Characteristics Affecting Creative Business Income of Leading Subsector Economies in Java

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Abstract
This study aimed to fill the literature gap on companies’ characteristics, focusing on the effects of entrepreneurs and business characteristics on the companies’ income. The companies chosen are the ones in the leading subsector, particularly the case in Java. This study also analyzed which characteristics of entrepreneurs and businesses affected income in the creative industry. The method used in this study was multiple linear regression and standardized beta test, with cross-sectional data taken from the specific survey in creative economy issued by BPS and BEKRAF in 2016. The unit of analysis comprises 822 companies in the leading subsector of the creative industry in Java. The results showed that all of the characteristics of entrepreneurs and businesses had significant and positive effects on the company’s income. The factors that affected company income are Intellectual Property Rights (IPR) ownerships and the business’s legal status. The primary factor affecting the income was the number of workers. Meanwhile, for each provincial level in Java, it showed that the number of workers, internet use, and the ownerships of IPR had significant and positive effects, while the IPR ownerships had a substantial magnitude in four provincial levels in Java.

Key words: Entrepreneur and Business Characteristics, Creative Economy, Leading Subsector, Business Income.

How to Cite: Purnawan, M., & Taufan, M. (2021). Characteristics Affecting Creative Business Income of Leading Subsector Economies in Java. JEJAK: Jurnal Ekonomi dan Kebijakan, 14(1). doi:https://doi.org/10.15294/jejak.v14i1.28717
INTRODUCTION

Business/ company income is interesting to study because it has a broad impact on a region or country’s economy through GDP. Research on business income has been carried out and has not given definitive conclusions, giving rise to a literature gap. Business/ company income used in this study refers to business income/companies engaged in the creative economy sector/ leading subsector (craft, culinary, fashion), while the characteristics are divided into two, namely, entrepreneur characteristics and business characteristics. The entrepreneur characteristics are divided into the gender of the entrepreneur/ owner, age of the entrepreneur/ owner, and length of study of the entrepreneur/ owner, which are significant because human resources are the determining factor for the success of the business/ company engaged in the creative economy (Piergiovanni et al. 2012). Business characteristics are divided into the number of workers involved in business/ company operational activities, the use of internet facilities in running a business/ company, business age, the business’s legal status, and ownership of Intellectual Property Rights (IPR).

Research related to the gender of entrepreneurs, which affects business income, generated different opinions. In general, gender had a significant effect on business performance (Radipere 2014), but not significant (Kirkwood 2016). Men were dominant over women in the business world (Kalleberg & Leicht 1991; Rosa et al. 1996; Robb 2002; Robb & Wolken 2002; Fairlie & Robb, 2009), but women also succeeded in business (Dumas 1999). Economic Census in 2016 showed that women amounted to 54.96% more than men entrepreneurs in the creative economy.

Another characteristic is the entrepreneur’s age, which is considered to affect business income also revealed different results in a number of studies. According to Chiliya & Lombard (2012), the entrepreneur’s age significantly affected business performance. Another opinion is that age of the entrepreneurs had a positive impact on business income (Kristiansen et al. 2003; Muijanack, Vroonhof & Zoetmer (2003) in Chiliya & Lombard 2012; Zhao Hao et al. 2020), but the results revealed inversely proportional in the research conducted by Sinha (1996); Sasmitha et al. (2017); Lubis et al. (2019). Bekraf 2016 showed that as many as 30.92% of creative economy entrepreneurs were aged 40-49 years, and at least 0.33% were aged less than 20 years.

The last characteristic of an entrepreneur is the length of study, which is considered to affect business income, resulting in different opinions. The duration of the study of an entrepreneur had a positive effect on business incomes as found in Fairlie and Robb’s research (2009, 379), Indarmoko (2000), Utari et al. (2014), Diandrino (2018), Maliranta and Nurmi (2018). In contrast, Maheswara et al. (2016) found that the length of study of an entrepreneur had a negative effect on business income. Nainggolan’s research (2016) stated that the duration of the study of an entrepreneur did not affect business income.

