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Exploring factors that influence web technology adoption in a time of crisis: A Ukraine SME perspective

Olena Kublitska

Technological University Dublin, mp151007@stu.cn.ua

Róisín Vize Dr

Technological University Dublin, roisin.vize@tudublin.ie

Isobel O'Reilly Dr

Technological University Dublin, Isobel.OReilly@tudublin.ie

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Exploring factors that influence web technology adoption in a time of crisis: A Ukraine SME perspective.

Olena Kublitska
Faculty of Marketing
Technological University Dublin
D22125330@mytudublin.ie

Dr Róisín Vize
Faculty of Marketing
City Campus
Technological University Dublin
roisin.vize@tudublin.ie

Dr Isobel O'Reilly
Faculty of Business
Blanchardstown
Technological University Dublin
isobel.oreilly@tudublin.ie

ABSTRACT

This paper aims to investigate factors that influence web technologies adoption among small and medium enterprises in Ukraine and understand how volatile conditions influence managerial decisions about the operation of small retailers' businesses. This research takes a case study approach and uses qualitative semi-structured interviews. This study contributes to the existing literature on web technologies adoption among SMEs in developing countries, improves the understanding of the role of web technologies within SMEs operating in volatile conditions, and explores key-decision makers' attitudes towards web technologies adoption within SMEs. The proposed framework based on Technology-Organization-Environment (TOE) is enriched with individual decision maker variables to overcome the lack of understanding of the individual attributes of key-decision makers. The proposed framework is also enriched with a resource-based view to understand of how small retailers use resources available to achieve competitive advantage during periods of crisis.

Keywords: SME, Web Technology Adoption, Retail, Ukraine, Developing Country, Volatility

Exploring factors that influence web technology adoption in a time of crisis: A Ukraine SME perspective.

This study develops a conceptual framework exploring factors that influence e-commerce adoption among small and medium enterprises (SMEs) in Ukraine in a time of crisis. This research extends Tornatzky and Fleischer (1990) Technology-Organization-Environment (TOE) framework to investigate the phenomenon. A resource-based view underpins the development of the model. This study aims to investigate factors that influence web technology adoption among SMEs. Furthermore, the investigation seeks to understand how operating in volatile conditions, influences managerial decisions and the operation of their business. The research takes a qualitative approach and uses semi-structured interviews. Ukrainian retailers who have adopted the internet as a channel to market and who are based in Ukraine are the respondent sample for data collection. This research is an initial exploratory phase to better understand the phenomenon being investigated.

SME businesses make significant contributions on economic growth within developing countries (Gouveia and Mamede, 2022). The emergence and development of web-based technologies such as Internet, mobile technologies, augmented reality (AR), or artificial intelligence (AI) create opportunities for small enterprises (Grewal et al., 2021). Moreover, recent literature suggests that the future of retailing is inherently connected with technology (Gauri et al., 2020). Research also suggests that technology adoption can ensure the survival of enterprises, increase their competitiveness (Eller et al., 2020; Beckers et al., 2021; Grewal et al., 2021), as well as make them more resilient during times of crisis. The adoption of e-commerce technologies among retail SMEs has increased significantly in recent years particularly in wealthy western countries (Beckers et al., 2021; Aithal et al., 2022). However, research indicates firms in developing countries' tend to, by comparison, have less progress in adopting e-commerce as a channel to market. The reasons for this are poorly understood and under-researched (Gauri et al., 2020; Aithal et al., 2022). Understanding the factors that facilitate as well as inhibit e-commerce adoption from a Ukrainian context particularly during a time of crisis is warranted. The motivation for this study is to address this knowledge deficiency and identify factors that deepen our understanding as to why SME retailers in Ukraine are slow to adopt e-commerce as part of their business model. Through understanding the decision making process as well as issues that inhibit retailer's to pursue this channel to market will help identify the barriers that need to be addressed at local level via local enterprise supports and at government policy level.

This research takes a case study approach to gain in-depth understanding of such complex phenomena (Yin, 2003). The complexity of the situation is exacerbated as small retail firms are operating during significant external pressures with the ongoing war in Ukraine. Taking qualitative online semi-structured interviews to explore the phenomena will enable the researcher to capture a deep understanding of the nature of the participants' experience (Malhotra and Birks, 2017) and remain flexible and open to the new themes and valuable insights that might emerge during the interview. This exploratory phase aims to form the basis for the larger quantitative phase of the research to develop and test the conceptual model.

The T-O-E framework provides a theoretical base on which to explore web technology adoption and innovation (Tornatzky, Fleischer and Chakrabarti, 1990) and examines major concepts that relate to technology, organization, and environmental factors of web adoption in varying context.

This framework has received significant interest from studies exploring and examining how firms adopt and use technology in different sectors, industries, and contexts (Kam and Tham, 2022). However, there is a lack of understanding on the individual attributes of key decision makers, and the role they play in the decision making process when considering the adoption and / or advancement of web based technologies within the firm (Lashitew, 2023). This study addresses this deficiency by adding a variable focusing on the individual/managerial decision-makers to gain a deeper insight into the attitudes, traits and characteristics of those who are responsible for the implementation innovative technology adoption (Sindakis and Aggarwal, 2022). The proposed individual / managerial group of factors consists of manager's age, manager's education, manager's technology experience, and manager's innovation awareness. In so doing, this study aims to understand how key-decision makers use the resources available to the firm as well as their attitudes towards web technologies and the impact on the firms' competitiveness and resilience to operate during times of crisis.

Retailers adopt web technologies to achieve benefits in the forms of increased customer reach and access, improved process effectiveness, refined innovative business model, and personalized customer experience. However, there is a deficiency of understanding how retail SMEs intend to achieve sustainable competitive advantage in the process of adopting web technologies. Thus, the TOE framework enrichment with a resource-based view (Lutfi et al., 2023) is considered as a promising direction to understand the combinations of resources and their synergistic effects which retailers use to achieve competitive advantage and form a competitive value proposition.

The proposed extended framework provides a baseline for how SME retailers may achieve and maintain a competitive position from the opportunities web based technologies afford smaller firms, which may result in improved company performance particularly firms operating during times of crisis in developing countries (Lashitew, 2023). Thus, this study contributes to the existing literature on web technology adoption among retail SMEs and addresses deficiencies in understanding the role of key decision-makers and the impact web technology can have on SMEs operating in turbulent times. By extending the TOE framework to include individual decision maker variables enriches the theoretical contributions of this study.

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