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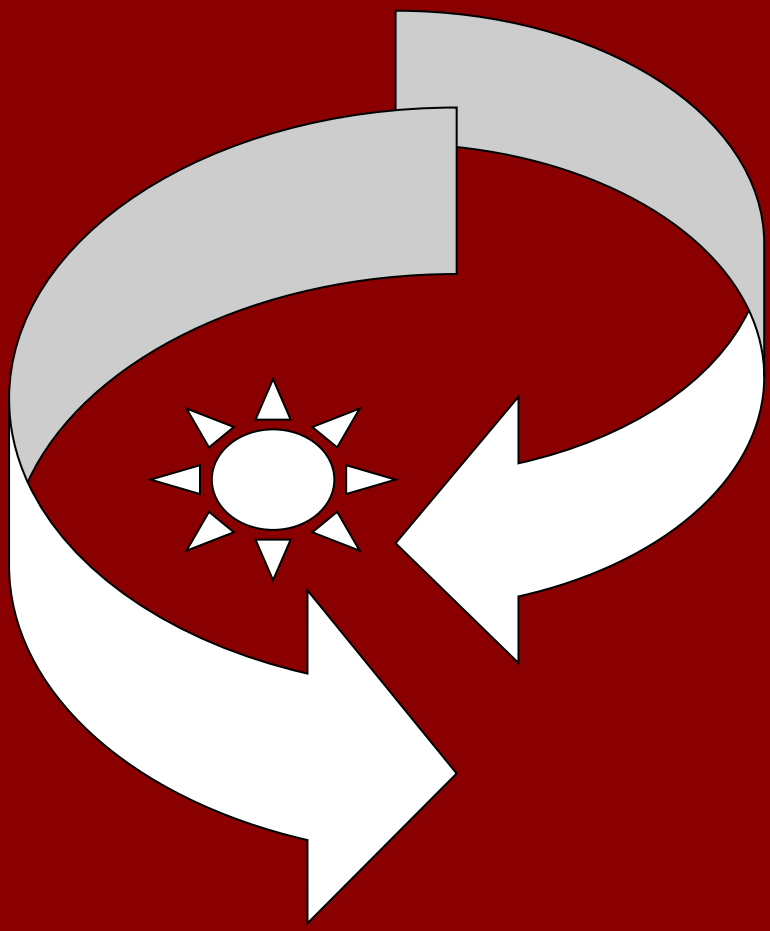

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Jurnal
Perspektif Pembiayaan dan Pembangunan Daerah

(Journal of Perspectives of Financing and Regional Development)

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Editor's Note

Since Volume 6, Issues 2 (September – October 2018), the Journal of Perspectives on Financing and Regional Development has been nationally accredited with SINTA (Science and Technology Index) score of S2, based on the Decree of the Director General of Development and Research Enhancement, Ministry of Research, Technology & Higher Education of the Republic of Indonesia, Number 10/E/KTP/2019 concerning the Ranking of Scientific Journal.

In Volume 8 Issue 2, 2020 is presented seven articles that come from Ekiti State (Nigeria), Universitas Andalas (Indonesia), Universitas Jambi (Indonesia), Industry and Trade Office of Jambi Province (Indonesia), Universitas Muhammadiyah Yogyakarta (Indonesia), IPB University (Indonesia), Jimma University (Ethiopia), University of Mitrovica (Kosovo), University College UBT (Kosovo), University of Westminister (England), Universitas Sumatera Utara (Indonesia), Politeknik Negeri Sriwijaya (Indonesia)

Hopefully in the next issue can be presented articles with issues and from more diverse circles.

Happy joy reading

Editorial

Agricultural output and government expenditure in Nigeria

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Abstract

The study empirically investigate the link between agricultural output growth and government spending in Nigeria from 1981 to 2018. Augmented Dickey-Fuller (ADF) test was used to investigate stationary variable at different levels. The mixture in order of integration necessitate Auto Redistributed Lag (ARDL) and Bounds co-integration, since it allows combination of fractionally integrated variables. The results show both short and long run effect of government spending on the growth of agricultural output in Nigeria. The policy implication is that any disruption in government spending on agricultural sector would have adverse effect on agricultural output growth in Nigeria. In view of poor agricultural output growth in Nigeria, coupled with corruption, and policy summersaults in the sector. It is pertinent in the study, to come up with the following recommendations thus; government should re-double it efforts in terms food security through improved agricultural policies, proper channelization of loans across board with sustainable fiscal measures that can translate to actual growth.

Keywords: *Agricultural output, Food security, Government expenditure.*

JEL Classification*:* Q14, H59, O4

INTRODUCTION

It is quite commonly explain that agriculture is the mainstay of an economy, especially in the developing one like Nigeria. However, this assertion has become triviality in Nigeria's scenario over the years. Agricultural output growth is the most vital component of general economic growth attainment, which could be achieved through aggressive investment in the agricultural sector. Ogiogio, (1995) posits that agricultural contribution to economic growth cut across four cardinal points thus; factor earning, product earning, market earning and foreign exchange earnings (Jhingan, 2003). Despite all these benefits, little attention has been drawn towards actualizing the above benefits in case of Nigeria, although government in the past had come up with different attempts to harness these benefits, such as structural adjustment programme (SAP), operation feed the nation (OFN) among others, but the agricultural growth continuously remains slow, coupled with poor agricultural funding by the government across all tiers. Interestingly, the sector witnessed it first major set-back in the early 1970s when oil discovery took the center stage and this attracted huge revenue deposit in the government convers which was termed as free money by most politicians in the helms of the nation's affairs. As a result, government attention was drastically shifted from the agricultural sector to petroleum sector hence agricultural product dropped sharply to less 1 percent on it contribution to annual growth. The crop export also fall with marginal rise in food production due short

labour supply in the sector. This ugly trend brought about general fall of domestic food supply, which led to augmentation of this shortages through foreign imports. According to the nation's apex bank in 2003, food import expenditure rose between 1970s and 1990s. This is connected to macroeconomic disequilibrium such as exchange volatility, skyrocket consumer price index with poor infrastructural based, policy inconsistence, over reliance on crude oil among others (Keji, 2018).

Notably, over the years, several measures were put in place to change the ugly scenario in the agricultural sector especially through agricultural financing, policy implementation like increase in agricultural budgetary allocation, among others, yet these measures fail to transmit to growth of the Nigerian economy, that is, measures without explicitly translating to an equivalent expansion in agricultural output hence slow economic growth is achieved. Consequently, several studies were carried out to examine what might had caused the slow growth in agricultural sector from different perspectives with little or no attention on the nexus between government expenditure and agricultural output growth. For example, studies like Oboh & Ekpebu (2010), Akintola (2004), Iganiga & Unemhilin (2011), Adekanye (2005), Rhaji, (2008), Egwu (2016) and Ebere, (2014) attempted to explain some other factors that affect agricultural output in broader perspective without specifically focus on factor such as government expenditure and agricultural output growth. Therefore, in the light of the above gap in the literature, it is pertinent in this study to investigate the relationship between government expenditure and agricultural output in Nigeria.

On this note, different research questions were raised thus; what is the nexus between government expenditure and agricultural out growth in Nigeria? What is the trend of government spending on agricultural output growth in Nigeria? In lieu of these questions, the study intended to empirically investigate the relationship between the two key variables (government expenditure and agricultural output growth) and to examine the government spending on agricultural output between 1981 and 2018. Interestingly, the findings from this study would serve as policy guide to the policy makers in the future. Also, it can be used by other researchers as point of references in the cause carrying further studies. It is worthy to note that the study is grouped into five different sections thus; Section one explains the introduction and section two contains the literature review. While section three, four and five address the research methodology, data analysis and conclusion respectively.

LITERATURE REVIEW

Agriculture is said to an art of crop growing and livestock production in one hand and scientific way of processing crops and livestock in medium and large quantity via modern bio-technology on the other hand. Agricultural practice is as old as man himself, which stands as mean of livelihood since the ancient time till the present day. Interestingly, over the years, agricultural practice had gone through diverse transformation in terms, scope, form that dictate the type of crop(s) to be cultivated, livestock management and down to processing and marketing. Agriculture plays central role in economic emancipation of any developing economy and Nigeria is not exceptional from this.

Government expenditure means the expended funds from the fiscal allocation, mostly on yearly basis across the whole sectors of the economy towards achieving growth objectives. While government expenditure on agriculture growth is said to be the total allocative resources set assign from the annual budgetary allocation specifically meant for enhance agricultural output through crop and seedling development, procurement of fertilizer and mechanized tools, agricultural research and development among others, so as to attained economic growth objectives. It is worthy to note that Rostow's growth

theory posit five stages of economic growth thus; firstly, the traditional society that emphasis more acquisition of land for cultivation so as to expand the volume of trade, which could rise general income level. Secondly, the pre-condition to take off analysis the transition period that is characterized by inventions and innovations. Thirdly, the take-off era predominantly characterized by new discoveries that bring an end to feudalism, which consequently give rise to discoveries and inventions and consequently the rise to bourgeoisies and emergence of new mercantile cities. Fourthly, the drive to maturity mainly address deficient high mass production to sufficient production via the needed transformation. Fifthly, the era of high mass consumption which is basically explain migration, use of automobile, where society is faced diverse production needs of the consumers.

Evidently, Adolph Wagner's law in 1876 opined that increasing public spending by the state on activities occur as government commitments increases. As it predicted that rise in the ratio of government to nation's income whilst per capital income grows. The law further states that public sector share of the economy rise as economic activities rises, that societal progress brings rise in state activities which in the long rise the public spending. Over time, Wagner's was divided into six strata to further test it adaptability across different periods by different researchers (Henrekson, 1993; Anoke, Odo, Chukwu & Agbi, 2016). For example, Peacock and Wiseman postulated the traditional form; G = F (GDP). It was argued that government expenditure has direct nexus with Gross Domestic Product.

It is pertinent to note that agricultural sector in Nigeria is being pigeon-holed by several problems, ranging from the point of production, through storage system to the point of marketing, which had been largely caused by different policy summersaults in the time past and this had resulted to poor performance of the sector. These ugly scenario were further worsen by poor financing system of the sector over the years. Although, there were claims that agricultural financing has been on the rise through different government agencies in the recent years, but without really translating to increase in output. In this note, it is pertinent in this study to empirically find the remote and immediate causes of this misleading claim by assessing the link between government expenditure and agricultural output in Nigeria.

Notwithstanding, several empirical studies have made different attempts in the time past to critically examine the link between agricultural financing and economic growth, through different perspectives thus; for example, Rhaji, (2008) adopt Ordinary Least Square (OLS) to examine the determinants of agricultural credit approval/loan size by commercial banks in south-western Nigeria. The study reveal that lack of sufficient access and affordable credit responsible for systematic fall in agricultural output, hence the rate of economic growth declines. Awoke, (2004) argued that unwillingness, default, and high rate of agricultural loans among the farmers pose serious danger to growth sustainability in Nigeria. The study inspect factors affecting loan acquisition and repayment method among the small scale farmers in Delta sate, Nigeria. Meanwhile, Obansa & Maduekwe (2013) employed Ordinary Least Square technique and Granger causality test to submit that agricultural output increases both by direct private loan to farmers and foreign direct investment in agriculture. The causality test disclosed two way relationship i.e. bidirectional relationship between agricultural financing and economic growth. In a similar vein, Nwankwo (2013) revealed that there is strong nexus between economic growth and agricultural financing in Nigeria, through Ordinary Least Square technique. It was further revealed that loan repayment rate has significant negative effect on economic growth in Nigeria. Interestingly, Egwu, (2016) adopt cointegration technique to investigate the effect of agricultural financing on agricultural output, economic growth and poverty alleviation in Nigeria. The study reveal that agricultural financing has

significant effect on agricultural output, which in the long run alleviate poverty among the populace.

Notably, Ihugba, Chinedu, & Njoku (2013) study Nigeria expenditure on the agricultural sector: Its relationship with agricultural output between 1980 and 2011, through the Engle-Granger modeling (EGM) of co-integration and Error Correction Mechanism and Pair wise Granger Causality tests. The results show that there is long run nexus between agricultural contribution and government expenditure. While, the causality test results reveal that weak causality exist among the two key variables in the study. Hence, the study posit that any drop in agricultural financing would have drastic negative impact on economic growth in Nigeria. Ewubare and Udo (2017) study the impact of public sector financing on agricultural output in Nigeria between 1980 and 2014, in which Johansen co-integration and error correction model techniques were used to establish that public sector financing has great effects on agricultural output in Nigeria during the period of study. Hence, the study recommends the need for government to increase her spending on agricultural sector so as to achieve sustainable growth in the economy.

Ayeomoni and Aladejana (2016) examine the nexus between agricultural credit and economic growth in Nigeria through Auto-Regressive Distributed Lag (ARDL) method to establish both short and long run link between the key variables- economic growth and agricultural credit. Hence, the study suggest that there is need for policy makers to improve boost agriculture credits in Nigeria so as to enhance growth. Again, Garba, (2011) agued through the impact of development banks via agricultural financing on economic growth in Nigeria. Multiple regression from the study disclosed that agricultural financing from development banks does not have significant impact on economic growth in Nigeria. The study therefore conclude that frantic efforts must be put in place in terms of proper loan monitoring, along with the whole operations of the said banks. Okoh, (2015) examines the effect of fiscal policy on the growth of agriculture sector in Nigeria from 1981 to 2013 through Error Correction Model. The study therefore revealed that long run relationship exist between fiscal policy and agriculture sector though with some serious concerns, in which the study recommend that government should increase budgetary allocation to agriculture with proper monitoring of the funds. In a similar vein, Eze, (2017) argued that agricultural output has positive without significant impact on real gross domestic product in the long run through co-integration and Vector Error Correction Model (VECM). On his work, which examine the link between agricultural sector performance and economic growth in Nigeria. The study recommends that there is need for government to boost agricultural through improved spending.

METHODS

In this section, empirical review of the study shall be discussed under various sub-sections. Preliminary test shall be employed in the cause of investigating the nexus between government expenditure and agricultural output growth in Nigeria, which is unit root test. The test is adopted to establish the order of integration of the time series. Interestingly, the study shall derive it empirical findings from Peacock and Wiseman version of Wagner's theory but with some re-modifications. Meanwhile, secondary data are sourced between 1981 and 2018 from the central Bank and World Bank development indicators.

It is a known fact that Wagner's theory model is broadly captured in six diverse (Anoke, Odo, Chukwu & Agbi, 2016). However, this study shall align with that of Peacock and Wiseman version as adopted by (Anoke, Odo, Chukwu & Agbi, 2016) as earlier stated but with some re-modifications thus:

$$G = F(GDP) \quad \text{.....(1)}$$

Where G implies Norminal total government expenditure, while GDP explains Nominal gross domestic product. In order to achieve the set objectives of study, the model hereby transformed to accommodate other series employed in the study thus:

$$AGOUT = F(GEX, GCF, EXC, INT, IDV, INF, GDP) \quad \text{.....(2)}$$

Where AGOUT = Agricultural output
GEX = Government expenditure
GCF = Gross Capital Formation
EXC = Exchange Rate
INT = Intrest Rate
IDV = Industrial Value
INF = Inflation Rate
GDP = Gross domestic product (measure of national income)
Ɛt = Error term and $\alpha_0 - \alpha_7$, are parameters estimates.

The functional transformation of the model as:

$$AGOUT_t = \alpha_0 + \alpha_1 GEX_t + \alpha_2 GCF_t + \alpha_3 EXC_t + \alpha_4 INT_t + \alpha_5 IDV_t + \alpha_6 INF_t + \alpha_7 GDP_t + \text{Ɛ}_t \quad \text{.....(3)}$$

For the purpose of achieve valid results, the high decimal series are hereby log for accurate analysis as;

$$LogAGOUT_t = \alpha_0 + \alpha_1 LogGEX_t + \alpha_2 LogGCF_t + \alpha_3 EXC_t + \alpha_4 INT_t + \alpha_5 IDV_t + \alpha_6 INF_t + \alpha_7 LogGDP_t + \varepsilon_t \quad \text{..... (4)}$$

DATA ANALYSIS

This section contains findings from the data employed in the study. The empirical findings are carried out in different sub-sections. Firstly, the descriptive analysis was conducted to reveal the summary information of the data. Secondly, unit root test is being carried out to know the appropriate technique to use in the study. Thirdly, the predicted techniques are carried out as suggested by unit root test results. Lastly, other post estimation analysis were conducted to check the validity of the estimated results.

Descriptive statistics

From the results in Table 1, it is observed that the mean values of the agricultural output (AGOUT), gross capital formation (GCF), inflation rate (INFR) and interest rate (INTR) are 5353.42, 38.35, 19.57 and 18.03 respectively while exchange rate (EXC) industrial value (IDV) gross domestic product (GDP) and government expenditure (GEX) are 78.63, 0.92, 3.74 and 1568.60 separately. The standard deviation showed that exchange rate (AGOUT) is the most volatile variable (6754.37) while economic growth (GDP) is the least volatile variable (4.80). Skewness statistics revealed that industrial value (IDV) gross and domestic product (GDP) are negatively skewed while the other series (like agricultural output, gross capital formation, inflation rate, interest rate, exchange rate and government expenditure) were positively skewed. The Kurtosis results disclosed that agricultural output, exchange rate, government expenditure were platykurtic, signifying flatness of the normal distribution, while inflation rate, industrial value and gross domestic product are leptokurtic showing the peaked comparative to normal distribution. Again, gross capital formation and interest rate Kurtosis statistics are mesokurtic i.e. the distribution of the series is bell shaped, which means the variables normally distributed. The null hypothesis of normal distribution from Jarque-Bera statistic for agricultural output, gross capital formation, interest rate, exchange rate, industrial value, gross domestic product and government expenditure were rejected while, the null hypothesis of normal distribution for inflation rate cannot be rejected at 5% level.

Table 1. Descriptive analysis

	AGOUT	GCF	INFR	INTR	EXC	IDV	GDP	GEX
Mean	5353.415	38.34767	19.56848	18.03226	78.63377	0.924866	3.743944	1568.597
Median	1426.974	37.23967	12.21701	17.79500	92.33810	1.695439	4.631193	701.0509
Maximum	21523.51	89.38105	72.83550	31.65000	253.4920	18.05893	15.32916	5185.318
Minimum	20.12592	14.90391	5.382224	9.433333	0.673461	-18.9746	-10.92409	9.636500
Std. Dev.	6754.374	19.09927	17.94746	4.799836	71.79460	6.983876	5.002072	1859.250
Skewness	1.064946	0.963758	1.647443	0.247753	0.384886	-0.41233	-0.597665	0.915066
Kurtosis	2.735759	3.673975	4.414909	3.743379	1.979013	4.183027	4.220342	2.246872
Jarque-Bera	6.717470	6.080604	18.75161	1.163951	2.384321	3.032781	4.255486	5.711683
Probability	0.034779	0.047820	0.000085	0.558793	0.303565	0.219503	0.119106	0.057507
Sum	187369.5	1342.168	684.8969	631.1290	2752.182	32.37032	131.0381	54900.88
Sum Sq. Dev.	1.55E+09	12402.59	10951.79	783.3065	175251.8	1658.334	850.7047	1.18E+08
Observations	35	35	35	35	35	35	35	35

Unit root test

The Augmented Dickey Fuller test was conducted which explains the results disclosed on Table 2. It can be observed that series were integrated of mix results i.e. unit root test results are of mix order of integration such as I(0) and I(1). For example, industrial value, gross domestic product and inflation rate are integrated of order zero I(0), while log of agricultural output, log of gross capital formation, interest rate, exchange rate and log of government expenditure are integrated of order one I(1). Consequently, the mix in the order of co-integration necessitates the need for bound co-integration technique as suggested by Pesaran, Shin and Smith (2001).

Table 2. Unit root test

Variable	T. Statics	Probability	Order of Integration
LOGAGOUT	-3.7952	0.0067	I(1)
LOGGCF	-5.6137	0.0001	I(1)
INFR	-3.4021	0.0179	I(0)
INTR	-6.5178	0.0000	I(1)
EXC	-3.6446	0.0099	I(1)
IDV	-4.9419	0.0003	I(0)
GDP	-3.9560	0.0044	I(0)
LOGGEXP	-7.0788	0.0000	I(1)

ARDL bound test

The Bound test results critical values revealed cointegrating series in the model. According to Pesaran, Shin and Smith (2001), For instance, if the F-statistic is greater than the upper critical value, then the null hypothesis of no co-integration is rejected, which indicates the presence of co-integration among the variables. Contrariwise, if the F-statistic is lower than the lower critical value, it is therefore implies that the null hypothesis of no co-integration cannot be rejected, which explains none co-integration among the variables. However, if the F-statistic falls between the upper and lower critical values, it is hence signifies that the result is inconclusive. Consequently, in the study, F-Statistic of 4.086147 is higher than both lower and higher Bounds of 2.32 and 3.5 at 5% level respectively (Ewubare & Udo, 2017; Keji, 2018).

Autoressive distributed lag model results

The autoregressive distributed lag model results reveal that log of agricultural output in first and second previous years are statistically significance on the current year agricultural output at 1% level, while series for interest rate and log of government expenditure in first previous years, industrial value and gross domestic products in current year are influence the current year agricultural output growth at 5% level. Whereas, log of gross capital formation and gross domestic products in first previous and interest rate

in the in second previous year are weakly significant on the current year agricultural output at 10% level. Interestingly, the key variables confirms the expected economic intuition e.g. current year gross domestic is positively related to current agricultural output, while interest rate and log of government expenditure in first year lag are negatively related to the current year agricultural output. This is in line with the findings of Ewubare & Udo, (2017).

The coefficient of multiple determination of the model (R-squared) explained that the independent variables jointly determined about 99 per cent of the variations in agricultural output while the remaining1 per cent explained by variables not included in the model. The result of the coefficient of multiple determination showed that the model is good and fit. While, the Durbin-Watson Stat of 2.13 showed that the estimate of the model is free from the problem of serial auto-correlation. As a result, the estimate model is appropriate and can be used for policy recommendation.

$$LOGAGOUT_t = \underset{(6.799953)***}{1.049LOGAGOUT_{(-1)}} \underset{(-2.738872)***}{- 0.607LOGAGOUT_{(-2)}} \underset{(0.356455)}{+ 0.081LOGGCF}$$
$$\underset{(-1.820556)*}{- 0.455LOGGCF_{(-1)}} \underset{(1.481963)}{+ 0.345LOGGCF_{(-2)}} \underset{(0.442158)}{+ 0.000INFR} \underset{(0.935655)}{+ 0.014INTR}$$
$$\underset{(-2.352000)**}{- 0.026INTR_{(-1)}} \underset{(2.091349)*}{+ 0.016INTR_{(-2)}} \underset{(-0.021908)}{- 2.742e05EXC} \underset{(-0.474457)}{- 0.001EXC_{(-1)}}$$
$$\underset{(1.632758)}{+ 0.004EXC_{(-2)}} \underset{(-2.896624)**}{- 0.014IDV} \underset{(2.166515)**}{+ 0.020GDP} \underset{(-2.102923)*}{- 0.013GDP_{(-1)}}$$
$$\underset{(0.446962)}{+ 0.100LOGGEXP} \underset{(2.537994)**}{+ 0.421LOGGEXP_{(-1)}} \underset{(0.568576)}{+ 0.688} \quad \text{..... (5)}$$

*Note: The standard errors are in the parenthesis, while * denotes statistical significance at 10%, ** denotes 5% and *** denotes 1% respectively. Whereas, the lag length ranges between one and two.*

Table 3. ARDL bound test results

Significance	I0 Bound	I1 Bound
10%	2.03	3.13
5%	2.32	3.50
2.5%	2.60	3.84
1%	2.96	4.26
Critical Value Bounds, F-Statistics = 4.086147, K = 7		

Meanwhile, the long run impact of the explanatory variables disclosed the long run effects of the key variables on the dependent variable. For example, log of government expenditure, exchange rate and industrial value have long run effects on the agricultural output growth in Nigeria between 1981 and 2016. Notably, the short-run dynamic model (error correction model) explain the speed of adjustment around the equilibrium points Ihugba, Chinedu, & Njoku (2013). That is, it explains -2.003279 (200.3%) of speed to adjust back to equilibrium at the slightest divergence.

