

The Choice of Collaborating with Fintech Entities for Competitive Advantage through Leadership Styles

Steph Subanidja 

Perbanas Institute, School of Postgraduate, Jakarta, Indonesia

Mercurius Broto Legowo 

Perbanas Institute, Faculty of Information Technology, Jakarta, Indonesia

Fangky A. Sorongan

Perbanas Institute, Faculty of Economics and Business, Jakarta, Indonesia

Eko Wahyudi

Perbanas Institute, School of Postgraduate, Jakarta, Indonesia

Abstract

Nowadays, the existence of a fintech entity is a necessity. The choice is disruption or collaboration. This study investigates the antecedents of fintech collaboration based on leadership styles and its consequence on competitive advantage. The study is a quantitative causality approach using a questionnaire to collect the data and use structural equation modelling to analyse it. There are 166 respondents, as samples, from 479 supervisors to directors of automotive, electronics, and food and beverage of medium and large companies. Results show that leadership styles have a positive effect on competitive advantage and fintech collaboration. This study's original value is that fintech collaboration is a necessity for managerial decisions as a mediator for competitive advantage based on leadership styles. It concludes that the primary antecedent choice in encouraging fintech collaboration is transactional leadership, and collaboration with the fintech entity to create a competitive advantage is necessary. Meanwhile, for further research, it is assumed that suitable leadership to encourage competitive advantage through fintech is transformational leadership, and collaborate with the fintech entity is a must.

Keywords

Fintech Collaboration, Competitive Advantage, Leadership Styles.

JEL Classification

G2, L21, M2, O32

Introduction

Currently, the industry in the world is heading towards the Fourth Industrial Revolution (Era 4.0). From the 4.0 era was born an innovation based on technology, not least in finance, which is usually called financial technology (Fintech). The existence of fintech is a reality. Companies, especially banks and non-bank financial institutions, directly felt the impact of fintech entities' presence. Whether banks and non-bank financial institutions will collaborate or erode the existence of fintech. Other industries appear to be affected by the existence of the fintech.

As the industrial internet of things, the fintech creates smart, self-regulating, and industrial values (Kang et al., 2016). It also ensures the manufacturing industry (Kagermann, 2015). Competition in business has always been and always will be. Then, what shapes and encourages competitive advantage? One of the answers is that a leadership style encourages a competitive advantage (Semolic and Steyn, 2018).

Moreover, Schumacher et al. (2016) identified the characteristics of leadership, customer, product, culture, people, governance, and technology strategies to determine the industry 4.0 concept's maturity, inside is the fintech concept. The fintech is the technology and innovation that aims to compete with traditional financial methods in delivering financial services (Lin, 2015). However, there is no accepted definition of fintech universally (Dorfleitner et al., 2017). Hence, this study defines the fintech as an entity. This entity is a technology-based and innovation-based business model to deliver financial services outside of traditional financial services.

Over the past 60 years, industrial forces such as Germany, United States, and Japan have quickly lost their

Corresponding Author:

Steph Subanidja, Address: Perbanas Institute, School of Postgraduate, Jl. Perbanas, Karet Kuningan, Setiabudi, Jakarta, 12940, Indonesia
Email: steph@perbanas.id

production's competitive advantage to developing countries spearheaded by China, India, and Brazil (Yuksel & Sener, 2017). Pressures of ongoing competition in Germany's manufacturing industry by Asia and South America make competitors call for commitments by industry to secure Germany as a production area and maintain its position against low-wage countries (Prinz et al., 2017). In Indonesia, the global competitiveness index level is still below Singapore, Malaysia, and Thailand as countries in the ASEAN Region (Schwab, 2016). That is why the competitive advantage of a company or an industry in a country plays a significant role in global competition.

When competitive advantage is as a consequent variable, it means there are antecedent variables that shape the competitive advantage, such as leadership styles and fintech. Ghobakhloo (2018) stated that the transition of digitalisation and fintech requires committed leadership. Furthermore, fintech is developing in regions and countries with sufficient competence, available resources, transformational leadership, healthy and sustainable corporate culture to create favourable business conditions (Semolic & Steyn, 2018).

