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# Impact of Transforming Organizational Culture and Digital Transformation Governance toward Digital Maturity in Indonesian Banks

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#### **ABSTRACT**

The purpose of this research was to know and analyze the effect of transforming organizational culture and digital transformation governance on digital maturity in banks in Indonesia. The population in this research was bankers in Indonesian banks with a sample size of 611 respondents. The method used in this research was descriptive and explanatory survey method, and the data analysis method used was structural equation modeling with data analysis tools Lisrel 8.80. The results showed that transforming organizational culture and digital transformation governance simultaneously have a positive and significant effect on digital maturity with a contribution of 61%. The digital transformation governance partially has more dominant influence on digital maturity compared to transforming organizational culture. The managerial implication of the results of this study was that to reach higher digital maturity in Indonesian banks, leaders must emphasize in digital transformation governance with removing silos as the main dimension to focus on.

Keywords: Organizational Culture, Digital Transformation, Governance, Technology, Bank

JEL Classifications: O32, M54, N75

#### 1. INTRODUCTION

Digitalization that used to be just a technological change has been transforming into the way of life of people now. It has changed every people's experience, not only in products they use, but also interactions and interconnectedness between people (Shah et al., 2014). For corporations, the changes happen to people mean changes of customers needs and demand. It fundamentally changes the corporations approaches in making, selling, and connecting with customers. In almost all industries, more and more companies are transforming themselves into digital. Throughout the efforts, companies now achieves different level of digital maturity (Vickers, 2016).

Digital maturity is the measure of digital transformation level of companies. By measuring the digital maturity of a company, the company will be able to know to what extend it has transformed

into digital (Gill and VanBoskirk, 2016). The companies that transform into digital are not the companies who were born digital, like Amazon, Facebook, or Google, but the companies in the industries that have been existing before the digital disruption time, ranging from financial industries, telecommunications, manufacturing, to pharmaceuticals.

The ways to measure the digital maturity of companies are different from one institute to the others. Delloitte (Kane et al., 2015) measured digital maturity in companies that they researched by relying on the assessment done by the employees of the companies themselves (internal assessment). They asked the respondents to rate their own company by 1-10 scale by benchmarking towards their own imagination of an ideal organization transformed by digital technologies and capabilities that improve processes, engage talent across the organization and drive new value-generating business models. Forrester Research (Gill and VanBoskirk, 2016) measured

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the digital maturity of companies also by using questionnaires answered by the employees of the companies themselves. However, Forrester Research used more detailed questions, which covered four aspects of the companies: (1) Culture; is the company's approach on digital driven innovation, and the way it empowers the employees by digital technology; (2) Organization; the level of alignment to support digital strategy, governance, and execution; (3) Technology; how good the company can adopt and use digital technology; (4) Insights; the ability of the company in data analytics to form strategy and measurements.

Based on The Microsoft Asia Digital Transformation Study results, 90% of Indonesian business leaders agreed that every organization needst to transform into a digital business (Karnadi, 2017). Among the Indonesian companies surveyed, 27% said that they have a digital strategy in place, 51% are progressing, and 22% have a limited or no digital strategy. According to The Economist Intelligence Unit (2016), Indonesia ranks number 11 or the worst in Asian Digital Transformation Index, and amongst the various factors, the weakest factor in Indonesia is the Human Capital factor. These weaknesses are even worsened by a compounding factor of the lack of understanding of the business leaders about the nature and requirements for digital transformation.

Among businesses, financial institutions are at the top riskiest businesses that is undergoing digital disruption after hospitality, retail, and media and entertainment, industries (Bradley et al., 2015). Bradley also mentioned that although the threat of digital disruption can be very severe to those industries, as worst as the total industry replacement, only few percentage of the companies' leadership that are actively responding to this situation. Research report done by CB Insights (2015) showed how banking services were under attack by financial technology companies, that unbundled the services of banks into specialized services with better customer propositions. This relatively new fin-tech companies can offer much more efficient thus cheaper services using the technology and new business models. Some of the most profitable services of banks like money transfer and loans are taken away by these fin-tech companies.

