

**THE EFFECT OF KUR, UTILIZATION  
E-COMMERCE, EDUCATION, AGE, AND GENDER ON THE INCOME OF KAMASAN  
WAYANG PAINTING MSMEs**

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**Abstract**

Micro, Small and Medium Enterprises (MSMEs) have an important role in the Indonesian economy, including in Bali Province. MSMEs also play a role in economic growth, especially in the craft industry such as Kamasan Puppet Painting. Kamasan Wayang Painting is a traditional art that grows and develops in Kamasan Village. The objectives of this research are: 1). To determine the influence of KUR, use of e-commerce, education, age and gender simultaneously on the income of Kamasan Wayang Painting MSMEs. 2). To determine the partial influence of KUR, use of e-commerce, education, age and gender on the income of Kamasan Wayang Painting MSMEs. The sample for this research consisted of 75 respondents. The data collection methods used in this research were observation, structured interviews and in-depth interviews. The data analysis technique used is multiple regression analysis. The research results show that simultaneously KUR, use of e-commerce, education, age and gender have a significant effect on the income of Kamasan Wayang Painting MSMEs. Partially, education and the use of e-commerce have no significant effect, while KUR, education, age and gender have a significant effect on the income of Kamasan Wayang Painting MSMEs. KUR, use of e-commerce, education, and age have a positive effect while gender has a negative effect on the income of Kamasan Wayang Painting MSMEs.

**Keywords:**MSMEs, Painting, KUR, E-commerce, Income

**INTRODUCTION**

Micro, Small and Medium Enterprises (MSMEs) have a large role in the economic development of a country or region, including Indonesia. MSMEs are one of the main economic drivers in both developed and developing countries and their existence is a major force in both countries. There is no doubt about the existence of MSMEs because the MSME sector is able to absorb a lot of labor and contribute to equal distribution of development results and several developing countries have realized the importance of MSMEs for economic growth and poverty alleviation.

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Increasing and developing the MSME sector is often used as a benchmark for the success of development in a country(Wibowo et al., 2015). According toKesuma & Utama (2015)One indicator of the success of the government's performance in increasing the economic growth of each country is economic growth

MSMEs have the ability to absorb a large workforce and play a role in the distribution of development results and play an important role as drivers of economic development.(Putra & Sudibia, 2018). The existence of MSMEs is very important for the Indonesian economy because in unfavorable circumstances, MSMEs help to ease the heavy burden on the country's economy. MSMEs have an important role in the Indonesian economy, playing a major role in economic activities in various sectors, especially in providing employment opportunities. MSMEs also contribute to the process of equalizing and increasing people's income, encouraging economic growth and achieving national stability(Indonesian Banking Development Institute, 2019: 22).

According toHartono & Hartomo (2016)MSMEs are one sector that makes a significant contribution to the expansion of the Indonesian economy. It is estimated that the majority of MSMEs operate in the informal sector. Small businesses and household businesses have a significant role in absorbing labor, expanding the number of business units, and supporting household income in Indonesia, which has an impact on the role of MSMEs, namely on community welfare. MSMEs have demonstrated their existence in a number of areas of the Indonesian economy when the economic crisis hit(Putra & Sudibia, 2018).

MSMEs play a very important role in economic growth in Bali Province, which is one of the provinces in Indonesia which is a major tourist destination and is familiar to domestic and foreign visitors. Bali's reputation as the "Island of the Gods" causes its diverse tourism potential to become the main attraction for visitors. This potential means that MSME players in Bali have a huge opportunity to attract domestic and international tourists to Bali who will then buy MSME goods while in Bali. MSMEs in Bali can take advantage of this opportunity to boost sales and production while providing attractive and quality goods. The development of MSMEs is very important for the economic expansion of Bali Province. MSMEs in Bali Province are still supported and encouraged by the Bali provincial government. The government is currently preparing a program for MSMEs which is expected to increase their productivity. If this program is designed and implemented well, it will encourage the growth and development of MSMEs in Bali(Wie, 2002).

According toNingsih & Indrajaya (2015)The development of the growing industrial sector in Bali has great potential to improve people's welfare considering the unlimited natural resources and people's creativity in the arts and crafts sector, so Bali Province is known as an island with a variety of craft industries. The craft MSME sector in Bali is closely related to tourist visits to Bali. If tourism advances, the craft

industry will also be boosted because through tourism, Bali Province's export products are easily accepted by foreign people.(Astuti & Indrajaya, 2016).

Nowadays craft MSMEs focus on the economic value and potential of the cultural sector. One of the cultures of the island of Bali is works of art in the form of paintings. Painting is one of the Balinese cultures, one of the most famous Balinese painting crafts is the Kamasan Wayang Painting. Kamasan Wayang Painting is a traditional art that grows and develops in Kamasan Village. Kamasan Village is an old village in Klungkung District, Klungkung Regency which has various artistic and cultural heritage(Winata & Idajati, 2020). Kamasan Wayang Painting is the name of the product produced by Kamasan Wayang Painting craftsmen according to the name of the village and place where the craftsmen live, namely in Kamasan Village, Klungkung District, Klungkung Regency(Mudana et al., 2015).

Kamasan Village also has other potential, namely as a tourist village. According to Bali Province Regional Regulation Number 10 of 2015 concerning the Bali Province Regional Tourism Development Master Plan for 2015-2029, In 2018, Bali Province had a total of 110 tourist villages in nine districts/cities in Bali. One of the tourist villages in Klungkung Regency is Kamasan Village with cultural tourism advantages. The tourism potential in the Kamasan tourist village can be seen from the presence of original Kamasan art crafts such as Kamasan Puppet Paintings.

The arrival of tourists can be a factor that can influence the production of Kamasan Wayang Painting crafts. According to Adnyani & Darsana (2019), production is the process of converting raw materials into useful and valuable products. The increasing number of tourists will cause artists to create more paintings to show tourists. Bearing in mind that interest in Kamasan Wayang Paintings does not only come from domestic tourists and from the surrounding community, but also from other countries who are interested in buying Kamasan Wayang Paintings while in Kamasan Village. From an economic perspective, tourism growth also has the potential to create more jobs, increase local community incomes, help reduce poverty, and play an important role in helping local communities sell Kamasan Wayang Painting products. Local governments need to create mechanisms to involve stakeholders in activities, just as local governments need to identify strategies for managing their relationships with stakeholders that are able to demonstrate how these decisions will be made(Yuliarmi & Marhaeni, 2020).

