

# The Effect of Learning Orientation on CRM and Innovation Capability Hotels in Lombok through PLS

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# Abstract

Learning Orientation is required to generate innovative products in public services industry. More comprehensive study is indeed required towards the relationship between learning orientation and Customer Relationship Management (CRM) especially in the hotel service sector. This study is projected to unite two roles of organizational culture, namely learning orientation and CRM that are addressed to develop innovation capabilities. There were 72 samples. Those were managers and hotels staff that headquarter in Lombok. The research was accomplished by conducted quantitative approach. SEM PLS with the Smartly 3.0 application was used to analyze the data. The results showed that the role of learning orientation had a direct positive and significantly affect on CRM and innovation capability. There was also positive effect but not significant in terms of indirect relationship. This research contributes to the development of innovation capability by providing empirical evidence that the stronger the learning orientation, the stronger CRM and innovation capability. Hotelier needs to emphasize learning orientation in enhancing innovation capability.

**Keywords:** Orientation Learning; Customer Relationship Management (CRM); Innovation, Hotels in Lombok; PLS

# Introduction

Learning orientation becomes the main capital of companies, especially tourism service companies, in generating innovation (Tajeddini, 2017). It is due to the fact that learning orientation results experiences and ideas as the creative sources of innovation (Zhang & Hartley, 2018). Organizational learning is an organization capability to receive and present knowledge (Zineldin, 2015). According to Sulhaini et al. (2018), learning orientation is characterized by three dimensions namely strong open mindedness in responding to market changes, great commitment on learning in satisfying relationships with customers, and the company's internal shared vision in understanding customers and competitors. Meanwhile according to Calontone et al. (2002) has four dimensions, namely open mindedness, commitment on learning, shared vision and intra-organizational knowledge sharing. Learning orientation is usually studied in manufacturing companies and is still rarely studied in service companies, especially

hospitality. In fact, according to Perez, Gutierrez, and Agudob (2019) learning orientation influences the innovation of new product and service development in the service industry.

A number of studies have identified major factors that determine the capacity of company to create innovation (such as Keskin, 2006; Wang and Wang 2012; Al-Hawary, 2016). Some internal and external factors that are derivated from innovation and their consequences play important roles for business performance. Innovation requires strengthening internal factors such as organizational culture, abilities, and learning organizations (Calantone et al. 2002). According to Lin, Chen, and Chiu (2010) and Smith, (2017) innovation capability contained five indicators: aesthetic innovation, marketing innovation, administrative innovation, technological innovation and service innovation (Al-Hawary, (2016). Manufacturing companies are more likely to innovate in products, processes, work organizations and product design. While companies in the service sector, are more likely to implement process innovation (Castro, Sanchez, & De-Urbina-Criadoc, 2011). Innovation capability has a reciprocal relationship of complementarily between the innovation of products, processes, and technology (Arrant, Arrogate, Li, & Arrogate, 2019).

Furthermore, external factors that influence innovation capability are customers. Several studies propose the relationship between CRM practices and innovation capability (Lin, Chen, & Chiu, 2010; Al-Hawary, 2016; Ismail, Suhaini, & Athar, 2019). CRM as a source of innovation capability that can be used to manage customers well, because customers are actively involved in the organization's innovation process and share knowledge about innovation (Mahr, Lievens, & Blazevic, 2014). The CRM capability dimension uses adaptation measurements from Sin et al. (2005) and Sofi and Hakim (2018) namely CRM organization, managing knowledge and CRM based technology. CRM can be relied on in managing customer relationships (Mahr et al., 2014) in hotels (Ada, Stalcup, & Lee, 2010; Athar, 2020), and fostering innovation capabilities depending on customer information processing (Cheng & Shiu, 2018). Therefore, the integrated model investigates how hotels utilizing CRM can influence innovation capabilities in hotels.

