



Investment Diversification in Improving Investor Resilience: An Experimental Approach on Various Investment Platform

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Abstract

The pandemic phenomenon encourages the acceleration of the application of digitalization in various sectors. Technological developments play a role in providing added value for business organizations to produce more effective, efficient, fast and agile performance. Investment diversification is needed so that investors remain resilient to uncertainty or rapid environmental changes that affect the investment value. Based on dynamic capability theory, digital transformation is a trigger for the creation of dynamic capabilities and is an innovation process of enterprise integration. Ambidextrous capabilities of an organization include exploitative innovation and exploratory innovation. The experimental approach, will try to analyze various types of investment platforms to find out how they compare in each of the different investment platforms. A quantitative method was used to determine the level of influence of digital transformation on ambidextrous innovation both exploitation and exploration, and the influence level of ambidextrous innovation on personal resilience. The experimental research process was conducted by distributing questionnaires to obtain primary data. The collected data was analyzed using smartPLS. The results of this study indicated that the hypothesis H1a and H1b has a P value of 0.000 so that it is proven to support the existing hypothesis. Then the P value H2a and H2b can be accepted and supports the hypothesis. The third hypothesis H3 with a p value of 0.030. Based on the five hypotheses, the result shows the most significant and strong influence in influencing the variable ambidexterity of innovation is digital transformation.

Keywords: *Personal Resilience; Ambidextrous Innovation; Digital Transformation*

Introduction

Digital transformation is increasing rapidly in various fields, as a form of encouragement to keep rising in the post-pandemic era. This form of transformation is not limited to the health area but also in the areas of economy, education, government to domestic life [Kominfo, 2021]. Nevertheless,

digitalization that occurs in the business world has become an enabler and driver that affects the development of digitalization in other sectors. Digitization plays a role in providing added value for business organizations to produce more effective, efficient, fast and agile performance [i.e., priandono,2021]. Practically, digitization is the use of digital technology and data to create revenue, improve business, replace/change business processes (not just digitize them) and create an ecosystem for digital businesses [DRA &WACA Schallmo, 2018].

According to Skog (2019), widespread digitalization will transform the business and technology environment, presenting opportunities and challenges for every organization to change. When the business environment becomes much more dynamic and produces conditions that are constantly changing, organizations must be able to take advantage of opportunities and protect themselves from the threats of competitors [D.A. Skog, 2019]. In that condition, digital transformation comes to play a role for business organizations. The rapid development of technology has changed a lot to the way of investing. Through the digital platform, investing activities can be done anywhere at any time via mobile phones. A digital platform not only offers an easier way to investing, it also offers a wide variety of instruments [Maesaroh, 2022]. The software service also allows people to start investing with affordable capital. Characteristics of Indonesian investors in the last few years increased by 260 thousand people as of January 2022 [L.A.Mahardika, 2022]. The increase is dominated by the millennial generation and generation Z who are active in the digital world.

In recent years, these opportunities have been accompanied by many threats; the emergence of illegal investments that have sprung up via digital. Illegal investment in Indonesia has sprung up; the Investment Alert Task Force has found a number of 21 illegal investment entities in February 2022 [V.A pradipta, 2022]. This can be a traumatic event for young investors who are the main targets in digital investment activities, so an education in the awareness of investing in official and guaranteed platforms is needed. In research (S.F & N. Azizah, 2021) it was found that investment awareness and educational efforts are influenced by company image and company integrity. However, nowadays, young investors increasingly feel the uncertainty condition so many of them invest in various platforms with investment diversification. Investment diversification is a strategy that is widely recommended by the global finance journal because it is proven to have great long-term benefits. Diversification means placing investment funds in several investment instruments with different characteristics. The characteristics are liquidity, risk, and potential return. For example, the potential return if you invest in stocks will be different from bonds, Sukuk (Islamic Bonds), and mutual funds. The diversification strategy is an effort to increase the resilience level of investors [OJK, 2022].

