

The Difference of Profile, Perception of Businessmen and the Utilization Rate of the ICT Means that Used in Rural and Urban Areas in the West of Java

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Abstract

This research aims to examine: (1) the MSMEs businessmen profiles, perceptions and the utilization level of ICT (2) means of analyzing the difference in profile, the perception of businessmen MSMEs and the level of utilization of ICT means in rural and urban areas. This research was conducted in Kabupaten Bandung, Kabupaten Bogor, Kota Bandung, and Kota Bogor from December 2016 until April 2017. The sample of respondents totaled 358 based on election results from the overall population of 3479. Methods of data analysis used in this study is the analysis of different test, the Kruskal Wallis test and Dunn test. Based on the results of this study showed that the highest percentage of compliance with the requirements of perception, perception of ease to use, the level of utilization of ICT means it is known that the highest percentage is in the region of the County, namely rural, for marketing activities, promotion and communications. There is a difference between the perception of businessmen against the relative benefit or use of the means of ICT among businessmen in rural and urban areas. The actors of MSMEs in rural areas tend to have a low perception levels will benefit the use of ICT means.

Keywords: ICT, MSMEs, Perception, Profile

• Introduction

One of the indicators to achieve the competitive advantage of Micro Small, Medium Enterprises (MSMEs) is producing quality products efficiently and effectively. The utilization of information and communication technology is one of the important factors in MSMEs to deal with competitive business competition. Therefore, through the use of ICT in the MSMEs sector will achieve the competitive advantage. It is also supported by the research written by Tambunan (2014) who stated that the main prerequisite for the realization of the competitiveness of business is (1) education, (2) capital, (3) technology, (4) input. The utilization of ICT is the main aspect that plays a role in the business activity. According to the results of the research written by Indrajit (2002), indicating the ICT means (1) facilitate the process of Communication and business, (2) expand the market share, (3) the rise of business opportunities, (4) new business opportunities, (5) reduce the cost of production.

The real condition shows that the local perpetrators of MSMEs in Indonesia are less able to compete due to the low intensity of utilizing ICT. Data from Central Bureau of Statistics in the Tribun News daily (2012) shows that 17 million of MSMEs in Indonesia only 75 thousands or about 22 percent of the total number of MSMEs that have a web site. Likewise, MSMEs in the area of Bandung and Bogor. The research of The Asia Foundation (2002) shows that the number of SMALL MEDIUM ENTERPRISES (SME) in Bandung and Bogor who utilize e-commerce is only 18 per cent of the total number of existing MSMEs' perpetrators. One of the reasons is because of the difference of perception. Harian Bisnis Jawa Barat (2013) revealed that the use of ICT in Bandung is still sporadic.

There is a gap between the real conditions and the expected conditions in the utilization of ICT by businessmen in urban and in rural areas. The result of field research indicates that the mindset and behavior of MSMEs' perpetrators in rural and urban areas is different in Kabupaten.

One barrier in the utilization of ICT in Bandung and Bogor is a low level of capability in using ICT. It is due to the competence in utilizing ICT and levels of information management with the use of ICT (Hafsah, 2000)

High and low capability in using ICT is influenced by some of the things that are attached to the MSMEs individual businessmen. Based on some previous research results, there is a gap between the conditions in the field with the conditions expected. In the area of Bandung and Bogor note there is a difference the fact that businessmen has limited mindset and behavior of rural businessmen in contrast to urban businessmen. Urban businessmen generally more dynamic and have a lot of availability of time to optimize the use of ICT means compared with the rural businessmen, besides the rural businessmen also tend to be less aware of the benefits of ICT means. These conditions encourage further research because of the use of ICT in MSMEs. Therefore, this research aims at:

- (1) To analyze the characteristics of the perpetrator's efforts, perception and the level of ICT utilization for MSMEs businessmen in rural and urban areas
- (2) To analyze differences characteristics, perception and the level of ICT utilization in rural and urban areas.

