

SUSTAINABLE DIGITAL TRANSFORMATION IN HOSPITALITY INDUSTRY: STUDY OF THE HOTEL INDUSTRY IN INDONESIA

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Abstract-This study presents and examines an integrated model that investigates the ability of the hospitality industry leaders in Indonesia to reconfigure resources such as digital market capabilities, digital leadership capabilities, and digital technology capabilities, to conduct sustainable digital transformation to build and improve engaging customer strategy. Research was carried out in Jogjakarta Province using a purposive technique sample of 101 hotel and resort leaders. The analytical method used multiple linear regression using SPSS version 23. The results show that hospitality industry leaders must rethink the dimension of customer experience, internal operation, and new business model. They must have cohesive strategy in integrating digital and physical elements in order to be able to transform their business model and set direction for the entire industry. Hospitality industry leaders must also focus on two complementary activities: sharpening customer value proposition and transforming their operating models using digital technology to interact and collaborate with their customer. From the managerial aspect this study contributes that managers must focus on factors such as digital market capabilities, digital leadership capabilities, and digital technology capabilities that determine the succes of digital transformation in order to build and increase customer engagement.

Keywords- *market, leadership, digital, transformation, customer*

I. INTRODUCTION

The Alvara Research Center Outlook 2018 stated that, Indonesian economy formed a new economic ecosystem: leisure economy. Leisure economy is an economy based on creativity, entertainment, and creation of experience with the main platform based on digital (Linda Nazareth, 2007). This is in line with the growth of new customer, urban middle-class millennials, who prioritise experience and interaction in using or consuming a product or services. The

consumption pattern shifts towards "experience-based consumption". This shift has begun since 2015. The Central Bureau of Statistics (BPS) 2018 noted that the consumption of restaurant and hotel growth by 5.87%, higher than the growth in household consumption which was at 4.93%. The Nielsen study (2015) shows that millennials which are the dominant consumers in Indonesia today (reaching 46%) spend more money on lifestyle and experience needs such as: watching cinema, recreation, body care, face care, and hair style. This shifting economy affects the growth of tourism in Indonesia. According to the BPS (January-September 2017), the number of foreign tourists visiting Indonesia reached 10.46 million. This increase 25.05% compared to foreign tourists visiting the same period in 2016 which amounted to 8.36 million visits.

The disruption of digital technology has affected several sectors such as transportation services, conventional retail business and the hospitality industry. The emergence of travel and accommodation applications such as AirBnB, Foursquare, Traveloka.com, and Tiket.com have affected the hospitality industry. The problem is application trips based on Android usually provide information about hotels or resorts at low prices. AirBnB currently offers services at very cheap prices because it is managed by individuals (private).

II. LITERATURE REVIEW

According to Valanto (2012), there are four components of digital market capabilities: first, to understand customer needs and actions needed to collect and process knowledge about customers. Second, companies need to satisfy customer needs through offering appropriate product features. Third, focus on customer relationships, means the ability to identify and serve customers and build customer loyalty. Fourth, communication with customers requires an appropriate channel. In the digital age, customer engagement is very important. An understanding of how marketing activities emphasize

engagement as one of the main priorities. Mogos (2015) emphasize that customer behavior is "a multidimensional concept that includes all decisions on actions taken both on individuals and groups that are directly related to the collection and use of goods and services to fulfill both current and future desires including the decisive decision making process action". Solis (2016) identified three main elements of digital transformation: understanding digital customer experience, transforming the company's vision and leadership, and building a digital transformation team. He stressed that customer do not see mobile phones as mere channels. For them mobile phones are a lifestyle.

A. Hypothesis 1: Digital market capabilities have a positive affect on sustainable digital transformation

Benis (2013) identified that digital business strategy is an important issue for leadership. Access to abundant information will make things transparent. Benis (2013) argues that one of the important things as an effective leader is adaptive capacity. The term adaptive capacity refers to several characters: resilience, which is returning effectively and rising from adversity or difficulty, openness to something new, willing to sacrifice to try something new, trying hard to get something new, being able to learn from failure. The quality of adaptive capacity also includes feeling optimistic about what needs to be done and tried. This does not mean adopting blindly every innovation, but must be sure the power of digital technology in changing the way to lead and manage. According to Westerman et al. (2011) many experts encourage companies to embark on a journey of digital transformation through digital technology. This is done because companies face pressure from customers, employees and competitors to start or accelerate their digital transformation. Digital transformation initiatives stress on customer experience, operational processes and business models. In this context, leadership plays a very important role.

