THE FACTORS THAT EFFECT THE PRODUCTIVITY AND WELFARE OF THE TRADE BUSINESS UMKM IN DENPASAR CITY

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ABSTRACT
This study aims to determine the effect of education, the amount of credit, technology, networking on the productivity and welfare of SMEs in trading businesses in Denpasar City. The number of samples used is 100 units of MSMEs. The test method used is path analysis. The results of the study indicate a significant effect from education, credit, technology and networking both simultaneously and partially on the productivity of SMEs in trading businesses in Denpasar City. Other results indicate a significant effect of education, credit, technology, networking and productivity both simultaneously and partially on the welfare of trade business SMEs in Denpasar City. This research resulted in recommendations for an increase in education, ease of access to credit, development of production technology, expansion of networking and increased productivity to further improve the welfare of trade business SMEs in Denpasar City.

KEYWORDS: education, credit amount, technology, networking, productivity, welfare

1. INTRODUCTION
Welfare in an economic context is closely related to production activities. The higher the level of productivity of a community will certainly increase the economic welfare of the community. Productivity at the grassroots level in Indonesia is experiencing obstacles due to the emergence of the microeconomic dilemma (informal). The microeconomic dilemma is as a result of the growing strength of the modernization process that moves biased towards dualistic traits. Macro development biases will produce other economic systems, namely the informal sector, which mostly occurs in developing countries.

The problem of the informal sector is actually becoming increasingly important, but the conditions are very important. The swelling of the informal sector in big cities was also a result of the swift flow of urbanization from villages to big cities. So far, the formal and informal sectors are running with their respective growth. The informal sector becomes a buffer from the transformation of unbalanced employment structures. It should be realized that the informal sector is also able to make a meaningful contribution both in terms of employment and output capacity. The informal sector is not only a shelter, but also a complementary alternative to the formal sector (Mulyadi, 2003 in Awami, 2009).

The large number of large micro, small and medium enterprises with rapid growth is clearly an important economic potential to drive economic growth. Subair (2011) states that small businesses
initiated by the community informally have a very important role to play in driving faster economic
growth in a country. The large number of small businesses on the other hand actually creates
problems for a country. Bhatti (2010) states that small businesses in many developing countries have
very low productivity levels so that the level of welfare of these business actors also becomes very
low. The impact of the low welfare of workers and small business owners will certainly burden the
country in an effort to improve the welfare of its people.

Small business productivity plays an important role in improving the welfare of all business people.
The success of increased productivity is effected by many things. Research conducted by Jasra
(2011) in Pakistan shows there are several factors that greatly affect the success of increasing
productivity. The factors in question are education, access to credit, technology, and networking.
Education from business actors is an important basis in shaping business mindset. Business actors
with a higher education level will be better able to increase their business productivity compared to
those with lower education. Easy credit access will provide support for capital requirements for the
growth and development of a business.

High-tech ownership in manufacturing businesses both on a large and small scale will still play an
important role in increasing the productivity of a business. Business people in managing and
operating their businesses need to be continuously improved if they want their business productivity
to increase from time to time. The global era with increasingly fierce business competition will be
difficult to win if businesses do not have good and extensive networking. Victory in competition will
provide opportunities for businesses to further increase their production.

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also a result of the rapid flow of urbanization from villages to big cities (Mulyadi, 2003 in Awami,
2009).

The low level of formal education that has been taken by most MSMEs in Denpasar City is one of
the factors that causes low productivity and subsequently impacts on welfare. Pajo (2010) states that
MSME actors who have higher education have high creativity in developing their business than those
who have lower education. The results of Bhatti’s research (2010) in his research show that higher
education will encourage MSME players to further enhance their capabilities in production.

Capital is a problem that is almost always experienced by MSMEs. The solution to this problem is
access to credit for MSME actors. The Denpasar City Government has provided access to credit to
MSME actors, but the ability to take different loans has led to a lack of production. Peck (2006) and Dasanayaka (2010) state that the size of credit greatly effects the increase in the amount of production in MSMEs.

The use of technology in this modern era is a major necessity in a production process. The use of modern technology will always be able to increase productivity (Millward, 2006). The problems that exist in MSMEs in Denpasar City are the uneven use of MSMEs in the proxy process in each MSME.