An important factor that contributes to the ability of innovation in the product development process is learning orientation. Research shows the ability of organizational learning to achieve competitive advantage and utilize radical innovative abilities (Wan, 2014). Cultural-based organizational values such as commiting to learning, sharing vision, and open-mindedness can develop innovation capabilities (Wan, 2014). The Small Medium Enterprise (SME) shows an indirect relationship through innovation capability between learning orientation and product development (Naheed, Nawas, & Latif, 2018). According to Zineldin (2015) the learning process has a positive impact on innovation that creates added value to customers. Furthermore, organizational learning has a significant relationship to innovation capability (Ghazali, 2014). Based on the results of the research above, this study proposes the following hypothesis: H1: The stronger learning orientation, the stronger innovation capability.

Several previous studies have examined the relationship between learning orientation towards CRM, such as Gunlu (2016); Herhausen and Schogel, (2013); Battor and Battor, (2013) that organizational culture positively influences customer relationship management (CRM). Learning orientation encourages MSMEs to use their business relationships for learning. Learning orientation cannot naturally grow within a company but must be accompanied by commitment to build relational capabilities (Sulhaini et al, 2018). According to Sirmon et al. (2007) learning becomes very important to adapt and create value for customers. Therefore, the following hypothesis is proposed: H2: The stronger learning orientation, the stronger Customer Relationship Management.

Implementation of a CRM system is referred to as a source of innovation capability (Lin et al., 2010). Customers can use technology to participate in the product innovation process (Sin et al., 2005). CRM can also increase the effect of customer involvement on innovation using customer information

processing capabilities (Cheng & Shiu, 2018). Technology-based CRM has a positive and significant impact on innovation capabilities (Al-Hawary, 2016). The use of CRM can drive the creation of innovation capabilities (Pedron et al., 2018). All indicate the role of CRM in the ability to innovate, thus hypothesis basses a proposed as follows: H3: The stronger Customer Relationship Management (CRM), the stronger innovation capability.

#### Method

The research method shows guidelines for carrying out certain activities. Describe the ways that are used by researchers to carry out a research activity in answering questions that are formulated in the formulation of the problem or research focus. This means that the reader knows the detailed ways carried out by researchers to answer the research formulation.

This study is addressed to analyze the effect of learning orientation on CRM and the ability of innovation. Moreover, research methodology explains the implementation of the research design which consists of the type of research, research location and research subjects, population and samples, data collection techniques, types and sources of data, operational definition of variables, quality test instruments validity and reliability, technical data analysis, evaluation measurement of the outer model and the inner model.

# **Type of Research**

This research is categorized as causality research. According to Ferdinand (2014), causality association is a research that aims to find out the causal relationship between two or more variables developed in management. This type of research is used to obtain empirical evidence answering research questions to determine the effect of *learning orientation* on CRM and *innovation capability* in hotels in Lombok. A good Likert scale has a symmetry size, the distance between categories 1 and 2 is the same as categories 3 and 4 (Hair, Hult, Ringle, M., & Sarstedt, 2014).

#### **Research Locations and Research Subjects**

The research is located in Lombok Island as a tourism destination center. Three-star hotels industry players in Lombok were the subject of the research. Midcentric is common group found among star-categorized hotels. Based on the normal distribution curve, three-star hotels are located at midcentris, which is the peak position that has the highest tourist involvement for tourism development (Piuchan, 2018).

#### **Research Population and Samples**

Population as research subjects are the industry players a three star hotel in Lombok. The sample using *non-probability sampling* is hotel employees ranging from managers and hotel staff who work in three star hotels in Lombok area. The sampling technique used was *purposive sampling* with sample criteria that the hotel has a minimum of 25 rooms with at least 10 employees. According to Hair et al. (2014) the number of samples is 5-10 times the number of indicators.

## **Data Collection Method**

Data collection techniques use quantitative research to test objective theory by testing the relationships between variables (Creswell, 2014). Data collection techniques using survey methods. A

good Likert scale has a symmetry size (Hair, Hult, Ringle, M., & Sarstedt, 2014). The higher the number, the more support the hypothesis. SEM-PLS (*Structural Equation Modeling - Parties Least Squares*) analysis with SmartPLS application.