• **Review of Related Literature**

According to Alter (1992), the definition of IT is the technology that includes hardware, software, to perform one or a number of processing. According to Kadir (2014), ICT replaces the human role, therefore (1) technology can perform automation tasks or process, (2) technology can strengthen the role of the human being and, (3) technology play a role in the realignment of the human role in doing the changes against a set of processes. The use of ICT will have an impact on product quality. It will be more innovative and the service will be even faster. As for the use of ICT is influenced by the characteristics, attitudes and perceptions of individuals towards technology.

Characteristics or profiles of individual businessmen is the visual demographic of the perpetrator inherently inherent in every individual. According to Mardikanto (1993), individual characteristics are inherent in the nature of a person related to aspects of life, such as age, gender, education and the status of the social economy, and religion. Stewart (1998) states that the factors such as individual age, education or gender can be a determinant of the success of an enterprise.

Understanding of the perception of businessmen towards ICT innovation characteristics, begins with the basic concept of perception is the process of receiving information or stimuli from the environment and convert it into consciousness psychology. Litterer (Asngari 1984) revealed the formation of perceptions consists of three mechanisms: selective, closure, and interpretation. When information is received by the individual, the individual form perception understanding begins with select or filters it and then incoming information organized into unity of meaning, and interpretation occurs regarding the fact the overall information, phase interpretation is influenced by experience. The perception of businessmen against the TICK refers to the concept of Roger (1996) that the perception towards compliance with the requirements of; p related perception using ICT; The perception after using ICT becomes easier; the relative benefit of perception and perception to see results and the perception that each ICT tool easy to try.

• **Research Methods**

This research is Sequential Explanatory Design research (Sugiyono, 2011). Quantitative research conducted with descriptive survey method of causality. The data collection is done by survey. Research is conducted in Kabupaten Bandung, Kabupaten Bogor, Kota Bandung and Kota Bogor. The location of this research deliberately considered the area with the largest business centers in the provinces of West Java (Jawa Barat) and the tourist centers. There are two types of data in this research, the primary and secondary data. The research was conducted in December 2016 until April 2017. The research was conducted at four sites of research i.e. Kabupaten Bandung, Kabupaten Bogor, Kota Bandung and Kota Bogor. The population of this research is about 3479 people. The determination of the amount of the sample is using the Slovin formula (Sevilla et al. 1993) and the standard error is about 5 percent.

The technique of sampling in this research is using disproportional stratified random sampling, which is determined based on the area followed by the type of business based on the Slovin formula. Primary data derived from interview data, surveys, in-depth interviews, questionnaires, observations and FGD. As for the secondary data were obtained from the local Office of government agencies. Types of research data include (1) the profile of the perpetrator of the attempt (2) perceptions of the trade (3) and the level of utilization of ICT means. Measurement of the level of perception of businessmen using the Likert scale with four scales of measurement. The level of measurement using frequency distribution of the utilization and transforms index with 0-100 scale. Measurement of the difference of the factors variables in this study performed using Kruskalwalliss test and Dunn test.

- **Result and Discussions**
- **Profile MSMEs Businessmen in Utilizing of ICT Means**

MSMEs trade profiles based on composition showed that the highest in Bandung Regency as much as 74 percent of the businessmen SMEC categorized productive adulthood (20-46 years), then followed Kabupaten Bogor as much as 66.7 percent. The level of formal education businessmen MSMEs mostly attended to secondary schools (junior-senior high school) average duration ranges ≥ 12 years. Formal education further education category there are in urban areas 90 percent of Kota Bandung and Kota Bogor of 80 percent. Non formal education owned by the businessmen most > 80 percent category are rare, the training frequency < 3 can be seen in table 1. The low intensity of counseling or mentoring from related Government use of ICT means application in business activities. Research results that done by Batte et al. (1990) showed that the level of implementation of information and communication technologies greatly associated with factors of age and education.