Table 4. Long run coefficients

Variable	Coefficient	Std. Error	t-statistic	Prob.
LOGGCF	0.133826	0.128612	1.040534	0.3157
INFR	0.000418	0.000965	0.433021	0.6716
INTR	0.001747	0.004804	0.363761	0.7215
EXC	0.001149**	0.000535	2.149364	0.0496
IDV	-0.006856***	0.002241	-3.059509	0.0085
GDP	0.003850	0.005930	0.649238	0.5267
LOGGEXP	0.260117***	0.070133	3.708906	0.0023

** Denotes statistical significance at 10%, ** denotes 5% and *** denotes 1%.*

Table 5. Error correction model results

Variable	Coefficient	Std. Error	t-statistic	Prob.
D(LOGGCF)	0.377734	0.227818	1.658052	0.3414
INFR	0.000837	0.001893	0.442158	0.6651
D(INTR(-1))	-0.016210*	0.007751	2.091349	0.0552
D(IDV)	-0.013735**	0.004742	-2.896624	0.0117
D(GDP)	0.020307**	0.009373	2.166515	0.0480
D(LOGGEXP)	0.100430	0.224695	0.446962	0.6617
CointEq(-1)***	-2.003279***	0.202559	3.708906	0.0000

** Denotes statistical significance at 10%, ** denotes 5% and *** denotes 1%.*

It is interesting to note that post estimated tests validated the results obtained from the ARDL and Bounds cointegration models. Specifically, diagnostic tests like normality and heteroscedatic (ARCH tests) and Serial Correlation LM Test (Breusch-Godfrey) were carried out to establish the validity of the earlier estimated results. Notably, the normality test result on figure 1 displays the Jarque-Bera statistics probability value which is greater than 5%, showing that the residuals from the series are normally distributed. Also, results obtained from heteroscedatic (ARCH tests) and Serial Correlation LM Test (Breusch-Godfrey) disclosed homoscedastic and absence of serial correlation in the model. That is, 0.3017 and 0.7075 the probability of no heteroskedasticity and serial correlation cannot be rejected.

Table 6. Heteroskedasticity test: ARCH

F-Statistics	1.1057	Prob. F(1,29)	0.3017
Obs*R-squared	1.1386	Prob. Chi-Square(1)	0.2859

*Note: * and ** denote 1% and 5% critical values respectively*.

Table 7. Serial correlation LM test: Breusch-Godfrey

F-Statistics	0.1471	Prob. F(1,13)	0.7075
Obs*R-squared	0.3580	Prob. Chi-Square(1)	0.5496

*Note: * and ** denote 1% and 5% critical values respectively.*

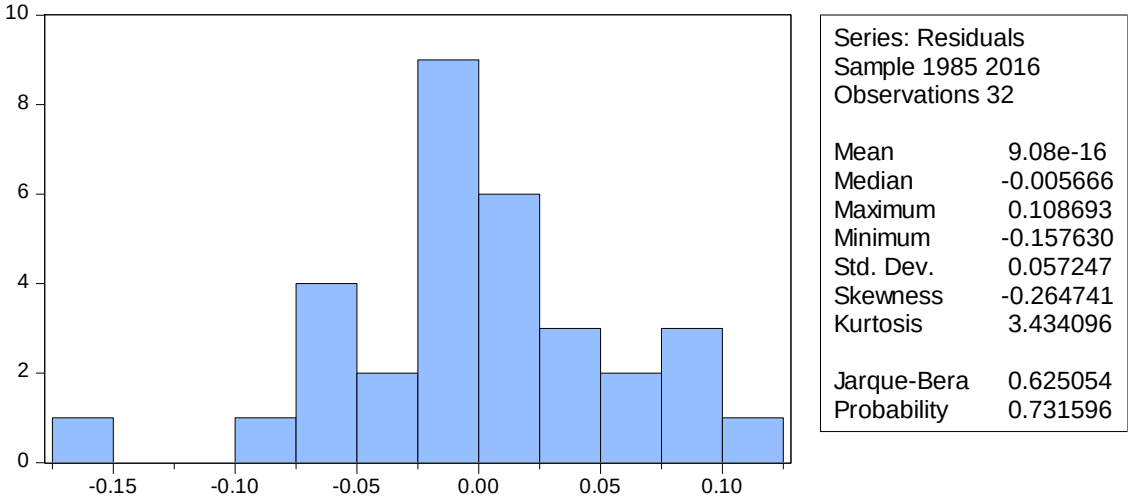

Figure 1. Normality curve

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

In so far, this study assesses the nexus between the agricultural output growth and government expenditure in Nigeria from 1981 to 2017. Autoregressive distributed lag (ARDL) and Bound cointegrating techniques were employed to empirically study the impact of government spending on agricultural output growth in Nigeria. The outcome disclosed that government spending has long significant effect on agricultural output performance in Nigeria, specifically between 1981 and 2017. The coefficient of multiple determination of the model (R-squared) explained that the independent variables jointly determined about 99 per cent of the variations in agricultural output while the remaining1 per cent explained by variables not included in the model. The result of the coefficient of multiple determination showed that the model is good and fit for the findings. While, the Durbin-Watson Stat of 2.13 showed that the estimate of the model is free from the problem of serial auto-correlation. As a result, the estimated model is appropriate and can be used for policy recommendation.

Recommendations

In view of the findings, the study recommends as follows; firstly, government should implement policies that would enhance agricultural productivity performance e.g. improve seedling for farmers, provision of modern mechanized tools among others, which corroborates the view of (Eze, 2017; Okezie et al., 2013). Secondly, government should improve agricultural finance system across all the financial institutions. Lastly, there is need for government to improve spending on critical infrastructure that could fast track conveyance of agricultural produce to appropriate quarters such as market, industrial zone etc.

REFERENCES

Adekanye, F. (2005). *Elements of Banking in Nigeria*. Lagos: F and A Publishers.

Akintola, S. (2004). *Banks Move against Soludo*. Nigerian Tribune (July 23rd), p.24

Ayeomoni, I.O. & Aladejana, S. A. (2016) The Relationship between Agricultural Credit And Economic Growth In Nigeria. *International Journal of Academic Research in Accounting, Finance and Management Sciences,* 6(2), 146–158.

Anoke, C. I., Odo S.I, Chukwu, B. C. & Agbi, P. E. (2016) Testing the Applicability of Wagner's Law in Nigeria. *Journal of Research in Business and Management,* 4(6), 33-45.

Awoke, M. U. (2004). Factors affecting loan acquisition and repayment patterns of small holder farmers in Ika North West of Delta State, Nigeria: *Journal of Sustainable Agricultural Resources,* 9, 61-64.

Ebere C, & Osundina K (2014). Government expenditure on agriculture and economic growth in Nigeria. *International Journal of Science and Research,* 3(9), 188 - 194

Egwu, P.N. (2016) Impact of Agricultural Financing on Agricultural Output, Economic Growth and Poverty Alleviation in Nigeria. *Journal of Biology, Agriculture and Healthcare,* 6(2), 36-42.

Ewubare, D. B. & Udo, V.E. (2017) Public Sector Financing and Agricultural Output in Nigeria. *International Journal of Economics, Business and Management Research,* 1(2), 79-88.

Eze, O.M. (2017) Agricultural Sector Performance and Nigeria's Economic Growth. *Asian Journal of Agricultural Extension, Economics & Sociology,* 15(1), 1-13.

Garba, J. (2011). *Impact of Development Banks Agricultural Financing on Economic Growth of Nigeria*. (Master's thesis). Ahmadu Bello University, Zaria. Available at: https://www.academia.edu/27174550/IMPACT_OF_DEVELOPMENT_

BANKS_AGRICULTURAL_FINANCING_ON_ECONOMIC_GROWTH_OF_NIGERIA

Henrekson, M. (1993) Wagner's Law - A Spurious Relationship? *Public Finance/Finances Publiques*, 48(2), 406-415.

Iganiga, B.O. & Unemhilin, D.O. (2011). The Impact of Federal Government Agricultural Expenditure on Agricultural Output in Nigeria. *Journal of Economics*, 2(2), 81-88.

Ihugba, O.A, Chinedu, N. & Njoku A.C. (2013). An assessment of Nigeria expenditure on the agricultural sector: Its relationship with agricultural output (1980 - 2011). *Journal of Economics and International Finance*, 5(5), 177-186.

Jhingan M. L. (2003) *Advanced economic theory: The theory of economic growth*, 12th edition. Delhi: Vrinda Publications (P) Ltd.

Keji S. A. (2018). An Empirical Investigation into the Nexus between Agricultural Financing and Economic Growth in Nigeria. *Saudi Journal of Economics and Finance (SJEF)* 2(2), 57-64

Nwankwo, Odi (2013) Agricultural Financing in Nigeria: An Empirical Study of Nigerian Agricultural Co-operative and Rural Development Bank (NACRDB): 1990-2010. *Journal of Management Research*, 5 (2), 28-44.

Obansa, S.A.J. & Maduekwe, I.M. (2013) Agriculture Financing and Economic Growth in Nigeria. *European Scientific Journal January*, 9 (1), 168-204.

Oboh, V. U., & Ekpebu, I. D. (2011). Determinants of formal agricultural credit allocation to the farm sector by arable crop farmers in Benue State, Nigeria. *African Journal of Agricultural Research*, 6(1), 181-185.

Ogiogio, G. O. (1995). Government expenditure and economic growth in Nigeria. *Journal of economic management*, *2*(1), 1-15

Okezie, A. I., Nwosu, C. & Njoku A.C. (2013) An assessment of Nigeria expenditure on the agricultural sector: Its relationship with agricultural output. *Journal of Economics and International Finance*, 5(5), 177-186

Okoh, A. S. (2015) Impact of Fiscal Policy on the Growth of Agricultural Sector in Nigeria. *European Journal of Educational and Development Psychology*, 3(4), 1-17.

Rhaji, M. A. (2008). An Analysis of the Determinants of Agricultural Credit Approval/Loan size by commercial banks in south-western Nigeria. *Nigeria Agricultural Development Studies, 1*(1), 17-26.

Solow, R. M. (1956). A contribution to the theory of Economic Growth. *Quarterly Journal of Economics*, LXX. (70), 65-9.

Udoh, E., (2011). An Examination of Public Expenditure, Public Investment and Agricultural Sector Growth in Nigeria: Bounds Testing Approach. *Journal of Business and Social sciences*, 2(1), 285-292.

Pesaran, M. H, Yongcheol S., Smith, R. (2001) Bounds testing approaches to the analysis of level relationships. *Journal of Applied Econometric*, 16(3), 289 - 326

Export orientation of Indonesia's manufacturing industry

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Abstract

The aim of this study is to analyze the export orientation of the manufacturing industry sector in Indonesia. In order to achieve this objective, Cobb-Douglas production function, consisting of foreign direct investment (FDI) and labor, was developed. The data from the Industrial Survey conducted by the Central Bureau of Statistics (Badan Pusat Statistik/BPS) for the period 2005-2015 with 249 manufacturing companies as samples. Based on the Hausman test, the fixed-effect model is more appropriate to be used in this study. The results from the estimation indicate that FDI and labor have a positive and significant impact on the growth of the export manufacturing industry. Labor has a stronger effect on exports than on FDI, where the coefficient of labor is 3.696 and of FDI is 0.302. On the basis of this result, it could be concluded that FDI and labor lead the export orientation to the Indonesian manufacturing industry.

Keywords*: Cobb Douglas production function, Export orientation, Foreign direct investment, Labor.*

JEL Classification: F14, D24, F2, O14, J24

INTRODUCTION

The industrial sector plays an important role for the Indonesian economy. This sector has the largest contribution to Indonesia's GDP, with the main sub-sectors, including mining and manufacturing. The manufacturing sub-sector (hereinafter referred to as the manufacturing sector) was the main contributor to the national GDP structure at 19.86 per cent in 2018 (see Fig. 1). This contribution rose by 3.86 per cent to 20.07 per cent of national GDP in the first quarter of 2019 compared to the same period of the previous year (Statista, 2019). The role of the manufacturing industry in the economy can also be seen from the chain effect of increased valued-added raw materials, absorption of local labor, increased investment and exports.

The percentage of the manufacturing sector in Indonesia's total exports also showed an upward trend. In 2017, the manufacturing industry accounted for 68.27% of Indonesia's total exports of USD 125 billion (Kementerian Perindustrian Republik Indonesia, 2018). Palm oil, apparels, and rubber and plastic industrial products are the main commodities. In 2018, the contribution of the manufacturing industry increased to 72.25 per cent or to USD 130.09 billion, an increase of 3.98 per cent compared to the previous year (Kementerian Perindustrian Republik Indonesia, 2019). However, this figure is relatively lower than the contribution of exports to the manufacturing sector in other developing countries, such as Thailand, Malaysia and Philippines, with contributions up to 90% higher. Indonesian government is committed to encourage the

productivity of the manufacturing sector in order to optimize the potential of the export market. Such activities are consistent with the results of Ramadhani, Rachman, Firmansyah, & Sugiyanto (2018) namely exports have a significant positive effect on GDP. He argues that one of the strategies to strengthen economic fundamentals is to restructure and strengthen the export performance of a country.

Indonesia is ranked 9th in the world (BKPM, 2020) with the highest MVA (manufacturing value-added) among ASEAN countries with a value of 4.5%. In line with these results, Indonesian government is developing a downstream method, given the abundance of Indonesia's natural resources and the increase of the ease of natural resources exports. The success of this strategy cannot be distinguished from investment both domestically (Domestic Investment) and internationally (Foreign Investment). Sharma (2003) found that FDI is an important variable to encourage export in East and Southeast Asian countries. Clear evidence of the role of FDI in improving performance can be seen from the ranking of China in the world from 32nd in 1978 to 3rd in 2004. Other studies also found positive direct investment (FDI) in exports in various countries, including Zhang (2005) in China, Jongwanich (2010) in Asian countries, Jevcak, Setzer, & Suardi (2010) in 10 EU Member States, Sharma (2003) in India, Magalhaes & Africano (2017), and Nisell (2017).

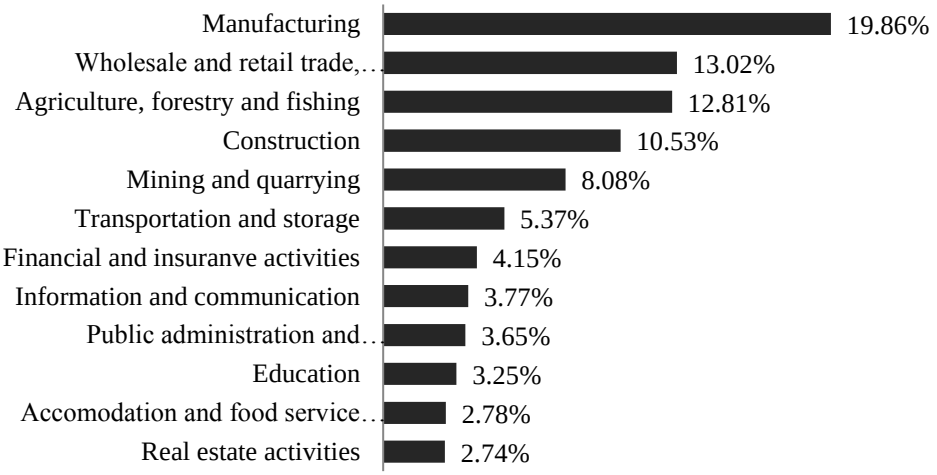

Figure 1. Contribution of industry to Indonesia's GDP 2018
Source: Statista (2019)

Increased FDI in a country can increase exports in that country (Uysal & Mohamoud, 2018). FDI contributes greatly to development through the transfer of assets, technologies and managerial skills. Based on the data from Kementerian Perindustrian Republik Indonesia (2019), FDI in the manufacturing industry amounted to IDR 195.74 trillion in 2014 and reached IDR 222.3 trillion in 2018. However, in the first semester of 2018, the value of manufacturing investment fell to IDR 122 trillion compared to the same period in 2017, amounting to IDR 146.1 trillion. According to Airlangga Hartarto (Minister of Industry of Indonesia) in Kontan (2018), this decrease was attributed to Domestic Investment (*Penanaman Modal Dalam Negeri*/PMDN) and FDI, which also saw a fall in PMDN from IDR 52.11 trillion to IDR 46.2 trillion and FDI from USD 7.06 billion to USD 5.6 billion.

Mahmoodi & Mahmoodi (2016) examined the trivariate causality relationship between FDI, exports and economic growth. Based on the panel of European developing countries, GDP and FDI have a one-way partnership to exports in the short term. There is evidence of the long-run causality of exports and FDI to economic growth and the long-run causality of economic growth and exports to FDI. FDI is having a positive impact on

exports. European countries can increase their economic growth by attracting FDI, for example by expanding the free trade zone. Meanwhile, developing countries in Asia are increasing their economic growth by increasing exports of goods and services. To reduce trade barriers, encourages export-based industry and improves quality control and training programs. Van, Dechun, Hossain, & Dung (2017) also observed that FDI and exports had a significant positive effect on Vietnam's economic growth over the long run, while FDI had a strong influence on GDP and exports over the short term. Furthermore, Jayakumar, Kannan, & Anbalagan (2014) found the importance of liberalization policies in India where liberalization could increase FDI inflow and export and import performance.

Export competitiveness of a country is measured using the Revealed Comparative Advantage (RCA) index. Indonesia's labor-intensive industry has seen a substantial decrease in competitiveness compared to other Asian countries, in particular Vietnam, which has actually improved. Moreover, Indonesia's intra-industry trade is still comparatively small compared to other countries. This suggests that Indonesia's manufacturing industry is still not using the Global Value Chain (GVC) opposed to other developing countries (Keme, 2017). There are five stages of a country's industrial development, namely the natural resource industry (Natural Resources Intensive/NRI), labor-intensive industries (Unskilled-Labor Intensive/ULI), higher skills (Human Capital Intensive/HCI), capital-intensive (Physical Capital Intensive/PCI), and technology and science-based industries Technology Intensive/TI) (Badan Pengkajian dan Pengembangan Kebijakan Perdagangan Kemendag, 2017). Based on competitiveness indicators (RCA), Indonesia is still specialized in manufacturing exports in the NRI and ULI industries. The specialization reveals that Indonesia's manufacturing industry is still concentrated in low value-added industries. NRI's competitiveness is driven by Indonesia's natural resource reserves, while the ULI industry is supported by a comparatively low wage policy.

The industrial development strategy implemented in a country determines the industrial demand for labor in that country (Marshall, 1988). Indonesia has an "export-oriented" strategy for the growth of the manufacturing industry, which produces goods for the primary purpose of exporting or controlling the export market. According to Stein (1981) and Myint (1984), an "export-oriented" strategy would increase labor demand in the industry. That is due to the expansion of the market, which encourages business activities. The manufacturing industry absorbs a workforce of 18.25 million, or 14.72 per cent of the overall national workforce (Statistics Indonesia, 2019). The Asian Development Bank (2004) estimates the absorption from the manufacturing sector up to 20% of the population by 2024. The government is also working to improve the quality of human resources in the manufacturing sector. One of the priority programs is vocational education, which links and matches between Vocational High Schools (*Sekolah Menengah Kejuruan*/SMK) and industry. The government also promotes research and development programs aimed at generating innovation and developing labor-intensive export-oriented industries. During 2017-2018, the government conducted programs that link and match 609 industries with 1,753 vocational schools (LPEM, 2010).

Education has a dual role to play in economic growth. There is some literature on the effect of labor on the export performance of a country. A variety of approaches to assess the contribution of education to economic development, including the rate of return analysis, human resources approach, and education and economic growth analysis (Mitra, 2018). Nasir (2006) found that capital and skilled workers have made a significant and positive contribution to the growth of industrial output. Worker skills, however, are negatively linked to capital princes and semi-skill workers. He concluded that the skills of the worker are complementary with capital and semi-skill workers. According to him,

there are a number of ways to benefit economies of scale in the future, including working with higher education institutions to generate skilled human resources, increasing investment so that they can acquire modern technology, and providing incentives for research and development (R&D). Economists in various countries have published studies on the effect of foreign direct investment (FDI) and labor on exports (see Zhang, 2005; Jongwanich, 2010; Jevcak, Setzer, & Suardi, 2010). However, no research has been conducted on the contribution of labor and FDI to the export performance of the manufacturing industry in Indonesia.

In the New Order, Indonesia's economic development was once oriented towards import substitution and then became export-oriented and subsequently geared towards superior industrial products (LPEM, 2010). However, following the 1997/98 economic crisis, the government has not set specific goals for the development of the industrial sector, except to increase production growth and export growth. Throughout the reform era, the growth of the manufacturing industry lagged far behind globally tradable sectors, with an average growth rate of just under 5%. Meanwhile, during the New Order, the manufacturing industry could rise beyond two digits. Indonesia's manufacturing exports increased from just 7% to 20% of its total exports in 1997. The success of Indonesia's export-oriented policy is the result of numerous reforms that have an impact on industries and sectors (Asian Development Bank, 2004).

Several efforts have been made by the Indonesian government to encourage the growth of the manufacturing industry, including the revitalization of the manufacturing sector through the implementation of the Making Indonesia 4.0 road map (Kementerian Perindustrian Republik Indonesia, 2019). According to Gregory in Anggita (2019), this initiative aims to foster productivity and competitiveness in five priority industries, namely the food and beverage industry, the automotive industry, the electronics industry, the chemical industry, and the textile and textile product industry. The government also has an Omnibus Law system to improve the domestic investment climate and to provide business licensing facilities. In addition, the government encourages investment focused on priority clusters (including high-tech, capital-intensive and labor-intensive clusters), establishes trade cooperation with other countries (such as FTA of Indonesia with South Korea), provides fiscal incentive facilities in the form of tax holidays, holds Regional Comprehensive Economic Partnership (RCEP) and regulates tax breaks.

In recent years, government policies have increasingly centered on driving exports from Indonesia's manufacturing industry. It is due to the large presence of the manufacturing industry in the economy, which is projected to be the mainstay of national economic growth going forward. The success of the industry is inseparable from its development and development strategy, namely export-oriented. The purpose of this study is therefore to examine whether Indonesia's manufacturing industry is suitable for export-oriented. This research is intended to provide knowledge on the direction and magnitude of the role of FDI and labor in the development of manufacturing industry exports. This article is composed of five sections. This section is an introduction that discusses the background of the topic selection and the distinctions from previous studies. Section 2 consists of data, analytical tools and the definition of operational variables. Section 3 explains the pre-estimation, results and discussions. The final part contains conclusions, policy recommendations and research limitations.

METHODS

Data were derived from a survey of manufacturing industry statistics. It is a national representation of all the manufacturing industries in Indonesia, conducted by the Indonesian Central Bureau of Statistics. This study uses panel data consisting of 249 industries with 16 time series, namely the 2005-2015. The statistics are exports, foreign

direct investment and the amount of labor employed by the industry. All data is in the log form.

The variables used in this study are exports, foreign direct investment (FDI) and the number of workers in each industry per year of analysis. Several forms of production functions have been developed by experts; among them are the Cobb-Douglas production function, the production function with constant substitution elasticity (CES) and the translog function. This research model is based on the Cobb-Douglas production theory; given that the constituent components of the Cobb-Douglas function correspond to the variables used in this study. The form of Cobb-Douglas production function in the form of stochastic as follows (Eq. 1) (Gujarati, 2004).

$$Y_i = \beta_1 X_{2i}^{\beta 2} X_{3i}^{\beta 3} e^{ui} \quad \ldots\ldots (1)$$

Y is output, X_2 is labor input, X_3 is capital input, and e is the base of natural logarithms. The equation can be transformed into a logarithmic form so that the equation used in this study becomes Equation (2).

$$ln(export)_{it} = \beta_0 + \beta_1 ln(FDI)_{it} + \beta_2 ln(labor)_{it} + u_{it} \quad \ldots\ldots (2)$$

Output is proxied by the number of exports and capital is proxied by Foreign direct investment (FDI). $\beta_0$is an intercept, $\varepsilon_{it}$is a stochastic error term where subscript *it* shows the number of cross- section (i) and time period (t).

This research equation consists of several variables, including FDI, labor and export. Foreign Direct Investment (FDI) is an investment made by residents of a country that crosses world borders intending to obtain interest rates in the long run (OECD, 2008). There are three things about direct investment: direct investment by an individual who lives outside the economy in which he or she invests, direct investment by foreigners either unincorporated or incorporated. Direct investment may also take the form of subsidiaries, associations and branches. In this study, FDI variable used is defined as investment that is invested in the Indonesian manufacturing industry, whether by individuals, groups or other parties coming from abroad. The labor variable used is the total number of workers who work in each manufacturing industry each year. Export variable is the cumulative export of manufactured industrial goods sold abroad in USD per year.

The exported commodity is part of a company's output and is marketed to other countries around the world. Foreign direct investment affects exports by funding the use of inputs in the production process and plays a part in the transfer of technologies and knowledge. FDI may be used by companies to buy and fund production operations, such as the purchasing and repair of machinery, the land rent, the payment of workers' wages and other production costs. Labor affects exports through its role as input in the production process. Labor productivity will influence the output or exports of the manufacturing company.

RESULTS AND DISCUSSION

Development of FDI, labor, and export in Indonesia's manufacturing industry

The manufacturing industry has a chain effect that is created by increasing the value-added of raw materials, absorption local labor, increasing investment and exports. The contribution of the manufacturing sector to Indonesia's total exports is showing a rising pattern. The export value of manufactured products hit USD 108.6 billion in 2015 and then rose to USD 110.5 billion in 2016. In 2017, the manufacturing industry accounted for 68.27% of Indonesia's total exports, or around USD 125 billion (Kementerian Perindustrian Republik Indonesia, 2018). The main commodities exported

are palm oil, apparels, rubber and plastic industry products. In 2018, the contribution of the industry rose by 3.98 per cent to 72.25 per cent or to USD 130.09 billion (Kementerian Perindustrian Republik Indonesia, 2019). Also in 2019, the export share of the manufacturing industry rose to 75.5 per cent or USD 126.57 billion. However, this figure is comparatively smaller than the ratio of exports to the manufacturing sector in other developing countries, such as Thailand, Malaysia and Philippines which have contributions of up to 90 per cent.