Based on historical records, Kamasan Village also colored the journey of painting in Bali, which is famous as a warehouse for Kamasan Wayang Painting works of art. Kamasan Wayang Painting is a cultural heritage that has existed since the time of the Majapahit Kingdom in the 14th to 18th centuries, namely since Ida Dalem ruled in Klungkung. At this time, all types of Balinese art reached their golden age. Many cultural products such as gamelan art, dance and painting are developing rapidly. In particular, painting developed in Kamasan Village, which was located close to the royal

center in Gelgel. The skills of Kamasan Village residents in painting wayang have been passed down from generation to generation (Dewi, 2022).

Wayang Kamasan painting originates from the art of painting on lontar, the art of painting practiced by the people of Kamasan Village during the period of Hindu-Javanese influence in Bali. When Dalem Ketut Semara Kepakisan, who was then the King of Samprangan, traveled from Bali to Majapahit to take part in the srada ceremony in 1362, he brought a sekropak wayang (a chest of wayang) back to Bali and since then the people have known wayang and it has developed into the art of painting. Puppet. Cultural acculturation occurred in Gelgel during the reign of Dalem Waturenggong around the 15th century (1460–1550), and was marked by the arrival of prominent writers to Bali, such as Dang Hyang Astapaka, Dang Hyang Angsoka, and Dang Hyang Nirarta. It is hoped that the arrival of these writers will be able to advance Balinese culture towards a golden age (Wedarsama, 2023: 17).

The craft of Kamasan Wayang Painting has its own characteristics that cannot be found in other contemporary paintings. The government's contribution to promoting the Kamasan Wayang Painting craft is very helpful so that the craft can be better known abroad. Kamasan Wayang paintings have very distinctive and original advantages seen from the very unique characteristics of the paintings. The characters in Kamasan Wayang Paintings are taken from wayang characters and stories, such as the Ramayana, Mahabarata, Sutasoma, Tantri, and others (Astawa et al., 2018). Visually, the Kamasan Wayang Painting is a traditional work of art that has high artistic aesthetics and high philosophical values embedded in it which is used as a reflection or inner reflection of human life. In the contemporary era, Kamasan Wayang Painting has developed as a profession to rely on to support the family, but the manufacturing process is still bound by existing standards (Wedarsama, 2023: 18).

According to Wedarsama (2023: 29), currently Kamasan Wayang Painting is in a dilemma situation. On the one hand, we are required to pay attention to artistic idealism by creating works based on traditional standards, while on the other hand, there is a desire among craftsmen to create modern or modified paintings to meet market demands and pursue tourism demand (Mudana & Ribek, 2017). This causes the low welfare of Kamasan Wayang Painting craftsmen in maintaining the standard traditions in making Kamasan Wayang Paintings.

This dilemmatic condition makes it necessary to provide more effective legal protection for IPR (Intellectual Property Rights) for Kamasan Wayang Paintings. Painting works of art are part of IPR which are protected by copyright law. However, in Indonesia there are still many violations of these works of art. It is very important to increase legal protection for IPR, especially in terms of copyright, which includes exploitation rights and moral rights. According to Department of Cooperatives, SMEs and Trade, Klungkung Regency (2023), The IPR for Kamasan Wayang Paintings is still in

the process of being submitted by the Ministry of Law and Human Rights (Human Rights).

Kamasan Wayang paintings are the result of the creativity of the people of Kamasan Village and are works of traditional knowledge that are rare in the world and have their own uniqueness. The people of Kamasan Village have inherited the ability to paint from generation to generation until now it is still maintained by the community so that Kamasan Wayang Painting can continue to be preserved and can be passed on to children and grandchildren. Kamasan Wayang Painting Craftsmen are usually anonymous and are the center of traditional Balinese art (Wedarsama, 2023: 18).

Paintings of wayang figures on canvas have long been used, but many Kamasan Wayang Paintings are no longer for sale. Kamasan Wayang Painting Craftsmen only make paintings on canvas to order. When the income of Kamasan Wayang Painting craftsmen decreased, it significantly affected Balinese cultural life. Craftsmen switched and looked for money in other sectors, so craftsmen began to leave the craft of painting. As a result, the craft of Kamasan Wayang Painting became extinct (Sucitra, 2020). The following is a comparison of the number of Kamasan Wayang Painting craftsmen in 2018 and 2023, which can be seen in Table 1

**Table 1. Comparison of the Number of Kamasan Puppet Painting Craftsmen in Kamasan Village in 2018 and 2023**

| No.           | Craftsman Location | 2018              | Year 2023         |
|---------------|--------------------|-------------------|-------------------|
|               |                    | Number of people) | Number of people) |
| 1)            | Sangging Hamlet    | 64                | 61                |
| 2)            | Banjar Elbow       | 3                 | 3                 |
| 3)            | Banjar Peken       | 2                 | 2                 |
| 4)            | Banjar Pande       | 3                 | 3                 |
| 5)            | Banjar Pande Mas   | 9                 | 8                 |
| 6)            | Banjar Pande Kaler | -                 | 1                 |
| <b>Amount</b> |                    | <b>81</b>         | <b>78</b>         |

*Source: Klungkung Regency Cooperatives, SMEs and Trade Service, 2023*

Table 1 shows a comparison of the number of Kamasan Wayang Painting craftsmen in 2018 and 2023. It can be seen in the table that the number of Kamasan Wayang Painting craftsmen in 2018 was 81 people, while currently the number of Kamasan Wayang Painting craftsmen is 78 people. According to observations made with the Klungkung Regency Cooperatives, SMEs and Trade Service (2023), there has been a decline in Kamasan Wayang Painting craftsmen due to several factors that have led to the low welfare of craftsmen. (Susanti, Entrepreneurship Development, 2023).