Average number of ICT means ownership still low categories ≤ 6 units. The level cosmopolitan businessmen MSMEs category average in 80 percent of the Bandung City and Kota Bogor of 40 percent. Most of the level motivation of MSMEs businessmen category are medium. Rukia (2016) declared motivation is an impetus that arise from one's self to a direction of the behavior that preceded the need giving rise to encouragement. Mardikanto (1996) state that the cosmopolitan nature of individuals is characterized at the level of its relationship with the outside world. The result of the research that done by Muliady (2000) show that the level of motivation and degree of cosmopolitan will affect on the ability and performance of the individual. Kim et al. (2011) in the research shows that individual motivation is intrinsic in the use of ICT that related to the nature of the interest in the world of ICT.

Based on the result of different test on the variables of MSMEs business actor in Kabupaten Bandung, Kabupaten Bogor, Kota Bandung and Kota Bogor, showed that by using analysis of different test, one way annova, kruskallwalis, and Dunn test there are differences in age, number of ICT ownership, and long ownership of ICT means. The results of different test sub age, age and number of ICT means ownership based on one way annova analysis test are presented in Table 2.

The results of different test from the variable profile of MSMEs businessmen based on table 1 through test one way annova shows that of the four areas, there is a real difference where the age variables between MSMEs businessmen of Kabupaten Bandung, Kabupaten Bogor is about sign p-value $< 0.05 = 0.000$. The difference in terms of percentage amount of productive age, Kabupaten Bandung has the highest percentage, 74.1 percent. As for the amount of ICT Means ownership in Kabupaten Bandung and Kabupaten Bogor in generally there is a difference with the reality is about sign p-value $< 0.05 = 0.030$. Based on survey results and test the distribution of frequencies (df), the amount of ICT means ownership higher or $>$ is Kabupaten Bogor, there are real differences in sub variables age between the MSMEs actors in Kabupaten Bandung and Kabupaten Bogor is about 0,000. For a long time the ownership of the ICT means there is a real difference between actor of the MSMEs Kabupaten Bandung and Kabupaten Bogor, MSMEs businessmen Kabupaten Bogor used ICT Means for a long time, because MSMEs businessmen Kabupaten Bogor are close to the center of the city, the value is < 0.05 or 5 percent..

Cosmopolitan based on Kruskalwaliss test generally indicates a different sub test results of the independent cosmopolitan where there are real differences of the four research areas in Kabupaten Bandung, and Kabupaten Bogor is about 0.001. Based on the results of the Dunn test in Kabupaten Bandung and Kabupaten Bogor, Kabupaten Bogor has higher level of Cosmopolitan compared to Kabupaten Bandung. The result of the different test of cosmopolitan sub-variables presented in Table 3.

- **The Perception of MSMEs Businessmen Actors on ICT Means Utility**

Average number of the level perception of MSMEs businessmen innovation characteristics of ICT are high, on the perception of the MSMEs businessmen towards compliance with the requirements and ease-to-use of ICT means for businessmen in urban and also in rural as follows in region Bandung and Bogor, indicated high categories by the average number likert scale is about 3.97 and likert scale about 2.92. At the level perception of MSMEs businessmen towards the benefits of ICT is in medium categories with the number average is about 2.5, the ease of seeing the results with a value of 2.4 and 2.3 for the value tried with ease. Based on the research results show that society among the business communities of MSMEs currently have judgments that the utilization of ICT means in accordance with the required trade in its business activity, including any trade like mobile phone, internet, computer, along with other ICT means that have utilized businessmen already fit and suitable for all business activities including marketing communications and accelerate customer service customers. Research written by Gaynor (1991) suggests that technology implementation much utilized in the corporate world in the aspect as follows (1) distribution, (2) marketing, (3) administration, (4) the resurrection product, and (5) manufacturing. Based on the results of different tests, KruskalWalliss test in perception of MSMEs businessmen variable in Kabupaten Bandung, Kabupaten Bogor, Kota Bandung and Kota Bogor, show that there is difference between the level perception of MSMEs businessmen. There also differences at the level of the test based on the Dunn test that presented in Table 4.

