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Implementation of the Information Systems and the Creative Economy for the Competitive Advantages on Tourism in the Province of Lampung

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Abstract: Tourism is the various tourism activities and supported by the various facilities and services provided by the society, the businessmen, the central government, and the local government (Act no.10/2009 concerning tourism). The creative economy is the concept in the new economic era which intensifies information and creativity by relying heavily on the ideas and knowledge of human resources as the main factor of production. This concept is normally supported by the creative industries as their manifestation. Due to the changing era, the economic development has turned up to the creative economy by which the informational, economic concept must be created behind it because the information is considered as the main matter for the economic development. The management information systems are regarded as the economic device of companies which becomes the support of the wheels of business. In this study, the management information systems were emphasised on the adoption of the informational technology held by tourism companies and the businessmen who are involved in the tourism objects and who create the product/service on creative industry. The objective of this study was to know how the effects of the human resource managements, the electronic systems, and the organizational information systems which were applied on the creative economy industry were towards the competitive advantages of the company/tourism object in the province of Lampung. The method of this study was the descriptive and associative method. The results of this study showed that the human resource managements significantly affected the competitive advantages on the creative economy industry; the electronic systems did not significantly affected the competitive advantages on the creative economy industry; and organizational information systems significantly affected effects towards competitive advantages moderated by the creative economy industry.

Keywords: Information Systems, Creative Economy, Competitive Advantages

1. INTRODUCTION

Tourism is one of the development sectors which are currently being promoted by the government. This is because the tourism holds the important role in the development of Indonesia especially as the foreign exchange, besides the oil and gas sector. The goal of the tourism development in Indonesia can be seen clearly in the instruction of the President of Indonesia No. 9 of 1969, especially in Chapter II, Article 3, which states “the efforts of the development of tourism in Indonesia can be seen in the form of the development of “tourism industry” and as a part of the development, construction, and welfare efforts for the society and the state”(The Department of tourism and culture, 2014). Tourism is called industry because the essence of tourism possesses various activities which produce products and services. However, the meaning of the industry is not commonly considered as the industry in general which is related to large and small factories and machines are corresponding with full of smoke so that the tourism industry is called the smokeless industry. It can be concluded that the tourism industry is a number of companies that produce products or services together which are needed by tourists during the trip.

The creative economy is the concept in a new economic era which intensifies information and creativity by relying heavily on ideas and knowledge of human resources as the main factor of production. This concept is normally supported by the creative industries as their manifestation. Due to the changing era, the economic development has turned up to the creative economy by which the informational, economic concept must be created behind it because the information is considered as the main matter for the economic development. The scopes of the creative, economic activities cover many aspects. The Department of Commerce (2008) in Guzty Muhammad (2013) identifies at least 14 sectors which are in the part of the creative economy. They are: advertisements, architectures, art markets, handicraft, design, fashion, film/ video and photography, interactive games, music, performing arts, publishing and printings, computer services and software, radio and television, research and development.

As everybody knows, the development of informational technology globally embraces all aspects of life and brings a lot of changes revolutionarily. In the business world, the use of email and the website has been able to improve the performance and competitiveness of business in the global world where the needs for rapid communication, the availability of data for decision-making efforts, and complex transaction processes demand the business world to improve the utilization of IT in various aspects of business rather than just presenting company profiles (web presence) until the complex transactions (e-commerce and e-business).

At the level of the government, we know the term *e-government* which is becoming a trend today. Moreover, the tourism is also one of the work results of the local government in the implementation of *e-government* to publish or to market the tourism potential in the certain region. Furthermore, the IT-based approach here means the management information systems which is based on the electronic data management.

In line with the growth of the prosperity of the people, the need in having vacation also increases. To get that goal, the information about tourism destinations, interesting attractions, available transportations, the tourism products, and etc. is needed. To obtain the information, tourist often have trouble because they do not know where and to whom to ask for information. In short, the need towards tourism information grows rapidly and needs to be prepared in a neat and organized way so that it can be accessed easily.

The complete, accurate, and easy-to-get information is not only for the tourists but also the managers who are involved in the the tourism industry and the government as the decision maker and the policy maker who work in the tourism field. However, the high demand on the need of data and information for each side is different. It can be seen that the tourists need the data and information for facilitating their trip plan but the manager of the tourism industry and the government uses the data and information for making decision.