In terms of business characteristics, the first feature is the number of workers. The number of workers had a positive effect on business income, as revealed in Leksono’s research (2013), Wijaya & Utama (2016), Antara et al. (2016), Butarbutar (2017). Another study conducted by Angraini (2018) concluded that workers’ quantity did not affect business income. Share of creative economy labor in 2011-2016 continued to increase even slowly, while the percentage of creative economy labor per subsector in 2011-2016 tended to decrease.
Internet use also disclosed a literature gap. According to Senn & Lee (1995), Mithas et al. (2012), Sari & Hanoum (2012), Sung (2015), Wahad et. al (2020) the use of the internet had a direct and significant positive effect on business/company performance as measured by business income/company. Other opinions Rai et al. (1997) and Aral and Weill (2007) in Mithas et al. (2012) showed insignificant results between corporate information technology budget expenditures and an increase in company income. Loveman (1988) and Roach (1991) in Senn and Lee (1995) stated that information technology did not affect company income. Percentage of businesses/companies creative economy per subsector in internet users in 2016 showed that the leading subsector became the three lowest subsectors as the businesses/companies using the internet in 2016.

The next characteristic of business is business age. This characteristic also results in a literature gap. Research by Kristiansen, Furuholt, & Wahid (2003) and Chiliya et al. (2012, 462) discovered that business/company age had operated significantly associated with business success. But the results are different from Indarti and Langenberg (2004), which stated that a company’s age did not significantly affect its success based on business income. Research in Indonesia also yielded different opinions. The study conducted by Antara et al. (2016) and Butarbutar (2017) discovered that business duration had a significant positive effect on business income/company. Research by Lubis et al. (2019) and Nainggolan (2016) found that business age was not related to business/company income.

Another characteristic that deserves attention is the legality status of a business. Research related to business entities conducted by Davidsson et al. (1987) in Puspaningrum (2019) showed the results that the legality of a business entity (legal form) significantly influences business growth. One measure of business growth is revenue growth (Bhaduri & Saumitra 2002). Other research conducted by Puspaningrum (2019) disclosed that business legality positively and significantly affected business growth. Another study by Indarti and Langenberg (2004) found that legality had a negative effect on business success. The fact is based on Economic Census 2016, much as 96.61% of businesses/companies did not have the legal status, and out of 3.39% who had the legal status of a business, the leading subsector would be the three lowest subsectors that already had the business legality status.

The last characteristic of business is the ownership of intellectual property rights (IPR). IPR is interesting because of its inherent nature of the creative economy. Research on the effect of IPRs on business/company income also revealed different results, such as Kandampully and Suhartanto (2003) who mentioned that trade had a significant impact on corporate economic profits. Ulum (2007) found a positive effect of Intellectual Capital (IC) on the company’s financial performance as measured by revenue growth. This result is different from the research conducted by Herawati (2017) which found that IC did not affect the revenue growth.

Based on the share GDP contribution per sub-sector, it is dominated by leading subsectors as presented at figure 1. The data shows the inequality between subsectors in contributing to the creative economy’s GDP, and in recent years, the leading subsector has experienced a downward trend. Besides, when viewed from the distribution of creative economy business units/companies based on the 2016 Economic Census area, it is also uneven and concentrated in Java by 65%. If described in
detailed per sub-sector, data distribution of business units/companies is also dominated by leading subsectors. The number of culinary business units/companies is 67.66%, fashion is 15%, and craft is 14.56%, and the other is at a rate of 2.78%.

Based on these problems, this study aims to analyze the effect (direction, significance, and magnitude) of the characteristics of entrepreneurs and business characteristics on creative economy business income of leading subsectors in Java and each province in Java and analyze the priority characteristics that affect the creative economy’s income of leading subsector in Java.

Based on theory and previous studies, hypotheses proposed in this study are as follows: 1) Entrepreneur characteristics (gender, age, length of study) have a significant and positive effect on the creative business income of leading subsector economies in Java; 2) Business characteristics (number of workers, internet use, business age, legality status of a business, ownerships of intellectual property rights) have a significant and positive effect on the creative business income of leading subsector economies in Java.

**METHOD**

This study used cross-sectional data obtained from BPS and Bekraf. The data used in this study were business units/companies that have been classified based on the 2015 Indonesia Standard Industry Classification (ISIC) code with large and medium scale businesses and micro-small businesses for leading subsectors, namely 293 craft businesses, 280 culinary businesses, and as many as 249 fashion business units a total of 822 business units observation.

This research’s characteristics or variables are processed from raw data Specific Survey of Creative Economic (SKEK) 2016 collaboration BPS and Bekraf. The characteristic used is that business income in millions of rupiah calculated for one year of business/company operations. Features of entrepreneurs consist of the entrepreneur/owner’s gender, age, and duration of the study. Business characteristics
are divided into the number of workers involved in business/ company operational activities, internet facilities in running a business/ company, business age, the business’s legal status, and Intellectual Property Rights (IPR) ownership.