Resilience is the capacity to adapt and achieve good results while facing adversity. It is one of the most significant concepts in contemporary social science [M&L.L.Ungar, 2009]. It relates to many systems, and can occur at many levels, including individuals, families, and communities [A. D. Van Breda, 2018]. Research over the last fifty years has focused primarily on the individual, positioning the family and then society, as a supportive or disruptive environment for individual outcomes [I. I. m. f. ivana mauraovic, 2020]. According to dynamic capability theory, digital transformation is a trigger for the creation of dynamic capabilities and is an innovation process of enterprise integration, reconstructing internal and external resources, processes, and structures. Organizational ambidextrous capabilities include exploitative innovation and exploratory innovation. Exploitative innovation refers to increasing an organization's existing resources and capabilities; exploratory innovation alludes to the reconfiguration of existing organizational assets [L. a. A. M. E. v. S. Jichang Zhang, 2021]. Through adaptive innovation, existing assets and capabilities can be effectively utilized while building new capabilities and resources that are compatible with previous development paths. "Ambidexterity" refers to dynamic capabilities that describe a company's ability to explore and exploit simultaneously and adapt over time [C. O'Reilly and M. Tushman, 2008]. As a result, dynamic capability theory offers insight into the relationship between digital transformation and organizational resilience. The digital transformation of various investment

platforms has its own advantages and disadvantages. So in this study, we try to find comparisons on various investment platforms in analyzing ambidextrous innovation and personal resilience of an investor.

Theoretical Review

The company's digital transformation involves integrating internal and external resources through information, computing, communication, and connectivity technologies to reshape the vision, strategy, organizational structure, processes, capabilities, and corporate culture to adapt to the ever-changing digital world. Digital transformation has been viewed as a facilitator of organizational dynamic capabilities such as ambidexterity [I. I. m. f. ivana mauraovic, 2020 & J. L. a. A. M. E. v. S. Jichang Zhang, 2020], which needs to be constantly updated to remain competitive in a dynamic environment. In line with previous research [J. L. a. A. M. E. v. S. Jichang Zhang, 2020], we consider digital transformation to be a trigger for dynamic capabilities, which can generate value either directly or indirectly [I. I. m. f. ivana mauraovic, 2020]. Based on the statement, it is obtained the hypothesis that:

H1 a: digital transformation has a significant effect on exploitative innovation platform to invest

H1 b: digital transformation has a significant effect on the exploratory innovation platform to invest

Ambidextrous innovation is the concept of “exploitation and exploration” introduced in March [A. P. J. Wulandari, 2022] and has been widely used since then in the areas of organizational learning and management strategy. Exploitation is the process of improving performance by improving and extending a company's existing capabilities, processes and technologies to achieve predictable results. Innovation exploration is responding to and influencing latent environmental trends through the creation of new products or services and new markets. It is concerned with offering innovative designs and creative ways to meet customer and market needs. In resilience, efforts are needed to exploit and explore a product, in the context of this research, it is a platform to invest. So, the next hypothesis can be formulated as follows:

H2a: Exploitative innovation platform to invest has a significant effect on personal resilience.

H2b: Exploratory innovation platform to invest has a significant effect on personal resilience.

The gradual or drastic digital transformation of existing resources or knowledge management is part of the process. Exploitative innovation continues to expand existing technology and knowledge of how to expand existing products and services, and its essence is to help individuals to gain resilience by enhancing their ability to coordinate and integrate into a rapidly changing environment. By constantly acquiring new knowledge and developing new products and services by releasing over-reliance on existing organizational processes, the goal of exploratory innovation is to help companies to gain resilience by increasing their dynamic ability to restructure and change the context of a changing environment. In medical organizations case study, [C. A. W. L. B. Daniel Schallmo, 2017] finds that flexibility and ambidextrous innovation can increase the likelihood of successful digital transformation. So that the next hypothesis is obtained the following statement:

H3: Digital transformation has a significant effect on personal resilience through ambidexterity innovation.