The Indonesian government aims to foster the productivity of the manufacturing sector in order to optimize the potential of the export market. It is one approach to strengthen economic fundamentals by restructuring and improving the export performance of a country (Ramadhani, Rachman, Firmansyah, & Sugiyanto 2018). The manufacturing industry became a government concern again in 2016. The sector was boosted again after reaching its golden age in the early 1990s. It was triggered by the deterioration of the global economic conditions that have had an effect on world commodity prices. The Indonesian government has now moved from a sector that depends on natural resources to an export-oriented sector that absorbs labor, namely the manufacturing industry. As in the 1990s, this industry is projected to be one of the pillars of the national economy. According to Budiyanti (2016), there are several strategies that the government can take to re-advance the industry, making it immune to crisis shocks and draw investors.

Based on data released by the Kementerian Perindustrian Republik Indonesia (2019), FDI in the manufacturing industry in 2014 amounted to USD 13 billion. The value of FDI fell to USD 11.8 billion in 2015. In 2016, it increased to USD 16.7 billion but decreased again to USD 13.1 billion in 2017 and USD 10.4 billion in 2018. During January-December, it reached USD 6.3 billion. This figure declined with just 29.7 per cent of total FDI, while the service sector accounted for the highest FDI share, hitting 59.1 per cent. The fall that has taken place over the past several years cannot be separated from the dynamics of the global economy as a result of many countries' trade conflicts and a recession of the international economy. That can also be seen from the decline in Domestic Investment (PMDN). According to Uysal & Mohamoud (2018), an increase in FDI in a country can increase exports in that country, and vice versa.

According to the International Monetary Fund Balance of Payment database, FDI is a net inflow of investment that requires the management of certain interest rates when operating a company in the economy. FDI data has a major problem that it cannot distinguish greenfield investment and capacity extension from mergers and acquisitions (Bertrand, 2004). Greenfield investment and capacity extension can directly increase the stock of physical capital in host countries. Mergers and acquisitions can encourage knowledge transfer in recipient countries through labor training, skills improvement, management expertise and organization. FDI inflows can also increase technological upgrades. The difference between greenfield investment and capacity extension, as well as mergers and acquisitions, would be more interesting to answer this research question, but it cannot be done due to limited data.

The manufacturing industry receives extra attention from the government in its current development. In the New Order, Indonesia's economic development was once oriented towards import substitution and then became export-oriented and subsequently oriented towards superior industrial products (LPEM, 2010). However, since the 1997/98 economic crisis, the government has not set clear goals for the development of the industrial sector, except to increase production growth and export growth. Throughout the Reform Era, the growth of the manufacturing industry lagged far behind the internationally tradable sectors, with an average growth rate of just under 5 per cent; whereas during the New Order, the manufacturing industry could grow above two digits.

Indonesia's manufacturing exports increased from only 7 per cent to 20 per cent of its total exports in 1997. The success of Indonesia's export-oriented policy is the result of numerous reforms that have an impact on the industry and across sectors (Asian Development Bank, 2004). After the 1980s, the manufacturing sector was an economic driver and a labor absorber to reduce poverty. According to Wie (2010), China is an example of a country that has managed to reduce poverty through a strategy of growing the country's manufacturing industry. Since 2016, the government has adopted again a policy for the manufacturing sector to be export-oriented.

In the last 4 years, employment in the manufacturing sector has started to increase. It employed 15.54 million workers in 2015 and then grew to 15.97 million in 2016. It opened up employment for 17.56 million people in 2017. The figure soared in 2018; with absorption of workforce up to 18.25 million people of 14.72 per cent of the overall national workforce (Statistics Indonesia, 2019).

Several industries in the manufacturing sector absorb the most labor, including the food industry (26.67 per cent), the apparel industry (13.69 per cent), the wood industry, wood products and cork industry (9.93 per cent), the textile industry (7.46 per cent), the non-metal mining industry (5.72 per cent), and the furniture industry (4.51 per cent) (Kementerian Perindustrian Republik Indonesia, 2019). Industrial demand for labor is also related to the country's industrial development strategy (Marshall, 1998). Countries that have export-oriented policies would have an impact on rising demand for labor in the industry. On the other hand, a country with an import substitution strategy would have a smaller market share and a limited production scale.

Pre-estimation

Before doing the estimation, there are several steps before determining the most appropriate model used in this study. Those include Breusch and Pagan Lagrangian Multiplier Test (LM Test) and Hausman Test. Other tests required are time-fixed effect and the Pasaran Cross-Sectional Dependence. LM Test is to determine the model used which are either Random Effects or simple Ordinary Least Square (OLS). Based on the LM test results, the probability value produced is smaller than zero (<0.05). Therefore, random effect is best considered as there is significant evidence of differences between companies in the manufacturing industry. In addition, the number of time series in this study was 11 years, with 249 entities as manufacturing companies. Since this number of entities is greater than the number of time series, it is better to use Fixed Effect or Random Effect.

The next test is the Hausman Test to determine whether it is better to use Fixed Effect or Random Effect. The Hausman test produces a p-value smaller than 0.05 (<0.05). So the more appropriate model to be used is the Fixed Effect (FE) model as the unique errors (ui) correlate with the regressor (Green, 2008). Fixed effect can minimize bias due to omitted variables (variables not included in the dataset but influencing the dependent variable) (Wooldridge, 2010). Related to this research, various variables affect the export of the manufacturing industry and it is very difficult to identify all of these factors in the dataset. This results in unobserved effects.

Further testing is to decide if it requires time-fixed effects while operating the FE model. The results show a probability greater than zero (>0.05). It can be concluded that the coefficient for all years is zero. So, there is no time-fixed effect is needed on this model. Cross-sectional dependence is a problem in macro panels with long period (20-30 years) and rarely becomes a concern in micro panels (short period). The Pasaran CD (cross-sectional dependence) testing is needed to know whether this problem exists. The goal is to examine whether or not the residuals between entities are correlated (contemporaneous correlation). Correlations between entities can result in bias. The

Pasaran Test shows a probability of 0.603 such that it can be concluded that there is no residual correlation.

Table 1. BP/LM Test, Hausman (1978) Specification Test and Testing for Time Fixed Effects

Pre-estimation test	Coef.
BP/LM Test	
Chibar2 (01)	409.63
Prob>chibar2	0.000
Hausman (1978) Specification Test	
Chi-square test value	88.55
P-value	0.000
Testing for Time Fixed Effects	
F (10, 2478)	1.76
Prob>F	0.0624

Estimation results

This section will present an analysis of the main findings of the study. The data used consisted of 2739 observations for each variable (Table 2). Researchers are using two methods to compare the results of both tests. However, the correct final result is still based on the pre-estimation of the fixed-effects model in the previous section. The comparison method to be used is random effects.

Table 2. Descriptive statistics

Variable	Obs	Mean	Std.Dev.	Min	Max
FDI	2739	7.954	10.813	0	100
Export	2739	10.189	13.792	0	100
Labor	2739	8.327	1.653	4.159	13.28

Table 3 presents estimation results of several fixed and random effects model specifications. Columns (1) through (4) report the estimated results of fixed effects and columns (5) through (8) display the results of random effects. The first specification formed consisted only of 1 dependent variable and 1 independent variable. The equations in columns (1) and (4) involve only one independent variable, FDI. Both estimation results indicate a significant positive effect of the FDI variable on exports from the manufacturing industry. The results of the fixed effect (1) imply that if there is only one type of input in the form of FDI, an increase in FDI by 1 per cent may increase exports by 0.417 per cent. This figure is not much different from the results of random effects, which is equal to 0.42 per cent.

Columns (2) and (6) are the results of the model specification with one other independent variable, namely labor. Both of these columns produce significant and positive estimation results at a significance level of 1 per cent. The column estimator (2) indicates that if there is only one type of production factor in the form of labor, an increase of 1 per cent in the number of labor would increase the export performance by 5.119 per cent. This finding is almost twice the estimated random effects (6), which is only 2.680 per cent. When FDI and labor are both single factors of production, it can be seen that the effect of labor on exports is greater than the effect of FDI on export performance. This indicates the importance and magnitude of the influence of labor inputs on the progress of the Indonesia's manufacturing industry.

Columns (3) and (7) are estimation results of the core equation. There are two independent variables (FDI and labor) and one dependent variable (exports). Column (3) shows a significant and statistically positive effect at a significance level of 1 per cent. The results show that a 1 per cent rise in FDI would have an effect on exports of 0.302 per cent. Meanwhile a 1 per cent increase in labor will affect an increase in export

performance by 3.696 per cent. Random Effect (7) also shows a significant positive outcome of FDI value that is not much different but labor has a figure that is much different than half of the results of fixed effects (3).

Columns (4) and (8) also show the results of the estimation of the main equation, but the independent variables used are labor and dfdi. Dfdi is a dummy of FDI where 1 implies the presence of FDI in the industry and zero means no FDI in the company. Estimation results show a significant positive effect of labor and dfdi on exports in each model used. This means that if there is FDI in manufacturing companies, the company will be able to increase its exports by 4.221 per cent. This number is not so far from the results of random effects (8). Meanwhile the labor estimator shows 4.236 per cent, this means that a 1 per cent increase in the number of workers will increase exports by 4.236 per cent. This finding is far greater than the random effects (8). It is almost the same as the results of the estimated columns (1). The labor coefficient also indicates a number that is not much different from dfdi, which is 4.236 per cent, which is smaller than columns (2). The coefficients of FDI (3) and dFDI (4) have far different values. FDI (3) uses the original value of FDI in the form of a percentage while dFDI uses the extreme value of existing and non-existent FDI.

Table 3. Estimation Results

Dependent variable : Export								
	Fixed Effects				Random Effects			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Fdi	0.417***		0.302***		0.422***		0.371***	
	(0.0316)		(0.0306)		(0.0310)		(0.0311)	
Labor		5.119***	3.696***	4.236***		2.680***	1.711***	1.568***
		(0.333)	(0.330)	(0.364)		(0.236)	(0.219)	(0.257)
Dfdi				4.221***				5.582***
				(0.640)				(0.634)
Constant	6.874***	-32.44***	-22.99***	-27.90***	6.830***	-12.13***	-7.012***	-6.596***
	(0.251)	(2.774)	(2.688)	(2.866)	(0.425)	(1.938)	(1.778)	(1.977)
Observations	2,739	2,739	2,739	2,739	2,739	2,739	2,739	2,739
R-squared	0.117	0.117	0.169	0.132				
Number of industry	249	249	249	249	249	249	249	249

*Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1*

The highest R-squared value is in columns (3) of 16.9 per cent. This figure shows that FDI and labor can explain variations in the exports variable by 16.9 per cent. If there is only one independent variable regressed as in columns (1) and (2), the resulting R squared value is smaller than the regression with two independent variables, such as columns (3) and (4). This increase is not surprising, because according to Wooldrige (2015), the addition of variables to the equation will automatically add the R squared value of the equation.

Overall, the results of the estimation of fixed effects and random effects indicate that FDI and labor have a significant positive effect on the significance level of 1 per cent on exports of Indonesia's manufacturing industry. The effect of FDI on exports when used as a single factor of production (column 1) as well as being one of the factors of production between two types of inputs (column 3) produces statistics that are not so different, as do the results of the random effects in column (5) and (7). However, the effect when FDI has a single input is greater than when it has two types of inputs. When there is only one type of input in the form of FDI (column 1), the manufacturing industry produces more capital-intensive output as the presence of FDI appears to be used for the procurement of machinery, buildings and other equipment that can support capital-intensive industries. However, if there are two types of inputs (FDI and labor) (column 3), the effect of FDI on exports will be reduced because the manufacturing industry is not

only focused on producing capital-intensive output, but also on balancing it with the use of labor. So the capitals collected in the company (Domestic Investment and Foreign Investment) are not only for capital-intensive equipment but also tools and machinery for enhancing labor performance.

To find out how the impact of the presence of FDI in the industry can be answered by column (4). The figure provided by the FDI dummy shows that the presence of FDI in the manufacturing industry would have an impact of 4.221 per cent on exports. Nonetheless, if we use historical FDI data from the manufacturing companies studied, the regression results of the FDI effect are only 0.302 per cent. This large gap in figures means that FDI in the manufacturing sector is currently not optimal. Government policies and strategies are required to maximize the benefits of existing FDI in manufacturing companies, considering the potential benefits that the industry will gain much more than 10 times the current benefits of FDI.

The effect of labor on exports as regarded as a single factor of production (column 2) as well as one of the factors of production for two types of inputs (column 3 and 4) shows statistics that are not so different. However, the results of the random effect estimation in column (2), (3), and (4) are far different from those of the fixed effects estimation. Even the numbers generated by random effects are half times smaller than those produced by fixed effects. The study should, however, emphasize the outcomes of fixed effects. The effect when labor is a single input (column 2) is greater than when the company has two types of input (column 3 and 4). The explanation for this is similar to FDI as a single factor of production. Labor, which is the sole factor of production, will make manufacturing companies produce labor-intensive output without the need to divide the intention for equipment such as machinery. Nonetheless, the effect of labor reduces as two types of inputs, as management focus will be divided with the aim of optimizing the benefits of the two existing factors of production.

The effect of FDI and labor as a single input (column 1 and 2) is much different, and the influence of labor is 12 times greater than that of FDI. By using FDI as a dummy, the effect of labor remains greater than the effect of FDI, although there is little difference (column 2 and 4). Overall, each model specification will generate a greater labor value than that of FDI. This can be inferred that Indonesia's manufacturing industry needs more labor than FDI, and Indonesian manufacturing companies tend to be labor-intensive. The types of products of the competitive non-oil manufacturing industry going into the export market include the food and beverage industry (USD27.28 billion), the base metals industry (USD17.37 billion), and the textile and apparel industry (USD 12.90 billion) (Minister Industry in Kontan, 2020). Based on the types of mainstay export products, the production process of such items is labor-intensive, both in the manufacturing of raw materials and in the adding of valued added to semi-finished goods. The process involves both skilled and trained labor.

The manufacturing industry is believed to be able to strengthen the Indonesian economy from global shocks. Reinforcing domestic potential is analogous to reinforcing plant roots that cannot be toppled by storms. The government promotes the export of commodities, the basic ingredients of which are owned by Indonesian nature, on the condition that there must be value added. The Indonesian government has an export-oriented policy in the development of the industry. As explained in the previous section, this strategy has an impact on the expansion of the workforce. Based on the estimation results, labor has a greater role than FDI. It can be concluded that the export-oriented strategy is the appropriate strategy for the development of the manufacturing industry. The magnitude of the influence of labor on Indonesian export performance (based on the results of regression table 3.2) and the potential of available human resources in Indonesia will be absorbed by the implementation of this strategy.

However, the expansion of job openings in the manufacturing industry must be balanced with the skills of the available workforce so as not to reduce the quantity and quality of output. Labor productivity plays an important role in encouraging exports of the industry. This result is consistent with the research carried out by Doan & Wan (2017), Iqbal & Nosheen (2016) and Hasan & Ramaswamy (2007), which found that labor had a positive effect on exports. Indonesian government has designed a range of strategies to enhance the quality of Indonesian human resources throughout the priority programs, including vocational education, which links and matches between Vocational High Schools (SMK) and industry. Iqbal & Nosheen (2016) also found that in export-oriented industries, trade liberalization had a significant positive effect on labor

The positive contribution from FDI is also comparatively low compared to labor contribution (Table 3.2). Although Indonesia's manufacturing industry is labor-intensive, this does not mean that the existence of FDI is not important. It is important since not all the products of the industry completely involve the role of labor. The rise in FDI will encourage exports through a process of capital accumulation, advanced technologies and enhanced management and marketing strategies that are typically adopted or introduced by multinational corporations operating as foreign investors (Pramadhani, Rakesh & Nigel, 2007). This finding is consistent with a number of prior researches, such as Selimi, Reci & Sadiku (2016), Magalhaes & Africano (2017) and Purusa (2018), which also found that FDI had a positive effect on exports. The study conducted by Appleyard, Field & Cobb (2008) found that one of the advantages of FDI is that it increases the productivity of the country, which also has an impact on rising exports. A combination of complementary FDI and labor should be developed in order to increase the amount of exports from the Indonesian manufacturing industry. The Indonesian government currently has a strategy to increase FDI in the manufacturing industry, such as the omnibus law, which facilitates the investment process in Indonesia.

CONCLUSIONS, RECOMMENDATIONS AND RESEARCH LIMITATIONS

Conclusions

This study aims to analyze the effect of FDI and labor on Indonesia's manufacturing industry exports using the Cobb-Douglas production function approach. Estimation results show that FDI and labor have a significant positive effect on exports. This means that these variables play an important role in the export orientation of the industry, but labor plays a much greater role than FDI. The estimated coefficient from the Fixed Effects regression shows that the effect of labor is 12 times greater than the role of FDI. Indonesia's current development strategy for the manufacturing sector, namely export-oriented, is the right policy, considering the main impact generated in the form of employment. However, the return of labor must also be recognized by maintaining the quality of labor so as not to reduce the productivity of labor on exports. There is no question that greater labor productivity would boost the export performance of the industry. Moreover, the effect of FDI in pushing exports of the manufacturing industry has not been optimal.

Recommendations

In recent years, the manufacturing industry has played an important role in the Indonesian economy. Due to the good performance of the manufacturing industry, there is a broad chain effect, starting with increasing the value added of domestic raw materials, absorbing local labor and receiving foreign exchange from exports. The manufacturing industry has received great attention from the government given the domino effect. The strategy launched by the government is aimed at encouraging FDI and improving the quality of human resources, such as omnibus law and the link and match of vocational

education and industry. The following are some policy recommendations on this subject. There is also a need for synergy between the elements of government in order to accomplish these strategies.

It is also important to note the development of the manufacturing industry to attract FDI. Government and stakeholders must require FDI to be planted in Indonesia, followed by technology and knowledge transfers. One of the causes of low FDI influence may be the lack of technology and knowledge transfers in the industry. Most of the FDI is only used for physical development, such as infrastructure. The government has an omnibus law to create job opportunities and encourage foreign investment. This policy makes it possible for investment bureaucracy to invest in Indonesia. It must, however, be noted that the terms and conditions of foreign investment must always be upheld and not provoked by corruption, collusion and nepotism.

The government has a main strategy for improving the quality of labor, namely the link and match SMK and industry. Government also has to encourage the industry to provide training and scholarships for its employees who are productive. This will have a long-term impact on the progress of the manufacturing industry in Indonesia. In conclusion, there must be good cooperation between the government and the company, including the development of the quality of the company's workforce.

Research limitations

This research has several limitations, including labor variables which do not differentiate between skilled and unskilled labor and labor based on their educational attainment. A further drawback is that there is no type of FDI classification. Greenfield investment or capacity extension can directly increase the stock of physical capital in host countries. However, mergers and acquisitions can encourage the transfer of knowledge in recipient countries through labor training, skill improvement, management expertise and organization (Bertrand, 2004). Manufacturing industries can be distinguished based on the type of production and industrial scale. Industrial scale is critical and needs to be differentiated in research, as large-scale industries continue to use increasingly sophisticated machines. As regards the availability of data, research data are available until 2015, when the issue of export orientation of the manufacturing industry has been declared by the Indonesian government since 2017. In the corresponding study, therefore, it is hoped that the researchers will distinguish between the types of labor, the type of FDI and the scale of the manufacturing company.

REFERENCE

Anggita, V. (2019). Sektor manufaktur dorong pertumbuhan ekonomi. *SWA Online Magazine*. Available at: https://swa.co.id/swa/trends/sektor-manufaktur-dorong-pertumbuhan-ekonomi

Appleyard, D. R., Field, J. F., & Cobb, S. L. (2008). *International economics*. Boston: Mc Graw-Hill Irwin

Asian Development Bank. (2004). *Asian development outlook 2004 Special chapter: foreign direct investment in developing Asia*. New York: Oxford University Press.

Badan Pengkajian dan Pengembangan Kebijakan Perdagangan Kemendag. (2017). *Peningkatan daya saing industri manufaktur Indonesia, mungkinkah?*. Available at: http://bppp.kemendag.go.id/media_content/2017/08/Peningkatan_Daya_Saing_Industri_Manufaktur_Indonesia,_Mungkinkah.pdf

Bertrand, A. (2004). *Mergers & acquisitions, greenfield investments and extension of capacity*. Issue Papers #4, #28, #29, Directorate for Financial and Enterprise Affairs, Investment Division, OECD

BKPM. (2020). *Industri manufaktur di Indonesia sebagai basis produksi di Asean*. Available at https://www.investindonesia.go.id/id/artikel-investasi/detail/perkembangan-industri-manufaktur-di-indonesia

Budiyanti, E. (2016). Penguatan kembali industri manufaktur Indonesia. *Majalah Info Singkat Ekonomi dan Kebijakan Publik*, VIII (12)

Doan, H. T. & Wan, G. (2017). *Globalization and labor share in national income*. ADBI Working Paper 639. Available at SSRN: https://ssrn.com/abstract=2942647 or http://dx.doi.org/10.2139/ssrn.2942647

Gujarati, D. N. (2004). *Basic econometrics* (4th ed.). New York: McGraw Hill Companies.

Hasan, R., Mitra, D., & Ramaswamy, K. V. (2007). Trade reforms, labor regulations and labor demand elasticities: Empirical evidence from India. *The Review of Economics and Statistics*, 89 (3), 466 - 481

Iqbal, J. & Nosheen, M. (2016). Trade and labor market outcomes: Evidence from Pakistan's export oriented and import competing industries. *Pakistan Business Review*, *18*(2), 290-306.

Jayakumar, A., Kannan, L., & Anbalagan, G. (2014). Impact of foreign direct investment, imports and exports. *International Review of Research in Emerging Markets and the Global Economy (IRREM)*, *1*(1), 51-58.

Jevcak, A., Setzer, R., & Suardi, M. (2010). Determinants of capital flows to the new EU member states before and during the financial crisis. *Economic Papers*, 425.

Jongwanich, J. (2010). Determinants of export performance in East and Southeast Asia. *The World Economy*, *33*(1), 20-41.

Kementerian Perindustrian Republik Indonesia. (2018). *Tertinggi, ekspor industri manufaktur sumbang 76 persen tahun 2017*. Available at: https://kemenperin.go.id/artikel/18731/Tertinggi,-Ekspor-Industri-Manufaktur-Sumbang-76-Persen-Tahun-2017

Kementerian Perindustrian Republik Indonesia. (2019). *Industri manufaktur sumbang signifikan ke PMDN dan PMA.* Available at: https://www.kemenperin.go.id/artikel/20730/Industri-Manufaktur-Sumbang-Signifikan-ke-PMDN-dan-PMA

Kementerian Perindustrian Republik Indonesia. (2019). *Pemerintah fokus katrol ekspor produk manufaktur.* Available at: https://kemenperin.go.id/artikel/20277/Pemerintah-Fokus-Katrol-Ekspor-Produk-Manufaktur

Kementerian Perindustrian Republik Indonesia. (2019). *Penyerapan tenaga kerja industri manufaktur terus meningkat.* Available at: https://kemenperin.go.id/artikel/20288/Penyerapan-Tenaga-Kerja-Industri-Manufaktur-Terus-Meningkat

Kontan. (2018). *Investasi PMA dan PMDN di sektor manufaktur menurun.* Available at: https://industri.kontan.co.id/news/investasi-pma-dan-pmdn-di-sektor-manufaktur-menurun

Kontan. (2020). *Kemenperin: Industri Manufaktur Sumbang hingga 75% Ekspor Nasional.* Available at: https://nasional.kontan.co.id/news/kemenperin-industri-manufaktur-sumbang-hingga-75-ekspor-nasional

LPEM. (2010). *Indonesia economic outlook 2010*. Jakarta: Fakultas Ekonomi Universitas Indonesia.

Magalhaes, M. & Africano, A. P. (2017). Panel analysis of the impact on international trade revisited. *Notas Economicas*, *45*, 1-16. DOI: 10.14195/2183-203X_45_3

Mahmoodi, M. & Mahmoodi, E. (2016). Foreign direct investment, exports and economic growth: Evidence from two panel of developing countries. *Economic Research-Ekonomska Istrazivanja*, *29*(1), 938-949.

Marshall, A. (1988). Immigrant workers in the labor market: a comparative analysis. *International Social Science Journal*, XXXVI (3), 501 - 518.

Mitra, A. & Rout, H. S. (2018). Education and economic development: a review of literature. *Journal of Indian Economy*, *5*(1), 81-110.

Myint, H. (1984). Inward and outward looking countries revisited: The case of Indonesia. *Bulletin of Indonesian Economic Studies*, 20 (2), 39 - 52

Nasir, B. (2006). *Permintaan industri manufaktur terhadap tenaga kerja berkemahiran di Indonesia*. Available at: http://repo.unand.ac.id/5007/.