B. Hypothesis 2: Digital Leadership capabilities have a positive affect on sustainable digital transformation

According to O'Hea (2011) digital technology has brought changes in various business functions, not only in the marketing function, but also includes business structures, systems, processes, and especially human capabilities that must be used to exploit business opportunities in the digital era. Organization needs to develop digital capabilities and objectives for digital capability assessment will contribute to increasing business value. Organizations that understand these opportunities and learn to measure and develop their digital capabilities will find themselves in a better position to compete in the digital economic era. Digital transformation, according to

Westerman et al. (2011) is the use of technology to radically improve performance. Executives in all industries use digital developments such as analysis, mobility, social media and intelligent equipment, and develop the use of traditional technologies to change customer relationships, internal processes, and value propositions.

C. Hypothesis 3: Digital technology capabilities have a positive affect on sustainable digital transformation

Vivek (2012) emphasizes that customer engagement is "the intensity of individual participation in the relationship with what the organization offers and or organizational activities. Brodie (2013) identified three dimensions of customer engagement: cognitive, emotional, and behavioral. Bellman (2011) analyzes the branded apps and indicates two application categories: informational and experiential. The contents of an informational application provide a utilitarian or functional experience, and make customers reach their goals more. The experiential side of offering experiential-based incentives provides intrinsic excitement and entertainment. According to Bellman (2011) the motive for engaging with mobile application is "relaxing and relieving stress". Utilitarian and experience-based motives correlate with the types of functional and hedonic motivation as Kim identified (2013). Functional motivation is seen in aspects of efficiency, ease of use, time saving, while hedonic is seen in fun, pleasure, and pleasure. According to Zhang (2014), customer sociability occurs through reciprocal interaction in the social environment, which appears as a platform for customers with similar interests, where they recommend and comment on various services. During interactions, customers build their online identities and form networks to achieve social benefits such as social support, friendship and intimacy.

D. Hypothesis 4: Sustainable digital transformation has a positive affect on engaging customer strategies

From the review of various theories and previous research as well as the phenomenon of the hospitality industry in Indonesia, a research model is developed:

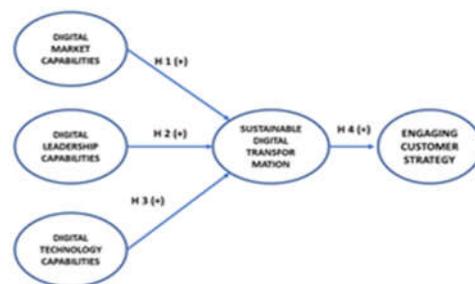


Fig 1. Engaging customer strategies

III. RESEARCH METHODOLOGY

Research was carried out in Jogjakarta Province using a purposive technique sample of 101 hotels and resorts leaders. Jogjakarta was chosen because it is the second largest tourist destination in Indonesia after Bali. Respondents in this study were hotel leaders and resorts owners. Hotel leaders are chosen because they have the ability to evaluate innovation initiatives in improving company performance. The type of data collected is quantitative, and data obtained directly from respondents determined from the beginning.

Data was collected by distributing questionnaires directly to 101 hotel leaders and resorts owners. The distribution of questionnaires was carried out between April and July 2018. In this study the indicators of the questionnaire used were based on previous research that was indexed by Scopus, and used a four-point Likert scale. Five-step analysis conducted in this research: descriptive statistics, quality test instrument (validity and reliability testing), classic assumption test (multicollinearity, heteroscedasticity test, normality test, linearity), data analysis (multiple regression analysis, F-test, t-test, R² test), and Research Hypotheses Test. The analysis of this study used SPSS version 23.

IV. RESULT AND DISCUSSION

A. Validity and Reliability Test

According to Chin in Ghazali (2012) a variable have good validity towards latent constructs if: (1) Loading factor load (λ) ≥ 0.5 , (2) T-Statistics value > 1.96 (greater than critical value). The results of the study (table A), is valid because it meets the required requirements. The rule of thumb used to assess the reliability of a construct is the value of Cronbach's Alpha must be greater than 0.70 and the value of Composite Reliability must be greater than 0.70, and if it is above 0.80 it is very satisfying (Ghozali, 2012). The results of this study (table B) the Cronbach's Alpha value meets the requirements.

TABLE 1. VALIDITY

Correlations	Y	Z	X1	X2	X3
Y Pearson Correlation	1	.348**	.568**	.494**	.491**
Sig. (2-tailed)		.000	.000	.000	.000
N	101	101	101	101	101
Z Pearson Correlation	.343**	1	.512**	.713**	.464**
Sig. (2-tailed)	.000		.000	.000	.000
N	101	101	101	101	101
X1 Pearson Correlation	.568**	.512**	1	.698**	.804**
Sig. (2-tailed)	.000	.000		.000	.000
N	101	101	101	101	141
X2 Pearson Correlation	.494**	.713**	.698**	1	.696**
Sig. (2-tailed)	.000	.000	.000		.000
N	101	101	m	101	101
X3 Pearson Correlation	.491**	.464**	.804**	.696**	1
Sig. (2-tailed)	.000	.000	.000	.000	
N	101	101	101	101	101

