

# The Role of Digital Transformation and Entrepreneurial Orientation in Achieving Competitive Advantage in Industry 4.0

(A Study of Digital Transformation on Non-Banking Organizations in Indonesia)

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KEYWORDS	ABSTRACT
Digital Transformation; Entrepreneurial Orientation; Organizational Change; Innovation Behavior; Competitive Advantage	In the realm of transitioning economies and the advent of Industry 4.0, digital transformation has emerged as a paramount subject. Nonetheless, there remains a scarcity of studies offering a comprehensive elucidation of the interplay between Digital Transformation (DT) and Entrepreneurial Orientation (EO) in the context of Organizational Change (OC). Digital transformation entails the integration of digital technology across all facets of business operations, fundamentally altering how enterprises function and deliver value to clientele. This paper explores these dynamics by addressing three fundamental inquiries: Firstly, how do digital transformation and entrepreneurial orientation correlate with the Organizational Change (OC) process? Secondly, why are digital transformation and entrepreneurial orientation deemed pivotal? Lastly, how do digital transformation and entrepreneurial orientation impact Organizational Change, and do they influence innovation behaviour and competitive advantage? This paper aims to enrich the discourse and foster an understanding of the critical roles played by digital transformation and entrepreneurial orientation in attaining competitive advantage through the Organizational Change (OC) process and fostering innovation behaviour at PT Pegadaian. To bridge the existing gap in the literature, this study posits digital transformation and entrepreneurial orientation as antecedents of the Organizational Change (OC) process, thereby fostering innovation behaviour and competitive advantage. The research adopts a case study approach rooted in qualitative analysis.

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## 1. Introduction

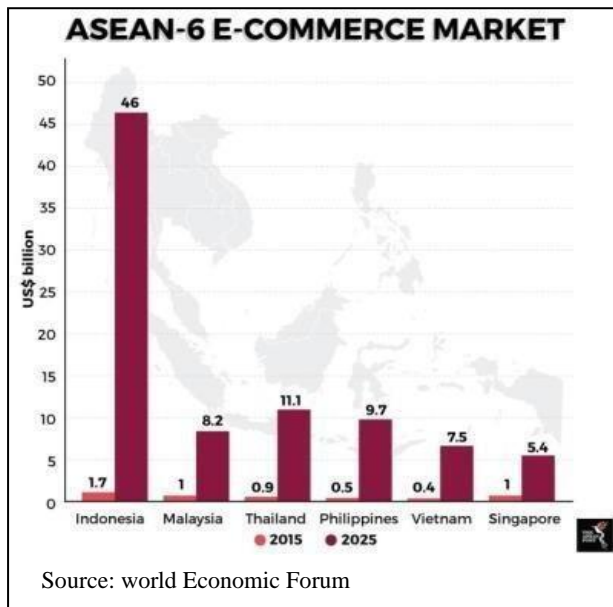
In recent years, digital transformation, entrepreneurial orientation, and organisational change have dominated discussions from scholars to professionals in a high-transition economy from journal headlines to boardrooms (Meineke et al., 2019). Digital transformation integrates digital technology into all business areas, fundamentally changing how firms operate and deliver value to customers (Kraus et al., 2021; Vial, 2021). It is also a change in behaviour that requires organisations to continually change and challenge the status quo and get comfortable with all the adjustment processes. Strategic management scholars have paid detailed and full attention to organizational change (OC) research. A summary of existing research on organizational change (OC) is described in Table 1. Past studies in organisational change have found several factors that influence the level of

change and mostly categorised them into two categories, which are individual and workplace factors (group and organisational level). Holt et al. (2007) have defined four (4) elements that influence for change, which is content, process, context, and the individual involved. Holts argue the development and evaluation of an instrument that can be used to gauge organisational change at an individual level Oreg & van Dam, Vakola et al. (2011) argue the antecedents that comprise pre-change antecedents (change recipient characteristics and internal context) and change antecedents (change process, perceived benefit/harm, and change content).