Instruments survey with 52 items statement follow specific citation is based on three variables. *Learning orientation* as an independent variable with 4 dimensions adapted from Calantone et al., (2002). Instrument CRM numbers 1-17 adapted from Sofi and Hakim (2018). Instrument Innovation Capability numbers 1-14 are adapted from Al-Hawary (2016) and Grawe, et al. (2009).

## **Test Validity and Reliability**

The research instrument was declared valid if the significance value was greater than 5% (Ghozal, 2006) and reliable if the *Cronbach Alpha* value was greater than 0.7 (Hair et al., 2014). Based on the results of testing using the SEM PLS program the results obtained in Table 1. *Cronbach Alpha* Value.

Variabel	Cronbach's Alpha	R	Conclusion
CRM	0.747	> 0.7	Reliable
Innovation Capability	0.883	> 0.7	Reliable
Learning Orientation	0.878	> 0.7	Reliable

 Table 1. Early Cronbach's Alpha Reliability Value

The recommended value is that if the correlation value is equal to 0,7 then the items are reliable. The analysis results in Table 1. Showed that all the variables in the column Cronbach's Alpha is more than 0.7, it can be concluded evaluation of the validity and reliability of the instrument indicate an invalid value and reliable.

#### **Data Analysis Techniques**

Data analysis techniques in this study used SEM (*Structural Equation Modeling*) *PLS Parties Least Squares* by using SmartPLS version 3.0. According to Garson (2016), *Parties Least Squares* is an alternative approach to SEM based on covariance to be variant based. Covariance-based SEM can test the causality of theory while PLS is more *predictive of a model*. Covariance-based SEM is used to confirm the theory model. SmartPLS is also referred to as the most common implementation for path models, PLS can analyze small sample data and use bootstrap sampling so that whatever data is entered can be smoothed (Garson, 2016).

#### **Result and Discussion**

According to Ghozali (2006) the purpose of PLS is to help researchers for predictive purposes. The formal model defines latent variables as linear aggregates of the indicators. *Weight estimates* for creating a component score of latent variables are obtained based on the *inner model* (structural model that connects between latent variables) and the *outer model* (measurement model that is the relationship between indicators and constructs).

#### Measurement Model or Outer Model

Evaluation of the outer model of this study uses the measurement of the reflective model of the variables on each indicator item by evaluating the *value of the loading factor, composite reliability, Cronbach alpha, AVE and discriminant validity.* The details are presented in the following evaluations:

## 1) Loading Factor

Each latent variable must be able to explain at least half of the indicator variants. Indicator variables are still acceptable because the *loading factor value* is greater than 0,5 (Hair et al., 2014). From the results of the analysis output in Figure 4. below it can be seen that most of the reflective indicators produce a *loading factor* value > 0,50. Reflective indicators less than 0.5 should be removed from the measurement model.



Figure 2. Initial Model Loading Factor

The highest loading factor value is shown by LO15 indicator for the learning orientation variable on the indicator of intra-organizational knowledge sharing of 0.830. CRM16 for CRM variables on the indicator of CRM based technology is 0.657. IC13 for the Innovation capability variable is on the indicator of administrative innovation of 0.723. The loading factor value is lower than 0.50 namely LO1, LO14 indicators for learning orientation variables, indicators CRM5, CRM6, CRM8, CRM10, CRM13, CRM14 and CRM15 for Customer relationship management variables, and indicators IC5, IC6, IC8, IC14, IC17, IC20 for the innovation capability variable is stated to have a correlation value that is less between indicators with the variable (not acceptable) in the first iteration.

After modifying the model by removing the non-conforming indicators, running the second iteration algorithm with the value of each indicator is shown in Figure 3 modification results n the measurement model, the loading factor increased slightly for each indicator, where all the indicators listed have a *loading factor* > 0.05 which indicates the significance of the indicator items.