Besides, leadership styles are essential in facing competition to address the existence of fintech. Success in creating a competitive advantage and producing good performance is very dependent on the company's success in creating and developing innovation based on technology. Meanwhile, several previous studies found a weak relationship between leadership styles and the creativity of workers. Ma & Jiang (2018) mentioned that because of charisma and narcissistic tendencies, transformational leaders tend to be overly optimistic in terms of their ability to influence and control others, which negatively impact followers' creativity, especially when influence or control is too strong. Furthermore, competitiveness and future survival hurt manufacturing companies' tendency to implement industry 4.0, including the existence of fintech, and it is also that the competition cannot be avoided (Müller et al., 2018). So, the choice is to collaborate with fintech or be undermined by the existence of fintech entities. The study is then leveraging the choice of collaborating with the fintech to encourage competitive advantage based on leadership styles.

Literature Review

Leadership style

There are many studies regarding leadership styles. Leadership is one of the most important elements and must meet to achieve its goals with the highest efficiency and effectiveness (Al Hilaa et al., 2017). Moreover, it is a process by which an individual motivates or influences others to achieve organisational goals (Kestling et al., 2016). Whereas, Albert & Olivia (2015) mentioned that leadership influences others to carry out specific tasks to achieve organisational goals set. It also said that the essence of strategic leadership is managing human and social capital by gaining access to crucial resources such as alliances with partner companies' social capital and the ability to build great human capital teams as critical corporate resources. Besides, leadership style controls interpersonal, rewards, and punishments that shape employee behaviour, motivation, and attitudes that impact organisational performance (Fiaz et al., 2017). Furthermore, they mentioned at least 2 (two) leadership styles, namely transformation and transactional leadership. It also elaborated that the transformation leadership style regarding a changing in the market place. It means that the style focuses on external conditions. The style is about a concept of idealised influence, inspirational motivation, intellectual stimulation, and individualised consideration. While transactional leadership is about an exchange process between the leaders and the subordinates. It means that the style focuses on internal conditions. The style is regarding a barter process between the needs of subordinates, and the ordinates or leaders. Also, transactional leadership encourage the subordinates to achieve their goals, in vice versa. Also, transformational leadership is regarding with vision of an organisation, whereas transactional leadership is about achieving company goals.

Competitive Advantage

There are many studies on competitive advantage. However, there are four studies in placing the competitive advantage variable, namely as exogenous, endogenous, intervening, or moderating variable. This placement depends on the purpose of the study. Subanidja and Hadiwidjojo (2017) stated that competitive advantage impacts on firm's performance and the competitive advantage is a crucial thing to handle the performance.

Competitive advantage is defined as any company is better than the competitors, when the company can do something that rival companies cannot do or have something that is an embodiment of competitive advantage (Fred & Forest, 2016). According to Porter (2005), in Syafarudin (2016), competitive advantage is a strategy that provides benefits from companies that work together to compete more effectively in the market. Porter (2005) in Fred & Forest (2016) explained that five strategic business forces determine market attractiveness and create competitive advantage: the threat of new entrants, the bargaining power of suppliers, the threat of substitute products, the bargaining power of buyers and competitors among industry members. It stated that competitive advantage is the company's ability to create value that competitors cannot imitate.

Porter (2005) in Fred & Forest (2016) mentioned that the primary competitive advantage strategy in facing market competition is cost leadership, differentiation, and focus strategy. The cost of leadership strategy is a robust competitive tool in cases where consumers are price sensitive. Differentiation strategy is an essential factor when

customer needs are diverse and cannot meet with standard products. This strategy aims to create a product or service that will differ significantly from competitors' products or services. A focus strategy means that the company chooses to sell its products and services to narrow or small market segments where buyers have particular preferences or requirements.

Barney (2016) mentioned that four attributes could analyse an organisation's competitive advantage, namely *valuable, rare, imitable, and organisation (VRIO)*. Based on the VRIO framework, the company's primary competence is valuable resources owned in the formation of new products and technological processes that enhance the effectiveness and efficiency strategy. It also stated in his strategic management model that competitive advantage as a consequent of antecedent variables.

Referring to the four placements of competitive advantage variable, and following the objectives of this study, competitive advantage is as an endogenous variable.

Fintech collaboration

In a literature review, Zavolokina et al. (2016) stated that fintech is applying information technology in finance and startups, services, technology, companies, digitalisation, industry, new generation, opportunities, products, or threats. In terms of fintech as a company or an entity, several studies show that collaboration between banks and fintech is a necessity.