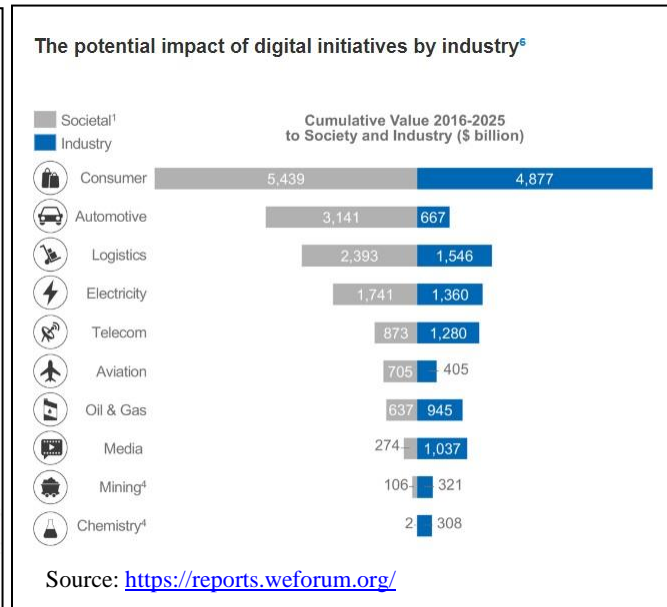
In other studies, behaviour fit predicted reactions to the change. Specifically, the degree to which the organisation's existing values were aligned with the change vision and objectives predicted change recipients to change (Jones et al., 2005). In another study, the degree of perceived fit between the behaviour of two merging organizations was negatively correlated with change-related stress (Cartwright & Cooper, 2018). Ng' ang' a Elijah (2016) argues about the adoption of a digital transformation with top management support and commitment, organisational behaviour, level of communication, and level of employee involvement. The literature review shows no research about digital transformation or entrepreneurial orientation as OC antecedents. From the phenomena background, since the new birth of digital in industry 4.0, digital transformation and entrepreneurial orientation are two of the significant drivers to scale up productivity and overcome a highly competitive environment. In this digital and internet era, which provides connectivity and the switch of the concept of their own economy to a sharing economy, companies will have significant potential to work collaboratively. Digital transformation and entrepreneurial orientation as resources should be drivers to Organizational Change (OC) in creating innovative behavior and performance. OC is a continuous process in building and shaping people, organizational and systems, strategy, knowledge management, technology and IT, and collaboration, and connectivity. Organisational change starts from a shift in corporate mindset to a first-class IT department is a priority for every company to survive in this digital and internet era of Industry 4.0. The change increases a company's potential to produce performance continuously. There are five research backgrounds: digital transformation in an interconnected world, entrepreneurial orientation as resources in industry 4.0, Organizational Change in e-Conomy SEA, innovation behaviour in highly competitive digital environments, shape a better future with a competitive advantage will be explained in more detail below.

Toward the end of the 19th century, a new era of digital transformation was born. Until now, the world is experiencing unprecedented change driven by the technological shifts of the Fourth Industrial Revolution. This phenomenon will dramatically increase the reach of producers and convenience for consumers. It will also disrupt traditional supply chains and oblige policymakers to think differently. Such shifts are happening at an unprecedented pace across global systems. Since September 2016, the World Economic Forum initiative "Shaping the Future of Digital Economy and Society" has allowed public and private organizations to collaborate and realise digital technology's potential to benefit humankind. World Economic Forum also initiated a project called "Digital ASEAN" in 2018. This project is a part of "Shaping the Future of Digital Economy and New Value Creation" and "Shaping the Future of Trade and Global Economic Interdependence Platforms" system initiatives. With 125,000 new users coming onto the internet every day, ASEAN is the fastest-growing internet market in the world. ASEAN's digital economy is projected to grow significantly, adding an estimated \$1 trillion to regional GDP over the next ten years. World Economic Forum's "Digital ASEAN" initiative

is to work on the issues that will underpin a regional digital economy in ASEAN so that the benefits of the Fourth Industrial Revolution can be fully unlocked and become a force for regional economic inclusion.



**Figure 1 ASEAN-6 E-Commerce Market**



**Figure 2 Digital Initiatives by Industry**

Companies should be prepared to develop and nurture the digital transformation that makes an organisation digitally capable. Since 2016-2025, the World Economic Forum reports that digitalisation is the key to Industry 4.0, and exponential growth or cumulative consumer value is very high (see figure 2). The company needs to incorporate digital transformation into its future competitiveness because, in the end, technology is just a tool. Digital transformation from people’s minds and behaviour is crucial to scaling up productivity and exponential growth performance through innovation behaviour.