Lampung is the province which is located on the southernmost island of Sumatra. Lampung officially becomes one of the provinces in Indonesia in 1964. There are various tourist attractions offered in Lampung so that it invites many tourists from outside Lampung to come to Lampung. Recently, Lampung becomes one of the tourist destinations that are quite attractive to local tourists and foreign tourists. With natural beauty, Lampung deserves to be one of the best tourist spots in Indonesia. Bandar Lampung is the capital city of Lampung and is a combination of the two cities (Teluk Betung and Tanjung Karang). Bandar Lampung is the quite vast city and inhabited by various tribes so that this city becomes a center of education, culture, and the economy in Lampung. Bakauheni port approximately located 90 km from Bandar Lampung and lied in the south is the gate to Sumatra Island so that crowded situation is made. Lampung is easily accessible due to its location which is near Jakarta.

From the descriptions of the background of this research, the researcher will discuss how the implementation of the information systems, the manifestation of the creative economy industry, and the support of the local government to tourism are in Lampung.

Formulations of the Problems

From the background of this research, the problems which are studied in this research is: “How are the implementation of management information systems (the human resources, the electronic systems, the organization information systems) towards competitive advantages on tourism in Lampung with the creative economy industry as the moderating variable?”

The Objectives of This Research

The objectives of this research which are written by the researcher are:

- 1) To find out the extent of the effect of the human resource managements towards the competitive advantages on tourism in Lampung with the creative economy industry as the moderating variable.
- 2) To find out the extent of the effect of the electronic systems towards the competitive advantages on tourism in Lampung with the creative industry as the moderating variable.
- 3) To find out the extent of the effect of the organization information systems towards the competitive advantages on tourism in Lampung with the creative economy industry as the moderating variable.

2. LITERATURE REVIEW

Types of Tourism

Tourism simply means everything which is related to recreations, travellers, and tourists. The types of tourism vary depending on the places which are going to be visited. They are: (1) Marine Tourism including

beaches, marine national parks marine, and so forth; (2) Archaeological Tourism including museums, fortress, prehistoric building, and so forth; (3) Nature Tourism covering botanical gardens, waterfalls, mountains, and so forth; and, (4) Artificial Tourism embracing city parks, squares, playgrounds, waterparks, and so forth. There are many theories on tourism according to experts as follows:

- 1) According to Koen Meyers (2009), tourism is the activity carried out temporarily from the original spots to the destination spots with the reasons of not to settle or to get earnings but merely to fill curiosity, to spend leisure time or holidays, and the another intent.
- 2) Gamal (2002) says that tourism is the process of temporary journey of a person to the places which are not his domicile. The motivation of his journey is due to the economic, social, cultural, political, religious, health, or other interests.
- 3) Kodhyat (1998) states that tourism is the trip from from one place to another place temporarily, carried out in individual or in groups to get a balance or harmony and happiness with the environment in terms of social, cultural, nature and science dimensions.
- 4) Richard Sihite explains that tourism is the trip which is done temporarily by the people and is held from one place to another place by leaving the original place with a plan and an intent of not to get earnings in the visited places, but merely to enjoy travelling and recreation activity to fill the various desires.
- 5) According to the WTO (1999), tourism is the human activity which is related to trips to stay outside of his vicinity.
- 6) According to the Act. No.10 / 2009 on tourism, tourism is the various tourism activities and supported by the various facilities and services provided by the society, the businessmen, the central government, and the local government.
- 7) According to UNESCO (2009), tourism is the travelling activity carried out temporarily from the original spots to destination spots with the reasons of not to settle or to get earnings, but to have fun, to fill curiosity, to spend leisure time or holidays, and the another intent.

Management Information Systems

Raymond McLeod, Jr. and George P. Schell (2011: 12), defines the Management Information Systems (MIS) as the computer-based systems which make available information for users who have similar needs. The MIS users typically are formal Organizational entities, companies, or sub-unit of the subsidiaries. The information provided by the MIS provides the account of the company or one of its main systems is seen from what happened in the past, what is happening, and what will likely happen in the future. MIS will generate this information through the use of two types of software:

The report writing software produces periodic reports and special reports. The periodic reports are coded in the programming language and are prepared based on the specific timetable. The special reports often called ad hoc reports are created in response to the need for the previous information which is not anticipated. Database management systems today have features which can quickly generate reports in response to the requests for data or information.