The decrease in the number of Kamasan Wayang Painting craftsmen has a very important influence on the sustainability of Kamasan Wayang Painting MSMEs, even though Kamasan Wayang Painting MSMEs are one of the potentials of the creative industry in Bali Province, namely as an economic driver. This condition is a serious threat because the creative industry sector has an important role in the development of the industrial sector which is increasing and has a big impact on economic development and growth.(Yulyanah & Kusumastuti, 2019).

In general, the problems often faced by craft industry players are a lack of working capital, limited technology and good quality human resources. Difficulties in marketing the products produced and market information and trends are also obstacles for craft industry entrepreneurs (Tambunan, 2002: 68-70). This problem is also often faced by Kamasan Wayang Painting MSME craftsmen. Apart from that, there are also internal problems caused by low levels of education, low regeneration of craftsmen, as well as external problems in the form of increasingly fierce competition. Income with maximum profit is not the only main goal of establishing a business because there are other goals, namely business continuity and development in the business, while the craftsmen's own income is received from various supporting factors, including capital, technology, education level and age (Simanjuntak, 1998 :27).

The Kamasan Puppet Painting Business is included in the small and medium business category when viewed from the capital and labor aspects. For business actors, capital is the main driver in business activities for operational needs and purchasing raw materials or goods used for the continuity of the business being run.(Putri & Jember, 2016). As an effort to support the survival of Kamasan Wayang Painting MSMEs, the government launched a development program for MSMEs, namely People's Business Credit (KUR) to overcome this problem. The KUR program helps finance and develop MSMEs, The government can simplify the conditions and procedures for MSMEs to borrow funds so that the problem of capital shortages can be resolved(Parinduri, 2014). According toDepartment of Cooperatives, SMEs and Trade, Klungkung Regency(2023), stated that there are four banks providing KUR for capital for Kamasan Wayang Painting MSMEs, namely Bank Mandiri, BNI, BRI and BPD.

Based on the results of research conducted bySari & Arka (2023), it was stated that KUR as capital can help MSMEs increase MSME production capacity. Research conducted byDewi & Bendesa (2022), shows that People's Business Credit (KUR) has a positive and significant effect on the income of MSMEs in the culinary sector in Denpasar City. This is in line with the research conductedAdyatma & Harmana (2020), the use of credit has a positive and significant effect on SME income in Padangsembian Village, West Denpasar District, Bali Province. Then supported by a statementSukirno (2006)that capital is one of the factors that influences production which then influences income. In other words, KUR is considered to be able to influence MSME

income indirectly through production. Additional capital from KUR can increase MSME production and income(Syukron, 2021).

Apart from being related to capital, the marketing development of Kamasan Wayang Painting MSMEs in the era of globalization is increasingly competitive in facing competition. Even though there are many enthusiasts of Balinese Kamasan Paintings, until now there has been no effective sales system. Sales are conducted privately at each home. Marketing is also carried out when exhibitions are held both locally and internationally. From the description above, it is clear that Kamasan Bali Painting has not yet entered the business phase. In order to expand the reach of marketing Kamasan Wayang Painting crafts, online marketing strategies have been implemented through e-commerce to support the trade transaction process. Online marketing strategies through e-commerce have a very big role in increasing production and income of business actors. Apart from that, by utilizing e-commerce media, Kamasan Wayang Painting can be reached by the wider community and abroad.

Research conducted byPutra & Aswitari (2020), concluded that food and beverage SMEs in Denpasar City who utilize e-commerce have an intermediate production value greater than those who do not utilize e-commerce. The research results are supported by the research conductedGustina et al. (2022), states that e-commerce has a significant effect on increasing income. This is in accordance with the results of research conducted byPinatih & Indrajaya (2019)which states that the use of e-commerce has a positive and significant effect on MSME income. According to researchYusuf (2022), the implementation of e-commerce has a significant positive effect on increasing production and income for Micro, Small and Medium Enterprises (MSMEs). The higher the influence of the use of e-commerce in business activities, the greater the production will increase, which will then affect the income generated by MSMEs.

The third factor that influences the income of Kamasan wayang painting MSMEs is education. Education is an internal problem that can influence the level of income generated. In accordance with human capital theory which states that a person can increase his income through increasing education. Education not only increases knowledge but also improves work skills. Supported by the research results of Diandrino and Pratomo (2018) that the education variable has a significant influence on the coffee shop MSME income variable in Malang City.

Education in this case is a form of investment in human resources which plays a role in increasing the country's economic growth. Education can be used as a long-term investment because the benefits are felt after ten years (Atmanti, 2005). According to Simanjuntak, 2001:70 (in the journal Tri Utari and Martini) the relationship between income level and education level is due to the assumption that the higher the education level, the higher the level of worker productivity and ultimately this will affect the income level. Mirawati (2014) in her research concluded that education has a

positive and significant effect on company effectiveness. From this research it can be explained that education is an important factor in developing MSMEs.

The next factor that influences the income of Kamasan wayang painting MSMEs is the age of the worker himself. According to Saihani in Rahayu (2014), age is a factor that has a big influence on a person's way of thinking and acting, especially in making decisions. In general, someone who is of productive age can earn more income than someone who is of non-productive age. The difference in physical strength between adults and young people is different, so it will greatly influence the level of income received (Dewi, 2012).

Apart from age, the level of a person's income can be influenced by gender, namely the different abilities of MSME owners in terms of gender, where some owners are men and some are women. Gender is the visible difference between men and women in terms of values and behavior. Gender comes from the Latin word "GENO" which means kind or species. Gender is the character and behavior of men and women that are formed socially and culturally. Note that the concept of gender is different from the concept of sex. Gender can be defined as a situation where individuals who are biologically born male and female acquire the social characteristics of men and women through the characteristics of masculinity and femininity, often supported by values or systems and symbols in that society. In short, gender can be interpreted as the social construction of gender into social roles and behavior. There is a stereotype where women are considered inferior to men. It is considered that women's productivity is lower than the productivity of male craftsmen (Seon, 2014). In Nainggolan's research, 2016, the results showed that gender had a significant effect on MSME income.

