), women activate more regions
28	Bo Xiao and Izak Benbasat	Product-Related Deception in E-Commerce: A Theoretical Perspective	2011 35 (1)	Users and e-commerce websites (4)	Theoretical reasoning	Anomalies should less likely be attributed to deception by users with high prior or calculative-based trust
29	Carol Xiaojuan Ou, Paul A. Pavlou and Robert M. Davison	Swift Guanxi in Online Marketplaces: The Role of Computer-Mediated Communication Technologies	2014 38 (1)	Buyers and sellers on electronic (auction) markets (1)	Longitudinal field study including surveys and archival data (DC) & PLS (DA)	Interactivity and presence impact trust, and trust impacts swift guanxi and repurchase intention
30	Yulin Fang, Israr Qureshi, Heshan Sun, Patrick McCole, Elaine Ramsey and Kai H. Lim	Trust, Satisfaction, and Online Repurchase Intention: The Moderating Role of Perceived Effectiveness of E-Commerce Institutional Mechanisms	2014 38 (2)	Consumers and web vendor (2)	Survey (DC) & PLS (DA)	PEEIM moderators the relationships between satisfaction and trust as well as trust and repurchase intention
31	Gordon Burtch, Anindya Gose and Sunil Wattal	Cultural Differences and Geography as Determinants of Online Prosocial Lending	2014 38 (3)	Borrowers and lenders on peer-to-peer lending platforms (1)	Archival data (DC) & Poisson pseudo-maximum likelihood estimator (DA)	Trust is a key mechanism in lending decision, and third party trust mechanisms can help to overcome culture-related lender concerns
32	Wencui Han, Serkan Ada, Raj Sharman and H. Raghav Rao	Campus Emergency Notification Systems: An Examination of Factors Affecting Compliance with Alerts	2015 39 (4)	Students and campus emergency notification systems (4)	Survey and focus group (DC) & logistic regression analysis (DA)	Information quality trust is the only factor that impacts intention to comply across all five scenarios
33	Kathy McGrath	Identity Verification and Societal Challenges: Explaining the Gap between Service Provision and Development Outcomes	2016 40 (2)	Nigerian citizens and identity smart cards (4)	Comparative case study analysis	Workable combination of trust and distrust needs to be in place when aiming to introduce identity smart cards

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Legend: CBSEM = covariance-based structural equation modeling; CFA = confirmatory factor analysis; DA = data analysis; DC = data collection; EFA = exploratory factor analysis; OSS = open source software; PEEIM = Perceived Effectiveness of E-Commerce Institutional Mechanisms; PLS = partial least square; POSAC = partial order scalogram analysis with base coordinates