Neienaber (2016) said that banks need to collaborate with fintech entities rather than compete with other banks. Besides, fintech promises not to disruptive (Zalan and Toufaily (2017). Moreover, Juengerkes (2016) stated that fintech and banks could collaborate at different stages of development. Hence, in general, it can be said that fintech is closely related to the banking sector, but how is it related to other industrial sectors.?

Several studies investigated industry 4.0 rather than fintech concerning non-banks and non-financial institutions. So far, there has been no research that discusses the relationship between the non-banking and non-financial industries with fintech companies. Nevertheless, some studies investigate the role and effect of industry 4.0. Industry 4.0 enables producers to utilise digital value, connecting, smart fully, and decentralised value chains (Kagermann, 2015; Kiel et al., Müller, 2017). It means that an increasing company digitalisation mainly related to the manufacturing process (Kagermann, 2015; Schumacher et al., 2016; Kocsi & Oláh, 2017). Industry 4.0 allows companies to have flexible manufacturing, process, and analyse large amounts of data in real-time, improve strategic and operational decision making (Kagermann, 2015; Schwab, 2016).

The relationship between industry 4.0 and fintech comes from the innovations based on technology, not least in finance, which is commonly called fintech. One of fintech's main objectives is to reduce the cost of financial infrastructure and does not need to have many branch networks with offices or employees to serve customers in all types of companies. Lee & Shin (2018) mentioned the ecosystem of fintech that has various business models and types. Specifically, Iman (2018) compiled detail that there are 6 (six) business models for collaboration with fintech, namely: (1) payment system, which consists of digital wallet and peer-to-peer payments, (2) investment, which consists of equity crowdfunding and peer-to-peer funding. The form of interaction between these two business processes is customer-to-customer. Furthermore, the business process of (3) financing (crowdfunding, micro-loans, and credit facilities), and (4) risk management is business to customer interaction. Whereas, the business process of (5) cross-process (big data analysis and predictive modelling), and (6) infrastructure (security) are business to business interaction.

Research Hypothesis

The effects of leadership style on competitive advantage

Strategic leadership capabilities have a positive effect on sustainable organisations' competitive advantage (Syafarudin, 2016). Both transactional leadership and transformational leadership have a positive and significant influence on organisational competitive advantage (Devie, Samuel, and Siagian, 2015; Khan & Anjum 2013, and Üru & Yozgat 2009). Based on the supporting studies above, the hypotheses proposed in this study are H_{1a}: Transactional leadership style has a positive effect on competitive advantages, and H_{1b}: transformational leadership style has a positive effect on competitive advantages.

The effects of leadership style on fintech collaboration

The German government proposes a model to assess the maturity of fintech in nine dimensions, namely strategy, leadership, customers, products, operations, culture, people, governance, and technology (Schumacher et al., 2016). Fintech focuses on knowledge and learning by introducing a knowledge-oriented leadership building and combining transformational and transactional leadership styles (Donate et al., 2015). Based on the supporting studies above, the hypothesis proposed in this study is H_{2a}: transactional leadership style has a positive effect on the choice of collaboration with fintech, and H_{2b}: transformational leadership style has a positive effect on the choice of collaboration with fintech.

The effects of fintech collaboration on competitive advantages

Organisations that have competitive advantages can answer challenges and take advantage of opportunities in the implementation of the new era of Fintech (Sagar & Jadhav, 2017). Their research on the impact of Fintech in India stated that by adopting fintech, it would have a significant competitive advantage over global competitors in the economy. Based on the supporting studies above, the hypothesis proposed in this study is H₃: Collaboration with fintech entity has a positive effect on competitive advantage.