The Denpasar City Government has created a website as a means of building networks between MSMEs. This responsiveness from the government is in line with Ndou's (2011) statement that MSMEs need networking in carrying out their business. Networking or networking can be a medium for exchanging information and other collaborations to create a larger scale of production with revenue gains which will also increase. The large number of MSMEs in Denpasar City and limited website has made many business people not included in the network.

2. LITERATURE REVIEW AND HYPOTHESES

The Effect of education on productivity
Formal education background plays an important role in various aspects of human life. This also applies to economic activities related to the productivity of MSMEs. Tambunan (2007) found that the causes of low productivity of women in Indonesia were involved in MSMEs due to the large number of Indonesian women who still had low education. Bhatti (2010) also found that low education from MSMEs in Sidh Pakistan had caused poor production capabilities. The anticipation of this condition was suggested by Bhatti to provide training to improve the production capabilities of the entrepreneurs.

The Pajo study (2010) conducted in New Zealand found a significant difference between low-educated and highly educated workforce who became workers in MSMEs. Workers with high educational backgrounds are better able to develop themselves so that they are better able to encourage higher productivity than lower educated coworkers.

The Effect of credit amount on productivity
Capital is the main factor that drives the success of a business. Strong capital will be able to encourage greater production. Peck (2006) who conducted a comparison between MSMEs in several European countries, Japan and Australia showed that MSMEs desperately need capital support which is packaged as a national policy from each country. The most important capital support to increase the productivity of MSMEs is ease of access to credit. The amount of credit that fits the needs of MSMEs will greatly help increase productivity.
The results of the study by Peck (2006) are in line with Dasanayaka (2010) who performed on MSMEs engaged in wood processing and furniture in Sri Lanka. The most important finding from Dasanayaka is that MSMEs that have easy access to credit will always be able to obtain a number of loans that match their production needs so that their productivity is increasingly able to be improved. This is inversely proportional to MSMEs that are unable to obtain the amount of credit that matches their production needs.

The Effect of technology on productivity
Millward (2006) states that small and medium industries will be able to survive in this modern era if they apply the latest technology in their production processes. This condition needs to be realized by the management of the company so that policies arise to always update the technology used in the production process. Adelina (2007) states that modernization in the business sector is now inevitable. This statement applies not only to large businesses, but MSMEs are also affected by the effects of modernization. The competitive advantage of the products produced by MSMEs can be built with the use of advanced technology in the production process. Adelina conducting research in Romania found that MSMEs that did not use advanced technology had weak production conditions.

The Effect of networking on productivity
MSMEs in running their business at this time certainly cannot stand alone in running their business. Ndou (2011) in his research showed that MSMEs need networking or networking in running their businesses. This network is not only built among MSMEs but also with large businesses that enable a partnership to be built. The involvement of MSMEs in a network will motivate an effort to continue to increase productivity. Transfers of information and knowledge also occur in a network so as to facilitate an MSME in an effort to find information about strategies to increase productivity. Gilaninia (2012) states that strengthening networks built by various MSMEs needs to be supported by information and communication technology (ICT). Transfer of knowledge and information between fellow network members will be implemented quickly, efficiently and at a low cost. These three things are proven to increase the productivity of MSMEs.

The Effect of productivity on welfare
The most important proxy for welfare is increasing income. Opinions will be obtained if someone or group does the production process. Irina (2009) who conducted a study of development strategies for MSMEs in Europe found a strong relationship between productivity and welfare. The higher the productivity, the greater the income that will be obtained. The Irina (2009) study is in line with the results of a research by Dasanayaka (2010) who found that the more productive wood and furniture craftsmen in Sri Lanka, the greater the opinion that would be accepted.

The Effect of education, credit amount, technology and networking on welfare
Irina (2009) and Dasaanaya (2010) state that productivity affects welfare. Productivity itself is very affected by many factors. All factors that effect productivity can directly affect welfare. The direct
and indirect effects of factors that affect productivity on welfare are presented in several previous studies. Bhatti (2010) states that high education not only makes MSMEs have creative thinking to produce, but also is able to provide welfare guarantees in the future. Dasanayaka (2010) states that a large amount of credit with the right usage will guarantee a sustainable increase in income in the future. The results of Adelina’s (2007) study show that the use of technology that is always updated will be able to guarantee an increase in income from every effort made by MSMEs. Ndou (2011) explains that networking can create opportunities to improve welfare through information sharing and knowledge transfer activities.