The difference between this research and previous research is that this research uses the location and year of the latest research, so this research tries to see and understand the factors that influence the income of Kamasan Wayang Painting MSMEs with KUR, use of e-commerce, education, age and gender. as the research independent variable.

## **RESEARCH METHODS**

The research design used in this research uses an associative quantitative method. Quantitative research methods are used to research certain populations or samples, collect data using research instruments, and analyze data quantitatively or statistically to test predetermined hypotheses (Sugiyono, 2019: 16). Associative research is research that describes and tests the relationship between two or more variables (Sugiyono, 2019: 65). In this research, associative research is used to analyze the influence of KUR, use of e-commerce, education, age and gender on the income of Kamasan Wayang Painting MSMEs.

## RESULTS AND DISCUSSION

### Descriptive Analysis

Descriptive analysis is analysis carried out to obtain a more detailed picture of the variables used in the research. The purpose of using descriptive statistics is to help readers understand the problem more easily. Descriptive statistical analysis looks at the minimum value, maximum value, average (mean) and standard deviation of each variable used. The results of the descriptive analysis test can be seen in Table 2.

**Table 2. Results Descriptive Variables**

|                           | N  | Minimum       | Maximum       | Mean          | Std. Deviaton |
|---------------------------|----|---------------|---------------|---------------|---------------|
| KUR                       | 75 | 10,000,000.00 | 50,000,000.00 | 33,000,000.00 | 8,137,334,712 |
| Utilization of E-commerce | 75 | 0.00          | 1.00          | 0.7333        | 0.44519       |
| Education                 | 75 | 2.00          | 16.00         | 10.6800       | 3.18001       |
| Age                       | 75 | 40.00         | 80.00         | 60.5867       | 8.54257       |
| Gender                    | 75 | 0.00          | 1.00          | 0.6267        | 0.48695       |
| Income                    | 75 | 33,500,000.00 | 75,000,000.00 | 48.420.666.67 | 8,556,529,407 |

Based on Table 2 it can be interpreted as follows:

- 1) The KUR variable ( $X_1$ ) from this data has a minimum value of IDR 10,000,000.00, a maximum value of IDR 50,000,000.00, an average value of IDR 33,000,000.00, and a standard deviation value of IDR 8,137,334,712. The KUR loans applied for by the craftsmen came from four banks providing KUR for capital for Kamasan Wayang Painting MSMEs, namely Bank Mandiri, BNI, BRI and BPD.
- 2) E-commerce Utilization Variable ( $X_2$ ) from the data has a minimum value of 0, which means that the Kamasan Wayang Painting UMKM does not utilize e-commerce as a marketing medium, the maximum value is 1, which means that the Kamasan Wayang Painting UMKM uses e-commerce as a marketing medium, the average value is 0.73, and the standard deviation value is 0.445. A maximum value of 1 means that the craftsman has used e-commerce as a marketing medium, for example using his own social media, such as Facebook, Instagram and WhatsApp or using a marketplace, such as Shopee and Tokopedia. E-commerce operations can be carried out directly by craftsmen or assisted by the craftsmen's children or family.
- 3) The Education variable ( $X_3$ ) from the data has a minimum value of 2 years, a maximum value of 16 years, an average value of 10.68 years, and a standard deviation value of 3.18 years. The education level of each craftsman varies depending on their economic level to continue their education and their desire to continue their education to college.

- 4) The Age variable (X<sub>4</sub>) from the data has a minimum value of 40 years, a maximum value of 80 years, an average value of 60.56 years, and a standard deviation value of 8.54 years. The age of each craftsman varies depending on his choice to continue his career. Some craftsmen choose to become craftsmen at a young age or when they retire, depending on the experience they have as a craftsman.
- 5) Gender Variable (X<sub>5</sub>) from the data has a minimum value of 0, which means that the Kamasan Wayang Painting UMKM craftsman is male, the maximum value is 1, which means that the Kamasan Wayang Painting UMKM craftsman is female, the average value is 0.6267, and the standard deviation value of 0.48695. A maximum value of 1 means that more Kamasan Wayang Painting MSME craftsmen are female compared to male craftsmen. There are craftsmen and women as MSME craftsmen of wayang painting are the result of factors such as each individual's skills, personal desires, and changes in social recognition of the role of women in art.
- 6) The Income variable (Y) from the data has a minimum value of IDR 33,500,000.00, a maximum value of IDR 75,000,000.00, an average value of IDR 48,420,666.67, and a standard deviation value of IDR 8,556,529,407. The total income of craftsmen per The years vary because most of the craftsmen run MSMEs as a side job or family business that must continue to be run from generation to generation.

## Multiple Regression

### Results of Multiple Linear Regression Analysis

The analysis technique used in this research is multiple linear regression analysis which is processed using SPSS 25 for Windows software. The results of multiple linear regression analysis are displayed in Table 3.

**Table 3. Results of Multiple Linear Regression Analysis**

| Model                     | Unstandardized Coefficients |            | Standardized Coefficients |        |       |
|---------------------------|-----------------------------|------------|---------------------------|--------|-------|
|                           | B                           | Std. Error | Beta                      | t      | Sig.  |
| 1 (Constant)              | 4,715                       | 0.438      |                           | 10,758 | 0,000 |
| KUR                       | 0.377                       | 0.057      | 0.605                     | 6,650  | 0,000 |
| Utilization of E-commerce | -0.010                      | 0.015      | -0.062                    | -0.707 | 0.482 |

|           |        |       |        |        |       |
|-----------|--------|-------|--------|--------|-------|
| Education | 0.004  | 0.002 | 0.172  | 1,864  | 0.067 |
| Age       | 0.002  | 0.001 | 0.223  | 2,403  | 0.019 |
| Gender    | -0.028 | 0.014 | -0.188 | -2,094 | 0.040 |

Source: SPSS data processing results, 2024

Based on the results of multiple linear regression analysis in Table 3, the following equation can be created:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e$$

$$= 4.175 + 0.377 X_1 - 0.010 X_2 + 0.004 X_3 + 0.002 X_4 - 0.028 X_5 + e$$

From this equation, it can be seen the magnitude of the influence of each independent variable which has a significant effect on the income of Kamasan Wayang Painting MSMEs.