In Asia, the situation is a little different, because of several different factors in comparison to developed countries such as the US, European countries, and Japan. In Asia, especially emerging Asian countries such as India, the Philippines, or Indonesia, people prefer to have financial services from banks and through physical branches for security reasons and cultural reasons. However, the percentage of the population that cannot be reached is still high, therefore, many technology companies are trying to serve those who cannot be reached, for the financial services they usually need from bank. Another challenge for banks in Asia according to the World Bank is that 20% of people who do not have bank accounts mentioned that distance as a barrier for them to have bank accounts. So, even though competition from financial technology (fintech) companies for their customers is currently not as high as in developed countries, banks in Asia still need to transform themselves into digital to serve the people and to survive in the future. For them, changing into digital is very important for cost efficiency, competitiveness, and increasing customer contact (Deorukhkar and Xia, 2015).

The internet penetration are growing significantly in Indonesian population, as much as 35% in year 2015 and expected to grow almost double to 68% in year 2020. That is followed by the ownership of digital devices like personal computers, laptops, smartphones, and tablets. In year 2016, the number of smartphones sold was already 85% of the number of Indonesian population. The changes in the digital lifestyle provide opportunities for banking industry to expand its service coverage to more Indonesian population, through the digital channels. At the same time, the customers' expectations are also demanding more digital approach (Samosir and YCP Group, 2017).

#### 2. LITERATURE REVIEW

# 2.1. Transforming Organizational Culture

Rigby (2015) defined Employees Engagement as the employees involvement -intellectually and emotionally- and enthusiasm about their work and company. Engaged employees will help to create satistied and loyal customers, and improved business performance. Since digital transformation should involve the whole organization, every function therefore every person in the organization, a successful digital transformation should be able to engage every and each employee in the organization. The employees need to be energized, be enthusiast and be involved in the transformation process. However, digital transformation should face the organizational culture that has been existing (Westerman et al., 2014). Therefore the new digital culture has to be installed deliberately, and starts with the top executives behavior. The new digital culture should embrace digital approaches and multichannel capabilities. It takes time to develop a digital corporate culture; the sooner a company acts, the more quickly it will be in a position to compete in this fast-paced, digitized, multichannel world. The dimensions and indicators of Transforming Organization Culture are:

- 1. Creating Sense of Urgency with indicators: present real figures to people, sent clear message of crisis, and move fast and bold.
- 2. Communicating with indicator: positive messages, using many channels of communication, and all levels exposed
- 3. Overcoming Resistance with indicator: removing barriers and building digital competencies.

As mentioned also by Amin et al. (2018), the interaction among the group members will be highly affected by the prevailing culture in the organizations, flexible cultures will definitely encourage the group work, and if the members belong to other cultural backgrounds then it also will not matter.

# 2.2. Digital Transformation Governance

Digital Transformation Governance is steering the digital activities of the company in the right direction by synchronizing diverse energy of the employees throughout the organization into a coherent engine that drives the digital transformation forward (Westerman et al., 2014). The dimensions and indicators of Digital Transformation Governance are:

1. KPI aligned with digital transformation strategy, with indicator: clear roles and responsibilities, digital measurement, and speedy feedback

- Removing Silos with indicator: all departments know and work together for company's priority, using shared people, technology, and data for the entire organization, there is a joint committee that oversees the policy and allocates resources
- Reward structures aligned the digital transformation goals with indicator: personal advancement, awards and Recognition, and financial Rewards.

# 2.3. Digital Maturity

Digital Maturity is defined as the level of how much a company has transformed itself into digital, which means how much digital approach has been integrated in every aspect of the company's life, including the human practises (Fitzgerald et al., 2013; Kane et al., 2015; Gill and VanBoskirk, 2016). Fitzgerald et al. (2013) defined Digital Maturity as the level of digital transformation, which are using new digital technologies to to enable major business improvements. Kane et al. (2015) defined organization's Digital Maturity as the integration of digital technology, including social media, mobile, analytics, and cloud, in transforming how the company's business work.