TABLE 2. RELIABILITY TEST

Case Processing Summary		
	N	%
Cases Valid	101	100 .0
Excluded ^a	0	.0
Total	101	100 .0
a. Listwise deletion based on all variable in the Procedure		
Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Item	N or items
.967	.969	.36
Item Statistic		

B. Multicollinearity Test

The result of multicollinearity test is the comparison of tolerance value and variance inflation factor (VIF) with the required value. Typical values used to indicate the presence of multicollinearity is tolerance value $\geq 0,10$ or equal to the value of VIF ≥ 10 (Ghozali, 2013). The result is seen in the table C below:

TABLE 3. MULTICOLINERITY TEST

Model	Coefficient ^a					Collinearity Statistics	
	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Tolerance	VIF
	B	Std. Error	Beta				
1(Constant)	2.916	1.963		1.485	.141		
X1	.101	.116	.100	.869	.387	.316	3.166
X2	.573	.082	.727	6.979	.000	.461	2.167
X3	-.102	.099	-.131	1.040	.301	.313	3.148

^aDependent Variable Z

Model	Coefficient ^a					Collinearity Statistics	
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Model	B
	B	Std. Error	Beta				
1 (Constant)	7.236	4.394		1.658	.101		
X1	.733	.257	.421	2.847	.005	.313	3.191
X2	.294	.223	.197	1.321	.190	.307	3.255
X3	.035	.220	.024	.161	.873	.314	3.183
Z	-.036	.225	-.019	-.161	.873	.430	2.057

^aDependent Variable Y

C. Heteroscedasticity Test

Heteroscedasticity test aims to test whether inequality of residual variance occurs in the regression model from one observation to another observation. It is good if heteroscedasticity does not happen by seeing a graph of the plot between the predicted value of the dependent variable with residual (Ghozali, 2013). The result is seen in the table D below:

Table 4. Heteroscedasticity Test

Modal	Unstandardized Coefficients		Standardized Coercieras	t	Sig.	Collinearity Statistics	
	B	Std Error	Bata			Tolerance	VIF
	1 (Constant)	2.916	1.963				1.485
X1	.101	.116	.109	.869	.387	.316	3.166
X2	.573	.082	.727	6.979	.000	.461	2.167
X3	-.103	.099	-.131	1.040	.301	.313	3.148

^a Dependent Variable Z

Coefficient ^a

Modal	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
	1 (Constant)	7.286	4.394				1.658
X1	.733	.257	.421	2.847	.005	.313	3.191
X2	.294	.223	.197	1.321	.190	.307	3.255
X3	.035	.220	.024	.161	.873	.314	3.133
Z	-.036	.225	-.019	-1.161	.250	.430	2.057

^aDependent Variable Y

D. Normality Test

Normality test aims to testing whether a regression model of independent and dependent variables has a normal distribution with normal probability plot (P-Plot). If the distribution of the residual data is normal, then the line that represent the actual data will follow a diagonal line, so it can be said that the regression model meet the assumptions of normality (Ghozali, 2013).

Table 5. Normality Test One-Sample Kolmogorof-Smirnov Test Dependent Variable Z

	Unstandardized Residual
N	101
Normal Parameter ^{a b}	
Mean	.0000
Std. Deviation	2.30441
Most Extrmw Differences	
Absolute	.085
Positive	.065
Negative	-.085
Test Statistic	.085
Asym. Sig. (2-tailed)	.070

- a. Test distribution is Normal
- b. Calculated From data
- c. Lilliefors Significance Correction

	Unstandardized Residual
N	101
Normal Parameter ^{a b}	
Mean	.0000
Std. Deviation	4.85405
Most Extrmw Differences	
Absolute	.090
Positive	.090
Negative	-.083
Test Statistic	.090

Asym. Sig. (2-tailed)	.044 ^a
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- a. Test distribution is Normal
- b. Calculated from data
- c. Lilliefors significance Correction

E. Coefficient of Determination

R² value is strong if in explaining the variation of the independent variables on the dependent variable, the value is between 0 (zero) and 1 (one). According to the table F below, the coefficient of determinat (R²) is 0.,514, means that 51,4% of dependent variable of engaging customer strategy can be said to be getting stronger by independent variables (digital market capabilities, digital technology capabilities, digital market capabilities). While the remaining 0,48,6% is explained by other causes not included in this research model. The table F below show the result:

TABLE 6. R-SQUARE

Model Summary ^a

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.717 ^a	.514	.499	2.238

- a. Predictors : Constant), X3,X2,X1
- b. Dependent Variable Z

Model Summary ^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.585 ^a	.342	.314	4.954

- a. Predictors : Constant),Z, X3,X2,X1
- b. Dependent Variable Y

F. Research Hypotheses Test

According to Willy Abdillah et al. (2015), measuring the significance of the support of hypotheses is conducted by a comparison of T-table and T-statistics. If the T-statistics value is higher than the T-table value, then the hypothesis is supported. For the 95 percent confidence level (alpha 5 percent), the T-table value for the two-tailed hypothesis is ≥ 1.96 . Based on the analysis, as showed in the table G below, the result is above ≥ 1.96 , so it can be concluded that all hypothesis is supported.