3. METHODS
This research began with the rapid growth and development of MSMEs in Denpasar City, but on the other hand it was not offset by increased productivity. The impact of this is on the welfare of MSME actors who become threatened. Identifying the factors that effect productivity is done to determine the influential factors to boost productivity and at the same time to the welfare of MSME actors. The results of the identification found that there were four factors that were empirically suspected of affecting the productivity and welfare of MSME actors both directly and indirectly. The factors in question are education, credit, technology, and networking. The results of previous studies indicate that the four factors have a positive and significant effect on the productivity and welfare of MSME actors.

A series of methods is done to answer the problems raised in this study. Determination of the sample is done by probability random sampling method. Data was collected by structured interviews and non-participant observation. Data is processed using the path analysis approach to produce answers to the problems raised in this study. Then the structural equation can be made as follows:

\[ Y_1 = \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e_1 \] .......................... (1)

\[ Y_2 = \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 Y_1 + e_2 \] .......................... (2)

Information:
X1: Education
X2: Credit Amount
X3: Technology
X4: Networking
Y1: Productivity of MSMEs
Y2: Welfare of MSMEs
4. RESULT AND DISCUSSION

Table

Result of Regression I

<table>
<thead>
<tr>
<th>Variabel</th>
<th>Unstandardized Coefficient</th>
<th>Standardized Coefficient</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>0,887</td>
<td>0,052</td>
<td>17,172</td>
<td>0,000</td>
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<tr>
<td>Tingkat Pendidikan</td>
<td>0,045</td>
<td>0,020</td>
<td>0,173</td>
<td>2,253</td>
</tr>
<tr>
<td>Jumlah Kredit</td>
<td>0,003</td>
<td>0,001</td>
<td>0,218</td>
<td>3,014</td>
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<tr>
<td>Teknologi</td>
<td>0,150</td>
<td>0,021</td>
<td>0,453</td>
<td>7,061</td>
</tr>
<tr>
<td>Networking</td>
<td>0,058</td>
<td>0,016</td>
<td>0,230</td>
<td>3,589</td>
</tr>
</tbody>
</table>

Adjusted $R_{square}$ : 0,736
$F_{hitung}$ : 69,929
Sig. $F_{hitung}$ : 0,000

Secondary Data, 2019

The regression equation produced from the moderation regression model in this study is as follows.

$$Y_1 = 0.173X_1 + 0.218X_2 + 0.453X_3 + 0.230X_4$$

The determination coefficient used in the regression analysis is the adjusted Rsquare value. The results of the analysis show a value of 0.736. This means that changes in productivity can be explained by the level of education, the amount of credit, technology and networking at 73.6 percent, while the remaining 26.4 percent is explained by other factors not tested in this regression test.

The effect of education, the amount of credit, technology and networking simultaneously on the productivity of SMEs in trading businesses in Denpasar City.

The results of the F test show that the calculated F value is 69,929 with a significance of 0,000. Significant value that is less than the error rate of 0.05, it can be stated that there is an effect of education, the amount of credit, technology and networking simultaneously on the productivity of SMEs in trading businesses in Denpasar City.

The effect of education, the amount of credit, technology and networking simultaneously on the productivity of SMEs in trading businesses in Denpasar City.

The results of the t test show a value of 2.253 with a significance value of 0.027. The significance value is less than the error rate ($\alpha = 0.05$). This means that there is a positive and significant effect of education on the productivity of MSMEs in the trade sector in Denpasar City.
The effect of the amount of credit on the productivity of MSMEs in the trade sector in Denpasar City.
The results of the t test show a value of 3.014 with a significance value of 0.003. The significance value is less than the error rate ($\alpha = 0.05$). This means that there is a positive and significant effect of the amount of credit on the productivity of MSMEs in the trade sector in Denpasar City.