Gill and VanBoskirk (2016) defined Digital Maturity as the level of a company business digital transformation by embedding digital capabilities into the very heart of the business, making digital as core competency, not just an accessory. To achieve that, the company should focus on three keys of functions, which are; developing digital strategy, governing digital activities accross the company, and driving operational excellence into the execution. Gill and VanBoskirk gave the example of Neiman Marcus that is real-time insights at work. Its app uses beaconing technology to notify associates when a preferred shopper enters the store. Through the app, associates can view a customer's past purchases and favorite products in order to service them appropriately. This dedicated service breeds loyalty; Neiman Marcus found that customers who shopped with the same associate three times or more, spent almost 10 times more than average.

Based upon references above, this paper defines Digital Maturity as the level of digital transformation in every aspect of the business strategy and processes to create major business improvements of the company's business. The measured Digital Maturity by three dimensions:

- Using New Digital Technology in improving Customers Experience, with indicator: Applying analytics based segmentation, using socially-informed knowledge, digitally-enhanced selling modes, applying predictive marketing, applying streamlined customer processes, using digital customer service, using digital to get cross-channel coherence, digital self-service.
- Using New Digital Technology in improving Operational Excellence, with indicator: Performance improvement by digital technology, new features of processes by digital technology, workers can work anytime anywhere, broader and faster communication, digitally assited community knowledge sharing, digitally assited operational transparency, data-driven decision making.
- 3. Using New Digital Technology in changing Business Model, with indicator: Digitally augmentation of products/services,

transitioning physical to digital, digital wrapping of products/ services, new digital products, reshaping organizational boundaries, digitally enabled enterprise integration, redistribution of decision authority, shared digital service.

# 2.4. Conceptual Framework

Transforming organizational culture has influence on digital maturity. The increase or higher transformation of organizational culture will be able to improve digital maturity. Digital transformation governance has influence on digital maturity. Increase or higher digital transformation governance will be able to improve digital maturity. Transforming organizational culture and digital transformation governance together have influence on digital maturity. The overall theoretical interpretation of the results of this study is the main path to improve the digital maturity as see in Figure 1.

# 2.5. Hypothesis

Based on the description of the framework at Figure 1 and referring to the research model above, the research hypothesis is as follows:

- 1. There is an influence of transforming organizational culture on digital maturity in Banks in Indonesia
- 2. There is an influence of digital transformation governance on digital maturity in Banks in Indonesia
- There is an influence of transforming organizational culture and digital transformation governance simultaneously on digital maturity in Banks in Indonesia.

# 3. METHODOLOGY

The research method used is descriptive method of survey and explanatory survey. The type of investigation in this study is causality, which is the type of investigation which states the relationship between the transforming organizational culture variables and the digital transformation governance variables partially or simultaneously on digital maturity. The object of research which is the independent variable in this research is the transforming organizational culture and the digital transformation governance. While the dependent variable is digital maturity. The nature of this research is descriptive and verification.

**Transforming** Organizational Culture Creating Sense of Urgency Communicating Overcoming **Digital Maturity** Resistance Customers Experience Operational Excellence Business Model Digital Transformation Governance KPI Removing Silos Reward structures Assurance

Figure 1: Framework

Population is an object that is in an area and meets certain conditions related to research problems. The type of population used in this research is a limited population, which is a population that has a quantitatively clear data source that can be counted. In this research the analysis unit was is a banker in banks in Indonesia, amounting to 113 banks. Related to the rule of thumb in SEM, Hair et al. (2010) state that in determining sample size, there is a minimum ratio of 5 respondents for each parameter in the study, or 10 respondents for each parameter, or 15 respondents for each parameter. Based on the rule of thumb in the SEM, the comparison of 5: 1 is used in this study. This study has 63 parameters (indicators), so the minimum sample size is 315 respondents. Thus, the minimum size of samples taken in this study was 315 respondents. Furthermore, the sampling technique used in this study was a saturated sampling technique (census). Saturated sampling/census technique is a sampling technique if all members of the population are used as samples according to (Sugiyono, 2013). So that the sample used in this study is the whole of the amount of income that is all banks in Indonesia.