Based on the existing Digital transformation (DT) research, organizational change (OC) and entrepreneurial orientation (EO) studies focusing on the comprehensive explanation of its role in the Organizational Change (OC) concept are still limited. Several theoretical and empirical research gaps can be explored for future research. These gaps are also present in (OC) literature in general (Holt et al., 2007); Ahmad et al., 2018). There are a number of articles study antecedents of Organizational Change (OC) in large firms as well as SMEs (Armenakis & Harris, 2002; Cunningham et al., 2002; Iverson, 1996; Jones et al., 2005), but the issue of digital transformation and entrepreneurial orientation as OC antecedents have not been addressed before. In addition, there is still limited research about DT on OC within the industry 4.0 context. In order to answer these phenomena and fill the research gaps in section 1.3, this study raises a research question “How is the role of digital transformation and entrepreneurial orientation associated with the Organizational Change (OC) process, and whether it has any influence on innovation behaviour and competitive advantage and firm performance?” Digital transformation is a critical issue in Industry 4.0 that every company should catch up with and

have a ready-to-cope attitude. The novelty of this study is to answer the research question to fill the problem of the phenomenon and, additionally, will fill the gap on DT as the antecedent and driver for OC. The role of digital transformation and entrepreneurial orientation of the OC process in PT Pegadaian will impact innovation behaviour and competitive advantage. We propose the growing concept in digital transformation and entrepreneurial orientation as the mechanism to fill the research gaps mentioned in this chapter. Therefore, by using resource-based theory, this study aims to contribute to the role of digital transformation and entrepreneurial orientation in the ROC process as organisational (managerial) and resources within the branches of PT Pegadaian as unit analysis. Besides filling the gap in OC research, the relationship between the OC process and innovation behaviour can also fill the gaps in OC literature about innovation performance in the industry 4.0 context, which is still limited.

In summary, this study aims to contribute to strategic management by investigating the role of digital transformation and entrepreneurial orientation that leads to OC process activities and its consequences to facing industry 4.0, innovation behaviour, and competitive advantage. Furthermore, this study also sheds light on implementing OC practice as integrated studies in four elements. Ahmad M. H. et al. said, "Most researchers are focusing only on an item as their independent variable. The lack of integrated studies resulted in a poor understanding of the critical and crucial factors among the four elements. This study also implements the analysis of the organisation level, not only on an individual level. The studies investigate more on the group and organisational level to provide findings that can be generalised across types of change content. The data collection in this study examines companies with multiple branches. These efforts are trying to respond to Mohd Hafis Ahmad et al. (2018) research recommendation.

## **2. Materials and Methods**

This research aims to examine digital transformation and entrepreneurial orientation as the antecedents of the organisational change process that creates innovation behaviour and competitive advantage. Thus, in this section, the researcher describes the research methodologies to conduct the study.

### **The Case Study Approach**

In this study, the researcher uses the case study approach based on a qualitative study with primary data collection from the unit analysis in the section. The theoretical gaps are identified in the literature review phase. Some data and information are also collected from secondary data, such as media and firm websites. The case study approach in this study is developed by using the measurement items from the previous study. The case study approach is the best option for digital transformation topics that have very limited literature and are new phenomena in this industry 4.0. The researcher will conduct the interviews to make them relevant to the research context about digital transformation and entrepreneurial orientation as OC drivers.

### **Case Selection**

This study investigates a single case study in PT Pegadaian. PT Pegadaian has all the criteria and experience to give a holistic understanding of answering all of the research questions in this study. The second reason, PT Pegadaian has the highest market share in Indonesia as an original researcher country. Third, PT Pegadaian has the highest market share, which qualifies as this study

will examine competitive advantage from a market share point of view. The researcher will conduct an interview with a leader from PT Pegadaian to examine and have the inside whether the digital transformation, as well as all the questions that happened in the respondent firm and also examine the case study that will be conducted are well understood.

#### Data Collection

The data collection will be conducted via pilot interviews and case studies, as described below.