Figure 3. Model Loading Factor after Modification

# 2) Composite Reliability

The second step is to evaluate the *reliability composite* to show the minor error variance values shown in Table 2 with the *composite reliability* value criteria produced by several indicators is good because it is above >0.70. Measurement of *composite reliability* value is greater than Cronbach alpha, so it can be called reliable (Garson, 2016). This means that all indicator variables are reliable or meet the reliability test.

Tuble 2 Valiaty and Rehability Test Results				
Variabel	Composite Reliability	Cronbach Alpha		
Learning orientation (LO)	0.905	0.886		
Customer Relationship Management (CRM)	0.823	0.752		
Innovation Capability (IC)	0.895	0.871		

**Table 2 Validity and Reliability Test Results** 

The highest value of *composite reliability* is indicated by the learning orientation variable (LO) of 0.905. While the lowest *composite reliability* value is indicated by the CRM construct of 0.823. It can also be seen that the *composite reliability* value of each variable is higher for all LO, CRM and IC variables compared to the *Cronbach alpha* value.

# 3) Cronbach Alpha

Cronbach Alpha test results can describe convergent validity. *Convergent validity* of the measurement model with the reflective model of indicators is assessed based on the correlation between *item score* and *construct score* calculated by PLS. Reflective size is said to be high if it correlates more than 0,70 with the construct that you want to measure. Value measurement criteria *loading* larger 0.5 can be called reliable (Hair et al., 2014). The Cronbach Alpha value > 0.80 has a good scale> 0.70 has an accepted scale, and > 0.60 is considered a low estimate. As seen in Table 4, the test results of the research model *Cronbach alpha* values for all variables are greater than 0.70. The highest *cronbach alpha* value is indicated by the *Learning Orientation* (LO) variable of 0.886 and the lowest *cronbach alpha* value is

indicated by the CRM construct of 0.752. Because there are no values below 0.70, it can be concluded that all indicator variables are reliable.

## 4) AVE (Average Variance Extracted)

This model is to assess discriminant validity by comparing the AVE root value for each variable greater than the correlation value between variables. Criteria for good AVE value is greater than 0.50. The root value of AVE must be greater than the correlation between the indicators in the latent table of the correlation variable. The results of the correlation values between the indicators are presented in Table 3. as follows:

Table 5. A VE (Average Variance Extracted) Value				
Variabel	CRM	IC	LO	
CRM	0.633			
Innovation capability (IC)	0.540	0.662		
Learning orientation (LO)	0.523	0.709	0.653	

Table 3. AVE (Average Variance Extracted) Value

The Fornel Lacker Criterion value shows the roots of AVE which are in the table on the diagonal side. The value of CRM has a value of 0.633 higher than the correlation between the variables of innovation ability and learning orientation. While the innovation capability is 0.662 lower than LO 0.709. This means that most of the variables in the model meet the convergent validity requirements. Thus it can be concluded that the correlation of each latent variable with its respective block indicator has a good discriminant validity.

## **Structural Model Test or Inner Model**

In this section the model describes the relationship between latent variables. The structural model is evaluated using *R*-square for the dependent construct and t test as well as the significance of the coefficient of structural path parameters. In assessing a model with PLS it starts by looking at the *R*-square for each latent dependent variable PLS test with SEM (*Structural Equation -Partiest Least Square*) is carried out in three stages as follows:

# 1) Correlation *Coeficient Determinant* (R<sup>2</sup>)

R square value for each dependent latent variable regarded as the predictive power of the structural model. R square value is the result of linear regression test that is the amount of dependent variability that can be explained by independent variables. Criteria *R* square 0.75; 0.50; and 0.25 show strong, moderate and weak models (Hair et al., 2014). Changes in the value of R square are also used to explain the effect of the independent latent variable on the dependent variable, whether it has an influence on the objective variable.