The analytical method used to answer the research objectives was multiple linear regression analysis and standardized beta test. The multiple linear regression method was used to analyze entrepreneurs’ characteristics and business characteristics that affected the business income of the leading subsector creative economy in Java and each province in Java. A Standardized beta test is used to analyze the priority characteristics that affect the leading subsector creative economy’s business income in Java.

Based on the literature and destinations that wish to reply, as described above, then the regression model used is:

\[ \text{Ln}_i \text{ income} = \beta_0 + \beta_1 \text{Gender}_i + \beta_2 \text{Age}_i + \beta_3 \text{Years of school}_i + \beta_4 \text{Numbers of workers}_i + \beta_5 \text{Internet}_i + \beta_6 \text{Business age}_i + \beta_7 \text{Legal}_i + \beta_8 \text{Intellect}_i + \epsilon_i \]  

(1)

Where are Income is natural log of business/ company income (million rupiah) leading subsector creative economy; \( \beta_0 \) is constants; Gender is dummy variable entrepreneur gender (1=male, 0=female); Age is age of entrepreneur (year); Years of school is length of education completed/ completed by the entrepreneur (years); Number of Workers is number of workers in the business/ company (people); Internet is dummy variable internet use in business/ company (1 = yes, 0 = no); Business age is length of business/ company carrying out activities to serve or produce goods or services commercially (years); Legal is dummy variable legality of the form of business (1=PT, Cooperative, etc., 0=not a legality of business); Intellect is dummy variable ownership of intellectual property rights (Patents, Trademarks, Copyrights, etc.) since the business/ company operates commercially (1=yes, 0=no); \( \beta_1, \beta_2, \beta_3 \) are Coefficient of independent regression of variables; \( i \) is 1, 2, ……, n (type of data cross section of business units / companies); \( \epsilon_i \) is error term.

The definition of operating income in this study is a unit of money measured for one year of business/ company operational activities, which are included in the leading subsector (craft, culinary, fashion) category in a million rupiah. Business income is transformed into a natural logarithm. Gender of entrepreneurs/ owners is the sex of entrepreneurs/ owners business/ companies consisting of men and women (BPS, 2016). The age of entrepreneur/ owner is the age of entrepreneur/ business owner/ company. Age is written rounding down from the date the data was collected (BPS, 2016). The entrepreneur/ owner’s duration of study is the length of the entrepreneur/ owner business/ company completes the education in units of the year (BPS, 2016).

The number of workers is the average number of workers directly involved in work/ business activities/ companies. The minimum number of workers is one (BPS, 2016). Internet use operates interconnection networks worldwide that allow users to share information interactively (BPS, 2016). Business age is how long the business/ company carries out activities to serve or produce goods or services commercially (BPS, 2016). A legal status is a form of ratification of a business unit/ company when established or formed, carried out by an authorized government agency (BPS, 2016). Ownership of Intellectual Property Rights (IPR) is the right (authority/ power) to do something about the intellectual property, which is governed by applicable norms or laws (BPS, 2016).
RESULTS AND DISCUSSION

The research results that have been processed as observational data using multiple linear regression are 822 business units/companies in Java, classified as leading subsector creative economies. Descriptive details of the results for Java is presented below (table 1).

Based on the data in table 1, the modus of business/company income leading subsector is 19,0085 or 180 million rupiahs per year. The business/company income of 180 million rupiahs per year is owned by 14 businesses/companies. The art sub-sectors are four businesses/companies, the fashion sub-sector are eight businesses/companies, and the culinary sub-sector are businesses/companies. Interestingly the smallest and biggest business income/company in Java is in the province of East Java. The smallest business/company income of 15,747 or 6.9 million per year is classified as a craft sub-sector with the ISIC 16291, a woven and bamboo industry. The most considerable business/company income of 26,5404 or 336 billion/year is classified as the fashion subsector with the ISIC 15202, the sports shoe industry.

| Variable          | Obs | min   | Max   | std deviation |
|-------------------|-----|-------|-------|---------------|
| Income            | 822 | 15,747| 26,540| 1.714         |
| Gender            | 822 | 0     | 1     | 0.468         |
| Age               | 822 | 21    | 90    | 11.584        |
| Duration of study | 822 | 0     | 18    | 3.688         |
| Number of Workers | 822 | 1     | 1500  | 83.447        |
| Internet use      | 822 | 0     | 1     | 0.500         |
| Business age      | 822 | 1     | 77    | 13.236        |
| Legal             | 822 | 0     | 1     | 0.385         |
| Intellect         | 822 | 0     | 1     | 0.359         |