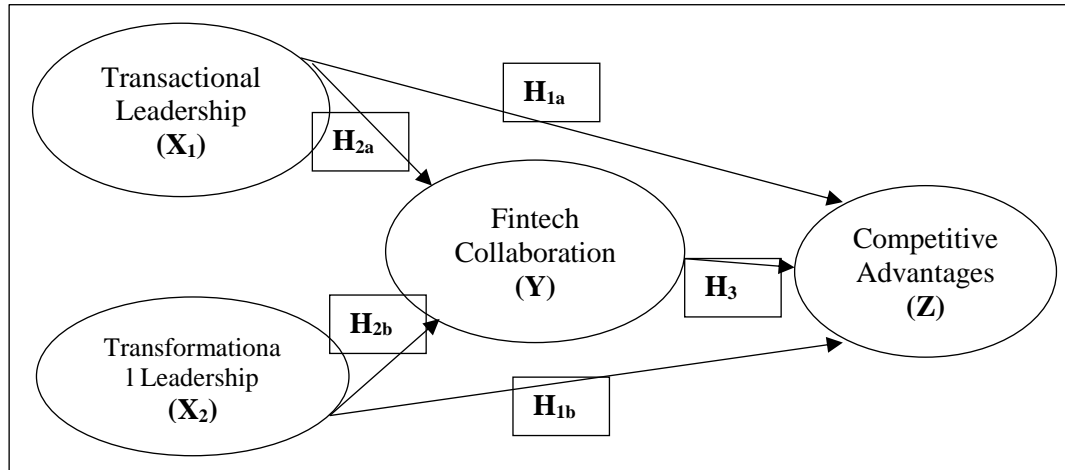


Figure 1. Research Framework

Source: Authors' own

Methods

The respondents are the managers who know about the company policy of leadership style and fintech collaboration. There are 479 managers. There are 218 prospective managers as the population of automotive, electronics, and food and beverage of medium and large companies, that spread in the three districts of West Java Province in Indonesia. However, there are 166 respondents from supervisors to directors who returned the questionnaire. Data analysis is using the AMOS statistical packages software.

The primary data collection method uses the questionnaire tool to get data about the dimensions of the construct. The research uses the Likert scale method as a data collection tool to measure a person's attitudes, opinions, or perceptions. The Likert scale contains several questions with response categories, and then a person's score on the scale is calculated by adding up the number of responses given (Creswell, 2015). This study's scale is by giving scores between 1 (low) to 5 (high) to obtain ordinal data, and then it transformed into interval data by using the method of successive interval.

The test of this study was using the validity of indicators. It is using the degree of freedom. The reliability test carried out using Cronbach's Alpha technique with a cut-off is 0.7. The measurement of the degree of conformity between the hypothesised models and the data presented in this study uses several fit indexes, namely: Chi-Square, Root Mean Square Error of Approximation (RMSEA), Goodness of Fit Index (GFI), Adjusted Goodness of Fit (AGFI), The Minimum Sample Discrepancy Function divided by Degree of Freedom (CMIN / DF).

Results

Respondent Characteristic

There are 7 (seven) respondent characteristics as follows.

Table 1. Characteristics of Respondents

1. Gender	Qty	%	5. Role	Qty	%
Men	132	80%	Quality Control	28	17%
Women	34	20%	Production	37	22%
Total	166	100%	HRD	17	10%
			Engineering	47	28%
			I.T.	6	4%
			Supply Chain	6	4%
			Purchasing & Logistic	8	5%
			Sales & Marketing	12	7%
			Others	5	3%
			Total	166	100%

2. Working Period			6. Industry		
3 – 5 years	27	16%	Electronic	46	28%
6 – 10 years	56	34%	Automotive	97	58%
11 – 20 years	68	41%	Food & Beverage	23	14%
>20 years	15	9%	Total	166	100%
Total	166	100%			
3. Education Background			7. Number of Employees		
Master	22	13%	20 - 99 employees	55	33%
Bachelor	110	66%	>100 employees	11	67%
Diploma	34	21%	Total	166	100%
Total	166	100%			
4. Job Title					
Director	4	2%			
Manager	63	38%			
Assistant Manager	49	30%			
Supervisor	50	30%			
Total	166	100%			

Source: Authors' own

Table 1 shows that most respondents are manager's level, with the working period between 11 to 20 years, and have a bachelor's education background. Furthermore, the majority role in their companies is in engineering, and the number of employees is between 20 to 99 employees. It means that the characteristics of the respondent are suitable for uncovering the research variables.

The validity and reliability test results

The quality of the data it is used validity and reliability test. The validity test results show in table 2. It shows that leadership style indicators (A11-A28), fintech collaboration indicators (B9-B17), and competitive advantage indicators (C18-C26) have a correlation coefficient greater than r -table for $n = 166$ respondents with a degree of freedom value of 164, that is 0.128. It indicates that all indicators as a measure of each construct of these variables are valid. It means that the respondent answers and understands all questions in the questionnaire according to the description of variables, dimensions and indicators. In other words, the questionnaire asks what the questions are going to ask following the intent of these questions.