Nisell, D. (2017). *Do foreign direct investment affect exports? The case of China's involvement in the African economy*. LUP Student Papers. Available at: https://lup.lub.lu.se/student-papers/search/publication/8911512

OECD. (2008). *OECD benchmark definition of foreign direct investment-4h edition*. Available at: https://www.oecd.org/investment/fdibenchmarkdefinition.htm

Pramadhani, M., Bissoondeeal, B. R., & Nigel, D. (2007*). FDI, trade and growth, a causal link?* Working Paper of Aston University. Available at: http://publications.aston.ac.uk/id/eprint/6959/

Purusa, N. A. & Istiqamah, N. (2018). Impact of FDI, COP, and inflation to export in five asean countries. *Jurnal Ekonomi Pembangunan*, 19(1)94 - 101

Ramadhani, T. A., Rachman, M. A., Firmansyah, & Sugiyanto, F. X. (2018). *The effect of investment and export on manufacturing industry in Indonesia*. International Conference on Economics, Business and Economic Education 2018. KNE Social Sciences.

Selimi, N., Reci, K., & Sadiku, L. (2016). The impact of foreign direct investment on the export performance: empirical evidence for Western Balkan countries. *ILIRIA International Review*, *6*(1), 57 - 66

Sharma, K. (2003). Factors determining India's export performance. *Journal of Asian Economics*, *14*(3), 435-446.

Statista. (2019). *Contribution to gross domestic product of Indonesia in 2018, by industry*. Available at: https://www.statista.com/statistics/1019099/indonesia-gdp-contribution-by-industry/

Stein, L. (1981). The growth of implication of LDC manufactured export to advanced countries. *Kyklos*, *34* (1), 36 -59

Uysal, O. & Mohamoud, A. S. (2018). Determinants of export performance in East Africa countries. *Chinese Business Review*, *17*(4), 168-178.

Van, V. T., Dechun, H., Hossain, M. E., & Dung, T. Q. (2017). The inter-linkage among fdi, export and economic growth in Vietnam: A causality analysis. *European Journal of Business and Management*, *9*(15), 117-127.

Wie, T. K. (2011). *Industri manufaktur Seperti di masa colonial*. Available at: https://ekonomi.kompas.com/read/2011/01/24/03451665/industri.manufaktur.seperti.di.masa.kolonial

Zhang, K. H. (2005). *How does fdi affect a host country`s export performance? The case of China.* WTO, China and Asian Economies International Conference. Available at: https://faculty.washington.edu/karyiu/confer/xian05/papers/zhang.pdf

Demand and supply analysis of labor in the agriculture, mining and industrial sector in Jambi Province, Indonesia

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Abstract

The aim of this study is to analyze: 1) The development of labor demand and supply as well as the factors affecting the agriculture, mining and industry sectors in Jambi Province; (2) The factors that affect labor supply in Jambi Province; (3) The factors affecting labor demand in the agriculture, mining and industry sectors in Jambi Province. This study is used secondary data with multiple linear regression analysis tools. The results showed that the labor force growth rate was 3.13 per cent, the agricultural sector labor demand rate was 2.87 per cent, the mining sector labor demand rate was 16.07 per cent, the industrial sector labor demand rate was 7.78 per cent, the agricultural sector's GRDP growth rate was 14, 96 per cent, mining sector GRDP growth rate 28.04 per cent, agriculture sector GRDP growth rate 5.03 per cent, population growth rate 2.31 per cent, PMW growth rate 16.44 per cent, HDI growth rate 0.20 per cent, growth rate agricultural land area 1.66 per cent, investment growth rate in the agricultural sector 14.14 per cent, investment growth rate in the mining sector 91.94 per cent, investment growth rate in the industrial sector 321.78 per cent and growth rate in the number of industries 2.06%. The factors that influence the supply of labor are the variable population and the Provincial Minimum Wage. The factors that influence the demand for labor in the agricultural sector are GRDP variables in the agricultural sector. Factors affecting the demand for labor in the mining sector are the Provincial Minimum Wage and investment in the mining sector. Factors that influence the demand for labor in the industrial sector are the Provincial Minimum Wage.

Keywords: *Agriculture, Labor demand, Labor supply, Mining and industry sectors*

JEL Classification: B21, F66, J23

INTRODUCTION

Human resources in a country (region) has an important role in supporting economic growth. Through a large number of human resources, productive and efficient

will be a determining factor for the success of economic growth in the country (region). Empirical studies in many countries show that the increase in national income or Gross National Product (GNP) per capita in many countries is determined by the country's success in developing human resource factors, through increasing productivity and achieving work efficiency (Feriyanto, 2014).

This success was done through increasing the mastery of knowledge, skills and abilities of human resources, especially as a workforce. Because it needs to be realized that an increase in the number of human resources that are too fast that is not supported by sufficient skills and knowledge will be a limiting factor for economic growth in the country (region). Therefore, to be able to optimally utilize population growth steps can be carried out as follows. First, there must be control over population growth, so that it can be put to good use. Second, there must be a change in viewing the workforce as partners with capital. Third, it must be able to continue to prepare workers who have good skills and knowledge in order to be able to perform optimally in every economic activity of the business so that it can make a maximum contribution to the national economy.

Labor supply as a result of increasing population, so that more people need jobs. The greater the population, the more labor available for the labor force or non-labor force so that the supply of labor will also be even greater. The larger population will cause greater labor. Thus the greater the number of people looking for work or unemployment (Sukirno, 2004). The population is very influential on the Labor Offer, where if the larger population will increase the number of the workforce so that the number of people looking for workers increases. This is in accordance with Malthus's theory, where the population increases, will increase the supply of labor (Malthus in Arida, Zakiah & Julaini, 2015).

According to Afrida (2003) labor supply is a function that describes the relationship between the level of wages and the amount of labor offered. The higher the level of wages, the higher the number of labor supply. Wages are as remuneration that must be paid by a company or agency to employees or laborers. The wage level will affect the demand or supply of labor. The government has made regulations on wages (minimum wages) for employees or laborers to meet the minimum living needs. The addition of labor wages will increase the number of people offering to work in the agricultural sector. This indicates that if wages increase will attract workers to become workers in the business (Arida, Zakiah, & Julaini, 2015).

That minimum wages actually work for those targeted: formal full-time workers earning less than an amount considered necessary to fulfill basic needs (Hohberg & Lay, 2015). The effects of changes in minimum wage on employment using total paid employment is likely to be underestimated because it includes paid employment that earns a wage below the minimum wage level. In practice, standard theory and literature assumed that the minimum wage compliance is always high. This is not the case in Indonesia where the compliance is relatively low, given the lack of enforcement and the greater proportion of workers in the uncovered sector (Pratomo, 2011).

The area of agricultural land will affect the size of the demand for labor in the production process. The greater the area of agricultural land the greater the amount of labor needed in the production process. Conversely the smaller the agricultural land the less the amount of labor that can be accommodated by agricultural businesses. The more extensive agricultural land the more labor is used, and also the land is one of the most important factors in the production process, where the more extensive the agricultural

land will increase production. If production increases require people/workers to manage it so that it will cause labor demand (Arida, Zakiah, & Julaini, 2015).

The structure of the farm and its production characteristics, in particular its size, specialisation, and productivity, are important determinants of the demand for on-farm labor. Moreover, farm specialisation is not the same across farms, but it is often related to the structure of the farm organisation. The type of structure, whether it is a family farm, a producer cooperative, or a corporate farm, influences the demand for on-farm labor. For example, family farms tend to specialise in labor-intensive activities in comparison to corporate farms, which instead, due to their superior access to land, finance, physical and social capital, focus more on capital intensive production (Tocco, Davidova, & Bailey, 2012).

In order to highlight the structural impediments and constraints which hinder an efficient allocation of labor and which may affect the structure of the rural economy and the agricultural sector, it is necessary to look at the supply and demand side limitations that characterise rural labor markets. The distinction between supply and demand side is not completely clear-cut but is often blurred, as some problems arise on both sides, as in the case of imperfect information. By the same token, many aspects are interconnected so that some supply-side limitations have implications on the demand for labor, as it is the case for low levels of human capital and limited access to land and capital Tocco, Davidova, & Bailey, 2012).

One of the efforts that can be carried out to achieve good economic growth is through investment or investment. Investment is the key to achieving economic growth that reflects the increase in the rate of economic growth and people's income. The greater the investment of a country/region and the greater the level of economic growth that can be achieved. The statement indicates the greater investment owned by the business owner, the greater the business can be run, so it requires a large workforce to manage the business (Arida, Zakiah, & Julaini, 2015).

The expansion of employment opportunities is an effort to develop sectors that are able to absorb the existing workforce in Jambi Province. Efforts to absorb laborcan not be separated from the factors that influence it, such as the development of the population and workforce, economic growth, the level of labor productivity and policies regarding employment itself. This will only have bad consequences if, companies in the agricultural sector and the government lack of attention in addressing this problem because it will cause unemployment in a certain time (Simanjuntak, Yulmardi & Bhakti, 2018).

This is also in line with Adam Smith's classic theory. This theory regards humans as the main production factors that determine the prosperity of nations. In this case, the classical theory of Adam Smith also saw that the effective allocation of human resources was the beginner of economic growth. The classics believe that an economy based on the strength of the market mechanism will always lead to equilibrium. In a position of balance all resources, including labor, will be used in full (full-employed). Thus, under a system based on the market mechanism, there is no unemployment. If no one works, rather than earning no income at all, they are willing to work at a lower wage. Willingness to work with lower wage rates will attract companies to hire more of them (Sayifullah & Emmalian, 2018)

As explained in the theory of production according (Sukirno, 2015) that the level of production of goods and services depends on the amount of capital, labor, natural

wealth, and the level of technology used. This result is in accordance with book theory (Sukirno, 2000), namely an increase in investment increases the demand for labor and national income. Then the agregat demand brings a change in the production capacity of an economy which is then followed by an increase in the need for labor for the production process, thus increasing employment. Investment as expenditure or expenditure of companies to buy production goods, to increase the ability to produce goods and services that come from domestic and foreign investment. The increase in investment will encourage an increase in production volume which in turn will increase productive employment opportunities so that it will increase income per capita (Sulaksono, 2015).

Investments in mining companies aiming to acquire land, buildings or plant expansion, raw materials, machinery and equipment, water, electricity and supply of supporting industries, research and development, pay employees directly or indirectly. Investment elements include exploration costs (drilling, mapping and sampling), additional costs of immovable property, mine development costs, equipment and factory costs, working capital, expansion costs and Environmental Impact Assessment legality costs. This investment increases the income of the mining sector in Indonesia and creates new jobs (Sulaksono, 2015). Investment is a major component in moving the wheels of a country's economy. In theory, an increase in investment will encourage rade volumes and production volumes which in turn will expand productive employment opportunities and will mean increasing per capita income while increasing community welfare (Sulaksono, 2015).

Mining tends to pay well and tends to provide stable employment (Brandon, 2012). Even more dramatic increases in productivity have been achieved in coal with the introduction of large-scale new technology, leading to a dramatic drop in employment (Dansereau, 2007). That mining has a relatively strong positive impact on non-mining employment, but the impact appears to be limited mainly to the private services-aggregate. In the long run, technological progress will continue to reduce the amount of workers required to operate a mine, and this suggests over time diminishing spillover effects on the local economies (Moritz, Ejdemo, Söderholm, & Wårell, 2017).

The population of Jambi Province in 2015 is known as much 3,402,052 inhabitants. With a population density of 67.82 people / km2.With a workforce of 1,620,752 people consisting of 1,550,403 people working and looking for work/unemployment 70,349 inhabitants. While not the labor force as many as 829,712 people. In addition to increasing the existing human resources, there is also an indication of a shift in the structure of the economy, which is marked by a shift in the number of workers working in the primary sector starting to move to the secondary sector. Seeing the pattern of economic structure shifting and the workforce needs that occur, the thing that needs to be prepared is to improve the quality of human resources in the Jambi Province community (Junaidi, Zulfanetti & Hardiani, 2014).

Based on the types of the main employment in 2010-2013 in the agriculture, mining and quarrying sectors, as well as the manufacturing industry, the number of population aged 15 years and over has fluctuated each year. Where the highest agricultural sector in 2011 was 851,138 people and the lowest in 2010 was 670,841 people with an average population of 784,501. While in the mining and quarrying sector the highest in 2012 was 27,836 people and the lowest in 2011 was 14,004 people with an average population of 21,987. In addition, the highest manufacturing sector in 2013 was 52,460 people and the

lowest in 2010 was 34,821 people with an average population of 42,857.

GDRP Based on the Applicable Price of Jambi Province in 2016 reached Rp 171.71 trillion or 1.36% of the 2016 national GDP (Rp 12,658.16 trillion). The economic structure of Jambi Province in 2016 was still dominated by agriculture, forestry and fisheries (29.79%), mining and quarrying (16.59%), wholesale trade, Retail and Car and Motorcycle Repair (12.15%), and Processing Industry (10.47%) (BPS, 2016).

These four economic sectors contributed 69.01% of the total GDRP of Jambi Province. Plantation commodities (oil palm, rubber) play an important role in encouraging Jambi economic growth (Hardiwan, Amir, Junaidi & Delis, 2019) especially in the agriculture and processing industries and indirect impacts on trade and service activities.

The problems to be analyzed in this study are:(1) how the development of labor demand and supply as well as the factors affecting the agriculture, mining and industry sectors in Jambi Province; (2) factors affecting labor supply in Jambi Province and (3) factors affecting labor demand in the agriculture, mining and industrial sectors in Jambi Province.

METHODS

The types of data used in this study are secondary data obtained from the Population Census, the National Socio-Economic Survey (Susenas), the Demographic and Health Survey of Indonesia (SDKI), the National Labor Force Survey (SAKERNAS), and the Jambi Provincial Manpower and Transmigration Office.

To answer the research problem used descriptive quantitative data analysis, which uses multiple linear regression analysis as follows:

Model of labor supply in Jambi Province

$SL = \alpha_0 + \alpha_1 NPt + \alpha_2 PMW_t + \alpha_3 HDI_t + e_t$

where:

SL	= Supply of Labor
NP_t	= Number of Population (People)
PMW_t	= Provincial Minimum Wage (Rupiah)
HDI_t	= Human Development Index (Percent)
α_0	= Constant
$\alpha_1, \alpha_2, \alpha_3$	= Regression Coefficient
e_t	= Standard Error

Model of labor demand in the agricultural sector

$DLA = a_0 + a_1 ALA_t + a_2 INVA_t + a_3 GRDPA_t + e_t$

where:

DLA	= Demand for Labor in the Agricultural Sector
ALA_t	= Agricultural Land Area (Ha)
$INVA_t$	= Investment in the Agricultural Sector (Rupiah)
$GRDPA_t$	= Gross Regional Domestic Product in the Agriculture Sector (Rupiah)
a_0	= Constant
a_1, a_2, a_3	= Regression Coefficient
e_t	= Standard Error

Model of labor demand for in the mining sector

$DLM = b_0 + b_1 GRDPM_t + b_2 PMW_t + b_3 INVM_t + e_t$

where:

DLM	= Demand for Labor in the Mining Sector
$GRDPM_t$	= Gross Regional Domestic Product in the Mining Sector (Rupiah)
PMW_t	= Provincial Minimum Wage (Rupih)
$INVM_t$	= Investment in the Mining Sector (Rupiah)
b_0	= Constant
b_1, b_2, b_3	= Regression Coefficient
e_t	= Standard Error

Model of labor demand for industrial sector

$LOG\ (DLI) = c_0 + c_1\ LOG\ (GRDPI)_t + c_2\ LOG\ (PMW)_t + c_3\ LOG\ (INVI)_t + c_4 LOG\ (NI)_t + e_t$

where:

DLI	= Demand for Labor in the Industrial Sector
$GRDPI_t$	= Gross Regional Domestic Product in the Industrial Sector (Rupiah)
PMW_t	= Provincial Minimum Wage (Rupiah)
$INVI_t$	= Investment in Industrial Sector (Rupiah)
NI_t	= Number of Industries (Units)
c_0	= Constant
c_1, c_2, c_3	= Regression Coefficient
e_t	= Standard Error

RESULTS AND DISCUSSION

Analysis of developing labor demand and supply as well as factors affecting the agriculture, mining and industry sectors in Jambi Province. Development analysis is used to find out the trends in the development of labor demand and supply in Jambi Province and the influencing factors.

Table 1. Development of labor supply in Jambi Province in 2000-2016

Years	Working		Job seeker		Labor force	
	Nominal	%	Nominal	%	Nominal	%
2000	1,004,844	-	38,400	-	1,043,244	-
2001	1,013,666	0.88	60,240	56.88	1,073,906	2.94
2002	1,094,331	7.96	67,092	11.37	1,161,423	8.15
2003	1,101,833	0.69	76,659	14.26	1,178,492	1.47
2004	1,137,460	3.23	73,108	-4.63	1,210,568	2.72
2005	1,113,150	-2.14	133,964	83.24	1,247,114	3.02
2006	1,103,386	-0.88	78,264	-41.58	1,181,650	-5.25
2007	1,146,851	3.94	76,090	-2.78	1,222,941	3.49
2008	1,224,483	6.77	66,371	-12.77	1,290,854	5.55
2009	1,260,592	2.95	73,904	11.35	1,334,496	3.38
2010	1,360,022	7.89	72,792	-1.50	1,432,814	7.37
2011	1,434,998	5.51	60,169	-17.34	1,495,167	4.35
2012	1,423,624	-0.79	42,296	-29.70	1,465,920	-1.96
2013	1,382,471	-2.89	70,361	66.35	1,452,832	-0.89
2014	1,491,038	7.85	79,784	13.39	1,570,822	8.12
2015	1,550,403	3.98	70,349	-11.83	1,620,752	3.18
2016	1,624,522	4.78	67,671	-3.81	1,692,193	4.41
Average	**1,262,804**	**3.11**	**71,030**	**8.18**	**1,333,836**	**3.13**

Source: BPS-Statistics of Jambi Province (2000-2016)

Based on Table 1 it show that the average labor force in Jambi Province for the period of 2000-2016 is only 1,262,804 people per year. The average person looking for work is only 71,030 people per year. While the number of employed people reaches 1,262,804 people per year. If seen from the annual growth rate, in 2002 the number of people employed reached 7.96 per cent. In 2013 it decreased by -2.80 per cent. In 2005 the number of people looking for work in Jambi Province reached 83.24 per cent. While in 2016 it decreased by -41.58 per cent. The total workforce in Jambi Province in 2013 reached 8.15 per cent. This growth slowed in 2006, reaching only -5.25 per cent.

Table 2. Development of labor demand in Jambi Province in 2000-2016

Years	DLA		DLM		DLI	
	Nominal	%	Nominal	%	Nominal	%
2000	531,754	-	5,741	-	28,846	-
2001	579,303	8.94	7,028	22.42	36,406	26.21
2002	631,104	8.94	8,604	22.42	45,947	26.21
2003	687,536	8.94	10,534	22.43	57,989	26.21
2004	743,971	8.21	13,888	31.84	48,017	-17.20
2005	631,399	-15.13	11,737	-15.49	76,374	59.06
2006	683,224	8.21	9,587	-18.32	60,514	- 20.77
2007	662,143	-3.09	9,257	-3.44	48,132	-20.46
2008	706,903	6.76	12,835	38.65	46,462	-3.47
2009	729,340	3.17	21,024	63.80	41,675	- 10.30
2010	810,866	11.18	24,769	17.81	50,017	20.02
2011	770,848	-4.94	21,517	-13.13	48,786	-2.46
2012	783,501	1.64	27,836	29.37	47,303	-3.04
2013	723,973	-7.60	26,433	-5.04	52,552	11.10
2014	736,204	1.69	33,853	28.07	52,473	-0.15
2015	819,545	11.32	26,732	-21.04	61,998	18.15
2016	800,719	-2.30	41,920	56.82	71,547	15.40
Average	**707,784**	**2.87**	**18,429**	**16.07**	**51,473**	**7.78**

Source: BPS-Statistics of Jambi Province (2000-2016)

Based on Table 2 it show that the average labor demand in Jambi Province for the period 2000-2016 is still dominated by the agricultural sector at 707,784 people.While the least demand was in the mining sector at 18,429 people. If seen from the rate of growth, labor demand in the mining and industrial agriculture sector in 2000-2004 was relatively stable. But in 2005 the demand for labor in the agricultural sector decreased by -15.13 per cent. In the mining sector, the increase in 2009 was quite high at 63.80 per cent and declined again in 2015 of -21.04 per cent. Whereas the industrial sector in 2005 increased so sharply that it amounted to 59.06 per cent.

Based on Table 3 it show that the average rate of economic growth in the mining sector in 2000-2016 was 28.04 per cent. The average rate of economic growth in the agricultural sector is 14.96 per cent. While the average rate of economic growth in the industrial sector was 5.03 per cent. The rate of economic growth in Jambi Province in 2001 reached 387.27 per cent, far higher than the year before and after. However, in 2006 the economic growth rate in the mining sector decreased by -7.29 per cent. The rate of economic growth in the agricultural sector in 2001 reached 238.56 per cent. Whereas in 2016 it decreased by -84.98 per cent. The rate of economic growth in the industrial sector in Jambi Province fluctuates. In 2002 it was the highest rate of economic growth, reaching

10.09 per cent. In 2013 it reached 8.17 per cent and again declined until 2016 which reached 2.29 per cent.

Table 3. Gross Regional Domestic Product (GRDP) of the agriculture, mining and industry sectors based on constant prices in 2010, period 2000-2016 (million rupiahs)

Year	GRDPA		GRDPM		GRDPI	
	Nominal	%	Nominal	%	Nominal	%
2000	4,234,801.81	-	3,577,662.43	-	6,530,991.43	-
2001	14,337,315.04	238.56	17,432,702.34	387.27	6,767,757.87	3.63
2002	15,032,448.73	4.85	17,167,144.92	-1.52	7,450,737.01	10.09
2003	15,566,925.01	3.56	17,650,400.86	2.82	7,626,469.11	2.36
2004	16,358,106.76	5.08	17,765,323.71	0.65	7,897,340.12	3.55
2005	17,111,658.95	4.61	17,950,327.57	1.04	8,205,368.88	3.90
2006	19,051,414.29	11.34	16,642,442.98	-7.29	8,569,962.08	4.44
2007	19,921,629.76	4.57	18,240,896.53	9.60	9,036,653.26	5.45
2008	21,060,812.35	5.72	20,922,122.25	14.70	9,545,850.75	5.63
2009	22,462,616.11	6.66	21,191,451.56	1.29	9,912,755.86	3.84
2010	23,627,241.97	5.18	24,255,278.20	14.46	10,357,580.68	4.49
2011	24,744,879.37	4.73	27,265,306.60	12.41	11,217,086.31	8.30
2012	26,429,045.13	6.81	28,595,774.90	4.88	12,023,508.82	7.19
2013	28,070,963.00	6.21	29,692,334.90	3.83	13,005,650.26	8.17
2014	31,145,428.62	10.95	30,951,985.90	4.24	13,630,734.50	4.81
2015	32,846,193.30	5.46	30,879,897.00	-0.23	13,948,630.01	2.33
2016	4,933,688.60	-84.98	31,016,887.70	0.44	14,267,736.88	2.29
Average	**19,819,715.81**	**14.96**	**21,835,172.96**	**28.04**	**9,999,694.93**	**5.03**

Source: BPS-Statistics of Jambi Province (2000-2016)

Based on Table 4 shows that the factors affecting labor supply in Jambi Province during the period 2000-2016 are the population, PMW and HDI. The average population in Jambi Province is 2,895,896 people with an average growth rate of 2.31 per cent. The average PMW in Jambi Province is 838,609 rupiah with a PMW growth rate of 16.44 per cent. While the average HDI in Jambi Province was 69.16 per cent with an HDI growth rate of 0.20 per cent.

Table 4. Factors affecting labor supply and demand in 2000-2016

Labor Factor	Average	Average (%)
Supply		
Total Population (People)	2,895,896	2.31
PMW (Rupiah)	838,609	16.44
HDI (Percent)	69.16	0.20
Agricultural Sector Demand		
Agricultural Land Area (Ha)	1,417,359	1.66
Investment (Rupiah)	167,852	14.14
GDRP (Million Rupiah)	19,819,716	14.96
Demand for the Mining Sector		
GDRP (Million Rupiah)	21,835,173	28.04
Investment (Rupiah)	9,837	91.94
Demand for the Industrial Sector		
GDRP (Million Rupiah)	9,999,695	5.03
Investment (Rupiah)	4,076,375,044	321.78
Number of Industries (Units)	23,150	2.06

Source: Investment and One Stop Integrated Services Office, Jambi Province (2000-2016)

The demand for labor in the agricultural sector in Jambi Province is affected by land area, investment and GRDP. The average area of agricultural land in Jambi Province is 1,417,359 hectares with a growth rate of 1.66 per cent. The average investment value is 167,852 with a growth rate of 14.14 per cent. While the average GDP of 19,819,716 rupiahs with an economic growth rate of 14.96 per cent.