Source: Bekraf and BPS (processed)

The age of entrepreneurs/owners is presented in units of years, the average age of entrepreneur/business owners in leading subsector companies in Java is 47 years, this makes the entrepreneur/owner age variable as a potential in developing a creative economy because it becomes a productive age population of 15-55 years (BPS). The youngest entrepreneur/owner’s age is 21 years belonging to the fashion subsector with the ISIC 47711, retail trade in clothing, in DKI Jakarta. The oldest generation of entrepreneur/owner is 90 years old, belonging to the culinary subsector with ISIC 10750, the food and processed food industry located in Banten province. The high standard deviation figure reflects the age difference between the entrepreneurs/owners business/companies leading subsector in Java. While the last characteristic of a businessman is the study’s duration, small numbers indicate that the level of education completed is low and vice versa. The average school years are 12 years, which means that entrepreneurs/owners of business/companies leading subsector in Java on average complete their high school/Madrasah Aliyah/Vocational School education levels. The smallest number of school years is 0 years, which means the number of entrepreneurs/owners who did not complete primary school or did not go to school is 22, from ten craft and culinary subsectors. The highest school duration is 18 years, which means finished/graduated master/doctor degree amount of 16 entrepreneurs/owner with five entrepreneurs/owner craft sub-sectors,
seven culinary entrepreneurs/ owners, and fashion subsector as many as four entrepreneurs/ owners who completed master/ doctoral degree

The first characteristic of a business is the number of workers. The number of workers in leading sub-sector business/companies that became the mode is two people. The total number of two workers is from 129 businesses/companies, with details per sub-sector, namely 54 in craft sub-sectors, 37 fashion sub-sectors, and 38 in culinary business sub-sectors. The smallest number of workers is one person, which means that the business/ company is run by the entrepreneur/ owner and a worker/ employee. The total number of leading subsector businesses/ companies in Java, which has only one employee, is 94 businesses/ companies. The highest number of workers is 1500 people, in the fashion subsector with ISIC 15202, which is in the sports shoe industry in East Java. The high standard deviation figure reflects the difference in the number of workers far enough between entrepreneur/ owners leading subsector business/ companies in Java. The following business characteristic is the use of the internet. The composition of internet use as many as 413 businesses/companies use the internet and 409 businesses/companies do not use the internet.

In terms of the business age, the leading sub-sector in Java is 17 years on average. The smallest business age is one year, which means the business/ company is a newcomer to the creative economy. Six businesses/companies are relatively new: two business/companies craft subsector, three culinary businesses/companies, and one business/company fashion subsector. The highest business age is 77 years, with two businesses/companies in Central Java.

The business/company is in the craft sub-sector with ISIC 47511, the retail trade of textiles, and ISIC 16292, woven industry from non-rattan plants bamboo. The high standard deviation figure reflects a considerable difference between the entrepreneur/ owners business/ companies leading subsectors in Java who are newcomers and have tried for decades or businesses/companies for generations.

The legality of a business and the ownership of Intellectual Property Rights (IPR) are categorized as a dummy variable with a code of 0, for those which do not have the legitimacy of business and do not have IPR, and code 1 means it has the legality of business and has IPR. The composition of businesses/companies having the legality of business is 149. In contrast, those that do not have the legality of business are 673 businesses. Meanwhile, for ownership of IPR, as many as 697 businesses/companies do not have IPR, and only 125 businesses/companies have IPR. It shows that the legality of business and the ownership of IPR in the leading subsector of Java are still low.

Data related to the results of the 2016 Specific Survey of Creative Economy (SKEK) leading sub-sectors for each province are presented (figure 2).

![Source: Bekraf and BPS, processed](image)

Figure 2. Percentage of entrepreneurs/ owners business/ companies by gender in each province in Java
The gender composition of entrepreneurs/owners business/companies leading subsector is dominated by men based on the data above. Almost all provinces in Java have a composition of male entrepreneurs/owners above 60%.

Source: Bekraf and BPS, processed

**Figure 3.** Percentage of entrepreneurs/owners business/companies by age in each province in Java

Data on the composition of the age of entrepreneurs/owners businesses/companies leading sub-sector show that most businesses/companies are owned by entrepreneurs/owners aged over 35 years. Almost all provinces in Java have an age composition of entrepreneurs/owners over 35 years above 80%, except Banten.