Table 2. Validity Test Result

Item	Leadership Style Strategy (X)	Fintech Collaboration (Y)	Competitive Advantage (Z)	Remark
A11	0.654			Valid
A12	0.672			Valid
A13	0.702			Valid
A24	0.640			Valid
A25	0.663			Valid
A26	0.647			Valid
A27	0.759			Valid
A28	0.569			Valid
B9		0.553		Valid
B10		0.608		Valid
B11		0.538		Valid
B12		0.551		Valid
B13		0.530		Valid
B14		0.571		Valid
B15		0.514		Valid
B16		0.665		Valid
B17		0.525		Valid
C18			0.150	Valid
C19			0.580	Valid
C20			0.443	Valid
C21			0.511	Valid
C22			0.567	Valid
C23			0.609	Valid
C24			0.481	Valid
C25			0.466	Valid
C26			0.582	Valid

df > 0.128 =Valid

Source: Authors' own

Table 3 shows that by using Cronbach's Alpha approach, the reliability test results show that these measurements of three main variables can provide consistent results with a cut-off is 0.7. The most consistent respondent's answer is the answer to the leadership style variables. That means there is a reasonably high consistency in answering the questions in the questionnaire.

Table 3. Reliability test results

Variable	Cronbach's Alpha	Remark
Leadership styles	0,887	Reliable
Competitive Advantage	0.793	Reliable
Fintech collaboration	0.792	Reliable

$\alpha > 0.7 =$ Reliable

Source: Authors' own

Structural Equation Model

Based on the SEM model that has been fit, it can be tested on the hypotheses. The results of the SEM analysis of the full model can be seen in Figure 2. The figure informs that transactional leadership's direct effect on competitive advantage is more significant than transformational leadership. Collaboration with the fintech entity is the most significant direct effect on competitive advantage. Hence, transactional leadership's total effect through fintech collaboration on competitive advantage is also more significant than the total direct effect from transformational leadership. It means that from the respondent's perspective, transactional leadership and collaboration with fintech entities are more important to create a competitive advantage rather than implementing transformational leadership.

