

Potentials and barriers to the use of Smart Contract in the Nigerian Construction Industry

Adebola Adeyera and Ayokunle Olanipekun (Nigeria)

Key words: Capacity building; Quantity surveying; Young surveyor; Smart Contract, Construction Industry, Technology

SUMMARY

Purpose: This study adopts the technology adoption model (TAM) which emphasises on the adopters' characteristics to explore the potentials and the barriers for the implementation of smart contract in the Nigerian construction industry.

Methodology: This study employs the qualitative methodology. Seven snowballed ICT compliant construction organisations in the Nigerian construction industry are identified. The construction contract personnel in each of the organisations are interviewed. The data obtained are analysed using the content analysis method.

Findings: There are many challenges in practice that pervade the contractual arrangements in the Nigerian construction industry. The knowledge of smart contract, and the usage in the industry is very low. The dominant barrier to the adoption of smart contract is the "averse to change" culture in the industry, while the years of experience is a strong predictor of construction practitioners' beliefs about the barriers to the adoption of smart contract. Furthermore, there is a relationship between the prospects (optimisms) and the barriers to the adoption of smart contract, while the TAM is a mild predictor of the adoption of smart contract in the Nigerian construction industry.

Implications: The industry culture is an important variable for the adoption of smart contract in the construction industry. The adoption of smart contract can be increased by eliminating the barriers in the industry. There is need for alternative technology adoption model to serve as theoretical basis for the research on the adoption of smart contract in the construction industry.

Keywords: Potentials, Barriers, Construction industry, Nigeria, Prospects, Smart contract, Technology Adoption Model (TAM)

Potentials and barriers to the use of Smart Contract in the Nigerian Construction Industry (10453)
Adebola Adeyera and Ayokunle Olanipekun (Nigeria)

FIG Working Week 2020
Smart surveyors for land and water management
Amsterdam, the Netherlands, 10–14 May 2020