Table 7. Hypothesis Test

Dependent variable Z (t table: 1.98472; F table: 2.70)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	2.916	1.963		1.485	.141		
X1	.101	.116	.109	.869	.387	.316	3.166
X2	.573	.082	.727	6.979	.000	.461	2.167
X3	-.103	.099	-.131	-1.040	.301	.313	3.148

Dependent Variable Y (t table: 1.98498; F table:2,47)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	7.286	4.394		1.658	.101		
X1	.733	.257	.421	2.847	.005	.313	3.191
X2	.294	.223	.197	1.321	.190	.307	3.255
X3	.035	.220	.024	.161	.873	.314	3.183
Z	-.036	.225	-.019	-.161	.873	.486	2.057

From the analysis above, it can be explained that the role of hotel industry leaders in carrying out digital transformation need action in four main areas (Westerman et al., 2014): framing the digital challenge, focus investment, engaging the organization, and sustaining transformation. Leaders must ensure that the senior leader has the same vision of how this vision must work. According to Westerman et al, 2014, the first step is to understand the threats and opportunities presented digital into organizations such as the effectiveness of the current workings in the digital world, and the ability to detect new opportunities available related to customer experience, operational processes, and business models.

To make digital vision reality, executives must ensure that organizations invest in the right area (Westerman et al, 2014), which is to cut unproductive areas while investing where needed. Executives must identify the areas where companies must excel based on their current capabilities and strategic assets (Egbunike, et all. 2018). The important question is deciding when hotel industry leaders need to adapt new business models. Companies have the opportunity to create value by adapting business models, adding value to products and services, getting new customers, harmonizing operational processes and customer facing in new ways, and even launching new businesses. Leaders must make digitalization a central part of their strategy agenda (Kurniasari, et all. 2018). Digitalization is the most important and priority in the corporate strategy agenda.

Another response to the hotel industry facing digitalization and the rapid usage of the internet is adopting a multiplatform approach. The focus is on migrating towards cross-platform information distribution and the impact of this approach on resources, organizations and on strategies that must be implemented to create and build revenue streams. In the context of digitization, interactivity is a key feature of digital platforms. The ability to understand customer preferences is a deeper value in sharpening services and developing ways to present them.

The hotel business that aims to create a new customer value proposition or transform its operating

model needs to develop a new portfolio of capabilities to be flexible and responsive. Facing the digital era, among the various capabilities needed is the ability to design and present new business models. Hospitality companies must constantly explore the best new ways to generate revenue, company activities, and take positions in new industries or existing industries. One important competency is to find new ways to engage with customer and the community. This requires interaction with customer across each phase of business activity, not only sales, marketing and services, but also product design, supply chain management, human resources, IT and finance. Engaging with customer is a customer-centered business differentiator. Customers change platforms and channels, compare prices through smart phones at certain minutes, browse other items later, and make transactions via PC. Among these interactions, customer expect consistency and clarity. Experience in one particular channel increases expectations across other channels.

V. CONCLUSIONS

Digitalization must be the most important priority in the corporate strategy agenda. The digitalization agenda must get strong support from top executives who generally take an active role in pushing the agenda. When leaders support the importance of digitalization, the implication is how to adapt the organization to be more agile and have strong internal processes. The key success of the digital transformation agenda lies in the ability to guarantee the speed of implementation. In developing customer-focused solutions or the transformation of internal systems and processes, the hotel industry still has to struggle to push the initiatives needed to deal with the agility of competitors.

In the hospitality industry, business leaders in order to meet customer expectations must strive to change the way they set their strategies and run their organizations. Technology is used to increase productivity and efficiency, reach new markets and optimize supply chains. What's new is customer expectations are constantly changing. The problem faced by the hotel industry is how to respond to this change, how to take advantage of this opportunity to innovate, differentiate and grow, and how to do all this at a cost efficient, using and optimizing the latest information technology as part of the overall operation. The company must have a cohesive strategy in integrating digital and physical elements in order to be able to transform its business model and set a direction for the whole industry that has not been many. The hotel industry must focus on two activities that complement each other: sharpen customer value propositions and transform its operating model by

using digital technology to interact and collaborate with customers.

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