

The Impact of Blockchain Technology on Trust in the Supply Chain

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In the past two decades, much research has been carried out about the role of collaboration for effective supply chain (SC) management. One important issue that has been pointed out in different researches is the lack of trust and transparency in information sharing in SC.

Blockchain technology (BCT) is a groundbreaking innovation to improve trust through transparency and traceability within any transaction. Although currently there is much hype around BCT as a novel solution to the age-old human problem of trust, the relation between BCT and trust in SC is still poorly understood. The aim of this thesis was to explore the nature of trust in SC and the impact of BCT on trust.

The study was conducted as a literature study followed by interviews about BCT in SC. This thesis describes some of the main conceptual models that have been suggested in the literature about trust in inter-organizational relationships, and it supports the idea of the multidimensional nature of trust.

I have defined an investigation model for understanding the impact of technology on trust in SC and studied the linkages between the investigation model and Trust Development Model.

In this study, some interviews were conducted in different industries. The analysis of the empirical data shows that the maturity level of trust in different industries is varied. This is mainly due to having different levels of dependency, regulations, and standards.

The finding shows that building trust in SC area is the first requirement for implementing BCT between two companies.

Partnering in BCT network requires belief and faith that partners will always fulfill their obligations.

BCT as a highly structured platform for information sharing has the capability of attaining the trust of the users and transferring power in their interaction.

BCT seems to be more than just tracking and tracing technology; it affects some other factors like orientation in the chain, level of participation and communication.

Since the BCT projects are still in the pilot stage, it is important to consider how a technological shift toward BCT will affect the user's behavior in a still-developing platform.

Finally, the trust in relationships, in general, has to be evaluated continuously, which means that the trust analysis is again required when BCT has been in place for a while.