- 1) Constant value ( $\beta_0$ ) obtained at 4.175 with a positive sign which states that if the KUR variables, use of e-commerce, education, age and gender are considered constant, the Y value or income will be 4.175.
- 2) The regression coefficient value of the KUR variable (is equal to  $X_1$ ) 0.377 with a positive sign states that if KUR increases by 1 rupiah, but the variables of e-commerce utilization, education, age and gender are constant (0), then income will increase by 0.377 Rupiah. On the other hand, if KUR experiences a decrease of 1 Rupiah, but the variables of e-commerce utilization, education, age and gender are constant (0), then income will decrease by 0.377 Rupiah.
- 3) The regression coefficient value of the e-commerce utilization variable (is equal to  $-X_{2i}$ ) 0.01. This means that Kamasan Wayang Painting MSMEs that utilize e-commerce have an income of 0.01 Rupiah bigger than the Kamasan Wayang Painting MSMEs which do not utilize e-commerce.
- 4) The regression coefficient value of the education variable (is equal to  $X_3$ ) 0.004. If the length of business increases by 1 year, but the variables KUR, age e-commerce utilization, and gender are constant (0), then income will increase by 0.004 years. On the other hand, if the length of business decreases by 1 year, but the variables KUR, age e-commerce utilization, and gender are constant (0), then income will decrease by 0.004 years.
- 5) The regression coefficient value for the age variable (is equal to  $X_4$ ) 0.002. If age increases by 1 year, but the variables KUR, use of e-commerce, education and gender are constant (0), then income will increase by 0.002 years. On the other hand, if education decreases by 1 year, but the variables KUR, use of e-commerce, education and gender are constant (0), then income will decrease by 0.002 years.

- 6) The regression coefficient value of the gender variable (is equal to  $-X_5$ ) 0.028. This means that male Kamasan Wayang Painting MSME craftsmen have an income of 0.028 Rupiah more than female Kamasan Wayang Painting MSME craftsmen.

#### **Coefficient of Determination ( $R^2$ )**

The determination test is carried out to find out and measure how much the dependent variable can be explained by the independent variable in a regression model. If the coefficient of determination ( $R^2$ ) is close to 1, the better the regression model created.

**Table 4. Results of the Determination Coefficient ( $R^2$ )**

| <i>Model</i> | <i>R</i> | <i>R Square</i> | <i>Adjusted R Square</i> | <i>Std. Error of the Estimate</i> |
|--------------|----------|-----------------|--------------------------|-----------------------------------|
| 1            | 0.685a   | 0.469           | 0.430                    | 0.05606                           |

Source: SPSS data processing results, 2024

The coefficient of determination is a measure of the goodness of fit of the regression equation, namely the variation of the dependent variable that can be explained by the independent variable (Utama, 2016). Coefficient of Determination (functions to determine and measure the proportion of total variation in the dependent variable that is explained by the independent variables simultaneously in the regression model. The R-Square value is 0.469 which shows that the income of MSMEs, the income of Kamasan Wayang Painting MSMEs. is influenced by 46.9 percent by KUR, e-commerce use, education, age and gender, while the remaining 53.1 percent is influenced by other factors outside the regression model. $R^2$ )

#### **Classic Assumption Test Results**

##### **1) Normality Test Results**

The normality test is used to test whether in the regression model, confounding or residual variables have a normal distribution or not. The residual value is said to be normally distributed if the standardized residual value is mostly close to the average. In testing the normality of the research data, the Kolmogorov-Smirnov Test was used for each variable. The results of the normality test in this study can be seen in Table 5.

**Table 5. Normality Test Results**

| <b>One-Sample Kolmogorov-Smirnov Test</b> |                |                                 |
|-------------------------------------------|----------------|---------------------------------|
|                                           |                | <i>Unstandardized Residuals</i> |
| N                                         |                | 75                              |
| Normal Parameters, b                      | Mean           | 0.0000000                       |
|                                           | Std. Deviation | 0.05556599                      |
| Most Extreme Differences                  | Absolute       | 0.090                           |
|                                           | Positive       | 0.090                           |
|                                           | Negative       | -0.067                          |
| Statistical Tests                         |                | 0.090                           |
| Asymp. Sig. (2-tailed)                    |                | 0.200                           |

Source: SPSS data processing results, 2024

Based on the normality test results in Table 5, it shows that the data in this study is normally distributed. This is indicated by the value of Asymp. Sig. (2-tailed) is 0.200, which is a value greater than 0.05. Therefore, the data in this study is normally distributed, so the model is suitable for use for further analysis.

## 2) Multicollinearity Test

The multicollinearity test aims to test whether a correlation is found in the model between the independent variables. According to Imam Ghozali (2006), the multicollinearity test aims to test whether in the regression model there is a correlation between independent variables or independent variables. To determine whether there is multicollinearity in the regression model or not, it can be seen from the tolerance value and VIF value. The following are the results of the multicollinearity test in Table 6.

**Table 6. Multicollinearity Test Results**

| No | Variable                 | Tolerance | VIF   | Information                |
|----|--------------------------|-----------|-------|----------------------------|
| .  |                          |           |       |                            |
| 1. | KUR                      | 0.932     | 1,073 | Not occurmulticollinearity |
| 2. | Utilization<br>Ecommerce | 0.987     | 1,013 | Not occurmulticollinearity |
| 3. | Education                | 0.905     | 1,105 | Not occurmulticollinearity |
| 4. | Age                      | 0.895     | 1,117 | Not occurmulticollinearity |
| 5. | Gender                   | 0.953     | 1,050 | Not occurmulticollinearity |

Source: SPSS data processing results, 2024

Based on Table 6, it shows that the tolerance value for each independent variable is KUR (0.932), e-commerce utilization (0.987), education (0.905), age (0.895) and gender (953). All independent variables in this study have a tolerance value > 0.10. The VIF value for each independent variable is KUR (1.073), e-commerce utilization (1.013), education (1.105), age (1.117) and gender (1.050). Based on this, it can be concluded that in the regression model of this research there is no correlation problem between the variables.

### 3) TestHeteroscedasticity

The heteroscedasticity test aims to test whether in the regression model there is an inequality of variance from the residuals of one observation to another.