Tuble in K Test Results Strength of the Model			
Variable	$\mathbb{R}^2$	Model strenght	
CRM	0.274	Weak	
Innovation capability	0.542	Moderate	

Table 4. R <sup>2</sup> T	est Results	Strength	of the	Model
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The results show the strength of the structural model that the value of R *square* latent variable *Innovation capability* (IC) is 0.542 and R *square* latent variable (CRM) is 0.274. It can be interpreted that the variable *Innovation capability* can be explained by the variable *Learning orientation* 

and CRM by 54.2 %, while the rest is again explained by other variables outside studied. Similarly, the CRM variables that can be explained by the study orientation (LO) is amount 27.4 %, while the rest is explained by other variables outside the research.

#### 2) Correlation Test R

The estimated value of the path coefficients in Figure 4.2 shows the value of the coefficient estimate that the value of the coefficient estimates latent variables *Learning orientation* towards CRM for  $0,523 ~(\geq 0,05)$  are positively correlated. CRM has a significant connection to the *Innovation Capability* with the estimated value of the coefficient parameters of  $0.233 ~(\geq 0,05)$  are positively correlated. *Learning orientation* has a significant connection to the *Innovation Capability* with the estimated value of the coefficient parameters of 0.233 ( $\geq 0,05$ ) are positively correlated. *Learning orientation* has a significant connection to the *Innovation Capability* with the estimated value of the parameter coefficient 0.587 ( $\geq 0,05$ ) are positively correlated.

#### 3) Test the Significance of the Structural Model Path Coefficient (T-statistic).

Testing this structural model was concted through the *bootstrapping* procedure on SEM PLS which aims to minimize the problem of research data abnormalities. The results of testing the structural model by looking at the T statistic *path coefficient* illustrate the contribution or influence between variables. Significance values are expressed in the statistical t-test value, which is used (*two-tailed*) t-value 1.96 (significant level of 5%). Based on the results shown in Figure 3.3 significance evaluation results, can answer the hypothesis proposed is accepted because the value of T is greater than 1.96.



Figure 4. Inner models after Bootstrap

Tabel 5. The result of the hypothesis test by PLS				
Hypoteses	Estimation	T value	P value	Conclusion
H1. LO $\rightarrow$ IC	0.587	5.183	0.000	Supported
Н	0.523	5.850	0.020	Supported
H3. CRM $\rightarrow$ IC	0.233	2.339	0.000	Supported
Indirect influence				
$LO \rightarrow CRM \rightarrow IC$	0.122	1.843	0.066	Partly supported

Based on table 5, shows that hypothesis of the three variables used, among others: There is a direct effect of learning orientation on Innovation capability estimated value 0.587 and T-statistic 5.183, p-value 0.000 < 0.05, then first hypothesis is accepted. The influence of learning orientation towards CRM the estimated value of 0.523 and T-statistic of 5.850 > 1.96, p-value 0.020 < 0.05 then the second hypothesis is supported. There is a direct influence of CRM on the Innovation capability estimated value of 0.233 and T-statistics 2.333, p-value 0.020 < 0.05, then the third hypothesis is accepted. In the indirect relationship of learning orientation to innovation capability through CRM, this result also shows a positive but not significant value because the T-statistic value is 1,843 < 1.96 and p-value 0.066 > 0.05. Meaning association directly influence a far greater impact than the relationship of indirect. This necessarily Hotelier role in the utilization of CRM and emphasize learning orientation in enhancing innovation capability.

#### Conclusions

The results of the measurement of the relationship between variables with SmartPLS based on path coefficients analysis showed (1) Learning orientation had a positive and significant effect on CRM. (2) Customer relationship management (CRM) has a positive and significant effect on the ability of innovation. (3) Learning orientation has a positive and significant effect on the ability of innovation. (4) The effect of learning orientation on innovation ability through customer relationship management (CRM) has a positive but not significant effect. The results of data analysis using SmartPLS successfully explained the effect of direct and indirect relationship learning orientation. This research can prove the direct influence of learning orientation toward innovation capability that the stronger the orientation of learning the stronger innovation capabilities. As well as learning orientation with CRM effectively utilize the stronger the innovation capability. The strong influence of direct learning orientation capability. The strong influence of direct learning orientation as an organizational culture must be maintained and enhanced.

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