The effect of technology on the productivity of MSMEs in the trade sector in Denpasar City.
The results of the t test show a value of 7.061 with a significance value of 0.000. The significance value is less than the error rate ($\alpha = 0.05$). This means that there is a positive and significant effect of technology on the productivity of MSMEs in the trade sector in Denpasar City.

The effect of networking on the productivity of MSMEs in the trade sector in Denpasar City.
The results of the t test show a value of 3.589 with a significance value of 0.001. Significance value that is less than the error rate ($\alpha = 0.05$) means that there is a positive and significant effect of networking on the productivity of MSMEs in the trade sector in Denpasar City.

Table 2.

<table>
<thead>
<tr>
<th>Variabel</th>
<th>Unstandardized Coefficient</th>
<th>Standardized Coefficient</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>0.513</td>
<td>0.208</td>
<td>2.466</td>
<td>0.015</td>
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<tr>
<td>Tingkat Pendidikan</td>
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<td>0.045</td>
<td>2.174</td>
<td>0.032</td>
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<tr>
<td>Jumlah Kredit</td>
<td>0.005</td>
<td>0.002</td>
<td>2.349</td>
<td>0.021</td>
</tr>
<tr>
<td>Teknologi</td>
<td>0.319</td>
<td>0.051</td>
<td>6.271</td>
<td>0.000</td>
</tr>
<tr>
<td>Networking</td>
<td>0.086</td>
<td>0.038</td>
<td>2.256</td>
<td>0.026</td>
</tr>
<tr>
<td>Produktivitas</td>
<td>0.790</td>
<td>0.183</td>
<td>4.323</td>
<td>0.000</td>
</tr>
<tr>
<td>Adjusted R_{square}</td>
<td>:</td>
<td>0.810</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F_{hitung}</td>
<td>:</td>
<td>85.673</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. F_{hitung}</td>
<td>:</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Secondary Data, 2019

The regression equation produced from the moderation regression model in this study is as follows.
\[
Y2 = \beta_1X1 + \beta_2X2 + \beta_3X3 + \beta_4X4 + \beta_5Y1 + e
\]
\[
= 0.146X1 + 0.154X2 + 0.361X3 + 0.132X4 + 0.305Y1
\]

The interpretation of the equation is as follows.
The determination coefficient used in the regression analysis is the adjusted Rsquare value. The analysis results show a value of 0.810. This means that changes that occur in productivity can be
explained by the level of education, the amount of credit, technology, networking and productivity by 81 percent, while the remaining 19 percent is explained by other factors not tested in this regression test.

The effect of education, credit, technology, networking and productivity simultaneously on the welfare of trade business SMEs in Denpasar City
The results of the F test show a calculated F value of 85.673 with a significance of 0.000. Significant value that is smaller than the error rate of 0.05, it can be stated that there is the effect of education, credit, technology, networking and productivity simultaneously on the welfare of trade business SMEs in Denpasar City.

The Effect of the level of education on the welfare of MSMEs in the trade sector in Denpasar City
The results of the t test show a value of 2.174 with a significance value of 0.032. Significance value that is smaller than the error rate ($\alpha = 0.05$), this means that there is an effect of the level of education on the welfare of MSMEs in the trade sector in Denpasar City.

The Effect of the amount of credit on the welfare of MSMEs in the trade sector in Denpasar City
The results of the t test show the value of 2.349 with a significance value of 0.021. The significance value is smaller than the error rate ($\alpha = 0.05$), this means that there is a positive and significant effect of the amount of credibility on the welfare of MSMEs in the trade sector in Denpasar City.

The effect of technology on the welfare of MSMEs in the trade sector in Denpasar City
The results of the t test show a value of 6.271 with a significance value of 0.000. Significance value that is smaller than the error rate ($\alpha = 0.05$), this means that there is a positive and significant effect of technology on the welfare of MSMEs in the trade sector in Denpasar City. This research is in line with the results of Adelina (2007) research which shows that the use of technology that is always updated will be able to guarantee an increase in income from every effort made by MSMEs.

The effect of networking on the welfare of MSMEs in the trade sector in Denpasar City
The results of the t test show a value of 2.256 with a significance value of 0.026. Significance value that is smaller than the error rate ($\alpha = 0.05$), this means that there is a positive and significant effect of networking on the welfare of MSMEs in the trade sector in Denpasar City.