Management Information System (MIS) is An information system designed to support the information that is already available for decision by the Managers (Ali, H.,: 2009:1). Interest MIS application in particular is to convey information to Managers / leaders on organizational performance and the environment in the past, present and future forecasts (Ali, H., & Wangdra, T, 2010: 18).

Research Hypotheses

By focusing on the premises above, the hypotheses of this research are outlined below in accordance with the paradigm of the linkage variable paradigms as follows:

- 1) Human Resource Managements moderated by the Creative Economy Industry affects significantly to the Competitive Advantages on tourism in Lampung
- 2) Electronic Systems moderated by the Creative Economy Industry affects significantly to the Competitive Advantage on Tourism in Lampung

Organization Information Systems moderated by the Creative Economy Industry affects significantly to the competitive advantages on tourism in the province of Lampung

3. RESEARCH METHOD

The methods which were used in this research were the descriptive and associative methods. These methods were described by making the design of this research and the variables. From the tabulated data of questionnaires, the analysis was conducted descriptively.

Population and Sample

The target population is the population that wants to be generalized by the researcher and is the ideal choice for the researcher. Population represents generalization area which consists of objects or subjects that have certain qualities and characteristics which have been determined by the researcher for being learnt and drawn conclusions (Sugiyono, 2010: 72). The population in this research covered the tourism objects and the creative economy industries in Lampung.

The sampling technique in this research used the purposive sampling technique by selecting the different criteria based on the characteristics of the handicraft industry and the food industry as the limitation of the obtaining sampling. The unit of analysis was also taken by cluster sampling. In this matter, the samples of this research were taken from the analysis unit 4 (four) of grouping on the types of tourism in Lampung. They were: (1) Marine Tourism including beaches, marine national parks marine, and so forth; (2) Archaeological Tourism including museums, fortress, prehistoric building, and so forth; (3) Nature Tourism covering botanical gardens, waterfalls, mountains, and so forth; and, (4) Artificial Tourism embracing city parks, squares, playgrounds, waterparks, and so forth. The tourism objects which became the sampling criteria were those which had used the information systems in their operations and had 500 visitors minimally in a month from inside and outside the province of Lampung. Target respondents were customers or visitors, businessmen, and society who were involved in the tourism objects with a minimum age of 20 years old and a minimum education level of high school.

Data Collecting Techniques

The primary data and the secondary data were obtained by:

- 1) Library research which meant that the research is done by studying the literature relating to the problems of the research.
- 2) Field research which meant that the research is conducted directly on the object of research. The techniques of the field research which were used were observation, documentation, interviews, and surveys in the field.

Data Analysis Techniques

The methods used in this research are the descriptive and associative methods. The descriptive method is defined as the general description on the profile of tourism objects which exist in Lampung and the description of the implementation of management information systems on the management of the tourism objects. The associative method is defined as the relationship between two variables or more consisting of independent variables and the dependent variable. Furthermore, the type of this research which is used is the qualitative research by which its objective of this research is to find out facts, phenomena, variables, and circumstances which occur when the research is carried out. The descriptive qualitative research interpret and explain data concerned with current situations, attitudes, perspectives occurring in society, contradictions between two circumstances or more, relationships among variables, differences among facts, effects to certain circumstances, and the others. The results of the analysis of this research were collected and processed using Eviews 8 and several stages of analysis were conducted. The stages are carried out by testing questionnaire by conducting descriptive analysis, factor analysis, and regression analysis with the moderating variable.

Variable Operational Definition

The information systems were used by the managers of tourism companies, the local government, the businessmen, and the society who were involved in the tourism objects in creating creative economy industry. The variables which were studied are as follows:

- 1) The enterprise resource planning systems including physical resources and human resources, how the technology-based production tools and equipment and the informational technology were used in creating products or services of the creative industry.
- 2) The virtual enterprise systems covering the use of electronics to facilitate communication and information processing systems as the decision-making support or the products or service manifestation of the creative industry.
- 3) The company's strategy systems include the use of strategies to achieve the competitive advantages which consist of strategic advantages, tactic advantages, and operational advantages used by the company for tourism and businessmen in the tourism objects.
- 4) The marketing systems defined as a series of attempts by the company to promote products or services of the creative industry which are produced by the tourism companies, the government, and businessmen in the tourism objects.