The demand for labor in the mining sector in Jambi Province is affected by GRDP and investment. The average GRDP in the mining sector is 21,835,173 rupiah with an economic growth rate of per cent. While the average investment value was 9,837 rupiahs with a growth rate of 91.94 per cent.

The demand for labor in the industrial sector in Jambi Province is influenced by the GRDP, investment and the number of industries. The average GRDP of the industrial sector was 9,999,695 rupiah with an economic growth rate of 5.03 per cent. The average investment value of 4,076,375,044 rupiahs with an economic growth rate of 321.78 per cent.while the average number of industries in Jambi province reached 23,150 units with a growth rate of 2.06 per cent.

Analysis of factors affecting labor supply in Jambi Province

Table 5 presents results of factors affecting labor supply in Jambi Province. The variable population has a positive effect on labor supply (probability = 0.0814). The results of this study are in accordance with the theory that the greater the number of population, the more labor available for both the labor force and non-labor force so that the number of labor supply will also be greater (Triani & Andrisani, 2019). It can be concluded that the population will have a positive and significant influence on labor supply in Indonesia. This means that each additional population will increase the number of labor supply in Indonesia. Influence (Triani & Andrisani, 2019). The results of this study are in research conducted by Sofyan, Iskandar & Izzati (2015), one of the main problems in employment is lowlabor productivity. The problem of the quality of human resources is also closely related to the problem of population. Very high population growth also affects the number of the labor force who will participate in the development or it can be said the number of labor force entering the labor market will increase.

Table 5. Estimated results of factors affecting labor supply

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	477881.4	667993.7	0.715398	0.4870
NP	0.271652	0.143791	1.889207	0.0814
PMW	0.174983	0.096511	1.813093	0.0930
HDI	-1119.999	5909.604	-0.189522	0.8526
R-squared	0.964636	Mean dependent var		1333835
Adjusted R-squared	0.956475	S.D. dependent var		193684.8
S.E. of regression	40407.70	Akaike info criterion		24.25375
Sum squared resid	2.12E+10	Schwarz criterion		24.44980
Log likelihood	-202.1569	Hannan-Quinn criter.		24.27324
F-statistic	118.2020	Durbin-Watson stat		1.446781
Prob(F-statistic)	0.000000			

The Provincial Minimum Wage variable has a positive effect on labor supply (probability = 0.0930).If wages rise, the amount of labor offered will increase and vice versa. The minimum wage has a direct role in the work time offered. In most people, high wages become a stimulus or motivation to work, in general wages have a positive

correlation with the work time offered (Yuliani, 2013). In its development, the demand and supply of labor in the agricultural sector are influenced by the labor market. The demand for and supply of labor in the agricultural sector is affected by changes in wages received (Conradie, 2004). High-wage employment will cause a high number of laborsupply too, on the other hand, low-wage jobs will cause low labor supply too. In other words, the wages offered by companies are positively related to labor supply. However, based on research on the existence of wage rigidity, or better known as wage rigidity, is the failure of wages to make adjustments to the supply of labor equal to labor demand. This failure to indicate wage rates often causes unemployment problems (Mankiw, 2003).The regression results show that the Human Development Index has no significant effect on labor supply.

Analysis of the factors that affect labor demand in the agriculture, mining and industrial sectors in Jambi Province

Table 6 presents results of factors affecting the demand for workers in the agricultural, mining and industrial sectors.The area of agricultural land and investment in agriculture have no significant effect on the demand for labor in the agricultural sector.The GRDP variable in the agricultural sector has a positive effect on labor demand in the agricultural sector (probability = 0.0024).

This is in line with research conducted byTambunan (2011) states that besides the demand (consumption) side, in terms of supply, population growth also requires growth in employment opportunities (sources of income). Economic growth without being accompanied by additional employment opportunities will lead to inequality in the distribution of additional income (ceteris paribus), which in turn will create a condition of economic growth with increased poverty. Meeting the consumption needs and employment opportunities itself can only be achieved by a continuous increase in aggregate output (goods and services) or GRDP. In the understanding of macroeconomics, economic growth is the addition of GRDP.

Table 6. Estimated results of factors affecting the demand for workers in the agricultural, mining and industrial sectors

Sector	Variable	Coefficient	Prob	R-squared	F-statistic
Agricultural Sector	ALA	0.064940	0.5902	0.722723	F = 11.29482 Prob= 0.000634
	INVA	0.016498	0.8910		
	GRDPA	0.008629	0.0024		
	Constant	426712.7	0.0186		
Mining Sector	GRDPM	0.000186	0.5070	0.910060	F = 43.84679 Prob = 0.000000
	PMW	0.018570	0.0005		
	INVM	-0.100273	0.0976		
	Constant	-208.4319	0.9532		
Industrial Sector	LOG (GRDPI)	-2.406900	0.1181	0.524742	F = 3.312362 Prob = 0.047804
	LOG (PMW)	1.366699	0.0583		
	LOG (INVI)	0.030216	0.4984		
	LOG (NI)	-2.208489	0.3251		
	Constant	52.80586	0.0851		

The mining sector regression results show that the GRDP of the mining sector has no significant effect on the demand for mining sector workers. The Provincial Minimum Wage variable has a positive effect on the demand for mining workers

(probability=0.0005). This means that wage increases will increase the use of labor. Jobs in the mining sector include management and operators who have high investment and work risks, so high risk high income applies. For management the success of exploration will reduce investment risk, failure of exploration is a high risk for investment. For labor operators also have a high enough risk, so that salaries/wages are relatively high compared to other sectors.This is not in line with research conducted by (Fikri, 2018) which states that the wage variable has no significant effect on employment in the Indonesian mining sector. This happens because wage movements do not directly affect the demand and supply of labor in the mining sector. In addition, the mining sector is a sector that absorbs more outsourcing workers so that the majority of the workforce or laborers in mining companies are outsourced labor. In this outsourcing policy the company has the freedom to determine how much wages will be paid to workers, and workers who approve it will get wages in accordance with the contract even though the agreed wages are below the stipulated sectoral minimum wage. This then makes the movement of mining sectoral wages, both when increasing or decreasing, not affect the absorption of labor in this sector because workers are employed according to wages in contract rather than sectoral wages. Another reason that makes wages insignificant to employment is that mining companies are willing to pay workers at any level of wages given the difficulty in getting criteria for mine workers who are willing and able to work in this sector.

The investment variable in the mining sector has a negative effect on the demand for labor in the mining sector (probability= 0.0976). This means that the increase in investment has no impact on the addition of workers in the mining sector. It is understood that investment in the mining sector is mostly used for land acquisition, land clearing, purchasing or leasing heavy equipment, making Environmental Impact Assessment, infrastructure and equipment.

The industrial sector regression results show that the GRDP of the industrial sector, investment in industrial sector and number of industrieshave no significant effect on the demand for industrial sector labor. The provincial minimum wage variable has a positive effect on the demand for labor in the industrial sector (probability = 0.0583).This is in line with research conducted by According to Sari's research (2013) analyzing that the factors that determine employment in agriculture, industry and construction in Sumatra Island are the gross regional domestic product (GRDP), provincial minimum wage (PMW), and foreign direct investment (FDI). While the factors that influence employment in the mining sector are GRDP. Whereas the effect on employment in the industrial sector is the minimum wage and the number of industries, other variables such as the real GRDP of the industrial sector does not affect labor absorption.

The regression results show that investment in the industrial sector has no significant influence on the demand for labor in the industrial sector.In this case investment value is still estimated to have a negative effect because many industries use capital-intensive (machinery) and reduce the number of workers because capital-intensive techniques with high technology result in productivity and efficiency being better, with the same large output only with labor that is a little (Ariska, 2018).The regression results show that the number of industries has no significant effect on the demand for labor in the industrial sector.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The results from 2000-2016 showed that the average rate of growth of the labor force was 3.13 per cent, the average rate of labor demand for agricultural sector was 2.87 per cent, the average rate of labor demand for mining sector was 16.07 per cent and the average rate of labor demand for industrial sector was 7.78 per cent. While the data variables in the study increased and fluctuated.

The factors that influence the supply of labor are the variable population and the Provincial Minimum Wage. The factors that influence the demand for labor in the agricultural sector are GRDP variables in the agricultural sector. Factors affecting the demand for labor in the mining sector are the Provincial Minimum Wage and investment in the mining sector. Factors that influence the demand for labor in the industrial sector are the Provincial Minimum Wage.

Recommendations

It is expected that the workforce is able to improve competency, skills and education. It is hoped that the government can provide facilities and infrastructure for infrastructure and education in the field of education and health. Expected to be able to invest in sectors and activities that can absorb a lot of labor, especially those that can increase the creativity of the workforce and increase the added value of the products produced and provide appropriate wages. It is hoped that further research can be carried out regarding labor supply and demand with broader variables and dimensions.

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REFERENCES

Afrida, (2003). Ekonomi Sumberdaya Manusia.Ghalia Indonesia. Jakarta.

Arida, A., Zakiah, & Julaini. (2015). Analisis Permintaan Dan Penawaran Tenaga Kerja Pada Sektor Pertanian Di Provinsi Aceh. *Agrisep*, *16*(1), 66–78. https://doi.org/10.24815/agrisep.v16i1.3033

Ariska, B. O. (2018). Analisis Permintaan Tenaga Kerja Pada Industri Kecil Dan Menengah Di Kabupaten Gresik. *Jurnal Ilmu Ekonomi*, *2*(1), 83–94.

Badan Pusat Statistik (BPS). (2016). *Provinsi Jambi Dalam Angka*. Jambi: BPS Provinsi Jambi.

Brandon, B. C. N. (2012). Emerging Workforce Trends in the U.S. Mining Industry. *Automated System Alliance Inc*, *January*, 1–38.

Conradie, B. (2004). Centre for Social Science Research Wages and Wage Elasticities for Wine and Table Grapes in South Africa. *Center for Social Research*, *90*, 1–21.

Dansereau, S. (2007). Globalization and mining labor: Wages, skills and mobility. *Minerals and Energy - Raw Materials Report*, *21*(2), 8–22. https://doi.org/10.1080/14041040600977845

Fikri, C.R. (2018). Analisis Pengaruh Produk Domestik Bruto, Ekspor, dan Upah

Terhadap Penyerapan Tenaga Kerja Sektor Pertambangan Indonesia. *Jurnal Ilmiah. Mahasiswa FEB Universitas Brawijaya, Malang*, 6(2)

Feriyanto, N. (2014). *Ekonomi Sumber Daya Manusia, Dalam Perspektif Indonesia*. Yogyakarta: UPP STIM YKPN.

Hardiwan, D., Amir, A., Junaidi, J. & Delis, A. (2019). The Linkages and Impact of Plantation-Based Sector on Economy and Poverty in Jambi Province, Indonesia: Miyazawa's Input-Output Model. *Agricultural and Resource Economics: International Scientific E-Journal*, 5(3), 5 - 19

Hohberg, M., & Lay, J. (2015). The impact of minimum wages on informal and formal labor market outcomes: evidence from Indonesia. *IZA Journal of Labor and Development*, *4*(1), 1–25. https://doi.org/10.1186/s40175-015-0036-4

Junaidi, Zulfanetti, & Hardiani. (2014). Analisis Kondisi dan Proyeksi Ketenagakerjaan di Provinsi Jambi. *Jurnal Perspektif Pembiayaan Dan Pembangunan Daerah*, *3*(3), 141–150. https://doi.org/10.13140/RG.2.1.2172.9042

Mankiw, N. G.(2003). *Teori Makroekonomi*. Jakarta: Penerbit Erlangga.

Moritz, T., Ejdemo, T., Söderholm, P., & Wårell, L. (2017). The local employment impacts of mining: an econometric analysis of job multipliers in northern Sweden. *Mineral Economics*, *30*(1), 53–65. https://doi.org/10.1007/s13563-017-0103-1

Pratomo, D.S. (2011). The effects of changes in minimum wage on employment in Indonesia: Regional panel data analysis. *International Research Journal of Finance and Economics*, *62*, 15–27.

Sari, N.(2013). *Faktor–Faktor Yang Memengaruhi Penyerapan Tenaga Kerja Di Pulau Sumatera 2006-2010*. Bogor: Institut Pertanian Bogor.

Sayifullah, S., & Emmalian, E. (2018). Pengaruh Tenaga Kerja Sektor Pertanian Dan Pengeluaran Pemerintah Sektor Pertanian Terhadap Produk Domestik Bruto Sektor Pertanian Di Indonesia. *Jurnal Ekonomi-Qu*, *8*(1), 66–81. https://doi.org/10.35448/jequ.v8i1.4962

Simanjuntak, M., Yulmardi, & Bhakti, A. (2018). Pengaruh GRDP Sektor Pertanian , Nilai Tukar Petani dan Investasi Sektor Pertanian terhadap Penyerapan Tenaga Kerja Sektor Pertanian Provinsi Jambi. *E-Jurnal Ekonomi Sumberdaya Dan Lingkungan*, *7*(1), 1–12.

Sofyan, Iskandar, E., & Izzati, Z. (2015). Analisis Kesempatan Kerja Dan Produktivitas Tenaga Kerja Pada Sektor Pertanian Di Provinsi Aceh. *Agresip*, *16*(2), 1–7. https://doi.org/10.24815/agrisep.v16i2.3040

Sukirno, S. (2015).*Pengantar Ekonomi Makro*. Jakarta: Raja Grafindo Persada.

Sukirno, S. (2000).*Teori Mikro Ekonomi*. Jakarta: Raja Grafindo Persada.

Sukirno, S. (2004). *Ekonomi Pembangunan: Proses, Masalah dan Dasar Kebijakan*. Jakarta: Kencana Prenada Media Group.

Sulaksono, A. (2015). Pengaruh Investasi Dan Tenaga Kerja Terhadap PDB Sektor Pertambangan Di Indonesia. *Jurnal Ekonomi Bisnis*, *20*(1), 16–24.

Tocco, B., Davidova, S., & Bailey, A. (2012). Key Issues in Agricultural Labor Markets: A Review of Major Studies and Project Reports on Agriculture and Rural Labor Markets. *Factor Markets*, *32*(20), 1–38.

Tocco, B., Davidova, S., & Bailey, A. (2012). Supply and Demand Side Limitations Affecting the Structure of Agriculture and the Rural Economy. *Factor Markets*, *21*, 1–10.

Tambunan, T. (2011). *Perekonomian Indonesia Kajian Teoritis dan Analisis Empiris*.

Jakarta: Ghalia Indonesia.

Triani, M., & Andrisani, E. (2019). Analisis Pengaruh Jumlah Penduduk Dan Upah Terhadap Penawaran Tenaga Kerja Di Indonesia. *Jurnal Geografi*, *8*(1), 49–54. https://doi.org/10.24036/geografi/vol8-iss1/568

Yuliani. (2013). Faktor-Faktor yang Mempengaruhi Penawaran Tenaga Kerja di Kota Samarinda. *Journal of Chemical Information and Modeling*, *3*(9), 1689–1699. https://doi.org/10.1017/CBO9781107415324.004

Empowerment of rural community through the development of renewable electricity

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Abstract

The purpose of this study is to analyze the empowerment of electricity beneficiaries through community empowerment activities following the use of wind and solar renewable energy (PLTH) in Pantai Baru. To achieve these objectives, the data collection in this study was carried out using a structured research questionnaire to 68 PLTH electricity beneficiaries in Pantai Baru, where they are also managers of tourism business in Pantai Baru.This study uses a frequency distribution analysis method to identify: (1) the profile of renewable electricity beneficiaries and (2) determine the extent of empowerment renewable energy electricity beneficiaries in Pantai Baru. The results showed that the characteristics of the beneficiaries were generally of a mature age, had a clear direction of life and goals, and had and adequate level of education. Furthermore, in terms of the empowerment indicators used in this study, they are rated as high. Thus, this study indicates that the community empowerment activities through the development of renewable energy have an impact to the empowerment of PLTH electricity beneficiaries in Pantai Baru.

Keywords: *Electricity beneficiaries, Empowerment, Rural community development.*

JEL Classifications: A13, C10, P25, R58, Q30, Z13.

INTRODUCTION

Yogyakarta Special Region (Daerah Istimewa Yogyakarta/DIY) Province is one of Indonesia's provinces with no reserves or potential for non-renewable primary energy resources. Thus, the demand for non-renewable energy, such as petroleum, coal and gas, has so far been supplied from other regions. Electricity is also supplied from the Java-

Madura-Bali (JAMALI) interconnection network since there are no power plants that satisfy the electricity demand of the people of Yogyakarta.

In addition to the 500 kV and 150 kV transmission systems, the main supplies for electricity needs in the Central Java Province and DIY Province are Tambaklorok PLTU/ PLTGU, Mrica PLTU, the Cilacap PLTU and the Dieng PLTP. On the other hand, the energy consumption of the DIY Province continued to increase from 1,603,700 BOE to 1,817,900 BOE in 2011-2015. It is also projected that the energy consumption level of the DIY Province will begin to grow to 2,138,900 to 2,529,600 BOE in 2020-2025 (Badruzzaman, 2013). It is predicted as well, on the basis of a review of current conditions, that the DIY Province will require a high supply of energy. Given the current state of energy availability, it is unlikely that these needs can be met only by relying on non-renewable energy supplies.

The potential for renewable energy in the DIY Province based on the results of the CAREPI study (2009) shows that the wind, energy and solar energy resources is the most potential of renewable energy resources to be developed in the Yogyakarta region (Table 1).

Table 1. Potential of renewable energy in DIY Province

Source of Renewable Energy	Energy Potential (kW)
Water	750
Photovoltaic	3,000
Wind	16,000
Biomass	2,750
Total	22,500

Source: CAREPI (2009)

Renewable energy is one of the most efficient ways to achieve sustainable development (Goldemberg, 2007). One of the main tasks of this century would be to manage a transition process towards a sustainable energy system (Haas, Watson and Eichhammer, 2008). Renewable energy use in the last five decades has been driven by environmental, social and economic factors (Gado & El-Zeftawy, 2009; Katti & Khedkar, 2005;Wang, Jing, Zhang and Zhao, 2009; Bernal & Dufo, 2009). In order to ensure that the renewable energy (RE) resources are optimized, there have been many attempts by researchers to enhance sustainability and the use of renewable energy.

Based on the potential of renewable energy in the DIY Province, it is very likely to develop electrical energy from renewable energy sources. This is reinforced by the Government Regulation Number 3 of 2005 concerning electricity, which specifically states that the role of the regional government, as outlined in Article 2A, namely "Regional Government provides electricity to help disadvantaged groups of society, construction of electricity supply facilities in undeveloped areas, development electricity in remote areas and rural electricity development." Through this regulation, regional governments produce energy management policies. Energy management policies of the DIY Province include:

1. Development of energy infrastructure to increase energy supply so that more consumers have access to energy, including:
   a. Creation of regulations for energy development and use activities;
   b. Increased investment in the construction of rural electricity networks, especially in remote and isolated areas;

2. Protection of disadvantaged communities, in particular communities in remote and rural areas by community empowerment to produce energy independently, both for the benefit of lighting, cooking and small-scale economic development;
3. Partnership between government and industry for the growth of the energy sector in the regions;
4. Research and development, as well as education and training for the advancement of technology and human resources;
5. Coordination between sectors at regional and national level to support energy supply in the regions.

The provision of access to electricity through the development of renewable energy is a strategic program for villages, because (1) electricity is one of the basic needs of the community, so that the provision of electricity is an effort by the government to meet the basic needs of the entire community, both those living in cities and in the villages. The existence of electricity in the village is expected to empower rural communities from backwardness and limitations in accessing electricity, (2) providing access to electricity for villages is expected to reduce the disparities between villages and cities as well as the disparities between regions. Access to electricity in the village is expected to encourage and contribute to rural economic growth and communities, (3) business case for renewable energy sources encourage investment activities (Peura & Hyttinen, 2011; Masini & Menichetti, 2012) and benefits beyond business profitability could be significant. The potential regional economic and employment impacts are among the most powerful drivers of sustainable energy. For instance, it has repeatedly been argued that renewable energy sources create more employment than conventional energy (Sastresa, Uson, Bribi & Scarpellini, 2010), (4) regional value-added among others monetary aspects (cost savings, enhanced purchasing power, creation of jobs, tax income, social, ecological and ethical aspects and improved vitality) would be remarkable if all the money which currently flows out remained within the region (Hillebrand, Buttermann, Behringer, Bleuel, 2006; Lehr, Nitsch, Kratzat, Lutz, & Edler, 2008; Moreno & Lopez, 2008; Thomley, Rogers, & Huang, 2008; Blanco & Rodrigues, 2009; Hoffmann, 2009; del Río & Burguillo, 2009; Openshaw, 2010; Sastresa, Uson, Bribi, & Scarpellini, 2010; Dalton & Lewis, 2011; Masini & Menichetti, 2012).

Access to electrical power is a crucial factor in reducing poverty in remote areas where human development factors are typically marginal (Shyu, 2014; Valer, 2014). The Human Development Index (HDI) factor is improved as the living standard of the population improves, such as better use of electricity, better education, higher net income per capita and the usage of electrical devices, new industries, and jobs. Due to its effect on the HDI, technical design has been proposed as an important aspect by many authors (Gomez & Silveira, 2010). The HDI approach depends on four key columns that must bolster each vital development activity in order to open the doors of growth for individuals and turning them into masters of their own advancement. These four standards are as (ul Haq, 1995): 1) Equity and Diversity; 2) Sustainability; 3) Productivity; 4) Empowerment.

Empowerment is associated with processes by which individuals are aware of their interests and how these relate to those of others. Empowerment, however, is more than simply opening up access to decision-making; it must also provide processes that allow people to see themselves as competent and entitled to fill the decision-making space (Rowlands, 1995). Thus, a more precise concept of empowerment refers to an

improvement of the ability, capacity, productivity, creativity and community independence to create greater opportunities for access and control of various resources.

Stewart (1994) notes that empowerment is quite simple, a highly practical and productive way to get the most out of yourself and your staffs. It can therefore be concluded that empowerment is not an objective of growth, but a tool for achieving development goals. Community empowerment is a strategy in development. As a concept of economic development, it encapsulates the social values that exist in society. Empowerment is described as a process in which individuals and organized groups can envision their world differently and achieve the vision by shifting the relations of power that hold them in poverty (Eyben, Kabeer & Cornwall, 2008). We chose the latter definition because it defines the role of critical consciousness, acknowledges that empowerment can happen at both the individual and collective level, and makes explicit reference to power.

Empowerment activities for tourism business managers in Pantai Baru are one of the main pillars that contribute to the process of developing sustainable hybrid electricity at Pantai Baru, which has been developed since 2010, namely the empowerment of electricity beneficiaries of Hybrid Power Plants (PLTH). Since the location was developed as a site for the development of PLTH electric energy, this effort has transformed the face of Pantai Baru into a potential new tourism development area in Bantul Regency. After the development of PLTH electricity in Pantai Baru, many community empowerment programs have reached the region, from the central, regional, and academic governments programs. The empowerment program focuses on the potential and needs of electricity of the beneficiaries who are business operators in Pantai Baru. The challenge they usually face is the issues of knowledge, skills, facilities and financial empowerment.

Community empowerment is a basic element that allows a society to survive and, in a dynamic sense, evolves and enjoys a much better life. The goal of the community empowerment project in rural areas is to improve human capital, increase capacity, and build business opportunities based on the potential, expectations and needs of the community. Therefore, through electrification activities in rural areas, it is hoped that the community will not only have access to electricity, but will also be able to empower the beneficiaries of PLTH electricity directly and indirectly to the local community. It is also hoped that this activity would increase the empowerment of the local community, in particular the beneficiaries of renewable hybrid electricity in Pantai Baru. Specifically, the objectives of this study are: (1) to determine the characteristics of electricity beneficiaries, environmental characteristics and group support following the development of PLTH electricity in Pantai Baru; (2) to examine the empowerment of electricity beneficiaries following the development of PLTH electricity in Pantai Baru.

METHODS

Types and sources of data

The aim of this study is to provide an overview of the level of empowerment of PLTH electricity beneficiaries following the development of PLTH in Pantai Baru. The data used are primary data obtained from field observations. This research consists of a survey of 68 respondents, who are beneficiaries of PLTH electricity.

Data collection techniques

Data collection uses two methods, namely in-depth interviews and interviews with respondents using census methods. Both data collection techniques are used as the number of samples is equal to the population. Data collection refers to the intention of obtaining a picture of the level of empowerment of beneficiaries following the development of PLTH in Pantai Baru. The results of the in-depth interviews provide proof of valid conditions for research purposes and no number of key informants are required (Berg, 2001). Key questions are designed for the purpose of in-depth interviews and the interview process by a key information questionnaire.

The in-depth interview approach provides qualitative data comprising two main sections, namely information on the characteristics of key informants as well as the history of PLTH developed in Pantai Baru. The census method provides qualitative data comprising four major parts, including information on the characteristics of the respondents, environmental aspects that support PLTH, and group support. Interviews were conducted in October 2017 with 7 key informants from the central government, local government and PLTH operational officers.