Source: Bekraf and BPS, processed

**Figure 4.** Percentage of internet use of leading subsector business/company creative economy in each province in Java

Data on the use of the internet in the business/company of creative economy in leading sub-sectors of each province in Java show diversity. It can also illustrate that the business/company has not realized the importance of the benefits obtained when using the internet compared to not using the internet.

Source: Bekraf and BPS, processed

**Figure 5.** Percentage of the legality of a business of leading sub-sector in each province in Java

Based on figure 5, enterprises' legal status in business/companies' creative economy of leading subsectors of each province in Java still is low. It showed that awareness is entrepreneur/owner business creative economics of leading subsector in each province in Java to maintain the legality of the enterprise is still at a low level.

Source: Bekraf and BPS, processed

**Figure 6.** Percentage of ownership of intellectual property rights business/companies leading subsector in each province in Java

The figure 6 shows the average of creative economy business/companies of leading subsector that do not own IPR. It is unfortunate considering the importance and benefits derived from IPR in businesses/companies engaged in the creative economy sector.
Regression results for Java are as follows (table 2).

Based on the table 2, both entrepreneurs and businesses’ characteristics positively and significantly affect the 99% confidence level to increase income business/companies’ leading subsector creative economy in Java. Characteristics of entrepreneurs who have a large magnitude of a gender regression coefficient of 0.52 means that entrepreneurs/owners male business/companies on average have a business/company income more significant than 52 million rupiahs per year compared to entrepreneurs/company business/owners women’s, cateris paribus. These results are consistent with research conducted by Kalleberg and Leicht (1991); Rosa et al. (1996); Indarmoko (2000); Robb (2002); Robb and Wolken (2002); Fairlie & Robb (2009); Radipere (2014); Nainggolan (2016); Sasmita and Ayuningsasi (2017). It is also related to the level of productivity, psychological and biological factors that support the man with a higher chance.

| Table 2. Leading subsector regression results in Java |
|-------------------------------------------------------------------------------------|
| **Entrepreneur Characteristics and Business Characteristics** | **Regression coefficient** |
| Gender | 0.52 *** |
| Age | 0.01 *** |
| Duration of study | 0.06 *** |
| Number of Workers | 0.005 *** |
| Inet | 0.53 *** |
| Business age | 0.01 *** |
| Legal | 0.72 *** |
| Intellect | 0.73 *** |
| A constant | 17.03 *** |

Model feasibility statistics

| Statistic | 70.90 |
| Prob>F | 0.0000 |
| \( R^2 \) | .4110 |
| The number of obs | 822 |

Dependent: Ln_business/company income leading subsector

*** significant at alpha 0.01
** significant at alpha 0.05
* significant at alpha 0.1

Source: results of data processing with stata 14.2

Based on the beta standardized coefficient test results, the characteristic that becomes a priority effect on the creative economy business income is the leading subsector in Java. The number of workers is the priority characteristic affecting the leading subsector economic creative business income in Java. It indicates that the leading subsector in Java is labor-intensive. It is also an important capital because, in terms of population, the island of Java is one of Indonesia’s islands with the largest and most populous population in Indonesia. This characteristic becomes essential because it is proportional to the output produced, meaning that the more labor used, the amount of the
production can increase, and vice versa (Mankiw 2007, 47). The number of workers can potentially develop a creative economy leading subsector in improving business/company income.

The regression results for each province in Java are also interesting to be presented because they can illustrate variations between provinces (table 3).

Overall, all the characteristics included in the elements of entrepreneurs and business characteristics positively affect varying degrees of confidence, some even insignificant to the business/companies income leading sub-sector creative economy. The results presented in the table above are the characteristics of entrepreneurs, namely gender and age of entrepreneurs/owners, are significant in each province in Java. The characteristics of many significant businesses in each province on the island of Java, among others, are the number of workers, internet use, and ownership of intellectual property rights.