Based on Table 2, the conclusions can be drawn as follows: results on variable X3.1 shows that there is a difference in all the variables because p-value of Kruskal Wallis is smaller than 5% alpha. On those results then we can know the result of Dunn test on all variables. (1) Kabupaten Bandung is different to other areas, but in Kabupaten Bogor, Kota Bogor and Kota Bandung have the same characteristics on perception of suitability. Kabupaten Bandung has the lowest compliance perceptions than others. (2) Based on a comparison of the value of the Dunn test. Kabupaten Bandung and Kabupaten Bogor in contrast to other areas, but in the Kota Bogor and Kota Bandung has the same characteristics on perception of ease of use. Kabupaten Bandung, and Kabupaten Bogor has the perception of the ease with which used the lowest compared to the other. (3) Based on comparison of the values test Dunn. Kabupaten Bandung in contrast to other areas, however, in Kabupaten Bogor, Bogor, Bandung and has the same characteristics on perception of the ease to see results. Bandung Regency has the perception to see results lower than others. Based on comparison of the values test Dunn. Bandung Regency in contrast to other areas, however, in the District of Bogor, Bogor, Bandung and has the same characteristics on perception of relative advantages. Base on the result of the Dunn test, Kabupaten Bandung is different from another areas, however Kabupaten Bogor, Kota Bogor and Kota Bandung has a same of characteristic in perception of easy to try.

- **The Utilization of ICT Means**

In terms of the utilization level of ICT means either a computer or a mobile means of MSMEs in urban areas is higher than the District. This can be indicated on the score the intensity level of the utilization and management of ICT means businessmen MSMEs Kota Bogor is about 60 percent and the rate of MSMEs trade information management of Kota Bandung which is 70 percent. The observations in the field show that the educational level of MSMEs businessmen in urban areas is higher than businessmen are in the District, so that the level of awareness, assessment of the use and benefits of ICT.

Utilization rate of ICT means include the level of intensity of use and degree of ICT information management on average trade at the District belongs to the medium. Kemenkoinfo research results (2011) shows the level of understanding in utilization of ICT by society is not optimal compared to communities in urban areas. Observations of the researchers in the field the majority of businessmen in MSMEs does not regularly use the computer means in any activity of his business, but overall for mobile means of using ICT in the form of HP with a degree of frequency use > 10 times in one week good means of conventional HP. Hafsa (2003) in her research shows that the intensity of the utilization of ICT means high competence required in applying ICT means. The level of the management of information the average high belongs to businessmen who are in SMALL MEDIUM ENTERPRISES in urban demographics the population of which the consumer has a fairly high level of mobility of the use of ICT, the public in urban areas tend to be kosmopolit so that affects most consumers MSMEs who are in urban areas tend to be very high in information management at ICT means, thereby encouraging businessmen to actively use various applications either through means of mobile and PC Select either computer information, manage and disseminate information.

Research results that done by Suaib (2013), demonstrates the ability to process data with basic information into a processing can be done more efficiently using a computer with the help of computer-based information system Observations in field applications Whats up, Blackberry, SMS application most used on the means of the HP konvensional, social media application used most respondents in the County to interact with customers.

- **The Utilization Rate of ICT Means by MSMEs Businessmen**

Each individual of MSMEs' businessmen in Kabupaten Bandung, Kabupaten Bogor, Kota Bandung and Kota Bogor has different characteristics in using and utilizing ICT means. Characteristics of the MSMEs businessmen actors in utilizing ICT means is the image of businessmen in operationalize ICT means in each of its business activity. The use of conventional means of mobile shows 44 percent highest percentage of MSMEs trade today. The average number of Kota Bogor discharging means of conventional handphone and computer is the highest compared to other regions. Kabupaten Bandung utilization rate means of smartphone and most conventional high HP means used. The description of the characteristics of MSMEs in trade levels utilizing ICT hardware means are presented in Figure 1.

MSMEs businessmen in Kabupaten Bandung, Kabupaten Bogor, Kota Bandung and Kota Bogor in utilizing software applications on a mobile facility or means of computerized have the level or frequency of use. Application Whatsap the highest usage by the community the MSMEs Kabupaten Bandung. The lowest one is line Application usage in four locations research. The use of email applications has lowest precentage in Kabupaten Bandung, because the average number of MSMEs offender in Kabupaten Bandung has a low ability to use software applications on a computer means. The description of the characteristics of MSMEs in trade levels utilizing ICT software is presented in Figure 2.