Based on the identification of the variables above, the following variables used in this research were:

1) Human Resource Management (X1)

The enterprise resource planning systems including physical resources and human resources, how the technology-based production tools and equipment and the informational technology are used in creating products or services of the creative industry.

2) Electronic Systems / Technology Development (X2)

The virtual enterprise systems covering the use of electronics to facilitate communication and information processing systems as the decision-making support or the products or service manifestation of the creative industry.

3) Organization Information Systems (X3)

The are as related to the companies business, finances, human resources, information services, manufacturing and marketing using databases which are produced by transaction processing systems, and the other additional data to produce the information which was used by the managers to make decisions and to solve problems.

4) Creative Economy Industry (Z)

The scope of the creative economy activities can cover many aspects. The Department of Commerce (2008) in Guzty Muhammad (2013) identifies at least 14 sectors which are in the part of the creative economy. They are: advertisements, architectures, art markets, handicraft, design, fashion, film/video and photography, interactive games, music, performing arts, publishing and printings, computer services and software, radio and television, research and development.

5) Competitive Advantages (Y)

The competitive advantages can be realized in terms of gaining strategic, tactical and operational advantages. The strategic advantages are the hallmarks that have fundamental effects in shaping the operations of the company. Moreover, the information systems can be used to create the strategic advantage. The tactic advantages are achieved when companies implement the strategy in a better way than their competitors do.

Competitive advantage to excel in business competition, then the manager needs to understand the situation of environmental organizations or companies that may interfere with the performance of the company and managing information resources effectively and efficiently. To excel in the company's business should be able to create value (creating value) of the goods or services offered to customers (customer) will be satisfied and loyal. If you've been loyal customers of this as one of the indicators that a good corporate image in the eyes of customers and as a first step in realizing the superior performance of the Organization (Ali, H., & Wangdra, T, 2010: 109).

Data Analysis Techniques. The results of the analysis of this research were collected and processed using Eviews 8 and several stages of the analysis were necessarily conducted. The stages are carried out by testing questionnaire by conducting descriptive analysis, factor analysis, and regression analysis with the moderating variable.

Test the Questionnaire. The items of the statement were invalid if it had correlation coefficient which was greater or equal to 0.30 (Barker et al, 2002). Besides the validity of the test, the reliability test was conducted to measure the consistency and the reliability of the measurement results which imply the accuracy of the measurement.

Descriptive Analysis. In the early stage of the analysis, the descriptive analysis of the five variables was carried out. The obtained data from the questionnaire were presented in the form of the frequency table as the percentage of the respondents' answers on each question towards the five variables which were studied.

Factor Analysis. The factor analysis was used concerning the analysis on the information management systems, the creative economy industry, and the competitive advantages. The factor analysis is used to conduct the reduction of many indicators (manifest variables) into a single value for the latent variables (Hesselbein, Frances; Marshall Goldsmith and Richard Beckhard (Editors), 1997).

Regression Analysis using Moderating Variable. The moderating regression analysis is regarded as the multiple regression which was similar to the polynomial regression equations which describe nonlinear effects. The effects on the human resource management variables (X1), the electronic systems (X2), the Organization information systems (X3) to the competitive advantages (Y) and the Creative Economy Industry (Z) as the moderating variables were expressed in the form of the three model equation which can be seen below:

$$KK = \beta_0 + \beta_1 \text{SDM} + \beta_2 \text{IEK} + \beta_3 \text{SDM} * \text{IEK} + \epsilon_1$$

$$KK = \beta_0 + \beta_2 \text{SE} + \beta_4 \text{IEK} + \beta_5 \text{SE} * \text{IEK} + \epsilon_2$$

$$KK = \beta_0 + \beta_3 \text{SIO} + \beta_6 \text{IEK} + \beta_7 \text{SIO} * \text{IEK} + \epsilon_3$$

Information: **HRM** = Human Resource Managements; **CEI** = Creative Economy Industry; **OIS** = Organization Information System; **ES** = Electronic Systems; **CA** = Competitive Advantages; β_0 = Intercepts and Constants; $\beta_{1, \dots, 13}$ = Regression Coefficient for each independent variable

Criteria of Hypotheses Test. The objective of testing hypotheses was to prove whether the three variables were independent. To test the hypothesis, the t test with the hypothesis criteria was used as follows:

- $H_1: \beta_1 > 0$ There is a significant effect on the human resource managements towards the competitive advantages with the creative economy industry as the moderation.
 $H_a: \beta_1 \leq 0$ There is no significant effect on the human resources managements towards the competitive advantages with the creative economy industry as the moderation.
- $H_2: \beta_2 > 0$ There is a significant effect on the electronic systems towards the competitive advantages with the creative economy industry as the moderation.
 $H_a: \beta_2 \leq 0$ There is no significant effect on the electronic systems towards the competitive advantages with the creative economy industry as the moderation.
- $H_3: \beta_3 > 0$ There is a significant effect on the Organization information systems to the the competitive advantages with creative economy industry as the moderation.