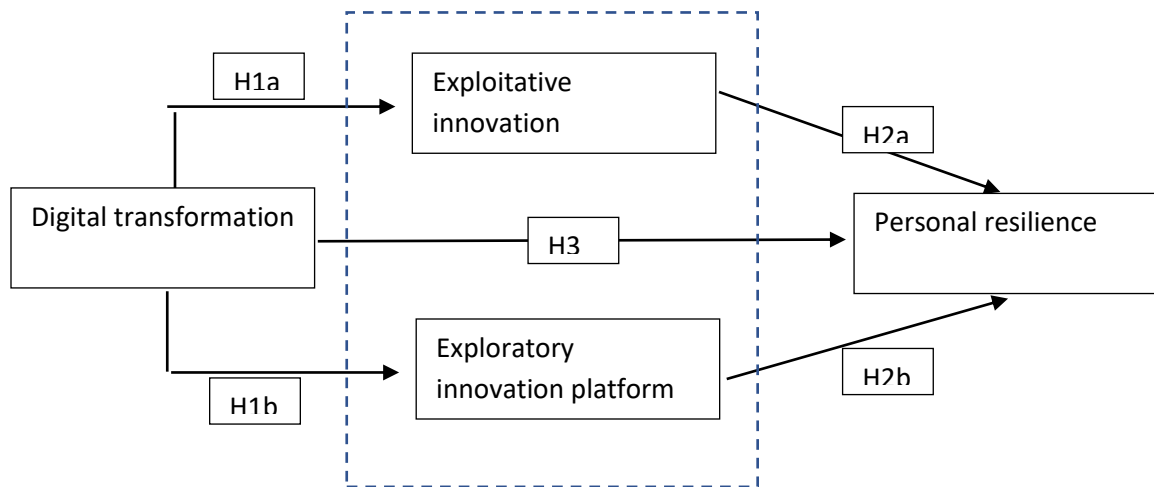


Figure 1. Conceptual framework of dynamic capability theory thinking on personal resilience

Source: Data processed by the author (2022)

Methods

The research method used in this study was quantitative mixed methods with an experimental approach. The experimental approach is a form of controlled treatment of the variables and samples to be used [J. Creswell, 2012]. The experimental approach allows researchers to control, manipulate, and observe the object of research. Special treatment for the selected sample will be followed by data analysis with quantitative methods and then analyzed using smartPLS software to determine the influence level on the current research variables.

Measurement of the digital transformation variable as a reflective construct, the independent variable measured by five statement items referring to Nwankpa and Roumani [2016] and Chu [2019]. Exploitative innovation platform to invest is the act of using the innovations that exist in an investment platform optimally, measured by six statement items referring to Jansen et al [2006]. Exploratory innovation platform to invest is an action to respond to the changes in the platform and filter according to needs as measured by five statement items referring to Jansen et al [2006]. Personal resilience is the ability to adapt in dynamic conditions or rapid changes both from the internal and external environment as measured by four statement items referring to Parker & Ameen [2018].

Results

Analysis of Indicators and Variables

The first analysis is the outer loading of each independent and dependent variable to determine the validity level of each indicator variable item. The independent variable in this study is digital transformation (DTM). It shows the outer loading value of each dimension above 0.5, so it can be categorized that each indicator on the dimension of the DTM variable is valid. The Cronbach alpha indicator is a sensitive indicator that is close to the composite reliability indicator where both indicators have a value > 0.50 which are declared reliable. In this study, all variables consisting of DTM, EPVM, EPRM, and PRM have Cronbach alpha and composite reliability values above 0.50, so all variables can be declared reliable. The next measurement indicators are Average Variance Extracted (AVE) and Rho-A. AVE and Rho-A values can be declared reliable and valid when the variable construct has a value above 0.50. In this study, the results of AVE and Rho-A were obtained, having a value above 0.50 then all of them could be declared valid and reliable.

Table 1. Outer loading value of each variable

VARIABLE	DTM	EPRM	EPVM	PRM
DTM1	0.852			
DTM2	0.640			
DTM3	0.845			
DTM4	0.889			
EPRM1		0.806		
EPRM2		0.850		
EPRM3		0.595		
EPVM1			0.543	
EPVM2			0.501	
EPVM3			0.600	
EPVM4			0.846	
PRM1				0.805
PRM2				0.667
PRM3				0.766

Source: Data Processed by Researchers (2022)

Table 2. Indicator values of Cronbach alpha, Rho-A, Composite Reliability and Average Variance Extracted (AVE).

Variable	Cronbach alpha	Rho-A	Composite reliability	Average variance extracted (AVE)
DTM	0.822	0.843	0.884	0.660
EPRM	0.614	0.609	0.799	0.575
EPVM	0.496	0.560	0.723	0.405
PRM	0.612	0.633	0.792	0.560

Source: Data Processed by Researchers (2022)

Based on table 4.5, it can be seen that all hypotheses in this study can be accepted and proven. The first hypothesis a (H1a) and the first b (H1b) are accepted with a p value of $0.000 < 0.01$, which means that those hypothesis are strongly correlated with a 1% chance of error. While the second hypothesis a (H1a) with a value of $0.001 < 0.05$, which means that it is moderately correlated and the second hypothesis b (H2b) is accepted with a p value of $0.010 < 0.10$, which means it is moderately correlated with an error rate of 10%. The third hypothesis (H3) is accepted with a p value of $0.030 < 0.010$, which means that it is moderately correlated with an error rate of 10%.