- **The Utilization Rate of ICT Software Application in Business Activity**

Based on the result of the comparative test towards perception of MSMEs Businessmen in Bandung and Kabupaten Bogor and also Bandung and Kota Bogor, show with the comparative test, KruskalWaliss, there is different of utilization rate of used ICT Means. The result of the Dunn test is presented in Table 5. Research results show that the intensity of the utilization of ICT means in four areas of research with difference analysis test and Dunn test in the real difference between Bogor and Kabupaten Bandung, in terms of frequency utilization intensities the use of the Kabupaten Bogor, it is used in a higher low in utilization in particular use of ICT in the form of hardware means computer and a laptop or netbook for business activities. Information management level between Kabupaten Bandung and Kota Bogor based on the results of Dunn test show that there is a difference. Its utilization rate of the MSMEs community of Bandung and Bogor has largely used the means of computer. Kabupaten Bandung in management of information is lower than the Kota Bogor. MSMEs society of Kota Bogor has higher ability in managing information by utilizing the means of ICT compared society Bandung Regency.

- **Conclusion**

The use of ICT at the level of intensity of the utilization and management information for the MSMEs' businessmen in the urban areas is at the highest percentage from average rate. Sub variables perception of conformity with the requirements for the use of ICT has the highest percentage. There are many productive adulthood in the MSMEs business in Kabupaten Bandung. MSMEs' businessmen in urban city like Kota Bogor and Kota Bandung has the highest percentage of the amount ownership of the ICT.

There are real differences in the profile of MSMEs' businessmen variables in a sub variables such as: age, the amount ownership of the ICT, long ownership of ICT and the level of cosmopolitan in Kabupaten Bandung, Kabupaten Bogor, Kota Bandung and Kota Bogor. At the level of the perception, there is a difference in the perception sub variables against the suitability with requirements, ease to use, the relative benefit of perception, the perception of ease to seeing the results of the conformity with the requirements and the perception on the level of the utilization of ICT there is a real difference in the intensity of the sub variable utilization and management of information.

- **Table**

Table 1 A Descriptive Profile of the MSME's Actor efforts in utilizing ICT means

| Sub Variables | Category | KabupatenBandung(%) n=178 | KabupatenBogor(%) n=26 | Kota Bandung(%) n=10 | Kota Bogor (%) n=9 |
|--|---------------------|------------------------------|---------------------------|----------------------------|-----------------------------|
| Age (year) | Teens(<20) | 0.0 | 0 | 10 | 0.0 |
| | Adults(20-46) | 74.1 | 66.7 | 40 | 40 |
| | Elder >47 | 25.9 | 33.3 | 50 | 60 |
| Formal Education (year) | Primary(0-6) | 20.9 | 11.1 | 0.0 | 20 |
| | Secondary(9-12) | 18.7 | 11.1 | 10 | 0 |
| | Advance>12 | 60.4 | 77.8 | 90 | 80 |
| Non Formal Education (frek/yea) | Rarely (<3) | 94.6 | 85.2 | 90 | 100 |
| | Medium(3-5) | 3.8 | 3.7 | 10 | 0 |
| | Often(>5) | 1.6 | 11.1 | 0 | 0 |
| Length of ICT Means Ownership (year) | Very Long (>16) | 0 | 0 | 0 | 0 |
| | Fairly Long (12-16) | 0 | 0 | 0 | 0 |
| | Lama (1-11) | 100 | 100 | 100 | 100 |
| The amount of ICT Means Ownership (unit) | Low (1-6) | 100 | 100 | 27 | 80 |
| | Medium (12-16) | 0 | 0 | 0 | 0 |
| | High (17) | 0 | 0 | 0 | 20 |
| Cosmopolitan (score) | Low | 61.7 | 40.7 | 10 | 0 |
| | Medium | 24.7 | 22.2 | 10 | 60 |
| | High | 13.6 | 37.0 | 80 | 40 |
| Motivation Rate (score) | Low | 36.4 | 33.3 | 10 | 0 |
| | Medium | 44.9 | 44.4 | 60 | 100 |
| | High | 18.7 | 22.2 | 30 | 0 |

