Block Chain Adoption in Environment

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Introduction

Block chain is a system for recording information in a way that makes it difficult or impossible to change, decrypt, or deceive the system. Each block in the chain contains multiple transactions. Whenever a new transaction occurs on the blockchain, the transaction record will be added to each participant's ledger. Although the mechanism of the blockchain is extremely complex, its basic idea is very simple: decentralize the storage of data so that this data cannot be owned, controlled or manipulated by the central participants.

Theory

Blockchain technology has been widely tested, implemented, used, and even abandoned by organizations. Whether an organization adopts blockchain technology depends on many factors. Previous literature has identified various potential factors affecting the adoption of blockchain technology, but most studies only focus on a subset of specific factors. Therefore, these studies can only provide limited explanations for varying degrees of blockchain adoption. Relying on a sound technical organization environment (TOE) framework, we propose an expanded blockchain adoption model (BAM). We derive a rich set of factors from the current state of blockchain adoption research and business ecosystem literature, and use conceptual reasoning to extend them. We then formulate testable hypotheses for each identified factor. A survey (n=350) carried out in the DACH region (Germany, Austria and Switzerland) tested the 14 hypotheses generated [1].

We use binary logistic regression analysis to quantitatively analyze our BAM and determine the six structures that influence adoption (relative advantage, observability, organizational age, pressure from external stakeholders, regulatory uncertainty, and scope of the business ecosystem) [2]. Based on our findings, we present a new idea of "Ecosystem Ready" as the most important factor in block chain adoption.

The preparation of the ecosystem has the following characteristics:

- Huge ecosystem scope
- Stakeholders have not yet collaborated in a trusted and regulated environment
- A strong organization that leads the ecosystem. This powerful organization intends to promote
- Innovations.

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- Allow others to observe the benefits of this new technology. Force other participants in the ecosystem to adopt new technologies, and ultimately
- Strive for regulatory certainty in the application and use of blockchain. The phenomenon of globalization has changed the global economy.

The reduction of national trade barriers, the increase of liquidity and the spread of innovative technologies on an international scale have led to the integration of existing markets and the emergence of new industries. These conditions have led to intensified competition among companies and revealed a sense of interest. Unexpected threat. Newcomers from different industries in the market. In order to maintain market position and maintain sustainable growth, executives are forced to respond to increasingly severe challenges and adjust company strategy and operations [3]. In this process, the company tries to establish a competitive advantage by seeking innovative solutions, improving the efficiency of existing processes, or improving service quality. New technologies play a special role and may disrupt current processes, markets or industries.

The "peer-to-peer electronic cash system" based on blockchain technology has attracted the attention of many researchers and organizations. Convinced of the potential of the technology, they began to explore its complex structure and create business use cases. The survey shows that the technology is constantly approaching its maturity stage. The hypothetical proposal has been transformed into a viable business case. In addition, executives recognize the true strengths and potential of their companies, as well as the emerging challenges, shortcomings, and limitations. Despite these obstacles, the vast majority of companies remain optimistic about blockchain in general, especially the large amounts of funds invested in blockchain projects that have been developed. Despite its positive attitude towards this new technology, the company has a conservative attitude towards the implementation of blockchain projects. According to a Deloitte survey, only 23% of the executives interviewed have already started implementing blockchain projects. Therefore, while many potential use cases and applications of this new technology have emerged, only a few have been implemented and run in a production environment.

Several studies have attempted to explain the low rate of blockchain adoption by mentioning the lack of knowledge and understanding of blockchain, lack of technological maturity (Iansiti and / or unresolved tension between required investment and benefits obtained from blockchain) relationship). Only in terms of the internal organizational factors that influence the decision to adopt blockchain, these studies can provide a valuable but only limited explanation of the observed phenomenon of low blockchain adoption in the organization [4]. Barnes and Xiao (2019) developed an extended model for blockchain adoption based on the Technical Organizational Environment (TOE) framework, which also considers ecosystem-related factors However; his work is still only theoretical, because the hypothesis has not been empirically tested. Addition to proposing hypotheses, they also tested them based on experience. However, his work has certain limitations [5]. They did not describe cross-domain adoption, but focused on the supply chain. In addition, their hypothesis does not question which factors will influence the adoption of blockchain, but rather question which factors will influence the organization's resistance to blockchain adoption. In the end, their calculations are based on a fairly small sample of 83 participants.

Conclusion

As blockchain technology is still developing rapidly and more and more companies are exploring its potential, it is difficult to assess actual adoption. It is expected that blockchain will be more widely adopted in the next five years. Therefore, we recommend a longitudinal survey to capture and examine these changes. Therefore, we hope that the technical differences between various blockchains (for example, private blockchains/consortiums and public blockchains), the business models behind these blockchains, and the application of blockchain governance models will play an important role in adoption. Use this new technology. In an industrial environment. Based on this, we also recommend those potential adopters' expectations of different functions, technical features, and business and government models are included in future research for a better understanding.

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