**Table 7. Heteroscedasticity Test Results**

| No. | Variable                 | Sig   | Information                       |
|-----|--------------------------|-------|-----------------------------------|
| 1.  | KUR                      | 0.959 | Heteroscedasticity does not occur |
| 2.  | Utilization<br>Ecommerce | 0.205 | Heteroscedasticity does not occur |
| 3.  | Education                | 0.789 | Heteroscedasticity does not occur |
| 4.  | Age                      | 0.828 | Heteroscedasticity does not occur |
| 5.  | Gender                   | 0.236 | Heteroscedasticity does not occur |

*Source: SPSS data processing results, 2024*

Based on the results of the heteroscedasticity test in Table 7, it shows that the significance value of each independent variable, namely the KUR variable is 0.959, the e-commerce utilization variable is 0.205, the education variable is 0.789, the age variable is 0.828, and the gender variable is 0.236. From these results, each variable has a significance value greater than 0.05, so the regression equation model used in this research does not have heteroscedasticity problems.

### **Simultaneous Regression Coefficient Significance Test Results (F Test)**

F test to find out how the independent variables influence the dependent variable together. The F statistical test basically shows whether all the independent variables included in the model have a joint influence on the dependent variable. The following are the results of the simultaneous regression coefficient significance test (testF) in Table 8.

**Table 8. F Test Feasibility Results**

| Model        | Sum of Squares | Df | Mean Square | F      | Sig.  |
|--------------|----------------|----|-------------|--------|-------|
| 1 Regression | 0.191          | 5  | 0.038       | 12,167 | 0,000 |
| Residual     | 0.217          | 69 | 0.003       |        |       |
| Total        | 0.408          | 74 |             |        |       |

Source: SPSS data processing results, 2024

Based on the test results that have been carried out in Table 8, it shows that the significant value of the variable is  $0.000 < 0.05$  and  $F_{hitung} 12.167 > 2.34$  then it can be concluded that it is rejected and  $F_{tabel} H_0 H_1$  accepted. This shows that KUR, use of E-commerce, education, age and gender simultaneously have a significant effect on income.

#### **Partially Significant Coefficient Test (t Test)**

The T test is used to see how much influence the independent variables, namely KUR, use of e-commerce, education, age and gender, partially have on the dependent variable, namely income.

##### **1) The Effect of KUR ( ) on the Income (Y) of Kamasan Wayang Painting MSMEs $X_1$**

Based on the results of this test, it shows that the value  $t_{hitung}(6.650) > (2.132)$  and the significance value is  $0.000 < 0.05$  then it is rejected and  $t_{tabel} H_0 H_1$  accepted. This means that the KUR variable has a partial and significant effect on incomeUMKM Kamasan Puppet Painting.

##### **2) The Effect of E-commerce Utilization ( ) on Income (Y) through the production of Kamasan Wayang Painting MSMEs $X_2$**

Based on the results of this test, it shows that the value  $t_{hitung}(0.707) > (2.132)$  and the significance value is  $0.482 > 0.05$  then it is rejected and  $t_{tabel} H_1 H_0$  accepted. This means that the e-commerce utilization variable has no partial and insignificant effect on incomeUMKM Kamasan Puppet Painting.

##### **3) The Effect of Education Utilization ( ) on the Income (Y) of Kamasan Wayang Painting MSMEs $X_3$**

Based on the results of this test, it shows that the value  $t_{hitung}(1.864) > (2.132)$  and the significance value is  $0.067 > 0.05$  then it is rejected and  $t_{tabel} H_1 H_0$  accepted. This means that the education variable has no partial and insignificant effect on incomeUMKM Kamasan Puppet Painting.

**4) The Effect of Utilization of Age (X<sub>4</sub>) on Income (Y) of Kamasan Wayang Painting MSMEs**

Based on the results of this test, it shows that the value  $t_{hitung}(2.403) > (2.132)$  and the significance value is  $0.019 < 0.05$  then it is rejected and  $t_{tabel} H_0 H_1$  accepted. This means that the age variable has a partial and significant effect on income UMKM Kamasan Puppet Painting.

**5) The Effect of Gender Utilization (X<sub>5</sub>) on the Income (Y) of Kamasan Wayang Painting MSMEs**

Based on the results of this test, it shows that the value  $t_{hitung}(2.094) > (2.132)$  and the significance value is  $0.04 < 0.05$  then it is rejected and  $t_{tabel} H_0 H_1$  accepted. This means that the gender variable has a partial and significant effect on income UMKM Kamasan Puppet Painting.

**Discussion of Research Results**

**The Simultaneous Influence of KUR, Utilization of E-commerce, Education, Age and Gender on the Income of MSMEs in Kamasan Wayang Paintings**

The variables KUR, use of e-commerce, education, age and gender on the income of Kamasan Wayang Painting MSMEs produce an F-statistical probability value of  $0.00 < 0.05$ . Thus, the relationship between KUR, use of e-commerce, education, age and gender together (simultaneously) is proven to have a significant effect on the income of Kamasan Wayang Painting MSMEs. Apart from that, the results of the coefficient of determination test also show that all independent variables have an effect of 46.9% on the dependent variable. So  $H_1$  is accepted, meaning that the KUR variable, use of e-commerce, education, age and gender simultaneously have a significant effect on the income of the Wayang Painting MSMEs.

The results of this study are in line with the research results Syahirah & Muchlisoh, (2023) in their research stated that Business capital and the use of e-commerce simultaneously have a positive effect on sales of MSMEs in the fashion sector in Denpasar City. In Agustina's (2019) research, it is stated that capital simultaneously and partially has a positive and significant effect on sales. This means that if the higher the level of capital owned by MSME actors, they will have a higher opportunity to obtain higher sales because the greater the stock of goods that can be purchased by MSME actors due to the large amount of capital and the more sophisticated consumer purchasing methods are. goods by utilizing e-commerce will increase income from sales. Meanwhile, education, age and gender simultaneously influence income, supported by research by Arya & Setiawina, (2023) in their research which states that simultaneously the factors of age and education have a significant influence on the income of poor households in the Banyakem village of Karangasem. This means that a person's physical strength to carry out activities is closely related to

age because if a person's age has passed the productive period, their physical strength decreases so that their productivity decreases and their income also decreases and education becomes a means of bridging the gap between the level of education they have achieved. achieved with the desired level of education to achieve a goal.