| Table 3. Comparison of regression results for each province in Java |
|---------------------------------------------------------------|
| Characteristics                             | DKI Jakarta | West Java | Central Java | DIY | East Java | Banten |
| Gender                                     | 0.43 **     | 0.35      | 0.41 **      | 0.29 | 0.73 ***   | 0.47   |
| Age                                        | 0.01 **     | 0.01 *    | 0.005        | 0.03 ** | 0.003     | 0.03 ** |
| Duration of study                          | 0.07 **     | 0.03      | 0.04 *       | 0.05 | 0.04       | 0.07 *  |
| Number of workers                          | 0.005 ***   | 0.02 ***  | 0.01 ***     | 0.002 ** | 0.004 *** | 0.008 ** |
| Internet                                   | 0.44 **     | 0.53 **   | 0.25         | 0.97 * | 0.39 *     | 0.60 *  |
| Business age                               | 0.009       | 0.001     | 0.02 **      | 0.007 | 0.02 **    | 0.02    |
| Legal                                      | 0.98 ***    | 0.41      | 0.33         | 0.51 | 0.55 *     | 0.90 *  |
| Intellect                                  | 0.12        | 0.65 *    | 0.65 **      | 0.92 * | 0.89 ***   | 0.14    |
| A constant                                 | 17.16 ***   | 17.39 *** | 17.50 ***    | 16.50 *** | 17.97 *** | 16.32 ***|

Model feasibility statistics

| Statistic | 18.98 | 18.41 | 14.34 | 8.04 | 13.79 | 7.94 |
|-----------|-------|-------|-------|------|-------|------|
| Prob>F    | 0.000 | 0.000 | 0.000 | 0.000| 0.000 | 0.000|
| \( R^2 \) | 0.503 | 0.479 | 0.391 | 0.6286 | 0.3949 | 0.4687|
| Obs       | 159   | 169   | 188   | 47   | 178   | 81   |

Dependent: Ln_Business/ company Income leading subsector

*** significant at alpha 0.01
** significant at alpha 0.05
* significant at alpha 0.1

Source: results of data processing with stata 14.2

Based on the data table 3, the first characteristic of an entrepreneur is gender. When comparing provinces in Java, gender only has a positive and significant effect on the confidence level of 99% in East Java and DKI Jakarta and Central Java with a confidence level of 95%, while the provinces of West Java, DI Yogyakarta, Banten are not significant. It means that male entrepreneurs/business owners of leading sub-sector, especially in East Java, still dominated compared to females. Magnitude coefficient of the largest in East Java, which is 0.73, meaning that entrepreneurs/owners business/
companies males had company income larger than 73 million per year on average compared to the women entrepreneur/owner business/company, ceteris paribus. The results of this study are in accordance with the research by Kalleberg & Leicht (1991); Rosa et al. (1996); Indarmoko (2000); Robb (2002); Robb & Wolken (2002); Fairlie & Robb (2009); Nainggolan (2016); Sasmitha & Ayuningsasi (2017). The next characteristic is the age of the entrepreneur/owner. When comparing between provinces in Java, the age affects positively and significantly at the confidence level of 95% in Jakarta, Yogyakarta, and Banten and West Java with a confidence level of 90%, while the Java Central and East Java, it shows no significant effect. The age regression coefficient in the provinces of DI Yogyakarta and Banten is equal to 0.03 with a 95% confidence level meaning an increase in the age of one entrepreneur/owner, then on average increases business/company income by 3 million rupiahs per year compared to entrepreneurs/owners business/companies younger, ceteris paribus.

The first characteristic of a business is the number of workers. When comparing results between provinces in Java, the number of workers positively affects all the provinces of Java but with significance at different confidence levels. The provinces of DKI Jakarta, West Java, Central Java, and East Java have a 99% confidence level. It means that the number of workers is a characteristic of companies that significantly affected the leading subsector's business/companies’ income in Java. West Java becomes a province that has the most significant regression coefficient magnitude among other provinces in Java. West Java regression coefficient means that an increase of one workforce on average increases business/company income by 2 million rupiahs per year compared to businesses/companies that did not add its workforce, ceteris paribus. Based on these results, a province with a relatively large population showed the characteristics of the number of workers affecting business/companies income of creative economy leading sub-sector. These results could be potential if actively and productively managed to increase the creative economy’s contribution, especially the leading subsectors in each province. These results are consistent with research conducted by Leksono (2013), Wijaya et al. (2016), Antara et al. (2016), Butarbutar (2017).