1. Pilot Interviews; As the initial step of the study, the researcher will conduct an interview with a leader from PT Pegadaian to examine whether the developed variable, as well as the indicators, is happening in the respondent firm. The second reason is that this pilot interview is to get insight and an understanding of how digital transformation, change, and innovation happen. Furthermore, matches with our case study are well understood.
2. The Case Study Approach; the case study approach in this study uses digital transformation as an empirical phenomenon. The phenomenon of digital transformation will derive organisational change, and innovation behaviour needs to be investigated through case studies, with very limited theory available. A case study is the investigation of a contemporary, empirical phenomenon and its real-life context when the boundaries between the phenomenon and its context are not clearly evident and when multiple sources of evidence are used Yin, (1991) (Masud, 2018). In this study, digital transformation is the phenomenon to be studied and needs further investigation.
3. Unit of Analysis; In order to examine the digital transformation and entrepreneurial orientation as organisational change antecedents, we approach the entire management teams of the PT Pegadaian and Branch Head from a highly competitive and turbulent branch to be involved in this digital transformation. Mostly, branches from the capital of the Indonesian provinces as unit analysis for this study. There are two types of PT Pegadaian branches. In this study, the sample will use the branches of PT Pegadaian syariah and conventional type with highly competitive market conditions.

#### Method and Data Analysis

To have a clear insight and comprehensive understanding of data analysis. These are the five steps and activities that will be taken to analyse the data. First, after the interview and gathering information phase is conducted, the reports will be analysed. All interview reports will be carefully read and re-read. After all of that process, the data will be organised into meaningful fragments. Second, to indicate the meaning, the data will be classified using the fragments, and these fragments will be coded-labeled in sentences to indicate the meaning. The third step is grouping several fragments according to the code. Five, the last process, after we coded a case, the subcategories from a category will be tested. "Do they discriminate between the cases, give an overview over time, combine several quotes?" Miles and Huberman, (1994); Stauss and Corbin, (1990) in (Deterding & Waters, 2021). In this phase, a case description is made. The complete case description will be sent to the person who is in charge of digital transformation in PT Pegadaian. The feedback will supply additional information to wipe out any mistakes, and the confidential information should be omitted from the report.



### 3. Results and Discussions

The manuscript addresses the critical interplay between Digital Transformation (DT), Entrepreneurial Orientation (EO), and Organizational Change (OC) within the context of Industry 4.0. By adopting a qualitative case study approach focused on PT Pegadaian, the research aims to comprehensively understand how DT and EO correlate with the OC process and their impact on innovation behaviour and competitive advantage. Firstly, the study explores the correlation between DT, EO, and OC processes. Digital transformation, characterised by integrating digital technology into business operations, and entrepreneurial orientation, exemplified by a proactive and innovative mindset, are identified as antecedents of OC. The manuscript highlights the importance of leadership, employee engagement, and change management in facilitating successful OC in the context of DT and EO.

Secondly, the research elucidates why DT and EO are deemed pivotal. In the transitioning economies of Industry 4.0, DT and EO play crucial roles in driving organisational change, fostering innovation behaviour, and gaining competitive advantage. The manuscript underscores the significance of embracing digitalisation and entrepreneurial practices to navigate the challenges and opportunities of Industry 4.0 effectively. Lastly, the study examines how DT and EO impact OC, innovation behaviour, and competitive advantage. Through qualitative analysis, the research identifies the mechanisms through which DT and EO influence OC activities, innovation behaviour, and, ultimately, competitive advantage. By leveraging DT and EO, companies can enhance productivity, engagement, and innovation capabilities, thereby gaining a competitive edge in the digital era.

### 4. Conclusion

In conclusion, the manuscript enriches the discourse on the critical roles played by DT and EO in attaining competitive advantage through the OC process and fostering innovation behaviour. By addressing the research questions, the study contributes to a deeper understanding of the complex dynamics between DT, EO, and OC in the context of Industry 4.0. Moving forward, it is imperative for companies, including PT Pegadaian, to recognise the pivotal importance of DT and EO in driving organisational change and achieving competitive advantage. By embracing digital transformation and cultivating an entrepreneurial mindset, companies can adapt to the evolving landscape of Industry 4.0 and capitalise on new opportunities. The research underscores the need for continuous adaptation and innovation to remain competitive in the digital era. By leveraging DT and EO as antecedents of OC, companies can foster a culture of innovation, drive organisational change, and ultimately enhance their competitive position in the marketplace.

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