



# Trust models addressing cultural differences between communities

**BIC Discussion Paper**

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## Introduction – need for INCO

A research topic for identified for international cooperation is the development of trust models, mechanisms and architectures to support business ecosystems in rural Africa. For these systems, it is important that trust management takes into account concepts relevant to the target context. An important identified focus of the research is the study of culture on trust. Cultural differences, while difficult to observe and measure, are obviously very important. Failure to appreciate and support them can lead to embarrassing blunders, and lower economic activity and performance.

For *individualistic* cultures, for which most trust management systems have been developed, consumer trust is facilitated through trust mechanisms such as institutional guarantees, laws and policies, information security mechanisms, and social controls. In contrast, *collectivist* cultures, found in Africa, Asia, India and South America have different needs as they interact in different ways. For example, in collectivist cultures people emphasize interpersonal relationships where loyalty is obtained by protecting the group members for life. Individuals see themselves as subordinate to a social collective such as a state, a nation, a race, or a social class. They prefer group harmony and consensus to individual achievement.

The research challenges entail:

- A study of existing cultural frameworks to determine the most suitable to use;
- Extraction of relevant cultural behaviours and beliefs that are applicable to consumer trust;
- A study of trust models to identify the most applicable to use for business ecosystems in rural Africa;
- The enhancement of trust models with cultural norms;
- The implementation and evaluation of a prototype system to determine if the culturally adapted trust model can be used in rural communities.

## Objectives

The objectives are to identify the role of culture in consumer trust. This research objective is of interest not only to the African context, but to any environment where different types of cultures exist, and where an understanding of the influence of culture on trust is limited. It is therefore a topic that is ideal for collaboration between parties found in different countries in Europe, Africa, India and Brazil.

### *The expected outcomes*

A framework that gives support on how to adapt trust models to culture.

## Required stakeholders

### *Currently:*

South Africa:

- University of Johannesburg
- SAP research Pretoria, South Africa

### *Future collaborators*

Possible partners have been identified already from India and the EU, but more are welcomed to mobilise in a bid for funding of a joint project to investigate the manner in which each partner country can benefit from this research.

## Benefits and success metrics

The project will bring more understanding of the role of culture on consumer trust.

### *Success metrics:*

A working prototype, evaluated in a real life context.

### *Need for INCO:*

- Funding to do more investigation on cultural behaviours and norms, and consumer trust in different contexts.
- Assistance with the evaluation of the prototype in a real community such as India.

## Approach:

Parallel approaches are needed – bi-lateral (country to country); multi-lateral (multiple countries) – because different countries have different perspectives on this problem, which need to be understood individually and then brought together into an interoperable framework.

## Timeline

Initial estimate:

- Investigation of culture on consumer trust – ongoing till 2015;
- Completion of basic model developed in South Africa - by end of 2013;
- Evaluation of prototype - start of 2014 – 2015;
- Continuous adaptation of trust model based on prototype evaluation - 2014 – 2015.

Full presentation of this paper can be found at <http://www.bic-trust.eu/files/2012/10/BIC-trust-and-culture-SA.pdf>



**About the Author**

**Marijke Coetzee** is a Professor in the Academy for Computer Science and Software Engineering at the University of Johannesburg, where she is also the sub-head of Computer Science. The main focus of her research focus is on Information Security, specifically security policy specification and evaluation, information security of service-oriented architectures and mobile and wireless environments, and trust for mobile social network applications. She is a rated NRF researcher and has co-authored 40 papers published in peer-reviewed local and international conference proceedings and journals. She acts as reviewer for various national and international conferences, is the external moderator of a number of post-graduate subjects at other tertiary institutions, and a co-chair of the ISSA (Information Security for South Africa) conference. She is a member of the ACM, IEEE and SAICSIT.