The results of the interviews provide evidence of the present condition of PLTH electricity beneficiaries. The interview uses a survey form that generates primary data and is tabulated for statistical purposes. Any relevant documents complement the interpretation of the research carried out (Bryman, 2004). The document shall include as a reference all written material relating to the focus of research and publication.

Table 2. Number of key informants and respondents

Key Informants		Respondent	
Representative	Person	Representative	Person
Central Government	1	Cullinary Traders	56
Head of Operational PLTH	1	Toilet Owner	3
Headman	1	Pool Owner	2
Hamlet Head	1	Cloths Seller	2
Head of POKDARWIS	1	Game Owner	1
Head of POKGIAT	1	Snack Merchant	2
Head of The Farmers Group	1	Fishmonger	2
Head of The Stock Farmers Group	1		
Total	8		68

Source: Research Observation Results. 2017.

Data processing and analysis

Data analysis is carried out by calculating the score and represented in a descriptive manner. The component of PLTH beneficiaries of this study consists of 4 (four) indicators: the adaptability, the ability to manage businesses, the ability to make decisions and the ability to cooperate. Each question is scored (1-4), with the following criteria: low, medium, high and very high. The responses of the respondents are then classified in the criteria interval.

Operational definitions of research and measurement variables

Community empowerment is a strategy that focuses on how to provide a proportionate role so that the community can play an active role in social activities. Hubeis (2002) states that community empowerment is an embodiment of community capacity building that is nuanced in empowering human capital through institutional growth starting from the central to the village level. It is in line with the development of the people's socio-economic system, facilities and infrastructure, as well as development,

namely: assistance that can facilitate community engagement, counseling that functions to respond to and track development in the community, and services that act as an aspect of controlling the accuracy of the allocation of physical and non-physical resource properties.

The essence of the concept of empowerment under cis power, that is, power to change. Fujikake (2008) describes the indicators of the level of empowerment, namely the level of participation, opinion opening, change of consciousness, taking action, caring and cooperation, creativity, setting new goals, negotiation, satisfaction, self-confidence, financial management and decision making.

Empowering the community in the context of this research is that the beneficiaries of PLTH electricity are intended to improve the dignity of the people who are unable to avoid the poverty and underdevelopment pitfalls in their present situation (Hendratmoko & Marsudi, 2010).

The level of empowerment refers to the ability possessed by electrical beneficiaries in the form of interrelation of individual, perceptions of their environmental abilities, collective actions and abilities to achieve goals as well as ability to overcome their problems to meet their needs. In this study, the level of empowerment was assessed using four indicators: the adaptability, the ability to manage a business, the ability to make decisions and the ability to cooperate. Measurement parameters were determined from the respondents' answers to questions posed in the research questionnaire using a Likert scale with four answer choices (very low to high). Strong beneficiaries are those who have the adaptability to situations of social change, manage businesses, make decisions and work together.

a) *Adaptability* is the knowledge, attitudes and skills of PLTH electricity beneficiaries in dealing with all causes of change from outside, such as: market changes, technologies and so on. *Adaptation* means adaptation to the environment, which can involve changes to the environmental conditions or vice versa (Gerunga, 1991). The adaptability in this study is demonstrated by the knowledge, attitudes and skills of the beneficiaries in the face of changes in the form of PLTH technology development in Pantai Baru.
b) *Ability to manage a business* is the knowledge, attitudes and technical skills possessed by PLTH electricity beneficiaries in the tourism industry of Pantai Baru. It also means that the beneficiaries have the ability to plan, keep books simple and be brave to bear business risks.
c) *Ability to make decisions* is the knowledge, attitudes and skills possessed by PLTH electricity beneficiaries to make decisions, overcome problems, handle pressure and take responsibility for the acts on the basis of their participation and active role in the tourism business activities in Pantai Baru.
d) *Ability to cooperate* is the knowledge, attitudes and skills of PLTH electricity beneficiaries to establish cooperation in groups, between groups, capital, food suppliers and institutions to boost the tourism businesses in Pantai Baru.

Analysis method

There are two analytical methods used in this study: (1) frequency distribution analysis to describe the profile of the respondents based on the construct variables of individual characteristics: age, education, business experience and motivation of the respondents; and (2) frequency distribution analysis to determine the empowerment of PLTH electricity beneficiaries, based on the following indicators: adaptability, ability to manage business, ability to make decisions and ability to cooperate.

Table 3. Matrix of achievement of objectives for analysis: the empowerment of PLTH electricity beneficiaries after the development of PLTH electricity in Pantai Baru

Objectives	Data	Source	Analysis	Results
(1) To identified the characteristics ofindividual: age, education, business experience, household income and motivation of PLTH electricity beneficiaries.	Questionnaire	Observation and interview	Descriptive of the variable: age, education, business experience and motivation	Description of individual characteristics: age, education, business experience, and motivation of PLTH electricity beneficiaries.
(2) Measuring the empowerment of PLTH electricity beneficiaries.	Questionnaire and key infromants	Observation and interview	Likert Scale	Theempowerment of PLTH electricity beneficiaries after the development of electricity in Pantai Baru.

Source: Rachmawatie, 2019.

RESULTS AND DISCUSSION

Individual characteristics of PLTH electricity beneficiaries

According to Lionberger (1982), Rogers & Shoemaker (1971), Spencer & Spencer (1993), Mardikanto (1993) and Hardiani, Prihanto & Junaidi (2019) individual characteristics are inherent in a person, underlying behavior related to aspects of life, including age, sex, position, social status and religion. Each individual has characteristics which are not shared by other individuals. Lionberger & Gwin (1982) suggest that the internal factors influencing the pace in adopting include: age, level of education, socioeconomic status, willingness to take risks, attitudes to change, and motivation. Individual characteristics of PLTH electricity beneficiaries can be found in Table 3.

Table 3. Characteristics of individual, PLTH electricity beneficiaries

Indicators	Category	Frequency	Percentage (%)
Age	18 – 40 years	23	33.82
	41 – 59 years	38	55.88
	≥ 60 years	7	10.29
Gender	Female	54	79.41
	Male	14	20.59
Level of Education	Primary School (≤ 6) years	21	30.88
	Junior High School (7 – 9) years	7	10.29
	Senior High School (10 – 12) years	37	54.41
	College (> 12) years	3	4.41
Business Experience	<2 years	4	5.88
	2-3 years	8	11.76
	4-5 years	4	5.88
	>5 years	52	76.47
Motivation	Very low	0	0.00
	Low	2	2.94
	Medium	14	20.59
	High	52	76.47

Source: Analysis Results. 2019.

Age

Age can be a sign of development related to the task of development, learning process, survival, and the various aspects that lie behind it (Monks, Knoers and Haditono, 2001). Based on the observations,55.88 percent of electricity beneficiaries are aged 41-59 years, 33.82 percent are aged 18-40 years, and 10.29 percent of them are 41 to 59 years old. At the age of 41 - 59 years, individuals make adjustments independently to life and social expectations. In general, at this age someone better understands the problems they face, so it is more stable to master themselves.Respondents in this age group mostly already had a life partner, had a main livelihood that can fulfill family needs, had a household life, had been through the period of guiding and caring for children, manage households, be able to take responsibilities as citizens, and find suitable and relevant social groups.

According to Hurlock (1980) the ability to control oneself develops with age. The theory says that as a person ages, the better he is in control, psychologically mature individuals will also be able to control their behavior because they have been able to consider what is good and what is not good for him.

Gender

The concept of gender has fundamental differences with the concept of sex (Hardiani, Hastuti, & Junaidi, 2019). Gender is a trait of men and women based on socio-cultural dimensions that are apparent from values and behavior (Santrock, 2003). The definition of gender has given birth to different roles, responsibilities, functions and even the space in which people move.

Electricity beneficiaries of this sample were mainly female at 79%, while the rest of them were male at 21%. The female respondents mostly had culinary business, while the male respondents had business in parking, toilet rental, children's game rental, swimming pool and fresh fish sales.

Education

Horton & Hunt (2006) describe the functions of education as: 1) to prepare each member of the community so that they may make their own living; 2) to develop their own interests and talents for personal fulfillment and the interests of the general public; 3) to help preserve the culture of the community; 4) to build the skills required to engage in democracy.

The study indicates that PLTH electricity beneficiaries, in general, are senior high school graduates. This means that respondents have a moderate (sufficient) level of education. Adequate education allows a person to be faster and more experienced in acquiring and applying new information from outside. The education level also affects attitudes, actions and mindsets of individuals in the decision-making process to adopt technological innovations. The higher the education level of an individual, the easier the comprehension of the positive influence obtained by the implementation of technological advancement for himself and his family would be (Rachmawatie, 2005).

Business experience

Entrepreneurial experience is important in increasing knowledge and ability in expertise and skills in entrepreneurship. This relates to the experience of providing initial knowledge before acting in an effort so that this person unconsciously must have the ability to predict the results obtained from actions in the business. Entrepreneurial experience is the experience of an individual in entrepreneurship and understanding the system in running a business (Hisrich and Peters, 1998). Successful aspects of experience through challenges drawn from learning activities that not only convey messages, but

members who get the opportunity to try. education, experience and entrepreneurship training from an early age can increase a person's potential to become an entrepreneur, in addition to the support of academics, social and business environment. Providing education and entrepreneurial experience to someone from an early age can increase one's potential to become an entrepreneur (Nuskhi & Setiana, 2004; Gurbuz & Aykol, 2008; Suharti & Sirine, 2011).

The level of business experience of PLTH electricity beneficiaries is in the category of more than 5 years, with an average business experience of 6 years. Observation findings also reveal that the business carried out by the beneficiaries prior to the establishment of PLTH in Pantai Baru was agricultural, fishing, livestock, and trading businesses. This is because the geographical location of this region is the area of dry land agriculture, fisheries and livestock. In general, those who do business at Pantai Baru are those who were initially doing business at Pandansimo Beach prior to the development of PLTH. Pandansimo Beach was hit by the earthquake in 2006 and the area was devastated. So when, in 2008, Bantul Regency engaged in a number of activities following the earthquake, the residents of Ngentak Hamlet at that time thought about setting up a new business in Pantai Baru. They did it with the hopes that their social and economic life will be better after the earthquake. Thus, the business experience of the beneficiaries existed before the development of PLTH in Pantai Baru.

Motivation

The term "motive" is closely related to motion, which is a movement carried out by people that is often referred to as acts or behavior (Sobur, 2009). Blanchard and Thacker (2010) define motivation as direction, encouragement, persistence and the amount of effort a person expends to achieve a specific goal.

Based on the findings of observations, the motivation of PLTH electricity beneficiaries in Pantai Baru is classified as very high. In the aftermath of the 2006 earthquake in Yogyakarta, the residents of Ngentak, in particular, made quite a major change. Some of the villagers are relying their lives on business activities along the coast, both in the fisheries sector, dry land agriculture and in the trading business in Pandansimo Beach. Efforts to build PLTH on Pantai Baru in 2008 were greatly welcomed by the villagers, as they could replace the site of their businesses that had been destroyed on Pandansimo Beach during the earthquake.

Empowerment of PLTH electricity beneficiaries

The empowerment of the electricity beneficiaries is an aspect that enables the beneficiaries to survive and, in a dynamic sense, means developing themselves and making progress. Empowering the communication in this research means that the beneficiaries of PLTH electricity are intended to improve the dignity of people who are unable to avoid the poverty and underdevelopment pitfalls (Hendratmoko and Marsudi, 2010). The empowerment level of electricity beneficiaries in general is seen in Table 4.

The development of PLTH electricity in Pantai Baru is an effort by the central and regional government to facilitate electricity needs of the residents of the hamlet. Based on the results of the analysis, it can be seen from the four indicators of the empowerment level that they are relatively high. The high level of empowerment of PLTH electricity beneficiaries is inseparable from the role of the local government, along with the Activity Group (POKGIAT) which already exists in Poncosari Village, includes the Farmer Activity Group, Livestock Activity Group, and Fisheries Activity Group. Post-development tourism in Pantai Baru is present by the Tourism Awareness Group (POKDARWIS) to provide knowledge as well as socialization and counseling of PLTH

activities. It also provides mentoring and coaching groups through business activities to encourage the beneficiaries to have the adaptability, the ability to manage business, the ability to make decisions and the ability to cooperate in groups.

Adaptation has a sense that is to do things that are more acceptable by altering or adjusting, referring to the process and conditions of adaptation that have specific interpretations in certain scientific disciplines (Smith, Burton, Klein, & Street, 1999). In this study, adaptability is the attempt made by electricity beneficiaries to obtain knowledge, attitudes and skills in the face of change from external, for example, changes in environmental conditions, changes in markets, changes in technology, and so on. Table 4 reveals that the level of adaptability of electricity beneficiaries is high at 64.7%.

Resource and financial limitations ultimately push households to carry out various coping strategies (Tridakusumah, Elfina, Murdiyaningsih, Pioke, & Bumulo, 2015). Reduction of loss of planting land by farmers in Pantai Baru following the development of PLTH has an impact on farmers to pursue alternative sources of income both as farmer and as non-farmer. Hua, Yan & Zhang (2017) define livelihood diversification the farmers' strategy to fulfill the needs of their family. Communities in the village, in general, make use of all the opportunities they need to make a number of efforts, including making a living in addition to farming. The results of field observations indicate that 64.70 per cent of farmers (farmers, ranchers, fishermen, shrimp ponds, sand miners, culinary and *pokdarwis*) also do additional work outside of agriculture by performing business tourism in Pantai Baru, while the remaining 35.30% do other work outside of farming and tourism businesses, such as civil servants, private workers and sand miners.

Table 4. Distribution of mean scores based on indicators of empowerment

Empowerment of PLTH Electricity Beneficiaries		Frequency	Percentage (%)
Adaptability	Very low	0	0.0
	Low	4	5.9
	Medium	20	29.4
	High	44	64.7
Ability to manage a business	Very low	0	0.0
	Low	0	0.0
	Medium	7	10.3
	High	61	89.7
The ability to make decisions	Very low	0	0.0
	Low	3	4.4
	Medium	16	23.5
	High	49	72.1
The ability to cooperate	Very low	0	0.0
	Low	0	0.0
	Medium	3	4.4
	High	65	95.6

The ability to manage business in this study refers to Meredith, Geoffrey, Robert, Nelson, Philip, & Nick (2000), which stated that it is the ability to manage all the resources owned by an entrepreneur, both knowledge, attitudes and technical skills. In this context, it includes planning, making simple bookkeeping, calculating and taking risks, and finding new ways and technologies in managing their business to achieve their goals and overcome the problems. The findings of this analysis indicate that electricity

beneficiaries have a fairly high level of ability to manage business equivalent to 57%. The level of the ability to make decisions of PLTH electricity beneficiaries is high, at 72.06%. It includes the willingness of beneficiaries to participate in the counseling and mentoring programs carried out by the local authority, along with the Activity Groups and Tourism Awareness Groups. It also includes the decision taking in the selecting suppliers that are relevant to the needs and the capability of PLTH electricity beneficiaries in managing businesses in Pantai Baru.

The ability to cooperate in this study refers to knowledge, attitudes and skills of electricity beneficiaries in groups, between groups, between institutions and so on in running a tourism business in Pantai Baru. Bachrum (2010) in Kuncono (2013) explained that the ability to cooperate was interpreted as an attempt to maintain and continue to evolve and improve continuously. It can be seen from the long-term nature of working relationship with suppliers and customers, as well as the continuous and increasing presence of productivity and profitability of the business. The high level of ability to cooperate between PLTH electricity beneficiaries in Pantai Baru is inseparable from the role of group support in Ngentak Hamlet particularly. Through the group activities, they are emotionally connected to each other, such that family ties are strongly felt when collecting data in the area. For instance, the price of food sold at Pantai Baru is fixed at the same price, and there is no different pricing for each stall, even though they sell the same type of food. The same refers to leasing prices and other service sectors. In addition, PLTH electricity beneficiaries, who use Pantai Baru as a tourism business location, are also willing to help set aside their income for the construction of tourism infrastructure facilities in Pantai Baru.

Activity Group (POKGIAT) and Tourism Awareness (POKDARWIS), founded as a non-profit organization of the village community, focused primarily on guidance and assistance, as well as ensuring the availability of human resources from POKDARWIS members. Meanwhile, tourism service actors, in this case, tourism business in Pantai Baru are profit-oriented and contribute to the welfare of POKDARWIS members. Both POKGIAT and POKDARWIS members are obliged to build synergies between institutions, self-help and self-service services both in villages and in districts and provinces.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Based on the characteristics of the beneficiaries of PLTH electricity since the establishment of PLTH electricity in Pantai Baru, the beneficiaries are generally in a mature age, have a clear perspective on life and goals, and have an adequate level of education. Thus, they are able to understand the objectives of the coaching and mentoring programs conducted by outsiders to empower themselves in the future. Furthermore, they do usually have fairly strong business experience, since they had already had business experience in Pandansimo Beach before PLTH was established in Pantai Baru. Similarly, with the amount of tourism business revenue in Pantai Baru following the development of PLTH, their average income from tourism business was quite high compared to the Provincial Minimum Wage (UMP) of the DIY Province. The growing number of tourists to Pantai Baru has an effect on the rising number of PLTH electricity beneficiaries in the area.

Following the establishment of PLTH in Pantai Baru, the empowerment of the beneficiaries was relatively high. This is inseparable from the role of local government

support, along with community groups, in mentoring, training and coaching through community empowerment activities. It was not only the government (central and regional) that encouraged empowerment of the Poncosari Village, but also academics. Thus, it can be concluded that PLTH in particular in Ngentak Hamlet and in general in Poncosari Village plays a role in promoting community empowerment activities both that have existed and that have not yet existed, such as Activity Groups (POKGIAT) and Tourism Awareness Groups (POKDARWIS). Through these activities, the local community is eventually able to explore all the potential possessed by itself and the potential of its area. In addition, the local community is able to take advantage of all the potentials and resources to enhance the lives and well-being of the entire village community.

Based on the results of the analysis, it was concluded that, by using the empowerment indicators used in this study, the adaptability, the ability to manage business, the ability to make decisions and the ability to cooperate of the electricity beneficiaries are rated as high. This is the product of a community empowerment process that has been initiated and developed by many parties in encouraging local communities to empower themselves. The results of this study have concluded that the empowerment activities cannot be separated from PLTH development in Pantai Baru and vice versa. They all complement each other in empowering the local community.

Recommendations

Recommendations are offered specifically to encourage the development of renewable energy in Pantai Baru. Investment cooperation scheme between the government and private institutions/agencies are needed to build new and renewable energy resources that have a potential to be established in the regions. The rules for cooperation in this area have been governed by Presidential Regulation Number 39 of 2014 concerning the List of Closed Business Sectors and Open Business Sectors with Requirements in the Investment Sector governing investment in the electricity sector in Indonesia.

The policy regulates the portion of investment policy between foreign investors and local investors based on generating capacity and infrastructure that will be developed. One of the goals of sustainable energy development is to increase investment in the energy and mineral resources sector, in particular renewable energy. This policy creates space not only for the central government and the private sector, but also for regional governments to establish a strong collaboration scheme between institutions in their respective regions to improve the capacity for sustainable renewable energy. In order to ensure that, this area can be used as a Regional-Owned Enterprise operated by the region in a professional manner which, in effect, will promote and stimulate industries that either exist or have the potential to be established in the regions.

In the case of renewable energy resources with sufficient electricity capacity, the electricity produced can be sold to PT. PLN (Persero). This matter has been governed by Material Regulation No. 21 of 2016 concerning Purchasing Electric Power by PT. PLN (Persero) from Biomass-Based Power Plants and Biogas-Based Power Plants. Investors tend to be more interested in things with low risks and big gains. If we look at the circumstances and challenges of the development of renewable energy, those which are related to the issue of equipment costs, technology and the guarantee of raw materials for power plants are one of the factors considered by investors to develop renewable energy in Indonesia.

REFERENCES

Badruzzaman, Y. (2013). Energy roadmap in the Special Province of Yogyakarta. *Journal of Applied Electrical Engineering (JTET)*, 2(1), 18-30.

Berg, B.L. (2001). *Qualitative Research Methodes for The Social Sciences*. New York (US): A Pearson Education Company.

Bernal, AJL., & Dufo. LR. (2009). Simulation and optimization of stand-alone hybrid renewable energy systems. *Renewable sustainable energy reviews,* 13(8), 2111-2118.

Blanchard, P.N., & Thacker, JW. (2010). *Effective training: systems, strategies, and practices* . New Jersey: Pearson Education.

Blanco, M.I., & Rodrigues, G. (2009). Direct employment in the wind energy sector: an EU study. *Energy Policy*, 37(8), 2847- 2857. https://doi.org/10.1016/j.enpol.2009.02. 049 .

Bryman, A. (2004). *Social Research Methods (second edition)*. New York (US): Oxford University Press. Inc.

CAREPI. (2009). *Contributing to poverty alleviation through regional energy planning in Indonesia.* Netherland: Intelligent Energy Europe

Dalton, G.J., & Lewis, T. (2011). Metrics for measuring job creation by renewable energy technologies, using Ireland as a case study. *Journal of sustainable renewable energy*, 15(4), 2123-2133. Https://doi.org/10.1016/j.rser.2011.01.015 .

Del, R., & Burguillo, P.M. (2009). An empirical analysis of the impact of renewable energy development on local sustainability. *Journal of sustainable energy*, 13(6-7), 1314- 1325. https://doi.org/10.1016/j.rser.2008.08.001 .

Douglass, M. (1998 A regional network strategy for reciprocal rural - urban linkages: an agenda for policy research with reference to Indonesia. *Third World Planning Review*, 20(1), 1 - 35..

Eyben, R., Kabeer, N., & Cornwall, A. (2008). *Conceptualizing empowerment and the implications for pro-poor growth: A paper for the DAC Poverty Network*. Brighton: IDS.

Fujikake, Y. (2008). Qualitative Evaluation: Evaluating People's Empowerment . *Japanese Journal of Evaluation Studies*, 8(2), 25 - 37.

Gado, A., & El-Zeftawy, A. (2009*).* Design and economy of renewable energy sources to supply isolated loads in rural and remote areas of Egypt. In: Proceedings of the 20th International Conference and Exhibition on Electricity Distribution - Part *1* (CIRED 2009), 1-4.

Caring. (1991). *Social Psychology*. Bandung: PT. Eresco.

Goldemberg, J. (2007). Ethanol for a sustainable energy future. *Journal of Science,* 315(5813), 808- 810. https://doi.org/10.1126/science.1137013.

Gomez, M., & Silveira, S. (2010). Rural electrification of the Brazilian Amaze n the achievements and lessons. *Energy policy*, 38(10), 6251-6260.

Gurbuz, G., & Aykol, S. (2008). Entrepreneurial intentions of young educated public in Turkey. *Journal of Global Strategic Management*, 2(2), 47 - 56

Haas, R., Watson, J., & Eichhammer, W. (2008). Transitions to sustainable energy systems special introduction to the energy policy issue. *Energy policy*, 36(11), 4009-4011. https://doi.org/10.1016/j.enpol.2008.06.015.

Hardiani, H., Hastuti, D., & Junaidi, J. (2019). An analysis of the attitudinal, contextual and gender perspectives of the entrepreneurial intentions among Indonesian millennials. *Malaysian Management Journal*, 23, 135-150.

Hardiani, J., Prihanto, P.H. & Junaidi, J. (2019). The Influence of Socioeconomic Characteristics and Family Support on the Quality of Life and Well-Being of the Elderly in Jambi Province, Indonesia. *International Journal of Social Sciences and Management*, 6(3), 63 - 74

Hendratmoko C., & Marsudi H. (2010). Analysis of Socio-Economic Empowerment Level of Capture Fishermen in Cilacap Regency. *Journal of Socio-Economic Dynamics*, 6(1), 1-17.

Hillebrand, B., Buttermann, H.G., Behringer, J.M., & Bleuel, M. (2006). The expansion of renewable energy and employment effects in Germany. *Journal of energy policy,* 34(18), 3484-3494. https://doi.org/10.1016/j.enpol.2005.06.017.

Hisrich, R.D. & Peters, M.P. (1998). *Entrepreneurship*. Boston: McGraw Hill.

Hoffmann, D. (2009). Creation of regional added value by regional bioenergy resources. *Journal of Renewable Sustainable Energy*, 13(9), 2419-2429. https://doi.org/10.1016/j. rser.2009.04.001 .

Horton, P.B., & Hunt, C.L. (2006). *Sosiologi* (Ram, A.,Trans.). Jakarta: Erlangga Publisher.

Hua X., Yan J., & Zhang, Y. (2017). Evaluating The Role of Livelihood Assets in Suitable Livelihood Strategies: Protocol for anti-poverty policy in the Eastern Tibetan Plateau, China . *Ecological Indicators* , 78, 62–74.

Hubeis, A.V.S., Priono, M., Sedyaningsih, S., Ace S., Bintari, A., Yanis, E., & Mintarti. (2007). *Communication Innovation.* Issue 2. Jakarta: Open University Publisher.