Table 3. Path Coefficients and Correlation between Variables

Variable	Original sample	Sample mean	Standard deviation	T statistic	P-Value
H1b: DTM → EPRM	0.783	0.778	0.070	11.107	0.000
H1a: DTM → EPVM	0.744	0.721	0.136	5.485	0.000
H3: DTM → PRM	-0.481	-0.451	0.221	2.179	0.030
H2b: EPRM → PRM	0.540	0.519	0.208	2.599	0.010
H2a: EPVM → PRM	0.765	0.749	0.225	3.398	0.001

Source: Data Processed by Researchers (2022)

In this study, the first hypothesis consists of two correlation tests; the correlation test of digital transformation (DTM) toward the Exploitative innovation platform to invest (EPVM) as H1A and the correlation test of digital transformation (DTM) on the Exploratory innovation platform to invest (EPRM) as H1b. The result of the correlation test H1a and H1B shows the same P value results, it is 0.000 and

T_{statistic} H1a of 5.485 and H1b of 11.107. Therefore, it can be concluded that digital transformation has a strong and significant effect on the level of exploitation and exploration of investment platforms.

In this study, the second hypothesis consists of two correlation tests; the correlation test of Exploitative Innovation Platform to Invest (EPVM) toward Personal Resilience (PRM) as H2a and the correlation test of Exploratory Innovation Platform to Invest (EPRM) toward Personal Resilience (PRM) as H2b. The result of the H2a correlation test shows that the P value is 0.001 and the T_{statistic} is 3.398, indicating a moderate level of correlation and a probability error of 5%. Furthermore, H2b has a P-value of 0.010 and T_{statistic} of 2.599, indicating a relatively low level of correlation with a probability error rate of 10%. The third hypothesis is the correlation test of digital transformation (DTM) toward Personal Resilience (PRM). The result of the H3 correlation test shows that the P value is 0.030 and the T_{statistic} is 2.179, indicating a relatively low level of correlation with a probability error of 10%. The results of the hypothesis tests are in line with previous research by Zhang (2021) that investigated the effect of digital transformation on increasing the resilience of an organization.

Discussion of the Correlation Test between Variables

In the first hypothesis a (H1a), the correlation between DTM → EPVM and the second hypothesis b (H1b) has a f^2 value of 1.583 (H1a) and 1.240 (H1b) indicate that the hypothesis is accepted and has a strong influence. The f^2 value in the second hypothesis a (H2a) and second hypothesis b (H2b) is the correlation level between EPVM → PRM (H2a) which has an f^2 value of 0.943 and EPRM → PRM has f^2 value of 0.408. These results indicate the effect of EPVM and EPRM on PRM has fairly strong influence. The third hypothesis is the correlation test between DTM → PRM. It has f^2 value of 0.313, indicates that the hypothesis is accepted and has an influence at a sufficient level. The R² value is a measure of the influence evaluation of the independent variable with the dependent variable, with a value of ≥ 0.67 (substantial), ≥ 0.33 (moderate), ≥ 0.19 (weak). In the study, the dependent variables consist of Digital Transformation (DTM), Exploitative Innovation Platform to Invest (EPVM) and Exploratory Innovation Platform to Invest (EPRM). In this research model, each dependent variable has R² that shows in table 4.6, with a substantial level of influence on EPRM and PRM, while the influence level on EPVM is moderate.