Ha: $\beta_3 \leq 0$ There is no significant effect on the Organization information systems towards the competitive advantage industry with the creative economy industry as the moderation

To test the hypothesis, the t test statistics with the formulation was used as follow:

$$t = \frac{b_i}{s_e(b_i)}$$

annotation:

b_i = regression coefficient for X_i variable

$s_e(b_i)$ = standard error of regression coefficient for X_i variabel

The result of the calculation using the formula was in the form of $t_{\text{calculated}}$ which was compared with t_{table} .

Test Criteria:

Ho was not accepted if $t_{\text{calculated}} > t_{\text{table}}$ or $t_{\text{calculated}} < -t_{\text{table}}$

Ho was accepted if $-t_{\text{table}} \leq t_{\text{calculated}} \leq t_{\text{table}}$

4. RESULTS AND DISCUSSION

General Descriptions of the Objects of this Research

The samples of this research were taken from the analysis unit 4 (four) of grouping on the types of tourism in Lampung. They were: (1) Marine Tourism including beaches, marine national parks marine, and so forth; (2) Archaeological Tourism including museums, fortress, prehistoric building, and so forth; (3) Nature Tourism covering botanical gardens, waterfalls, mountains, and so forth; and, (4) Artificial Tourism embracing city parks, squares, playgrounds, waterparks, and so forth.

The tourism objects which became the sampling criteria were those which had used the information systems in their operations and had 500 visitors minimally from inside and outside Lampung in a month. Target respondents were customers or visitors, businessmen, and society who were involved in the tourism objects.

The tourist destinations which were regarded as the unit of analysis consisted of four types of the tourism groups which were spread out in Lampung. They were: Bandar Lampung, East Lampung District, Pesawaran District, South Lampung District, West Lampung District, and Tanggamus District. The list of units of analysis can be seen below:

Table 1
The List of the Tourism Objects

No.	Name of tourism objects	City/ District
1	Sari Ringgung Beach	Pesawaran District
2	Mutun and Pulau Tangkil Beach	Pesawaran District
3	Pahawang Beach	Pesawaran District
4	Putus Tanjung, Tegal Island, Maitem	Pesawaran District
5	Waykambas National Park	East Lampung District
6	Pugung Raharjo Archaeological Park	East Lampung District

contd. table 1

No.	Name of tourism objects	City/District
7	Lembah Hijau Tourism Park	Bandar Lampung City
8	Gita Persada Butterfly Park	Bandar Lampung City
9	Bumi Kedaton Tourism Park	Bandar Lampung City
10	Duta Wisata Beach	Bandar Lampung City
11	Lampung Museum	Bandar Lampung City
12	Kiluan Gulf	Tanggamus District
13	Wai Lalaan Waterfall	Tanggamus District
14	Terbaya Beach	Tanggamus District
15	Anak Gunung Krakatau Mountain	South Lampung District
16	Pasir Putih Beach and Condong Island	South Lampung District
17	Tanjung Setia Beach	West Pesisir District
18	Ranau Lake	West Lampung District

The data which were analysed were the primary data. The primary data were obtained from the answers of the questionnaire based on interviews and surveys from the sources (the managers, the businessmen, and visitors) which were selected as the sample. The data collecting techniques were conducted by using surveys on the deployment of the questionnaire and the direct observation on the tourism object and the creative economy industry with the use of management information systems in the City or District. Furthermore, the minimum requirement of the respondents was in the high school education and the gender of the respondents was men and women. Moreover, the respondents who were obtained were 30 respondents who were collected from each tourism object. The number of the tourism objects and the respondents who meet the sample criteria of 6 City or District can be seen below:

Table 2
The List of the Tourism Objects in the City/District

No.	City/District	Total (OW)	Number of Respondents
1	Bandarlampung City	5	150
2	Pesawaran District	4	120
3	Lampung Timur District	2	60
4	Tanggamus District	3	90
5	Lampung Selatan District	2	60
6	Lampung Barat District	2	60
	Jumlah	18	540

Sumber : Survey Result (processed), 2016

Descriptions of Human Resource managements

Table 3
The Averages of the Human Resource Management Variable

Var	Average	Std. Dev	Min	Max	Value above Average		Value below Average	
		Total	Total	Total	Total	%	Total	%
HRM	24,26	31,77	17	29	60	60	40	40

According to the table 3 above, it was seen that the average variable of the human resource managements on tourism objects in Lampung (Bandar Lampung, Pesawaran District, South Lampung District, West Lampung District, East Lampung District, and Tanggamus District) in 2016 from the entire sample is 24.26. The minimum value is 17, while the maximum value is 29. The variable of the human resource managements which was below the average in 2016 was 40 (40%), while the human resource management variable which was above the average in 2016 was 60 (60%). Standard Deviation (31.77) show the good spread data because the value of the standard deviation value is greater than the average value (24.26).

Descriptions of Electronic Systems

Table 4
The Averages of the Electronic System Variable

<i>Var</i>	<i>Average</i>	<i>Std. Dev</i>		<i>Min</i>		<i>Max</i>		<i>Value above Average</i>		<i>Value below Average</i>	
		<i>Total</i>	<i>Total</i>	<i>Total</i>	<i>Total</i>	<i>Total</i>	<i>%</i>	<i>Total</i>	<i>%</i>		
HRM	20,39	27,59	15	25	8	8	92	92			

According to the table 4 above, it was seen that the average value of the electronic systems on tourism objects in Lampung (Bandar Lampung, Pesawaran district, South Lampung district, West Lampung District, East Lampung District, and Tanggamus District in 2016 from the entire sample is 20.39. The minimum value is 15, while the maximum value is 25. The electronic systems which were below the average in 2016 were 92 (92%), while the electronic systems which were above the average in 2016 were 8 (8%). Standard Deviation 27.59 show the spread of good data the good spread data because the value of the standard deviation value is greater than the average value (20.39).

Descript of Organization Information Systems

Table 5
The Average of the Organization Information System Variable

<i>Var</i>	<i>Average</i>	<i>Std. Dev</i>		<i>Min</i>		<i>Max</i>		<i>Value above Average</i>		<i>Value below Average</i>	
		<i>Total</i>	<i>Total</i>	<i>Total</i>	<i>Total</i>	<i>Total</i>	<i>%</i>	<i>Total</i>	<i>%</i>		
CA	28,19	34,03	24	38	99	99	1	1			

According to the table 5 above, it was seen that the average variable of the organization information systems on tourism objects in Lampung (Bandar Lampung, Pesawaran District, South Lampung District, West Lampung District, East Lampung District, and Tanggamus District) in 2016 from the entire sample is 28.19. The minimum value was 24, while the maximum value is 39. The variable of the Organization information systems which was below the average in 2016 was one (1%), while the organization information systems which was above the average in 2016 was 99 (99%). Standard Deviation (34.03) show the good spread data because the value of the standard deviation value is greater than the average value (28.19).

Descript of Creative Economy Industries

Tabel 6
The Average of the Creative Economy Industry Variable

Var	Average	Std. Dev	Min	Max	Value above Average		Value below Average	
		Total	Total	Total	Total	%	Total	%
CEI	6,31	7,06	5	9	97	97	3	3

According to the table 6. above, it was seen that the average value of the creative economy industry on tourism objects in Lampung (Bandar Lampung, Pesawaran District, South Lampung District, West Lampung District, East Lampung District, and Tanggamus District) in 2016 from the entire sample is 6,31. The minimum value is 5, while the maximum value is 29. The variable value of the creative economy industry which was below the average in 2016 were 3 (3%), while the variable of creative economy industry which was above the average in 2016 was 97 (97%). Standard Deviation showed the good spread data which is good because because the value of the standard deviation value is greater than the average value (6.31).