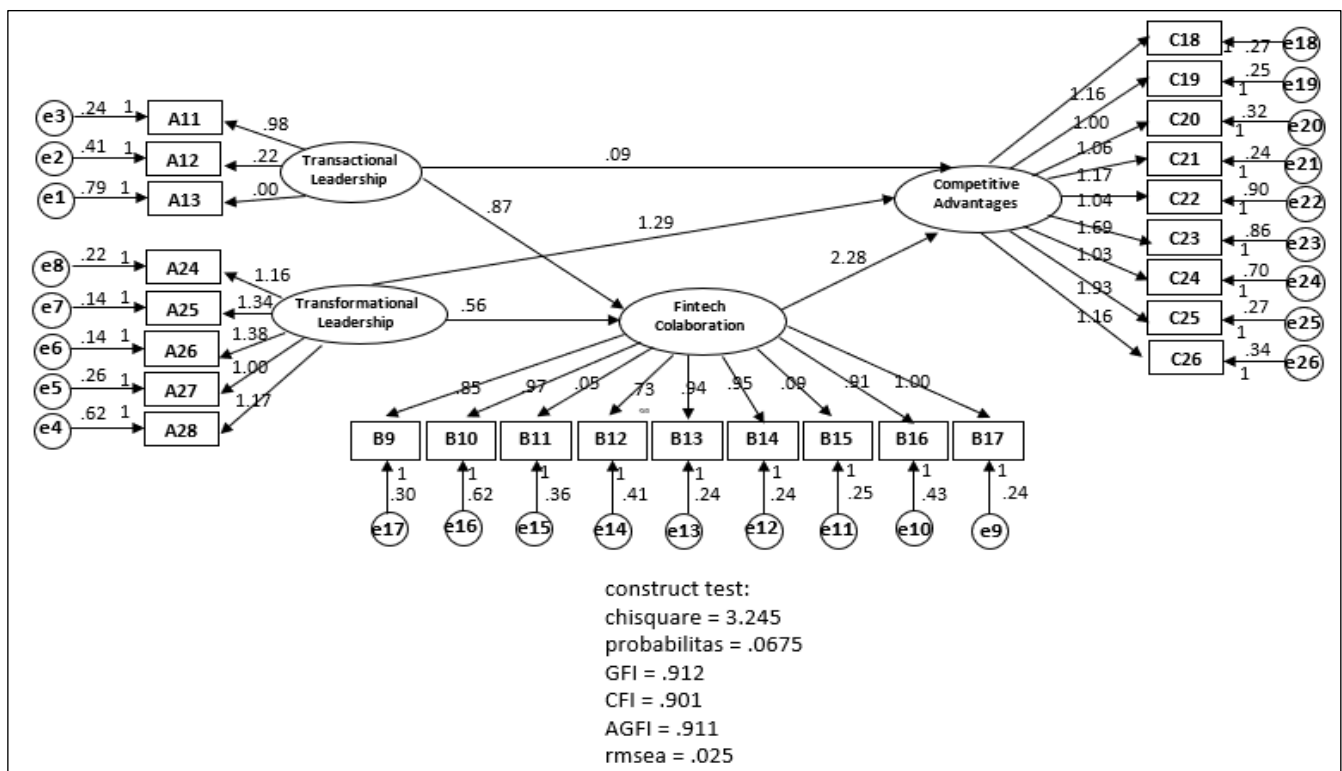


Figure 2. Full Model of Structural Equation

Source: Authors' own

In terms of the goodness of fit index, table 4 shows that the Chi-Square value is 3,245. It is greater than the acceptance level of 0.05. The probability value is 0.0675. It is greater than 0.05. CMIN / DF value is 1,865. It is smaller than 2.00. The GFI value is 0.912. It is greater than 0.90. AGFI value is 0.911. It is greater than 0.90. The TLI value is 0.905. It is greater than 0.90. CFI value is 0.90. It is equal to 0.90. The RMSEA value is 0.025. It is smaller than 0.08. Hence, all of the research model's measurement is good enough to explain the competitive advantage based on leadership styles and collaboration with fintech.

Table 4. The Goodness of Fit Index

The Goodness of Fit Index	Cut-off Value	Default Model	Evaluation Model
Chi-Square	Smaller seems a more accurate result.	3.245	<i>Good Fit</i>
Probability	$\geq 0,05$	0.0675	<i>Good Fit</i>
CMIN/DF	$\leq 2,00$	1.865	<i>Good Fit</i>
GFI	$\geq 0,90$	0.912	<i>Good Fit</i>
AGFI	$\geq 0,90$	0.911	<i>Good Fit</i>
TLI	$\geq 0,90$	0.905	<i>Good Fit</i>
CFI	$\geq 0,90$	0.901	<i>Good Fit</i>
RMSEA	$\leq 0,08$	0.025	<i>Good Fit</i>

Source: Authors' own

Hypothesis testing is done by looking at the value of C.R. (Critical Ratio). The regression weight is shown in Table 5. The ratio indicates that covariance factors have a significant relationship.

Table 5. Estimation Parameter Regression Weight Modification

Consequent	Antecedent	Estimate	S.E.	C.R.	P	Label
Fintech collaboration	← Transformational leadership	.564	.098	5.753	***	par_31
Fintech collaboration	← Transactional leadership	.874	.212	4.130	***	par_32
Competitive advantage	← Fintech collaboration	2.277	.583	3.906	***	par_33
Competitive advantage	← Transactional leadership	.0912	.134	6.808	***	par_34
Competitive advantage	← Transformational leadership	1.293	.321	4.031	***	par_35

*** means the probability is less than 0.05. It means the relationship is significant.

Source: Authors' own

C.R. is more significant than 1.967, which means there is a positive effect of antecedent on consequent.

Table 5 shows that transactional and transformational leadership have a positive and significant direct effect on competitive advantage. Furthermore, from estimation parameter regression, it can be seen that the effect of transformational leadership on competitive advantage is much greater than the effect of transactional leadership. Secondly, transactional and transformational leadership have a positive and significant effect on fintech collaboration. The estimation shows that the effect of transactional leadership on fintech collaboration (0.874) is greater than the effect of transformational leadership (0.564). It means that the effect is seen based on cost and benefit for collaborating with the fintech entity. Finally, collaboration with fintech entities has a positive and significant effect on competitive advantage. From all results, it shows that collaboration with the fintech entity has the most significant effect (2.277) on competitive advantage. In other words, there is a positive effect of leadership styles on competitive advantage (H_1), leadership styles on fintech collaboration (H_2), and fintech collaboration on competitive advantage (H_3).

Discussion

The results show that the transactional and transformational leadership style influence the creation of competitive advantage. The result is in line with the research of Devie et al. (2015), which stated that transactional leadership has a positive and significant influence on competitive advantage. Based on the study results, it means that leadership styles play a significant role to encourage the competitive advantage in the automotive, electronics, and food and beverage of medium and large companies, especially the transactional leadership style.