Apart from education level, income is also influenced by gender, supported by research by Desanti & Ariusni, (2021) and Agustina & Greece, (2020) in their research showing that gender has a positive and significant effect on labor income in Padang City. The existence of gender differences can affect a person's level of productivity. Universally, men's productivity levels are higher than women's. This is influenced by factors that women have, such as being less physically strong, tending to use feelings at work or biological factors such as maternity leave.

### **The Influence of KUR on the Income of Kamasan Wayang Painting MSMEs**

Based on the results of the analysis of the influence of KUR on MSME income, a significance value of 0.000 was obtained with an Unstandardized Beta Coefficient of 0.377. A significance value of  $0.000 < 0.05$  indicates that H1 is accepted. These results mean that KUR has a positive and significant effect on the income of Kamasan Wayang Painting MSMEs. The Beta Coefficients value of 0.377 means that if craftsmen use a KUR loan of 1 Rupiah, it will increase the income of Kamasan Wayang Painting MSMEs by 0.377 Rupiah. This means that KUR influences the size of the craftsmen's income.

KUR obtained by UMKM actors of Kamasan Wayang Painting will provide additional capital which can have an impact on increasing income. Additional capital will enable MSMEs to develop the products they produce, in the form of adding machines, improving the quality of raw materials, and developing marketing or promotion of the products produced. The results of this research are supported by research conducted by Dewi & Bendesa (2022) which states that People's Business Credit (KUR) has a positive and significant effect on the income of MSMEs in the culinary sector in Denpasar City. This research is also in line with the results of research conducted by Meilinda (2020) concluded that People's Business Credit (KUR) influences the income of creative MSMEs in Semarang City.

### **The Effect of Using E-commerce on the Income of Kamasan Wayang Painting MSMEs**

Based on the results of the analysis of the influence of the use of e-commerce on MSME income, a significance value of 0.482 was obtained with an Unstandardized Beta Coefficient of -0.010. The significance value of  $0.482 > 0.05$  indicates that H1 is rejected. These results mean that the use of e-commerce does not have a significant effect on the income of Kamasan Wayang Painting MSMEs.

This research is in line with research conducted by Paradise (2022) stated that the implementation of e-commerce does not have a significant influence on MSME income. Then it is also supported by research results Hardilawati (2020) which states

that online transactions (e-commerce) have a positive but not significant influence on the performance of MSMEs. Hardilawati's research shows that there is still a lack of knowledge regarding the use of e-commerce media.

#### **The Influence of Education on the Income of MSMEs Kamasan Wayang Painting**

Based on the results of the analysis of the influence of education on MSME income, a significance value of 0.067 was obtained with an Unstandardized Beta Coefficient of 0.004. The significance value of  $0.067 > 0.05$  indicates that  $H_1$  is rejected. This result means that education does not have a significant effect on the income of Kamasan Wayang Painting MSMEs. This research is in line with research conducted by Hasanah et al (2020) which states that education does not have a significant influence on the income of MSMEs in Purbalingga district. This happens because in running a business a person does not only use the knowledge gained from formal education either at school or at college. MSME players often gain knowledge from experience and non-formal education. So that in the process of running an MSME business, Kamasan Wayang Painting craftsmen gain knowledge that comes from the experience of running a business.

This is in line with the research results of Melania et al (2023), Kristiana (2022), Maheswara et al (2016), and Nainggolan (2016) which stated that the high or low level of education of MSME owners has no effect on the income earned. Different research results were obtained by Aprila et al (2023) with the title the influence of length of business, level of education, and technology on the income of furniture MSMEs in Menganti which shows that the level of education has positive and significant results on the income of MSMEs. Sidik & Ilmial (2022) found that educational level results had a positive and significant effect on the income of MSMEs in Pajangan Bantul District.

#### **The Influence of Age on the Income of UMKM Kamasan Wayang Paintings**

Based on the results of the analysis of the influence of age on MSME income, a significance value of 0.019 was obtained with an Unstandardized Beta Coefficient of 0.002. The significance value of  $0.019 < 0.05$  indicates that  $H_0$  is rejected. These results mean that age has a significant effect on the income of Kamasan Wayang Painting MSMEs. A person's age can be an illustration of productivity which can influence income, being old enough will give a person maturity in thinking and working (Hurlock, 1998). This is supported by Jayeola et al (2018) who in their research explain that age can be a determining factor in business success. This is based on the assumption that increasing age will provide maturity to think and experience to understand the market.

This research is in line with research conducted by Zulnanda & Muslim (2023) which states that the age of MSMEs has a positive and significant influence on the income of street vendors at the People's Market in Pariaman City. The age factor determines a person's capacity to grow, as well as its impact on business performance. People who are still in their productive period usually have a higher level of

productivity compared to older workers, so their physical abilities become weak and limited. The results of this research are in accordance with research conducted by Panggno Septiawan et al (2019) and Keiku et al (2020) which stated that the age of traders has a significant and positive effect on traders' income.

### **The Direct Influence of Gender on the Income of Kamasan Wayang Painting MSMEs**

Based on the results of the analysis of the influence of gender on MSME income, a significance value of 0.040 was obtained with an Unstandardized Beta Coefficient of -0.028. The significance value of  $0.040 < 0.05$  indicates that  $H_0$  is rejected. These results mean that gender has a significant effect on the income of Kamasan Wayang Painting MSMEs. Gender in this study uses a dummy variable, male gender = 0, female = 1. Based on the results of the t test it can be said that there is a difference between male and female gender in the income of Packed Wayang Painting MSMEs. From value *Coefficients Beta* of -0.028 means that the income of male MSME actors has a higher income compared to female MSME actors. Gender differences affect a person's level of productivity. Based on the UMKM business sector, Packaging Painting uses more energy in the production process, so men's productivity is higher. The high productivity of men causes higher opportunity to earn income than women. This is in line with The results obtained by Shon (2015) stated that women have multiple roles so they do not have much time to do work outside of household work, therefore women tend to have lower incomes than men.