Descriptions of Competitive Advantages

Table 7
The Average of the Competitive Advantage Variable

Var	Average	Std. Dev	Min	Max	Value above Average		Value below Average	
		Total	Total	Total	Total	%	Total	%
CA	32,91	27,90	24	38	99	99	1	1

According to the table 7. above, it was seen that the average variable of the competitive advantages on tourism objects in Lampung (Bandar Lampung, Pesawaran District, South Lampung District, West Lampung District, East Lampung District, and Tanggamus District) in 2016 from the entire sample is 32.91. The minimum value is 24, while the maximum value is 38. The variable of competitive advantages which was under the average in 2016 was 1 (1%), while the competitive advantages variable which was above the average in 2016 was 99 (99%). Standard Deviation (27.90) show the good spread data because the value of the standard deviation value is greater than the average value (32.91).

Hausman's Model Specification

The model specification test was conducted to determine whether the type of used model was the random effect or the fixed effect. This test was required because the data which were to be processed were the data panel (the data of the cross section which were combined with data of the time series). The model specification test was carried out to use Hausman test and the result was as follow:

Table 8
Result of Hausman's Test for Model Selection

$X^2_{calculated}$	X^2_{table}	Probability (p)	Conclusion
1,672	7,815	0,601	random effect

The model specification test showed that the random effect is the exact choice to estimate the effect of the human resource management models, the electronic systems, the Organization information systems, the creative economy industry, and the competitive advantage. It is shown that the significant level of Hausman test result (5%) (probability = 0.601 > 0.05). It was also shown by $2\chi_{hitung}^2 (1.865) < 2\chi_{tabel}^2 (7.815)$.

Classical Assumption Tests (multicollinearity)

Tabel 9
The Result of Classical Assumption Test Multicollinearity

<i>Independent variable</i>	<i>R-square</i>	<i>VIF</i>
HRM	0,034	1,032
ES	0,022	1,002
OIS	0,022	1,002
CEI	0,033	1,033

By the obtained VIF value in Table 9. above, it was shown that there is a strong correlation among the independent variables such as the human resource managements, the electronic systems, the organization information systems, and the creative economy Industry which were smaller than 10 and it can be concluded that there is no multicollinearity among the four independent variables.

Regression Estimation Results

The data below was the result of multiple linear regression analysis which was used to test the effect of the human resource managements, the electronic systems, the Organization information systems, the creative economy industry, and the competitive advantages.

The estimated result of the regression model using Eviews.8 was as output (appendix 2) as follow:

$$CA = 0,373 + 0,151 HRM + 1,223 ES + 0,127 OIS + 0,356 HRM * CEI + 0,132 ES * CEI + 0,761 OIS * CEI + \varepsilon_1$$

$$\text{Standard Error} = 0.175 + 0.002 HRM + 0.273 ES + 0.004 OIS + 0.273 CEI$$

$$t\text{-statistic} = 3.623 + 0.266 HRM + 3.224 ES + 1,601 OIS + 3.224 CEI$$

$$R\text{-squared} = 0,3224$$

$$\text{Adjusted R-squared} = 0.610$$

The regression coefficient value above was interpreted as follows

- 1) The value constant by 0.373 showed the average value of the competitive advantages of the human resource managements, the electronic systems, the Organization information systems, and the creative economy industry which was equal to zero (0).
- 2) Human resource managements had a positive coefficient by 0.151. It meant that each improvement of the human resource managements by 1 percent increased the competitive advantages by

0.151 with which the assumption of the electronic systems, the Organization information systems, and the creative economy industry did not changed. The value by 0.151 indicated the human resources managements effect which was also had a positive direction towards the competitive advantages.

- 3) The human resource managements which was moderated by the creative economy industry had a positive coefficient by 0.356 which meant that each improvement of the human resource managements by 1 percent increased the competitive advantages by 0.151 with which the assumption of the electronic systems, the Organization information systems, and the creative economy industry did not changed. The value by 0.356 indicated the human resources management effect which was also had a positive direction towards the competitive advantages.
- 4) The electronic systems had a positive coefficient by 1.223 which meant that each improvement of the proportion of the electronic systems by 1 percent increased the competitive advantages by 1.223 with which the assumption of the human resource managements, the Organization information systems, and the creative economy industry did not changed. The value by 0.00066 indicated the human resources management effect which was also had a positive direction towards the competitive advantages.
- 5) The electronic systems which were moderated by the creative economy industry had a positive coefficient by 0.132 which meant that each improvement of the proportion of the human resource managements by 1 percent increased the competitive advantages by 0.132 with which the assumption of the human resource managements, the Organization information systems, and the creative economy industry did not changed. The value by 0.132 indicated the electronic systems effect which was also had a positive direction towards the competitive advantages.
- 6) The Organization information systems had a positive coefficient by 0.127 which meant that each improvement of the proportion of the Organization information systems by 1 percent increased the competitive advantages by 0.127 with which the assumption of the human resource managements, the electronic systems, and the creative economic industry did not changed. The value of the effect of the Organization information systems showed a positive direction towards the competitive advantages.
- 7) The information systems which were moderated by the creative economy industry had a positive coefficient by 0.761 which meant that each improvement of the proportion of the human resource managements which was implemented by the company by 1 percent increase the competitive advantage by 0.761 with which the assumption of the human resource managements, the electronic systems, and the creative economy industry did not changed. The value of the effect of the Organization information systems showed a positive direction towards the competitive advantag.