In terms of fintech collaboration, collaboration has the most significant effect on competitive advantage. It seems that the collaboration is a necessity to create a competitive advantage. This result is in line with Anning-Dorson (2018) that the fintech collaboration process is positively related to the company's competitive advantage and encourages the creation of corporate competitiveness. It also stated that talent and fintech collaboration empowered through a culture of cooperation and resonant transformational leadership become the main preconditions for business success in inter-personal digitalisation value chains and between organisations (Semolic & Steyn, 2018). However, in this result, competitive advantage is more created by transactional leadership rather than transformational leadership. It means that the choice in collaborating with fintech entity more based on considerations of transactional leadership. Moreover, success in creating a competitive advantage and producing good performance is very dependent on the company's success in collaborating with fintech. The automotive, electronics, and food and beverage industries in the Industrial Estate in West Java agree, through the respondent, that both transactional and transformational leadership styles can encourage innovative technology to create a competitive advantage for the company.

This research also proves a positive effect of the leadership style, fintech collaboration, and competitive advantage possessed by companies in determining collaborating with fintech entities. Zakaria et al. (2019) suggested a leadership approach and leader characteristics lead the Fourth Industrial Revolution. It means that

leadership is an essential factor in seeing the existence of fintech, and through corporate commitment driven by good leadership can support fintech implementation policies. This suggestion is in line with the research result that the three hypotheses show there is an impact of leadership styles on competitive advantage through fintech entity. It shows that leadership and collaboration are essential to encourage a competitive advantage. Also, Pradhan & Pradhan (2015) also stated a positive relationship between transformational leadership and organisational commitment. This commitment can be executed through the role of a leader. Therefore, the characteristics of leaders become crucial. Furthermore, Bibby & Dehe (2018) explained that openness to fintech collaboration is one of the conceptual frameworks in developing a competitive advantage. Empirically, the research results show that the existence of fintech is a necessity, and collaboration with fintech entities is a high consideration option to encourage competitive advantage.

Next, it is also crucial that the convergence of fintech towards a sustainable corporate goal platform through competitive advantage is possible, but this needs to require fintech collaboration and supporting policies from corporate leaders (Bonilla et al., 2018). As a result of the decision to collaborate with fintech entities, Schwab (2016) argued that by collaborating with the fintech, the company would create low-cost products, various products, and products that focus on specific segments. This research result also shows that collaboration with fintech entity could create a competitive advantage through cost leadership, product differentiation, and focus. Moreover, without mentioned a relationship with fintech, Porter in Fred & Forest (2016) stated that the strategy of excellence in facing market competition is cost leadership, differentiation, and focus strategy. With a competitive advantage, companies are expected to survive in the global competition in collaborating with fintech entity. The choice is whether cost leadership, differentiation, or focus strategy, or a mixture of the three strategies, to increase competitive advantage, is the domain of a leader in the company. Thus, the leadership style determines the company's ability to compete with other companies through collaboration with fintech entity. However, this research does not explore the way how to compete with other company through fintech and leadership styles.

Conclusion

Transactional and transformational leadership styles have a positive and significant influence on creating a company's competitive advantage. However, in this study, transactional leadership is a more dominant effect factor on competitive advantage rather (H_{1a}) than transformational leadership (H_{1b}). Furthermore, the transactional and transformational leadership styles have a positive and significant influence on the choice to collaborate with fintech entities. Likewise, collaboration with fintech entity has a positive and significant influence on competitive advantage. Moreover, the most dominant factor in encouraging fintech collaboration is transactional leadership. Collaboration with the fintech entity is more affected by the transactional leadership (H_{2a}) than transformational leadership (H_{2b}) to create a competitive advantage. Hence, collaboration with fintech entities can strongly mediate the effect of transactional leadership on competitive advantage (H_3). It means that fintech entities' existence is a necessity, and companies can address this by collaborating with the fintech entity.

From the results of this study, the company should be more considerate of working together with fintech entity. It also suggests that future studies can classify or make the level of each industry to obtain a comparative picture of the level of readiness of each manufacturing industry. Future research needs to consider variables that influence competitive advantage and fintech collaboration, such as human capital and culture, products, services, and technology. Future research needs to encourage government policy factors in the process of fintech collaboration. Transactional leadership seems business as usual approach. It is good, but it is still not enough to collaborate with fintech without innovation and transformation leadership.

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