Hurlock, E.B. (2006). *Developmental Psychology: a development throughout the life span.* Jakarta: Erlangga Publisher.

Hurlock., E.B. (1980). *Developmental Psychology: An Approach Throughout the Life Span*. Jakarta: Erlangga Publisher.

Katti, P.K., & Khedkar, M.K. (2005). Towards sustainable energy systems: integrating renewable energy sources is the key to rural area power supply. *Proceedings of the 7th International Power Engineering Conference (IPEC),*1.

Kuncono, O.S. (2013) . Effect of Confucius Ethics on Entrepreneurship, Business Capability and Business Performance of Chinese Ethnic Retailers in Surabaya. *Dissertation*. Airlangga University.

Lehr, U., Nitsch, J., Kratzat, M., Lutz, C., & Edler, D. (2008). Renewable energy and employment in Germany. *Energy Policy*, 36(1), 108- 117. https://doi.org/10.1016/j. enpol.2007.09.004 .

Lionberger, H.F & Gwin, P.H. (1982). *Communication strategies: A guide for agricultural change agents*. Ilinois, United States of America: The Interstate Pinters & Publisher Inc.

Mardikanto, T. (1993). *Penyuluhan Pembangunan Pertanian.* Surakarta: Sebelas Maret University Press.

Masini, A., & Menichetti, E. (2012). The impact of behavioral factors in renewable energy investment decisions making process: conceptual framework and empirical findings. *Energy policy*, 40, 28-38. https://doi.org/10.1016/j.enpol.2010.06.062.

Meredith., Geoffrey, G., Robert, E., Nelson., Philip, A., Nick. (2000). *Kewirausahaan: Teori dan Praktek.* (Asparsayogi, A., Trans.) Jakarta: Pustaka Binaman Pressindo.

Monks, FJ., Knoers, AMP., Had itono, SR. (2001). *Developmental psychology: Introduction in various parts*. Yogyakarta: Gadjah Mada University.

Moreno, B., Lopez, AJ (2008). The effect of renewable energy on employment. The case of Austria (Spain). *Renewable and sustainable energy*, 12(3), 732- 571. Https://doi.org/10.1016/j.rser.2006.10.011.

Nuskhi, M., & Setiana, L. (2004). Factors affecting the entrepreneurial attitudes of dairy farmers in Banyumas Regency. *Journal of rural development*, 4(3), 17-20.

Openshaw, K. (2010). Biomass energy: Employment generation and its contribution to poverty alleviation. *Journal of Biomass Bioenergy*, 34(3), 365-378. Https://doi.org/10.1016/j.biombioe.2009.11.008.

Page, N., & Czuba, C.E. (1999). Empowerment: What Is It? *Journal of Extension*, 37(5). http://www.joe.org/joe/2006august/rb4.php.

Peura, P., & Hyttinen, T. (2011). The potential and economics of bioenergy in Finland. *J.Clean. Prod*, 19(9-10), 927- 945. Https://doi.org/10.1016/j.jclepro.2011.02.009.

Peura, P., Kuittinen, H., Knuckey, L., Goodall, L., & Dinta, L. (2014). Implement sustainable energy for case studies. *International Journal of a sustainable economy* , 6(1), 19-44. Https://doi.org/10.1504/IJSE.2014.058516.

Rachmawatie, D. (2005). *Analysis of Farmer Decisions in Adopting Artificial Insemination Technology*. (Master's thesis). Bogor. Faculty of Animal Husbandry. Bogor Agricultural Institute.

Rogers, E.M., & Shoemaker, F.F. (1971). *Communication of Innovation: a cross-cultural approach*, New York: United States of America: Free Press.

Rowlands, J. (1995). Examined Empowerment. *Development in practice*, 5(2), 101-107.

Santrock, J.W. (2008). *Educational Psychology*. Jakarta: Kencana Prenanda Media Group Publisher.

Sastresa, E.L., Uson, A.A., Bribi, I.Z., & Scarpellini, S. (2010). Local impact of renewable on employment: methodology and case study assessment. *Journal of renewable energy sustainable energy*, 14(2), 679- 690. Https://doi.org/10.1016/j.rser.2009.10.017 .

Shyu, C. (2014). Ensuring access to electricity and minimum basic electricity needs as a goal for the post-MDG development agenda after 2015. *Energy for sustainable development*, 19, 29-38.

Smith, B., Burton, I., Klein, R.J.T., & Street, R. (1999). The Science of Adaptation: A Fremework for Assessment. *Mitigation and Adaptation Strategies for Global Change*, 4, 199–213.

Sobur, A. (2009). *General Psychology*. Bandung: CV. Faithful Reader.

Spencer, L.M., & Spencer, S.M. (1993). *Competence Work: Model for superior performance*. New York: John Wiley and Sons, Inc.

Stewart, J. (1994). *Empowering people*. London: Pustman Publishing .

Suharti, L. & Sirine, H. (2011). Faktor-Faktor yang Berpengaruh Terhadap Niat Kewirausahaan (Entrepreneurial Intention) (Studi Terhadap Mahasiswa Universitas Kristen Satya Wacana, Salatiga). *Jurnal Manajemen dan Kewirausahaan*, 13(2), 124-134.

Thomley, P., Rogers, J., & Huang, Y. (2008). Quantification of employment from biomass power plants. *Renewable energy*, 33(8), 1922 - 1927. Https://doi.org/10.1016/j.renene.2007.11.011.

Tridakusumah, A.C., Elfina, M., Murdiyaningsih, D.I., Pioke, J., & Bumulo S. (2015). Pola Adaptasi Ekologi dan Strategi Nafkah RumahTangga di Desa Pangumbahan. *Sodality: Jurnal Sosiologi Pedesaan*, 3(3), 85-90.

Ul Haq, M. (1995). *Reflection on human development*. United Kingdom: Oxford University Press.

Valer, L.R., Mocelin, A., Zilles, R., Moura, E., & Nascimento, A.C.S. (2014). Assessment of socioeconomics impact of access to electricity in the Brazilian Amazon: a case study in two communities in Mamiraua Reserve. *Energy for sustainable development*, 20, 58-65.

Wang, J.J., Jing, Y.Y., Zhang, C.F., & Zhao, J.H. (2009). Review of multi-criteria decision analysis aid in sustainable energy decision-making. *Journal of sustainable renewable energy*, 13(9), 2263-2278.

Association of owner related and external factors with micro and small manufacturing enterprises growth in Ethiopia

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Abstract

This study was conducted with the objective of analyzing the association of owner related and external factors with growth of MSEs operating in the manufacturing sector. Primary data were collected from 218 randomly selected owner/operator of manufacturing MSEs and coordinators of MSEs by using structured questionnaire and interview, respectively. Chi-square test was employed to analyze the owner related/internal factors, and external factors with growth of manufacturing MSEs. The statistical test revealed that gender, initial investment size, modern machinery, training, infrastructure and location have statistically significant association with growth of manufacturing MSEs; whereas age, education level, work premises and market linkage/ access are found to have statistically insignificant association with growth of MSEs operating in the manufacturing sector, though they make difference on the MSEs growth level. Therefore, to improve the growth of manufacturing MSEs, MSEs development office in collaboration with the municipality, among others, should consider the statistically significant factors and focus on the MSEs' challenges which are stated by the owners of the business (own working premise and market access/linkage) and take corrective actions. Finally, further research on similar area is suggested by considering factors that need solution such as previous experience of operator in the sector, firm age and access to credit; besides similar study on remaining MSEs sector and comparative study may be conducted even within the manufacturing sector as economic sub-sector (i.e., textile and garment, metal working workshop, furniture and wood working, manufacturing bricks etc.) in order to have a holistic understanding of about the determinants of manufacturing MSEs growth

Keywords: *Chi-square, Growth, Manufacturing sector, MSEs*

JEL Classification: L25, L26, O14

INTRODUCTION

Micro and small enterprises play vital roles in poverty reduction, income and employment generation as well as economic development in developing countries like Ethiopia. The sector is now increasingly recognized unlike the previous pessimist notion that these sectors are not linked to the modern and formal sectors and would disappear once industrial development is achieved (McPherson, 1996). Therefore, in many

countries they have been the major engine of growth in employment and output (Effective Policies for Small Business, 2004). According to Fisseha (2006); as cited in Admasu (2012), MSEs employ around 22 percent of the adult population in developing countries. Thus, MSEs are considered as quick remedy of unemployment problem (MoTI, 1997).

Ethiopia has prioritized on MSE development for economic growth, employment generation and building an industrial economy. To this end, in 1997 the government has designed a National MSEs development and promotion strategy which was reviewed in 2011 in view of the country's dynamic economic progress, program feedback and experience of other countries (MoTI, 2011), which facilitates and paves the ground for the growth and development of the sector with the primary objective of creating a favorable environment for MSEs so that MSEs could facilitate economic growth, create long-term jobs, strengthen cooperation between MSEs, provide the basis for medium and large scale enterprises and promote export. In this strategy framework, the government prioritized those enterprises with features like manufacturing and processing various commodities, self-employment particularly by disabled and unemployed youth, start-ups and expanding firms owned by women etc (Berihu, Abebaw, & Biruk, 2014).

Special attention has been given at all levels to untie the constraints of MSEs for they are important vehicles to address the challenges of unemployment, economic growth and equity in the country. The government of Ethiopia has been implementing and incorporating the program as a strategic agenda in three consecutive five years national developmental plans of the country i.e. the 1st five years plan called Poverty Reduction and Sustainable Development Program (PRSDP), in the 2nd five years plan called Plan for Accelerated and Sustainable Development to End Poverty (PASDEP) and in the 3rd five years plan which is called Growth and Transformation Plan (GTP) covering the years from 2010/11 to 2014/15 (MoFED, 2011), and currently the 2nd part of five years plan Growth and Transformation Plan (GTP). In view of this, the government is implementing different support service programs in different parts of the country for helping MSEs attain their intended objectives.

Ensuring that Micro and Small Enterprises (MSEs) fully participate is a key to the large-scale uptake of sustainable practice. Sustainable development is highly demanding in particular on manufacturing firms, including MSEs, as their economic importance is higher. In Ethiopia, for example, as discovered by the CSA survey of 2003, MSEs account for the bulk of non-agricultural economic activities and nearly 95.6% of total industrial employment. Despite the large number, the MSE sector in Ethiopia is exposed to a number of constraints related to policy, and structural and institutional problems that hinder sustained growth, development and long-term planning (Amha & Ageba, 2006).

Various studies have been conducted on MSEs in Ethiopia. The major focuses of these study subject are on (1) nature and characteristics of MSEs and their operators (Assefa, Zerfu & Tekle, 2014; Saravanan, Mohideen & Seid, 2014); (2) access to finance for MSEs (Selamawit, Aregawi & Negus, 2014); (3) the social and economic role of MSEs (Berhanu, 2014; Kidane, Hepelwa, Mdadila & Leel, 2015; Tasisa, 2014; Bereket, 2010 and Worku, 2004); (4) the performance of MSEs (Hailu, 2010; FeDRE, 2013; Sherefa, 2012; Abera, 2012 and Netsaalem, 2011); (5) the efficiency of micro finance institutions and other relevant bodies (Deribie, Negussie & Mitiku, 2013 and World Bank Group, 2013); (6) external factors and success factors on developments and growth of MSESs and women and youth owned MSEs (Haftom, 2013; Hailay, 2014; Habtamu, 2012; Arega, Muhammed, & Daniel, 2016; Lilian, 2013; Berhanu, 2014;Zemenu, Mohammed, 2014 and Berihu, Abebaw & Biruk, 2014) and (7) challenges and opportunities of MSEs (Desalegn, 2013; Bizusew, 2015; Ruth, 2013 and Mukund, 2013).

Moreover, almost all of the previous studies were conducted not in a sector wise, because some problems are specific to a given sector. Their focuses were in general all sector altogether but not in sector by sector (as manufacturing, construction, service, trade and industry, etc). It is difficult to generalize that the identified determinants ofMSEs growth of all individually owned enterprises across the sector are equally affect the growth of MSEs. Therefore, this study was conducted with the objective to analyzing the association of owner related and external factors with growth of micro and small manufacturing enterprises taking the case of selected towns of central administrative zone of Tigray regional state.

METHODS

This section presents the research approach, description of the data type, data sources, method of data collection, sampling design, sample size and method of data analysis. Given the objectives and nature of this study, the study has applied an explanatory type of research that determine the association between the dependent and independent variables by using cross sectional data collected from the sample respondents.

Target population

The target population of the study includes the owners/operators of micro and small enterprises engaged in manufacturing sectors located in selected study area that have been in business for a minimum of two years.

Data type, sources and collection instruments

This study had used primary sources of data. It employed cross-sectional data sourced from primary source of data. This is mainly due to the difficulties encountered in surveying large samples of the same respondents over time because of high firms entering and exiting the market. Besides, both qualitative and quantitative types of data have been used for this study. In this study the required data have been collected through questionnaire and interview instruments: Questionnaire**:** both close ended and open-ended structured questionnaires have been prepared and personally distributed by data collectors for the owners/operators of the MSEs to collect relevant data for the study.

Sampling design and size

A sample design is a definite technique that is adopted in selecting a sample from a given population. Among the major towns found in central zone, Aksum, WukroMaray, Adwa and Abiy Addi towns are selected purposively as a study area for this study. This because first central zone is the mandate zone of the university and these towns found in this zone believed can represent the remaining towns in the zone, and it is very difficult to address all small towns found in the zone to conduct quality research. To get a sample size from each town, the total MSEs registered before two years (before 2017) are identified. Then out of these total populations of the study the sample size are selected by applying a simplified scientific formula provided by Yemane (1997).

$$n = \frac{N}{1 + N(e)^2} \quad \text{..... (1)}$$

Where; n is the sample size, N is the total Manufacturing MSEs in the selected towns. The unit of analysis of the study was the individual owner of enterprise. The investigators decided the confidence level of the study to be at 95% consequently the level of precision (e) is 5%.

According to the above-mentioned equation the MSEs owners that have been questioned were 218. Drawn using proportionate sampling technique 62 MSEs owners, 61 MSEs owners, 24 MSEs owners and 71 MSEs owners (total 218) from Aksum Town, Adwa Town, WukroMaray Town and Abiy Addi Town, respectively, has been questioned.

Method of data analysis and presentation

This study has applied the Chi-square test to test the statistical association of owner related and external factors with growth of MSEs operating in the manufacturing sector.

Definition of variables

Once the analytical procedure and its requirements are known, it is necessary to identify the potential explanatory and dependent variables, and describe their measurements. Deferent variables are expected to have association with growth of MSEs.The variables in this study are of two types: dependent variable (the growth of manufacturing MSEs) and independent or explanatory variables (internal and external factors).

In this study change in the number of employees was used as a dependent variable to measure the growth of manufacturing MSEs. Hence, employment growth is computed following the Evans (1987) model, i.e. *firmgr*= (ln *St*'-ln *St* / *firma*)Where, *firmgr* = firm growth, lnSt' = ln of current employment, lnSt = ln of initial employment and *firma* = firm age.

Independent variables are variables that are expected and have more explanatory power on the dependent variable, i.e., growth of manufacturing MSEs.vThese are owner related/internal factors, i.e., age, gender, education level, initial investment size, availability of machinery and external factors, i.e., access to working premise, market access or linkage, infrastructure facilities (electricity, water, road facility), business or technical training and location of business. The expected effects of these factors on the growth of manufacturing MSEs are discussed in the following section.

Age:Due to the reason that the younger owner/operator has the necessary motivation, energy and commitment to work and is more inclined to take risks, many previous empirical studies indicated that the younger owner/manager of MSEs is more likely to grow than the counterpart (Kokobe, 2013 and Hailay, 2014). Thus, in this study age of the owner is predicted to have a negative impact on the growth of manufacturing MSEs.

Gender:It indicates whether the owner is male or female. Male ownedfirms may have more opportunities to develop as a result of male may have higher networks to get assistance may have lesser difficulty in assembling resources. Since women are more family oriented**,** concentrated in more slowly growing sectors and more risk-averse, empirical studies (Habtamu, 2012; Haftom, 2013; Ishengoma & Kappel, 2008; Kokobe, 2011; Hailay, 2014; and Mulu, 2007) found that Male-headed firm's grow faster than that of female headed. On the other hand, Chirwa (2008) indicated that female-owned enterprises tend to grow more rapidly in terms of employment than male-owned ones.

Education level:Owners of MMSEs with a higher formal education and training would be expected to grow faster than their counterpart (Harding, 2002). In consistent to this theory, some empirical studies (Ahiawodzi & Adabe, 2012; and Mulu, 2007) found that the growth of MSEs improves with increasing in education. In contrast, there were also studies which found education is insignificant in determining the growth of MSEs (Hove & Tarisai, 2013; and Kokobe, 2013). Hence, in this study education level of the owner is predicted to have a positive impact on the growth of manufacturing MSEs

Initial investment size: Clover & Darroch (2005) reported that funding constraints at start-up highly affects the growth of MSEs. In other words, start- up capital of a given firm has significant positive effect on the growth of MSEs (Ahiawodzi & Adabe, 2012; Habtamu, 2012; Hailay, 2014 and Haftom, 2013). Similarly, in this study, it is predicted that the size of initial investment size has a positive impact on manufacturing MSEs growth.

Availability of modern machinery: According Belay, Asmera & Tekalign (2015), MSEs that lacked modern machinery and equipment have shown limited growth and expansion. Similarly, in this study, it is predicted that having modern machinery for the intended business operative has a positive impact on manufacturing MSEs growth.

Access to working premises: MSEs that have own premise is positively associated with its growth. Manufacturing business enterprises need enough working and marketing place for their product and services. Unless having enough working and selling place, the productivity of manufacturing MSEs go down due to the fact that the product produced need warehouse to store and selling outlets to rich in the hands of final customers which is major determinant for existence and growth of the enterprises. The empirical study of (Haftom, 2013) showed that MSEs operators that secure own working place and buildings are in a better position to plan with greater certainty and stand a better chance of accessing the needed infrastructure and in doing so will enhance the growth of such enterprises. Thus, own premise is expected to have positive association with Manufacturing MSEs growth.

Technical and business management training: Studies conducted by Dagmawit & Yishak (2016); and Arega, Muhammed, & Daniel (2016), attending technical and business management training positively affect the growth of MSEs. Whereas, studies conducted by Garoma (2012), found insignificant association between Entrepreneurial training of the owner and success or growth on micro enterprises. Thus, in this study those manufacturing MSEs that have attended technical and business management training are more likely to grow as compared to others

Market linkage: According to Mbugua, Mbugua, Wangoi, Ogada, & Kariuki. (2013), marketing has a major effect on the growth of MSEs.MSEs that have good market linkage exhibit higher growth compared to MSEs that have no good market linkage (Belay, Asmera & Tekalign, 2015). Further, Kinda & Loening (2008) reported that lack of basic raw materials and their higher cost affects the growth of the MSEs. In consistent to these findings many studies (Admasu, 2012; Hove & Tarisai, 2013; Kefale & Chinnan, 2012; and Kokobe, 2013) indicated the positive effect of marketing issues. Similarly, in this study, it is predicted that the market linkage has a positive impact on manufacturing MSEs growth.

Access to infrastructure: Nonexistent of basic infrastructure such as, inability to access power, water, road etc have a large impact on the growth of manufacturing MSEs (Hailay, 2014; Admasu, 2012; Clover & Darroch, 2005; Haftom, 2013; Kinda & Loening, 2008; and Osotimehin, Jegede, Akinlabi, & Olajide, 2012). Similarly, in this study access to infrastructure is expected to have a positive impact on manufacturing MSEs growth.

Location*:* MSEs located at main road side exhibit higher growth compared to MSEs located out of town (Habtamu, 2012; Hasnu & Amjam, 2007). Therefore, in this study operating at busy street is expected positively affect MSEs growth.

Thus, to investigate the association of internal and external factors with growth status of manufacturing MSEs, the following equation is estimated to examine the relation of each factor with growth of MSEs (number of employees). The equation is specified as follows:

$$Pr(Y=1)= \beta_0 + \beta_1(Age) + \beta_2(Gndr) + \beta_3(Ednlvl)+ \beta_4(InitInv) + \beta_5(Machnry) + \beta_6(Acswp) + \beta_7(Mrkta)+ \beta_8(Infr) + \beta_9(Trnng)+ \beta_{10}(Loctn)+ \varepsilon_i \quad (2)$$

Where;

β_0= Constant (intercept)

$\beta_1, \beta_2 \ldots \beta_{10}$ = slope coefficients of independent variables (the unknown parameters that reflecting the impact of change in independent variables).

ε_i= Error term

Y = Manufacturing MSE's growth

Age= Age of owner operator

Gndr= Gender of MSEs owner/operator

Ednlvl = Education level of owner operator

InitInv= Size of the initial investment by the owners

Machnry= Availability of machineries

Acswp = Access to Working Premise

Mrkta= Market access.

Infr= Infrastructure facilities (electricity, water, Road Facility)

Trnng= owner attended business and technical training or not

Loctn=LocationMSEs located at main road side versus located out of main road

RESULT AND ANALYSIS

For the purpose of analyzing the association of owner related and external factors with growth of MSEs operating in the manufacturing sector which are found in the selected towns of central administrative zone of Tigray region (i.e., Aksum, WukroMaray, Adwa and Abiy Addi towns) were taken as a target population for this study. Primary data was collected from 218 MSEs functioning in manufacturing sector. Using the manufacturing MSEs growth status as a dependent variable where by a value of 1 is given to grown manufacturing MSE and 0 to non-grown/survival manufacturing MSE taking the employment growth rate in to account.

General characteristics of the enterprises

Micro and small enterprises are generally categorized in to two: micro and small enterprises. As per to Table 1, most 134 (61.47percent) of the surveyed enterprises in selected towns of Central administrative Zone of Tigray Region were micro enterprises and the remaining 84(38.53 percent) were small enterprises. This shows that majority of the enterprises of the selected towns were categorized under the micro enterprise. This result is consistent with the findings of MoTI (1997) which found 90 percent micro and 10 percent small enterprises conducted in 48 major Ethiopia towns, Hailay (2014) found 80 percent micro and 20 percent small enterprises in Feresmay Town, and Kefale &Chinnan (2012) found 73 percent micro and 27 percent small enterprises in Woldiya Town.

Table 1. Category of mmanufacturing MSEs in selected towns of Central Administrative Zone of Tigray

Enterprise type	Number of enterprises	Percent (%)
Micro	134	61.47
Small	84	38.53
Total	218	100.00

Source: Own Survey Data (2019)

Status of manufacturing MSEs in selected towns of central administrative zone of Tigray

To determine the status of manufacturing MSEs, information on the growth measure has to be collected and an appropriate measure of aggregate growth has to be used. As a result, from the available alternatives of aggregate growth measures (capital, sales, profit, employment and etc) that are discussed in literature, this study used employment size as an objective measure of firm growth since the data used in this study rely on a recall basis as a result other measures are susceptible to measurement errors. Accordingly, manufacturing MSEs growth rate is computed by taking the natural logarithm of change in employment size over the life of the firm [i.e., $\boldsymbol{gr} = \frac{\boldsymbol{ln\,St' - ln\,St}}{\boldsymbol{entage}}$] following Evans (1987) model. Taking the calculated growth rate, the manufacturing MSEs are classified in to two broad categories i.e., grown (if growth rate > 0) and non-grown or survival (if growth rate ≤ 0) following Cheng (2006) growth classification. Thus, out of the total sample 55.96 percent are found survival type (122 MSEs) and the remaining 44.04 percent (96MSEs) are found grown type. The following Figure 1 shows status of manufacturing MSEs in the selected towns.

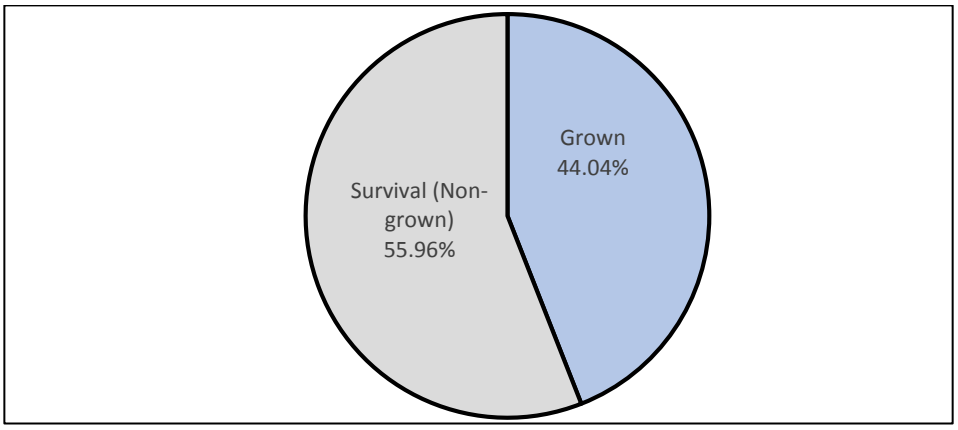

Figure 1. Status of manufacturing MSEs in selected towns of Central Zone of Tigray

As Figure 1, shows majority (55.96%) of manufacturing MSEs are found non-grown type and only 44.04 percent (96) are found grown type. When looking at the growth situation of each enterprise separately, the following Table 2 indicated that from the surveyed 134 micro enterprises 38.06% (51 micro enterprises) are found grown type and the remaining 61.94% (83 micro enterprises) are found survival type. Similarly, from the surveyed 84 small enterprises 53.57% (45 small enterprises) are found grown type and the remaining 46.43 percent (39 small enterprises) are found survival type. From this it is possible to conclude that manufacturing MSEs of the selected towns has shown a growing level from start to present in terms of increasing in number employees, even though there is a difference between these enterprises. Small enterprises show more growing status than that of micro enterprises.