#### 4. RESULTS AND DISCUSSION

#### 4.1. Results

Based on Table 1, all model conformity indices have a measure of the suitability of the measurement model with a good match category, which exceeds the minimum suitability of the model. Full model of SEM equation by using LISREL 8.80 program obtained

Table 1: Model suitability index

<b>Indicator GOF</b>	<b>Expected size</b>	Result	Conclusion
Ukuran absolute fit			
GFI	GFI>0.90	0.97	Good fit
RMSEA	RMSEA<0.08	0.067	Good fit
Ukuran incremental fit			
NNFI	NNFI>0.90	0.99	Good fit
NFI	NFI>0.90	0.99	Good fit
AGFI	AGFI>0.90	0.94	Good fit
RFI	RFI>0.90	0.98	Good fit
IFI	IFI>0.90	0.99	Good fit
CFI	CFI>0.90	0.99	Good fit

two models, namely standardized model and t-values model, each model as shown in the following Figure 2.

Based on Table 2, Figures 2 and 3, SEM model measurement analysis based on the two models above in each variable shows that all indicators in the formation of exogenous latent variables transformation oranizational culture and digital transformation digital; and endogenous latent variables digital maturity have good validity, this is indicated by all indicators having Standardized Loading Factor (SLF)  $\geq$ 0.5 and t count  $\geq$ 1.96 (at  $\alpha$  = 5%) (Hair et al., 2010). Measurement of reliability of exogenous and endogenous latent variables has good model reliability, it is indicated by all variables having construct reliability values >0.70 (CR >0.70) and extract variance values >0.50 (VE >0.50) (Hair et al., 2010).

- 1. Base on Table 3, the path coefficient value of the transforming organizational culture variable on digital maturity is 0.22 with a t-value of 4.39 > 1.96, so that it can be said to be significant. The path coefficient value shows that the magnitude of the effect of the transforming organizational culture on digital maturity is 0.22 with a coefficient of determination of 0.0484. Based on the testing of these hypotheses, the transforming organizational culture proved to have a positive and significant effect on digital maturity.
- 2. Base on Table 3, the path coefficient value of the digital transformation governance variable on digital maturity is 0.60 with a t-value of 11.09 >1.96, so that it can be said to be significant. The path coefficient value shows that the magnitude of the effect of the digital transformation governance on digital maturity is 0.60 with a coefficient of determination of 0.3600. Based on the testing of these hypotheses, the transforming organizational culture proved to have a positive and significant effect on digital maturity.
- 3. Base on Table 3, the coefficient of determination (R<sup>2</sup>) transforming organizational culture and digital transformation governance simultaneously towards digital maturity is 0.61, so that it can said to be significant. The magnitude of the coefficient of determination (R<sup>2</sup>) shows that the magnitude of

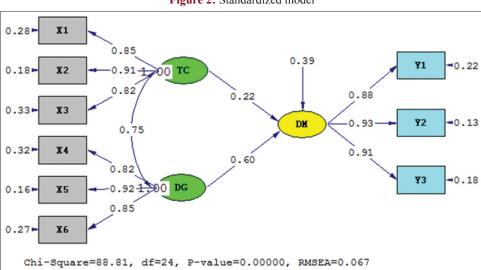


Figure 2: Standardized model

Figure 3: t-value model

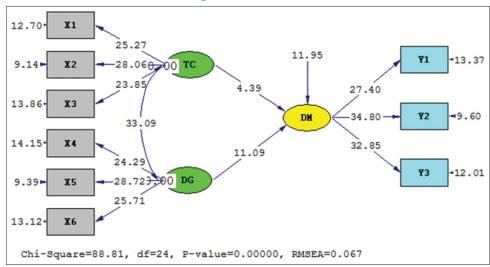


Table 2: Measurement analysis of SEM model

Measurement model		SLF	STD. error	t-value	Construct	Extract
Variabel laten	Indicators		(SE)		reliability (CR)	variance (VE)
Transforming organizational culture (TC)	Creating a sense of urgency (X1) Communicating (X2) Overcoming resistance (X3)	0.85 0.91 0.82	0.034 0.032 0.034	25.27 28.06 23.85	0.985	0.957
Digital transformation governance (DG)	KPI aligned with digital transformation strategy (X4)	0.82	0.034	24.29	0.985	0.958
	Removing silos (X5) Reward structures aligned the digital transformation goals (X6)	0.92 0.85	0.032 0.033	28.72 25.71		
Digital maturity (DM)	Using new digital technology in improving customers experience (Y1)	0.88	0.032	27.40	0.988	0.966
	Using new digital technology in improving operational excellence (Y2)	0.93	0.027	34.80		
	Using new digital technology in changing business model (Y3)	0.91	0.028	32.85		

the contribution of the influence of transforming organizational culture and digital transformation governance simultaneously to 61% of digital maturity, while 39% is a large influence outside the variable transforming organizational culture and digital transformation governance. The most dominant variable influencing digital maturity is the variable digital transformation governance.