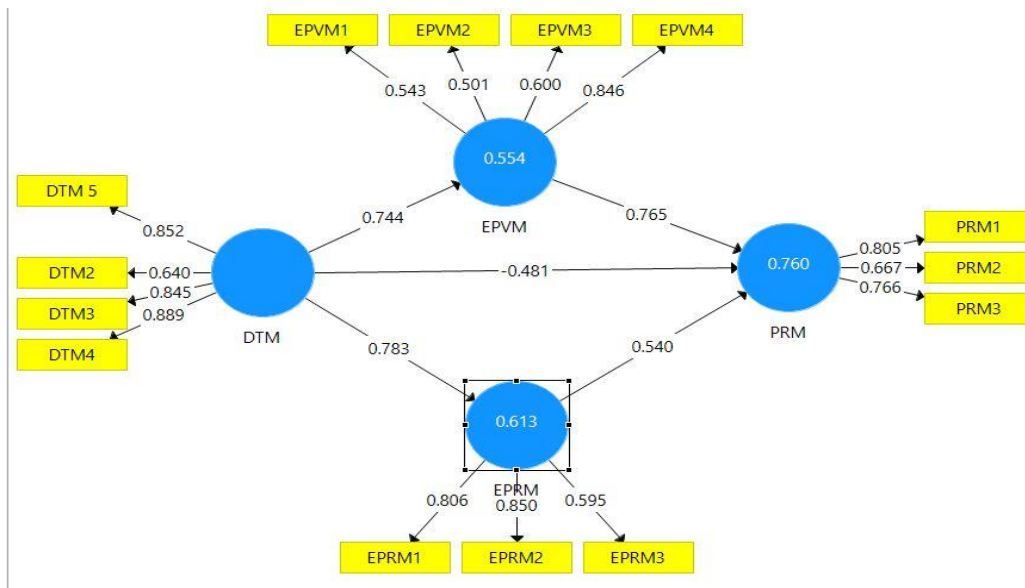


Figure 2. The value of each indicator on the variable and the value of the influence between variables
Source: Data Processed by Author (2022)

The Q^2 value on the construct of PRM variable model is 0.357, indicating the influence of other variables and supporting the proposed hypothesis. Theoretically, this research has proven that resilience theory is influenced by ambidexterity innovation and digital transformation variables. During the experimental research period on easy investors using three motion trade platforms, Bareksa and Pluang show significant results in accordance with the proposed hypothesis based on resilience theory. Based on the hypothesis test of the DTM factor, EPVM and EPRM have a strong influence on PRM. This shows that the resilience of users is strongly influenced by the level of exploration, exploitation and digital transformation of an investment platform. Practically this research can be used as a reference in the innovation of an investment platform in order to pay attention to how the level of change or novelty of a platform is and to what extent it is well received by users. The level of users who have accepted or not to the novelty of the digital investment platform, it is necessary to analyze the level of exploration and exploitation of the existing investment platform. So it is better if the digital investment platform provides services that are easy to understand and use by users, in addition to ensuring the security of data and assets of investors.

Table 4. Blindfolding Test Results

Variable	SSO	SSE	$Q^2 (=1-SSE/SSO)$
DTM	128.000	128.000	
EPRM	96.000	67.731	0.294
EPVM	128.000	102.179	0.202
PRM	96.000	61.714	0.357

Source: Data Processed by Researchers (2021)

Discussion

This section begins with the answer or settlement of the research hypothesis that has been built in the section of the literature review (only mentioning the effect or influence from independent to dependant variables, without providing statistical numbers). Then, the research implication has to be explained, connected to the description as well as contribution to related science. The results of other relevant research also need to be explained and compared in this section.

Conclusion

This study aimed to find out the effect of digital transformation on ambidexterity innovation and personal resilience. This study explored the two dimensions of ambidexterity of innovation. There are exploitation and exploration of innovations that exist in a digital transformation. The results obtained from the experimental method on 45 respondents show that all hypotheses are supported. The first hypothesis consists of two hypotheses; the digital transformation correlation test (DTM) on the Exploitative innovation platform to invest (EPVM) as H1a and the digital transformation correlation test (DTM) on the Exploratory innovation platform to invest (EPRM) as H1b. The results of hypothesis testing H1a and H1b is those hypothesis have P value of 0.000, so that it is proven to support the existing hypothesis. The second hypothesis consists of two hypotheses. It consists of the Exploitative Innovation Platform to Invest (EPVM) correlation test against Personal Resilience (PRM) as H2a and the Exploratory Innovation Platform to Invest (EPRM) correlation test against Personal Resilience (PRM) as H2b. The p value H2a is 0.0001 and p value H2b is 0.010, so that it can be accepted and support the hypothesis. Next, the third hypothesis is the Digital Transformation (DTM) correlation test on Personal Resilience (PRM) with a p value of 0.030. Based on the five hypotheses, the results show that the most significant and strong influence in influencing the variable ambidexterity innovation is digital transformation.

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