Internet use in businesses/companies engaged in the creative economy sector is a requirement. When comparing between provinces in Java, internet use has a significant positive effect on the confidence level of 95% in the regions of Jakarta and West Java as well as the provinces of Yogyakarta, East Java, and Banten with a confidence level of 90%, while it is not significant in Central Java. It means that the use of the internet is vital for creative economy business/company of leading subsector in each province in Java except Central Java. The regression coefficient for DKI Jakarta on the internet use is 0.44, which means that the leading subsector businesses/companies in DKI Jakarta that use the internet have an average business/company income higher than 44 million rupiahs per year compared to businesses/companies that do not use the internet, ceteris paribus. The regression coefficient of internet use at the level of confidence 90%, which has a magnitude relatively high is Yogyakarta by 0.97, which means that the business/company creative economy leading subsector in Yogyakarta that use the internet have an average income of the business/company higher than 97 million rupiahs per year compared to businesses/companies that do not use the internet, ceteris paribus. These results are in line with research.
by Senn & Lee (1995); Mithas et al. (2012); Kauffman & Waiden (2001); Kulatilaka & Venkatraman (2001) and Sambamurthy et al. (2003) in Mithas et al. (2012); Sari & Hanoum (2012); Wahad et. al (2020).

The legality of business in leading subsector businesses/companies for each province only significantly affects three provinces. DKI Jakarta is the only province with a positive and significant effect at a 99% confidence level, while East Java and Banten are at a 90% confidence level while the other three provinces are not substantial. The regression coefficient value of the legality of business DKI Jakarta has the most significant magnitude of 0.98, meaning that the leading subsector business/company in DKI Jakarta that has legality business on average has a business/company income higher than 98 million rupiahs per year compared to businesses/companies that do not have the legality of a business, ceteris paribus. These results are in line with the research of Davidsson et al. (1987) and Puspaningrum (2019).

The results of the regression of IPR ownership in leading subsector businesses/companies are interesting to discuss. DKI Jakarta and Banten are two insignificant provinces. The provinces of West Java and DI Yogyakarta have a positive and significant effect on the confidence level of 90%, while Central Java and East Java have a confidence level of 95% and 99%, respectively. It means that IPR ownership is essential in increasing business/companies’ income leading subsector because IPR ownership has a significant effect in four provinces that have great potential in the creative economy. The value of the regression coefficient of IPR ownership in West Java and Central Java provinces is the same but with different confidence levels. The value of the regression coefficient with relatively large owned Yogyakarta, namely 0.92. East Java has the most significant effect on the value of the coefficient of 0.89 means that the creative economy business/company of the leading subsector in East Java with the average IPR has a higher business/company income of 89 million rupiah per year compared to a business/company that does not have IPR, ceteris paribus. These results align with the research conducted by Kandampully and Suhartanto (2003); Ulum (2007). These results become fascinating because the provinces with significant effects have local potential and a strong cultural heritage.

The choice of characteristics or variables becomes the features or independent variables, both the entrepreneur and the business, that cannot be separated from the existence of endogeneity problems, for example, the type of partnership, access to capital, marketing (Fitriana et al.2019; Lubis et al.2019). Both characteristics are based on literature studies and previous research. Hence, the selection of the five business characteristics is feasible to be used in this study. The problem of robustness check in selecting the characteristics used in this study is carried out by choosing characteristics related to the definition, classification of businesses, and the benefits of the creative economy. The characteristics used have also been based on existing literature studies and supported by related data that still shows incompatibility with expectations. These stages are carried out to provide confidence that the model used is robust.

**CONCLUSION**

Based on the analysis and discussion, the conclusions are as follows: 1) Characteristics of the entrepreneurs and businesses have positive and significant impacts on the increase of companies’ income of the leading subsector in Java. Gender has the coefficients of 0.52, while business characteristics (IPR ownership) is 0.73;
2) The highest factor affecting income is the number of workers. It is part of business characteristics; 3) The number of workers, the internet use, and the ownership of intellectual property rights are among the significant factors affecting the creative economy’s income. In comparison, the ownership of intellectual property rights plays an important role in four provinces in Java.

Based on the research results above, some of the policy implications recommended by the author are as follows: 1) Through the Ministry of Tourism and Creative Economic, the government is expected to continuously increase the capacity of the characteristics of entrepreneurs (gender, age, years of school), which is referred to as human capital. Its policy is to carry out business incubator activities and small communities by bringing together successful entrepreneurs and budding entrepreneurs; 2) The priority that needs attention is the number of workers. It can be related to the Ministry of labor; policy implications that can be done are training activities before retirement (especially to prepare for disasters); 3) The use of the internet can be done through strengthening network capacity to remote villages, given the potential of many local products starting from the village. The legality of business and IPR is related to the Ministry of Law and Human Rights. These two variables have a relatively large effect on their magnitude so that policies in the form of digital and transparent registration processes need to be improved. It is also essential to actively promote the importance of business protection through the legality of business and ownership of IPRs through the activities of campus, communities and novice entrepreneurs to continue to obtain guidance and issuance of digital certificates for the legality of business entities and intellectual property rights.