Source : data processed in 2017

Table 2 The Results of Different Test From the Variable Profile of MSMEs Businessmen on Sub Variables age, Long of Ownership and the Amount of ICT Means Ownership

| Sign | Age | Formal Education | NonFormal Education | Long of ICT Means Ownership | The Amount of ICT Means Ownership |
|---------|------|------------------|---------------------|-----------------------------|-----------------------------------|
| Mean | 0.00 | 0.143 | 1.743 | 9.220 | 7.883 |
| F | 0.00 | 0.013 | 2.095 | 4.396 | 4.737 |
| P value | 0.00 | 0.910 | 0.149 | 0.037 | 0.030 |

Table 3 Test Results of the Different Test from the Profile of MSMEs Businessmen Variable on the Cosmopolitan of Sub-variables

| Variables | Areas | N | Mean | P-value |
|--------------|-------------------|-----|-------|---------|
| Cosmopolitan | Kabupaten Bandung | 313 | 170.7 | 0.001 |
| | Kabupaten Bogor | 26 | 219.3 | |
| | Kota Bandung | 9 | 281.3 | |
| | Kota Bogor | 10 | 297.3 | |

If P value < 0,05 or 5 percent, means that there is a real different

Table 4 The result of the different test of MSMEs businessmen profile towards cosmopolitan sub-variable

| Variable | Areas | N | Mean | P-value |
|----------------------------------|-------------------|-----|--------|---------|
| Perception Over all needs | Kabupaten Bandung | 313 | 173.2 | 0.0047 |
| | Kabupaten Bogor | 26 | 212.3 | |
| | Kota Bandung | 9 | 248.5 | |
| | Kota Bogor | 10 | 260.5 | 0.0007 |
| Easy to Used Perception | Kabupaten Bandung | 313 | 173.5 | |
| | Kabupaten Bogor | 26 | 197.9 | |
| | Kota Bandung | 9 | 271.1 | |
| | Kota Bogor | 10 | 271.1 | |
| Easy to Seeing Result Perception | Kabupaten Bandung | 313 | 170.7 | 0.0001 |
| | Kabupaten Bogor | 26 | 237.27 | |
| | Kota Bandung | 9 | 244.5 | |
| | Kota Bogor | 10 | 289.8 | |
| Perception of Relative Finance | Kabupaten Bandung | 313 | 171.7 | 0.0001 |
| | Kabupaten Bogor | 26 | 223.6 | |
| | Kota Bandung | 9 | 249.7 | |
| | Kota Bogor | 10 | 288.3 | |
| Easy to tried perception | Kabupaten Bandung | 313 | 168.9 | 0.0001 |
| | Kabupaten Bogor | 26 | 253.2 | |
| | Kota Bandung | 9 | 269.9 | |
| | Kota Bogor | 10 | 269.9 | |

If P value < 0,05 or 5 percent, means that there is a real different

Table 5 The Result of Differences Test on Utilization of ICT Means Variable by MSMEs Businessmen

| Variable | Areas | N | Mean | P-value |
|-----------------------------|-------------------|-----|---------|---------|
| Intencity of Utilization | Kabupaten Bandung | 313 | 174.161 | 0.017 |
| | Kabupaten Bogor | 26 | 207.426 | |
| | Kota Bandung | 9 | 229.15 | |
| | Kota Bogor | 10 | 266.800 | |
| ManagamentInfromation | Kabupaten Bandung | 313 | 172.5 | 0.0001 |
| | Kabupaten Bogor | 26 | 203.6 | |
| | Kota Bandung | 9 | 257.3 | |
| | Kota Bogor | 10 | 294.85 | |

If P value < 0,05 or 5 percent, means that there is a real different

- **Figure**

Source : data processed in 2017

Figure 1 The Rate of ICT Means Utilization

Source : data processed in 2017

Figure 2 The Rate of Utilization of ICT Software Application

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