# 4.2. Discussion

Digital transformation obviously is the next frontier for banks in emerging Asia to conquer. Emerging Asian countries like Indonesia has higher digital banking penetration rate than the developed Asian countries. (Deroukhkar, 2015) Indonesia indeed has a big opportunity for Digital Banking which can provide a better penetration of banking services to more people with more efficient costs and wider penetration geographicaly. The data showed that in 2017 (Samosir and YCP Group, 2017), 50% of Indonesian adults did not have a bank account, 60% financial transactions were concentrated in Java island, the majority of transactions (85%) were carried out in cash while government is pushing toward cashless transaction, and an estimated USD 75 billion financing gap was needed to be addressed. While on the

**Table 3: Structural equation model** 

Structural equation	Error, Var.	Determination					
DM=0.22*TC+0.60*DG,	Error, var.=0.39,	$R^2=0.6$					
(0.051)(0.054)	(0.033)	(0.001)					
4.39	11.09	468.36					
Correlation matrix of independent variables							
Variables	TG	DG					
TG	1.00	1.00					
DG	0.75						
t value	(0.02)						
	33.09						

other side, Indonesian adoption on smart phone is very high and continues to increase every year.

Indonesian Banker Association research in 2018 (Hie, 2018) found that most CEOs (84%) in Indonesian Banks considered very important (score 5 out of 5 scale) to transform into digital, and the rest (16%) chose important (score 4 out of 5 scale). It means that digital transformation is in high priority for Indonesian Banks. While on the reasons and motivational sides are confirmed, we come to the next question; how to execute digital transformation in the most effective and efficient way. The same research (Hie, 2018)

revealed that the number one hurdle for the digital transformation according to the CEO's of Indonesia Banks is human resources aspects. We understand that in the digital transformation, without having the people ready and committed, the transformation can be stalled or get lost.

Most of researches and experts opinion mentioned that the most important thing to do in digital transformation of companies is to transform the culture (Fitzgerald et al., 2013; Gill and VanBoskirk, 2016; Kane et al., 2015, Westerman et al., 2014). To make a good comparison between this paper and the researches of those authors, we must first examine the definitions of the variables:

Gill and VanBoskirk (2016) put it as the first of the four dimensions that a company should address in digital transformation, namely: (a) Culture; a company's approach to digitally driven innovation, and how it empowers employees with digital technology, (b) Technology; a company's use and adoption of emerging technology, (c) Organization; how aligned a company to support digital strategy, governance and execution, (d) Insights; how well a company uses customer and business data to measure success and inform strategy. Although the authors (Gill and VanBoskirk, 2016) has their own definition of 'culture' and 'governance', more or less the understanding is similar to the definition of 'culture' and 'governance' in this paper.

Kane et al. (2015) mentioned that the key finding of their research was that the key differentiating factors of digital transformation success were a clear strategy, culture, and leadership. Their definition of 'culture' in their research was also similar to the definition mentioned in this paper.

Fitzgerald et al. (2013) concluded based on their research that the most frequently stated obstacle to digital transformation was 'lack of urgency' which is one of the dimensions (creating a sense of urgency) in the definition of 'transforming organizational culture' in this paper. Furthermore they emphasized that the CEO's commitment to put digital transformation in the priority agenda made a difference in the success of a company's digital transformation.