This research has several weaknesses. Some suggestions that can be given for further research are as follows: 1) Interaction between entrepreneurs and business characteristics is not carried out so that it does not provide a picture of the relationship between the two, for example, businesses/companies of leading subsector owned by men who have used the internet and own intellectual property rights; 2) To provide an overview of the relationship between the entrepreneur/owner and an outsider, further research is expected to use the participation variable of a community, work experience or previous business, partnership networks, access to capital, and marketing, which are endogeneity problems; 3) The use of a long period is highly recommended for further research to see differences between time; 4) Additional research areas can be between islands in Indonesia.

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APPENDIX

| TABLE | "TATA TERTIB PENGISIAN KUESIONER" |
|-------|---------------------------------|
|       | Semua kontak data dengan tipe data masih valid / Terlambat administrasi telah mengakibatkan kualitas (data) serta tidak termasuk dalam kualitas kelengkapan, kehalusan, keakuratan serta keterlambatan yang kemudian dianggap kualitas (data) yang tak berarti atau tidak bisa dianggap kualitas (data) yang masih valid |  
|       | 1. Namun data pengisian data yang tidak valid / Terlambat administrasi telah mengakibatkan kualitas (data) yang tidak valid atau tidak bisa dianggap kualitas (data) yang valid |  
|       | 2. Untuk data yang tidak valid / Terlambat administrasi telah mengakibatkan kualitas (data) yang tidak valid atau tidak bisa dianggap kualitas (data) yang valid. |  

| BLOK 1: "KARAKTERistik USAHA/PERUSAHAAN" |
|----------------------------------------|
| **A. Pencapaian**                      |
| 1. Name                                |
| 2. Jenis usaha                         |
| 3. Uraian                              |

| **B. Kegiatan Usaha**                  |
| 1. Regulasi usaha/pemahalan           |
| 2. Regulasi usaha/pemahalan dibanding |

| **C. Regulasi Usaha**                  |
| 1. Regulasi usaha/pemahalan           |


###Tabel Data

| | 1 | 2 |
|---|---|---|
| 1. | | |
| 2. | | |
| 3. | | |
| 4. | | |
| 5. | | |
| 6. | | |
| 7. | | |

**Catatan:**

- Selain data yang masih valid, data yang tidak valid / terlambat administrasi telah mengakibatkan kualitas (data) yang tidak valid atau tidak bisa dianggap kualitas (data) yang valid.

**Keterangan:**

- Selain data yang masih valid, data yang tidak valid / terlambat administrasi telah mengakibatkan kualitas (data) yang tidak valid atau tidak bisa dianggap kualitas (data) yang valid.
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| Block II: Karakteristik Usaha / Perusahaan (Lanjutan) |
|-----------------------------------------------------|
| 8. Apakah perusahaan memiliki produk yang unik?       |
|   Ya  | 1   |
|   Tidak | 2 |
| 9. Banyak jenis produk yang ditawarkan?               |
|   Ya  | 3   |
|   Tidak | 4 |

| Block II: Karakteristik Usaha / Perusahaan (Lanjutan) |
|-----------------------------------------------------|
| 10. Status perusahaan:                               |
|   Pernamaan Usaha (PNK)                             |
|   1                                               |
|   Pernamaan Usaha Dalam Nagari (PUD)                |
|   2                                               |

| Block II: Karakteristik Usaha / Perusahaan (Lanjutan) |
|-----------------------------------------------------|
| 11. Bekerja pada usaha yang unik?                    |
|   Ya  | 5   |
|   Tidak | 6 |

| Block II: Karakteristik Usaha / Perusahaan (Lanjutan) |
|-----------------------------------------------------|
| 12. Jika "Ya", apakah perusahaan memiliki sumber daya yang memadai? |
|   Ya  | 7   |
|   Tidak | 8 |

| Block II: Karakteristik Usaha / Perusahaan (Lanjutan) |
|-----------------------------------------------------|
| 13. Jika "Ya", apakah perusahaan memiliki sumber daya yang memadai? |
|   Ya  | 9   |
|   Tidak | 10 |

---Beberapa Catatan untuk Sel Baris "C" di atas adalah "SETAWAH TERAKHIR"---