Coefficient of Determination

The coefficient of determination was used to look the extent of the effect of the human resource managements, the electronic systems, the Organization information systems, and the creative economy Industry towards the competitive advantages. The value of the coefficient of determination was precisely seen from the Adjusted R-Squared which was 0.3224 or 32.24%. it meant that the human resource

managements, the electronic systems, the Organization information systems, and the creative economy Industry simultaneously give the contribution or the effect by 71.26% towards the competitive advantages on the tourism objects or tourism companies in Lampung.

Discussion

1) The Positive Effect on Human Resource Management towards Competitive Advantages

The hypothesis which stated that the human resource managements which was moderated by the Organization information systems affects significantly towards the competitive advantages was accepted. The result of the test of the hypothesis provided an empirical evidence that the human resource managements showed the positive effect towards the competitive advantages in the sector of the tourism companies or objects in Lampung. This result showed that the human resource managements affected positively towards the competitive advantages.

2) The Positive Effect on Electronic Systems towards Competitive Advantages

The hypothesis which stated that “the electronic systems which was moderated by the Organization information systems affected towards the competitive advantages” was accepted. The result of the test of the hypothesis provided an empirical evidence that the electronic systems did not affect significantly towards the competitive advantages in the sector of the tourism companies or objects in Lampung. This result showed that the electronic systems affect positively but had no the significant effect towards the competitive advantages.

3) The positive influence of the Organization Information Systems Competitive Advantage

The hypothesis which stated that “the Organization information systems which was moderated by the creative economy industry affect towards the competitive advantages” was accepted. The result of the test of the hypothesis provided an empirical evidence that the distribution systems gave the positive effect towards the competitive advantages in the sector of the tourism companies or objects in Lampung. This result showed that the Organization information systems affected positively towards the competitive advantages.

To realize competitive advantages apart from Information Systems is influenced many factors, including image and customer loyalty. Image and customer loyalty in the context of this rating is influenced also by Customer Relationship Management, (Ali, H., & Djojo, A: 2016). Besides, influenced by the Customer Loyalty Service Quality and Accessibility (Ali, H., and Hadibrata, B, et al., 2016).

5. CONCLUSIONS AND SUGGESTIONS

Conclusions

- 1) The human resource managements which was moderated by the creative economy industry affected towards the competitive advantages. It showed that the human resource managements with the creative economy industry was able to enhance the competitive advantages in the sector of tourism objects or tourism companies.

- 2) The electronic systems in the management of tourism objects affected positively but not significantly towards the competitive advantages from the tourism objects or tourism companies. The electronic systems and the moderation of the creative economy industry towards towards the competitive advantages in this research were also be used as an evaluation tools by the local government to support the tourism objects or tourism company with the adequate technology.
- 3) There was a significant effect positively between organization information systems and the competitive advantages with the moderation of the creative economy industry. It showed that the good organization information systems had a significant effect positively towards the competitive advantages on the tourism objects or tourisms company.

Suggestions

- 1) The government is expected to support tourism businesses and to develop tourism objects in, especially in district, by providing facilities that support infrastructures in the form of appropriate access roads and networks and by providing training skills for Human Resource either in the tourism companies and society around the tourism object.
- 2) The tourism business is expected to continue creativity to find new ideas and to continue to innovate and to improve the service quality.
- 3) The other researchers are expected to create appropriate information system designs to be implemented by developing tourism companies or tourism objects and to add measurement variables in order to more accurate.

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