The Effect of productivity on the welfare of MSMEs in the trade sector in Denpasar City
The results of the t test show a value of 4.323 with a significance value of 0.000. The significance value is smaller than the error rate ($\alpha = 0.05$), this means that there is a positive and significant effect of productivity on the welfare of MSMEs in the trade sector in Denpasar City.
Based on the equation Sub-structures 1 and 2 can be made relationships between variables as shown in figure (5.1). Based on Figure 5.1, it can be explained that the variable that most affects productivity is Technology with a coefficient of 0.453. Followed by the Networking variable with a coefficient of 0.230, then the amount of credit is 0.218 and the last level of education with coefficient is 0.173. In other structures, the biggest variable influencing welfare is Productivity, followed by successive Technology variables of 0.361, Amount of Credit with a value of 0.154, Variable Education Level with a value of 0.146 and the lowest value in the Networking variable of 0.132.

**Figure 1.**

Coefficient of Education Pathways, Amount of Credit, Technology, and Networking in Denpasar Against the Welfare of MSMEs in Denpasar with UMKM Productivity as Intervening Variables

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>X1</td>
<td>0.173 (S)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X2</td>
<td>0.218 (S)</td>
<td>0.453 (S)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X3</td>
<td>0.146 (S)</td>
<td>0.154 (S)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X4</td>
<td>0.361 (S)</td>
<td></td>
<td></td>
<td>0.132 (S)</td>
</tr>
<tr>
<td>Y1</td>
<td></td>
<td></td>
<td></td>
<td>0.305 (S)</td>
</tr>
<tr>
<td>Y2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Indirect Effects**

The influence of intervening from education (X1), credit amount (X2), technology (X3), networking (X4) on the welfare of MSMEs (Y2) through MSME productivity (Y1) is measured by the Sobel test. The Zobel test results are presented below:
Tabel 3.
Sobel Test

<table>
<thead>
<tr>
<th>No.</th>
<th>Uraian</th>
<th>Zscore</th>
<th>Ztable</th>
<th>Keterangan</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>X₁→Y₁→Y₂</td>
<td>1,960</td>
<td>1,96</td>
<td>Ada pengaruh intervening</td>
</tr>
<tr>
<td>2</td>
<td>X₂→Y₁→Y₂</td>
<td>2,429</td>
<td>1,96</td>
<td>Ada pengaruh intervening</td>
</tr>
<tr>
<td>3</td>
<td>X₃→Y₁→Y₂</td>
<td>3,660</td>
<td>1,96</td>
<td>Ada pengaruh intervening</td>
</tr>
<tr>
<td>4</td>
<td>X₄→Y₁→Y₂</td>
<td>2,719</td>
<td>1,96</td>
<td>Ada pengaruh intervening</td>
</tr>
</tbody>
</table>

Secondary Data, 2019

This result is in line with the research of Bhatti (2010), Dasanayaka (2010), Adelina (2007), Ndou (2011). All of these studies state that there are direct or indirect influences on factors that influence productivity towards welfare. The factors in question are education, credit amount, technology, networking and productivity.

5. CONCLUSION AND SUGESSION

Education, credit, technology and networking partially have a positive and significant effect on the productivity of MSMEs in the trading business in Denpasar City. Education, the amount of credit, technology, networking and productivity partially have a positive and significant effect on the welfare of SMEs in trading businesses in Denpasar City.

MSME actors should be able to improve their education both formally and informally to further increase productivity so that indirectly it will improve their welfare. Credit access should be better facilitated by funding institutions and the Denpasar City Government. MSME players should also be wiser in using credit for the benefit of activities that support productivity improvements. Increasing the quality and quantity of technology by MSME actors needs to be done. MSME players must be able to take advantage of various facilities from the various availability of current technology, starting from product development programs, marketing as well as ease of work for MSME players, such as cash registers and goods / services counting programs. The ease of getting consumers by offering non cash payments needs to be considered. The expansion of the network by maximizing the existing information technology should be able to be carried out by trade MSMEs in Denpasar City. With the many platforms offered by various media, it can be taken into consideration to expand the market share of MSME players. Online sales can also be done by SMEs in expanding the network.

REFERENCES