### **Conclusion**

Based on the results of the discussion that has been described, several conclusions can be drawn as follows:

- 1) The research results show that simultaneously KUR, use of e-commerce, education, age and gender have a significant effect on the income of Kamasan Wayang Painting MSMEs.
- 2) The research results show that partially education and the use of e-commerce have no significant effect, while KUR, education, age and gender have a significant effect on the income of Kamasan Wayang Painting MSMEs.
- 3) The results of the research show that KUR, use of e-commerce, education and age have a positive effect on the income of Kamasan Wayang Painting MSMEs.
- 4) The results of the research show that gender has a negative effect on the income of Kamasan Wayang Painting MSMEs.

## REFERENCE

- Adnyani, NMAD, & Darsana, IB (2019). The Influence of Raw Materials, Capital, and Work Experience on Productivity and Income. *E-Journal of Development Economics*, Udayana University, 8(7), 1540–1574.
- Adyatma, IWC, & Harmana, MD (2020). Effectiveness of the Use of Business Credit on SME Productivity and SME Income of Cooperative Members in Padangsemblian Village, West Denpasar District, Bali Province. *WICAKSANA: Journal of Environment and Development*, 4(2), 52–63. <https://doi.org/10.22225/wicaksana.4.2.2679.52-63>
- Aldillah, R. (2015). Indonesian Soybean Production and Consumption Projections. *Journal of Applied Quantitative Economics*, 8(1). <https://doi.org/10.24198/kultivasi.v19i2.26469>
- Andreu, L., Aldás, J., Bigné, J.E., & Mattila, A.S. (2010). An analysis of e-business adoption and its impact on relational quality in travel agency–supplier relationships. *Tourism Management*, 31(6), 777–787.
- Ani, NWIAIA, & Karmini, NL (2021). The Influence of Working Capital and Work Experience on Production and Income of Batik Entrepreneurs in Denpasar City. *Udayana University Development Economics E-Journal*, 10(4), 1744–1773.
- Arniyasa, PYP, & Karmini, NL (2023). The Influence of Business Capital, Labor, and Use of E-commerce on the Income of MSMEs in the Culinary Sector in Denpasar City. *Public Service and Governance Journal*, 4(2), 139–149. <https://doi.org/10.56444/psgj.v4i2.938>
- Astawa, GW, Putra, IGLAR, & Juliharta, IGPK (2018). Kamasan Puppet Painting Android Application Using QR Code as Interactive Promotional Media (Case Study: Startup Way'K). *Musirawas Computer Systems Journal (JUSIKOM)*, 3(2), 103. <https://doi.org/10.32767/jusikom.v3i2.376>
- Astuti, NKD, & Indrajaya, IGB (2016). The Influence of Tourist Visits, Inflation and the United States Exchange Rate on the Export Value of Bamboo Crafts in Bali Province. *Udayana University Development Economics E-Journal*, 5(2), 216–235. <https://ojs.unud.ac.id/index.php/eep/article/view/17157>
- Aulia, E. (2017). Effectiveness of People's Business Credit Distribution and Its Influence

- on Increasing the Performance of Micro and Small Enterprises (Case Study of Bank Rakyat Indonesia KUR Customers in Jatimulyo District). Thesis, 78. <http://digilib.unila.ac.id/27965/3/>
- Damayanti, NNS, & Budhi, MKS (2023). Effectiveness and Impact of the People's Business Credit (KUR) Program on the Income of Micro, Small and Medium Enterprises (MSMEs). *Udayana University Development Economics E-Journal*, 12(9), 625–633.
- Das, IMM, & Sudiana, IK (2019). Analysis of Factors that Influence Production and Income of the Apparel Industry in Denpasar City. *Udayana University Development Economics E-Journal*, 8(4), 780–809. <https://ojs.unud.ac.id/index.php/eeep>
- Meilinda, D., & Mahmud, A. (2020). The Influence of People's Business Credit (KUR), Total Assets, Number of Workers, Marketing Costs and Business Location on the Income of Micro, Small and Medium Enterprises (MSMEs) Based on Creative Economy in Semarang City. *Business and Accounting Education Journal*, 1(3), 247–257. <https://doi.org/10.15294/baej.v1i3.45659>
- Monica, M. (2021). The Influence of People's Business Credit (KUR), Own Capital, Length of Business and Number of Workers on the Income of Micro, Small and Medium Enterprises (MSMEs) in Malang City. *FEB Student Scientific Journal*, 9(2).
- Mudana, IW, Kumbara, AAA, Rai S, IW, & Dhana, IN (2015). Transformation of Kamasan Puppet Painting Art in Postmodern Era. *E-Journal of Cultural Studies*, 8(3).
- Mudana, IW, & Ribek, PK (2017). Commodification of Kamasan Wayang Painting as a Creative Industry Product to Support Tourism. *MUDRA: Journal of Arts and Culture*, 32(1), 68–80. <https://jurnal.isi-dps.ac.id/index.php/mudra/article/view/83>
- Nair, K.S. (2017). Impact of e-commerce on global business and opportunities - A conceptual study. *International Journal of Advanced Engineering and Management Research*, 2(2), 324–336.
- Nicholson, W. (2002). *Intermediate Microeconomics and Its Applications*, Fifth Edition, volume one and volume two. Translated by Agus Maulana. Bina Rupa Literacy, Jakarta.

- Ningsih, NMC, & Indrajaya, IGB (2015). The Influence of Capital and Wage Levels on Production Value and Labor Absorption in the Silver Crafts Industry. *Journal of Applied Quantitative Economics*, 8(1), 83–91.
- Ohidujjaman, O., Hasan, M., & Nurul Huda, M. (2013). E-commerce Challenges, Solutions and Effectiveness Perspective Bangladesh. *International Journal of Computer Applications*, 70(9), 9–17. <https://doi.org/10.5120/11989-7867>
- Parinduri, RA (2014). Family Hardship and The Growth of Micro and Small Firms in Indonesia. *Bulletin of Indonesian Economic Studies*, 50(1), 53–73.