Westerman et al. (2014) put transforming organizational culture as one of the four pillars in leading digital transformation, namely: (a) Digital Vision; the vision projected by the top management about the future of the company after the digital transformation, (b) Engaging the organization at scale; how to engage the whole empoyees to the digital vision of the companies by communicating to them inspiratively and install digital way of working, (c) Digital Governance; aligning decisions in the company to achieve effective and efficient company-wide actions, (d) Building technology leadership capabilities; integrating IT people and business people into a team with customer centric focus. The definitions of 'transforming organizational culture' in this paper resembles Westerman's explanations about 'engaging the organization at scale' and the definition of 'digital transformation governance' in this paper is quite similar to the explanation of Westerman's 'digital governance'

# **4.3.** Theoretical Interpretations

From the model and statisctical results, we can derive some theoretical interpretation:

- 1. Transforming organizational culture has a positive and significant influence on digital maturity in banks in Indonesia. This shows that the increase or higher transformation of organizational culture will be able to improve digital maturity. The dimensions that most strongly reflect transforming organizational culture are the dimensions of communicating with all levels exposed, while the strongest dimensions reflecting digital maturity are using new digital technology in improving operational excellence with indicators of performance improvement by digital technology.
- 2. Digital transformation governance has a positive and significant influence on digital maturity at the Bank. This shows that an increase or higher digital transformation governance will be able to improve digital maturity. The strongest dimensions reflecting digital transformation governance are dimensions of removing silos with indicators using shared people, technology, data for the entire organization, while the dimensions that most strongly reflect digital maturity are using new digital technology in improving operational excellence with indicators of performance improvement by digital technology.
- 3. Transforming organizational culture and digital transformation governance together have a positive and significant influence on digital maturity in banks in Indonesia with a coefficient of determination (R2) of 61%, this shows that 61% of the digital maturity variables are able to be explained together by variables transforming organizational culture and digital transformation governance. Digital transformation governance variables that are reflected in the dimensions of removing indicator silos using shared people, technology, data for the entire organization are part of the most dominant variable in increasing digital maturity reflected by high digital technology in improving operational excellence with indicators of performance improvement by digital technology.
- 4. The overall theoretical interpretation of the results of this study is; the main path to improve the digital maturity of banks reflected in dimensions "using new digital technology in improving operational excellence" is to improve the "digital transformation governance" that is primarily reflected in the dimension of "removing silos," as well as being supported by improving 'transforming organizational culture' mainly reflected by the dimension of "communicating."

# 4.4. Management Implications

The results of our research showed that digital transformation governance variable influences digital maturity more than transforming organizational culture variable with a quite high coefficient difference (0.60 vs. 0.22). It means that a leader will get higher effectiveness when he move the company's priority to digital transformation governance. This doesn't mean that transforming organizational culture is not important, however the results of our research showed that by doing digital transformation governance the company might influence the culture transformation (correlation coefficient between the two variables is 0.75), and together they made the determinant coefficient as much as 0.61,

meaning contributes to 61% of factors needed to achieve digital maturity as defined in this research.

The digital transformation governance variable in this research consists of dimensions: (a) Setting up Key Performance Indicators (KPI) that aligns with the digital transformation direction and goals, (b) removing silos between departments so that they work together in digital way, and (c) assuring reward structures aligned with the digital transformation direction and goals. These are the fundamentals that every leaders should do to make digital transformation happens as measured as digital maturity index. It also implies that culture transformation will be easier to be done when the rules of the game reflected by KPI, rewards, and work structures, are set up. It is like when you want a group of people to move themselves from one place to another, it is more effective when you have already made the clear and visible signs for the track they should take. From the three dimensions of digital transformation governance, removing silos has the highest loading factor, it means leaders should take serious and bold actions to change the formal structures of the work process, which conventionally build departmental walls. The new ways of working in digital setting is agile and dynamic interfunction teams, which often referred as 'scrum process'. KPI and reward structures then should follow this way of working design.

# 5. CONCLUSION

As a conclusion, we have a big insight from this study, that can give a strong impact of leadership effectiveness in managing digital transformation, that is; to reach digital maturity as the measure of the advancement of digital transformation, leaders should set up the digital transformation governance first, which will lend a strong power for transforming organizational culture. This may help especially for leaders who often clueless on fighting the problem of changing the culture of their people, and don't know where to start. The three dimensions of digital transformation governance, which are setting KPI, removing silos, and assuring reward structures, are also intertwin to each other. This reseach also showed where to start, that is to remove silos first, by creating a new way of working that is agile and interfunctional working teams. The KPI set should be based on that new way of working with its goals, and then the reward structures tied to it.

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