Table 2. Growth situation of manufacturing MSEs in enterprise type wise in the selected towns

Categories	Enterprise type				Total	
	Micro		Small			
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Grown	51	38.06	45	53.57	96	44.03
Survival	83	61.94	39	46.43	122	55.96
Total	134	100.00	84	100.00	218	100.00

Source: Own Survey (2019)

Growth situation of manufacturing MSEs in each of the selected towns

Concerning to the growth situation of an enterprises in the selected towns comparatively, the following Table 3 indicated that from the surveyed 75,54,65 and 24 MSEs found in Adwa, Abiy Addi, Aksum and WukroMaray towns 66.67% (50 enterprises), 31.48% (17 enterprises), 32.31%(21enterprises) and 33.33%(8 enterprises) are found grown type and the remaining 33.33% (25 enterprises), 68.52% (37 enterprises), 67.69% (44 enterprises), and 66.67% (16 enterprises) are found survival type, respectively. Similarly, the average growth rate of manufacturing micro and small enterprises shows 21.30%, 20.50%, 19.40%, and 17.40% for enterprises found in Adwa, Abiy Addi, WukroMaray, and Aksum towns, respectively.

From this it is possible to conclude that those manufacturing MSEs found in Adwa Town comparatively grow faster than enterprises found in other towns selected in this study and followed by enterprises operating in Abiy AddiTown. This is because, as it was observed in our field survey and communicated MSEs coordinator, manufacturing MSEs found in Adwa Town are clustered which in turn might be helped them to access enough working premise, market linkage, easy access to manufacturing inputs, etc as compared to other towns addressed in this study. Table 3. shows growth situation of manufacturing MSEs in each of the selected towns.

Table 3. Growth situation of manufacturing MSEs in each of the selected towns

Towns	Grown		Growth Rate			Non-grown		Total	
	Freq.	Percent	Min.	Max.	mean	Freq.	Percent	Freq.	Percent
Aksum	21	32.31	**0.006**	**0.403**	**0.174**	44	67.69	65	29.82
Adwa	50	66.67	**0.009**	**0.693**	**0.213**	25	33.33	75	34.40
WukroMaray	8	33.33	**0.063**	**0.347**	**0.194**	16	66.67	24	11.01
Abiy Addi	17	31.48	**0.013**	**0.549**	**0.205**	37	68.52	54	24.77
Total	96	100.00	**0.006**	**0.693**	**0.201**	122	100.00	218	100.00

Source: Own Survey (2019)

MSEs growth and internal/owner related factors

As it is discussed in the review of related literature part, internal/operators related factors are those of internal factors which may affect the growth of manufacturing MSEs internally. Several studies have been suggested various such factors including gender, age, education level, previous experience, initial investment size etc. In this section the growth of manufacturing MSEs in relation to gender, age, educational level, initial capital (investment) size and available machinery are discussed below.

MSEs growth in relation to owners/operators gender and age

Gender of the owner/operator was the first factor which expected to affect the growth of manufacturing MSEs. It is categorized in to male and female. In this study, out of the total surveyed MSEs (218), 189 (86.70 percent) were male headed and the rest 29 (13.30 percent) were female headed as described Table 4. This result is consistent with the findings of Mbugua, Mbugua, ,Wangoi, Ogada, & Kariuki (2013) that found most (58.5) of the surveyed MSEs were male-headed and the remaining 41.5 were female-headed and Hailay (2014) also found 64 percent of the surveyed MSEs were male-headed and the remaining 36 percent were female-headed but contrary to studies of Mulu (2007), Habtamu (2012), Haftom (2013), and Kokobe (2011).

In this survey also there is a difference in the average growth rate between the female owned manufacturing MSEs and the male owned manufacturing MSEs i.e., male owned manufacturing MSEs reveals a smaller mean growth rate (20%), whereas the mean growth rate of female owned MSEs is higher (21.7%). As a result, male owned Manufacturing MSEs have a smaller tendency of growth and are more of survival type as compared to female owned manufacturing MSEs. This may be due to the fact females take their business activities seriously and they may not incur extra unnecessary expenses as compared to male counterpart. Furthermore, the Chi-square analysis (Chi^2=5.37, P=0.02) shows that there is a significant association between manufacturing MSEs growth and gender of the operators at 5 percent significance level.

This result is consistent to the findings of Chirwa (2008) which indicated that female-owned enterprises tend to grow more rapidly in terms of employment than male-owned ones, but it is in contrast with the empirical studies of Habtamu, (2012), Haftom (2013), Ishengoma & Kappel (2008), Kokobe (2011), Hailay (2014) and Mulu (2007) which found that male owned firm's grow faster than that of female headed.

From this result it is possible to conclude that there is a difference in growth among these two groups (grown and survival) in terms of gender. Table 4 shows the overall relationship between the surveyed owners/operators gender and age, and manufacturing MSEs growth.

Table 4. Manufacturing MSEs growth in relation to owners/operators gender and age

Variable	Cate-gories	Manufacturing MSEs Growth							Total		Chi^2	P-value
		Grown		**Growth Rate**			Non-grown					
		Freq.	Percent	**Min.**	**Max.**	**mean**	Freq.	Percent	Freq.	Percent		
Gender	Male	89	92.71	**0.006**	**0.693**	**0.200**	100	81.97	189	86.70	5.37*	0.02
	Female	7	7.29	**0.040**	**0.549**	**0.217**	22	18.03	29	13.30		
	Total	96	100.00	**0.006**	**0.693**	**0.201**	122	100	218	100		
Age	19-28	30	31.25	**0.034**	**0.693**	**0.266**	44	36.07	74	33.94	0.78	0.94
	29-38	45	46.88	**0.009**	**0.693**	**0.189**	56	45.90	101	46.33		
	39-48	16	16.67	**0.009**	**0.346**	**0.152**	17	13.93	33	15.14		
	49-58	3	3.13	**0.046**	**0.099**	**0.067**	3	2.46	6	2.75		
	>58	2	2.08	**0.006**	**0.198**	**0.102**	2	1.64	4	1.83		
	Total	96	100.00	**0.006**	**0.693**	**0.201**	122	100.00	218	100.00		

Source: Own Survey (2019)
**Significant at 5 percent level*

Owner/operator age was the other factor which expected to determine manufacturing MSEs growth significantly but negatively. In order to clearly and precisely analyze and discuss the effect of owner/operator age on manufacturing MSEs growth, the continuous value of age is categorized in to five categories (i.e. 19-28, 29-38, 39-48, 49-58 and greater than 58) by taking 10 value in between each category. Accordingly, Table 4 shows 74 (33.94 percent), 101 (46.33percent), 33 (15.14 percent), 6 (2.75 percent) and 4 (1.83 percent) of the surveyed MSEs were found within the age range of 19-28, 29-38, 39-48, 49-58 and greater than 58 years, respectively. Thus, most 101 (46.5 percent) of the sampled MSEs were found within the age range of 29-38.

As it is shown in the above Table 4, 78.13 percent of grown manufacturing MSEs are owned or operated by those individuals' age are in between 29-38 and 19-28 years with in 0.9-69.3percent growth rate. Similarly, they also take majority (81.97%) of the

survival manufacturing MSEs succeeded by 39-48 and49-58 that constitutes 19.8 percent of the grown manufacturing MSEs and 16.39 percent of the survival manufacturing MSEs. Therefore, most manufacturing MSEs are operated by whose age is between 29-38 and 19-28. Similarly, the average growth rate is higher (26.6%) for whose age is in between 19-28years and decreases as the age of operator is increases. From this we can understand that age of the owner/operator has an exact inverse relation with the growth of manufacturing MSEs. However, the Chi-square analysis (Chi^2=0.78, P=0.94) shows that there is insignificant association between manufacturing MSEs growth and age of the owners/operators.

This result is consistent to the findings of Hailay (2014) that found age of the owner/operator is negatively affect growth of manufacturing MSEs that young owners grow faster than the old one and inconsistent to empirical studies of Mulu (2007), Habtamu (2012) and Haftom (2013) found that age of the owner/operator is not a significant factor affecting MSEs growth.

This may be due to the reason that the younger owner/operator has the necessary motivation, energy and commitment to work and is more inclined to take risks; a younger individual may have a higher need for additional income. In addition, the burden of supporting a family generally declines with age. That means the older owner/operator is likely to have reached his/her initial aspiration.

Manufacturing MSEs growth in relation to owners/operators education level

According to previous studies of McPherson (1996), Mulu (2007), and Habtanu (2012) in most developing countries the level education of MSEs operators is low. Similarly, the result of this study show that out of the total respondent 39.91, 28.44 and 22.48 percent of manufacturing MSEs operators are secondary education, college diploma/ TVET, primary education and above holders, respectively. The remaining 6.88 percent and 2.29 percent of sample populations are degree holders and illiterate, respectively. Table 5 summarizes the educational level of manufacturing MSEs owners.

Table 5. Manufacturing MSEs growth in relation to owners/operators education level

Categories	Manufacturing MSEs Growth							Total		Chi^2	P-value
	Grown		**Growth Rate**			Non-grown					
	Freq.	Percent	**Min.**	**Max.**	**mean**	Freq.	Percent	Freq.	Percent		
Illiterate	-	-	-	-	-	5	4.10	5	2.29		
Primary	24	25.00	**0.006**	**0.693**	**0.167**	25	20.49	49	22.48		
Secondary	40	41.67	**0.012**	**0.693**	**0.254**	47	38.52	87	39.91	7.31	0.12
Coll. Dipl/TVET	23	23.96	**0.009**	**0.549**	**0.161**	39	31.97	62	28.44		
Degree & Above	9	9.38	**0.034**	**0.274**	**0.161**	6	4.92	15	6.88		
Total	96	100.00	**0.006**	**0.693**	**0.201**	122	100.00	218	100.00		

Source: Own Survey (2019)

The secondary and primary education completes take the majority (66.67%) of the grown manufacturing MSEs with 0.6-69.3 percent growth rate similarly secondary and College diploma/TVET holder takes majority (70.49%) of the non-grown manufacturing MSEs succeeded by college diploma/TVET and degree and above holders that constitutes 33.34 percent of the growing manufacturing MSEs. Therefore, most manufacturing MSEs are operated by secondary education completes and college diploma holders.The average growth rate is higher (25.4%) for secondary education completes and decreases for primary education complete, diploma/TVET and degree and above holders. However, the

Chi-square analysis (Chi^2=7.31, P=0.12) shows that there is no significant association between manufacturing MSEs growth and education level of the operators.

Moreover, the interview result shows that degree holders manufacturing MSEs mostly have an additional income from other activities such as from professional jobs and mostly they are opportunist i.e., they are engaged in many businesses. This implies that as the level of education increase the growth rate of manufacturing MSEs increase till some education level and then as education level further increases the growth of MSEs start to decline.

From this result it is possible to conclude that there is a difference in terms of growth among these two categories (grown and non-grown/survival) in terms of education level of the owner or operator, although the difference is insignificant according to Chi-square test statistics.

Manufacturing MSEs growth in relation to initial investment size

To start any business obviously it needs capital which may raise either from own saving or other sources such as family, relative, friend, Equb, Idir, microfinance, banks etc. The amount may again vary from firm to firm. To make this analysis short and clear, this variable was also grouped in to seven categories (less than or equal birr 1000, 1001-5000, 5001-10000, 10001-25000, 25001-50000, 50001-100000 and greater than 100,000). The following Table 6 shows the comparison of grown and non-grown/survival manufacturing MSEs by using initial investment size.

Table 6. Manufacturing MSEs growth in relation to initial investment

Categories	Manufacturing MSEs Growth							Total		Chi^2	P-value
	Grown		Growth Rate			Non-grown					
	Freq.	Percent	Min.	Max.	mean	Freq.	Percent	Freq.	Percent		
<=1000	4	4.17	**0.006**	**0.268**	**0.173**	5	4.10	9	4.13		
1001-5000	19	19.79	**0.034**	**0.693**	**0.160**	28	22.95	47	21.56		
5001-10000	26	27.08	**0.009**	**0.693**	**0.194**	26	21.31	52	23.85		
10001-25000	22	22.92	**0.041**	**0.549**	**0.236**	37	30.33	59	27.06		
25001-50000	16	16.67	**0.013**	**0.549**	**0.218**	18	14.75	34	15.60		
50001-100000	7	7.29	**0.009**	**0.549**	**0.216**	4	3.28	11	5.05	9.64***	0.00
>100000	2	2.08	**0.091**	**0.347**	**0.213**	4	3.28	6	2.75		
Total	96	100.00	**0.006**	**0.693**	**0.201**	122	100.00	218	100.00		
Mean		24,348.02			**0.201**		23,265.57		26,620.24		
SD		38,145.39			**0.154**		35035.95		37,919.65		
Minimum		300			**0.006**		300		300		
Maximum		300,000			**0.693**		220,000		300,000		

Source: Own Survey (2019)

**** Significant at 1percent level*

Majority (27.08%) of the growing manufacturing MSEs start operation with an initial investment size that ranges from birr 5001–10,000 while majority (30.33%) of the survival manufacturing MSEs start operation with an initial investment size that ranges from birr 10,001-25,000. But most (88.07%) manufacturing MSEs in this study start operation with an initial investment size that ranges from birr 1001 – 50,000. The minimum initial investment size for all MSEs is birr 300 whereas the maximum initial investment size is birr 300,000 and the average initial investment size is birr 26,620.24. The initial investment size for the growing manufacturing MSEs is more variable and diverse as compared to the survival manufacturing MSEs as the SD of the initial investment shows in the Table 6. Similarly, the average initial investment size is higher for the grown manufacturing MSEs (birr 24,348.02) as compared to the survival/no-

grown manufacturing MSEs average initial investment size (birr 23,265.57). The average growth rate is higher for those manufacturing MSEs that are started operation with an initial investment size that ranges from birr 10,001-25,000 and decrease for both those that start operation with an initial investment size that below birr 10,000 and over birr 25,000. Moreover, the Chi-square analysis (Chi^2=9.64, P=0.00) shows that there is a significant association between manufacturing MSEs growth and initial investment of the operators at 1 percent significant level.

Therefore, this result is consistent with the finding of Habtamu (2012), Haftom (2013), and Dagmawit & Yishak (2016) which stated that MSEs started with higher initial investment size were significantly more likely to grow than MSEs started with lower initial investment size. But, contrary to the results of Hailay (2014) reported that start- up capital of a given firm has insignificant effect on the growth of MSEs.

Generally, from this result, it can be summarized that the relationship between initial investment size and manufacturing MSEs growth rate in some extent positive as expected. This may be because larger in initial investment size are sufficient enough to carry out their business activities.

Manufacturing MSEs growth in relation to modern machinery

Availability of machinery is another factor which expected to positively affect the growth of manufacturing MSEs. Buyers need better products time after time. To produce quality product/better product, enterprises (especially, wood work and metal work) need modern machineries and equipment that is very crucial for producing quality output that is preferred by buyers. In this study it is categorized in to those which have modern machinery and those which have not it. Table 7 shows the comparison of grown and non-grown/survival manufacturing MSEs by using accessibility of machinery.

Table 7. Manufacturing MSEs growth in relation to modern machinery

Categories	Manufacturing MSEs Growth							Total		Chi^2	P-value
	Grown		Growth Rate			Non-grown					
	Freq.	Percent	Min.	Max.	mean	Freq.	Percent	Freq.	Percent		
Available	20	20.83	**0.009**	**0.594**	**0.211**	15	12.30	35	16.06		
Not available	76	79.17	**0.006**	**0.693**	**0.198**	107	87.70	183	83.94	2.90*	0.08
Total	96	100.00	**0.006**	**0.693**	**0.201**	122	100.00	218	100.00		

Source: Own Survey (2019)
**Significant at 10 percent level*

As indicated in the Table 7, 20.83% of the growing manufacturing MSEs and 12.30% of the survival MSEs have machinery in their business operation. Majority (79.17%) of the grown manufacturing MSEs and majority (87.70%) of the survival/non-grown MSEs have not machinery in their manufacturing activities. On the contrary, the average growth rate is higher (21.10%) for those manufacturing MSEs which have machinery and (19.80%) for those manufacturing MSEs which have not it.Furthermore, the Chi-square analysis (Chi^2=2.90, P=0.08) shows that there is a significant association between manufacturing MSEs growth and availability of machinery at 10 percent significance level. From this one can understand that those manufacturing MSEs that have machinery have shown higher growth and expansion comparatively.

Therefore, this result is consistent with the finding of Belay, Asmera & Tekalign (2015), which stated that MSEs have the required modern machinery were significantly more likely to grow than MSEs have not modern machinery. Thus, from this result it is

comparatively possible to conclude that lack of working machinery was one the impeding challenge faced by most manufacturing MSE, although it can be summarized as manufacturing MSEs get modern machinery for their manufacturing activities, the probability of manufacturing enterprise growth increases.

MSEs growth and external factors

Manufacturing MSEs growth in relation to work premises and training

A work premise is another factor which expected to affect the growth of manufacturing MSEs positively. In this study it is categorized in to own enough work premises and own not enough work premise. In this study, out of the total surveyed manufacturing MSEs, 6.88% were have enough work premises for their business operation and 93.12% are not have enough work premises as described Table 8. Majority (92.71%) of the grown manufacturing MSEs and majority (93.44%) of the survival MSEs not have enough work premises. Only 7.29% of the grown manufacturing MSEs and 6.56% of survival/ non-grown manufacturing MSEs have enough work premises to carry out their business. Thus, it is possible to say that still lack of working place for manufacturing micro and small enterprise is immense. However, the association between work premises and growth of manufacturing MSEs is not statistically significant according to the Pearson chi-square test statistics (Chi^2=0.05, P=0.83).

Even though, it is statistically insignificant, from the result it is possible to conclude that those manufacturing MSEs that have work premises are most probably growing as compared to non-grown or survival MSEs and positively related to manufacturing MSEs growth. The following Table 8 shows the comparison of grown and non-grown/survival manufacturing MSEs by using work premises and training.

Table 8. Manufacturing MSEs growth in relation to work premises and training

Variable	Categories	Manufacturing MSEs Growth							Total		Chi^2	P-value
		Grown		Growth Rate			Non-grown					
		Freq.	Percent	Min.	Max.	mean	Freq.	Percent	Freq.	Percent		
Work Premises	Enough	7	7.29	**0.012**	**0.255**	**0.144**	8	6.56	15	6.88	0.05	0.83
	Not enough	89	92.71	**0.006**	**0.693**	**0.205**	114	93.44	203	93.12		
	Total	96	100.00	**0.006**	**0.693**	**0.201**	122	100.00	218	100.00		
Training	Trained	17	17.71	**0.006**	**0.549**	**0.208**	9	7.38	26	11.93	5.45*	0.01
	Not trained	79	82.29	**0.009**	**0.693**	**0.167**	113	92.62	192	88.07		
	Total	96	100.00	**0.006**	**0.693**	**0.201**	122	100.00	218	100.00		

Source: Own Survey (2019)
**Significant at 5 percent level*

As indicated in Table 8, about 88.07% of manufacturing MSEs owners were not participated in business training and 11.93% of them were participated in the training. Only 17.71% of the growing manufacturing MSEs and 7.38% of survival/non-grown manufacturing MSEs owners participated in training. Among the non-growing manufacturing MSEs 65% were not trained and 7.38% were trained. Chi-square test of business training between the two groups was run and the difference was found to be statistically significant at 1% level of significance. This result is consistent with the findings of Dagmawit & Yishak, (2016) who found significant association between business training of the owner and growth of manufacturing MSEs. However, it is

inconsistent with the findings of Garoma (2012) who found insignificant association between business training of the owner and success of micro enterprises.

Therefore, from these results it is possible to conclude that training conducted to micro and small enterprises is still inadequate to perform well in the enterprise business, despite startup training is given for most of manufacturing MSE. In addition, as asserted by interviewee, most likely inadequacy of training resulted from both by quality of training and shortage of duration of training.

Manufacturing MSEs growth in relation to market linkage and infrastructural access

Access to market linkage was another variable which expected to have a positive relationship with growth of manufacturing MSEs. According to Table 9, majority (87.50%) of the growing manufacturing MSEs and majority (80.33%) of the survival MSEs have not market linkage with other firms/institutions. Only 12.50% of the growing manufacturing MSEs and 19.67% of survival/ non-grown manufacturing MSEs have market linkage.Similarly, the MSEs that have a market linkage with firms reveal the 21.20% average growth rate. 83.49% percent of the growing and the survival manufacturing MSEs have no market linkage. This is consistent with Eshetu & Mammo (2009) and Habtamu (2012) study that found most MSEs in Ethiopia has poor market linkage.

This is may be due to the fact that most manufacturing MSEs sell their products to customers around their working place or to any person that comes to their market area. In addition, the demand for the MSEs products and the supply of raw material to MSEs may not be consistent. Similarly, the association between market linkage and growth of manufacturing MSEs is not statistically significant according to the Pearson chi-square test statistics (Chi^2=2.00, P=0.157). But this doesn't mean that market access/linkage and manufacturing MSEs growth has no association, rather in this particular study area its effect is statistically insignificant. From this result it is possible to conclude that there is a difference in terms of growth among these two groups (grower and non-grower) in terms of market linkage, although the difference is insignificant according to Chi-square test statistics. Table 9 shows the details of market linkage and infrastructure result.

Table 9. Manufacturing MSEs growth in relation to market linkage and infrastructure

Variable	Categories	Manufacturing MSEs Growth							Total		Chi^2	P-value
		Grown		Growth Rate			Non-grown					
		Freq.	Percent	Min.	Max.	mean	Freq.	Percent	Freq.	Percent		
Market Linkage/ Access	Have access	12	12.50	**0.009**	**0.321**	**0.212**	24	19.67	36	16.51	2.00	0.157
	Not have access	84	87.50	**0.006**	**0.693**	**0.125**	98	80.33	182	83.49		
	Total	96	100	**0.006**	**0.693**	**0.201**	122	100	218	100		
Infrastructure	Enough infra	75	78.13	**0.006**	**0.693**	**0.213**	76	62.30	151	69.27	6.32*	0.01
	Not enough	21	21.87	**0.009**	**0.462**	**0.159**	46	37.70	67	30.73		
	Total	96	100.00	**0.006**	**0.693**	**0.201**	122	100.00	218	100.00		

Source: Own Survey (2019)
**Significant at 5 percent level*

Access to infrastructure was also the other external factors which expected to positively affect the growth of MSEs. The specified factors in relation to this variable are

insufficient and interruption of power, insufficient and interruption of water supply, insufficient and interruption of communication services, insufficient and inconvenient road and lack of sufficient and quick transportation. Here respondents were also asked to state whether these all infrastructures are sufficient enough to carry out their business operation or not. Then as indicated in the Table 9 above, majority (78.13%) of the growing manufacturing MSEs and majority (62.30%) of the survival MSEs have enough to infrastructure facilities in their business operation. The remaining (21.87%) of the growing manufacturing MSEs and 37.70% of the survival/non-grown MSEs have not enough access to infrastructure facilities in their manufacturing activities. Similarly, the average growth rate is higher (21.30%) for those manufacturing MSEs which are enough access to infrastructure and (15.90%) for those manufacturing MSEs which are not access to it.Furthermore, the Chi-square analysis (Chi^2=6.32, P=0.01) shows that there is a significant association between manufacturing MSEs growth and enough access to the required infrastructure facilities at 10 percent significance level.

This result is consistent with the findings of Hailay (2014), Admasu (2012), Clover & Darroch (2005), Haftom (2013), Kinda & Loening (2008), and Osotimehin, Jegede, , Akinlabi, & Olajide (2012) which revealed that infrastructure such as, inability to access power, water, road etc has a significant impact on the growth of MSEs.

Manufacturing MSEs growth in relation to location

Table 10, shows the comparison of grown and non-grown/survival manufacturing MSEs by using location.

Table 10. Manufacturing MSEs growth in relation to location of enterprises

Categories	Manufacturing MSEs Growth							Total		Chi^2	P-value
	Grown		Growth Rate			Non-grown					
	Freq.	Percent	Min.	Max.	mean	Freq.	Percent	Freq.	Percent		
On main road	59	61.46	**0.006**	**0.549**	**0.179**	88	72.13	147	67.43		
Out of main road	37	38.54	**0.034**	**0.693**	**0.235**	34	27.87	71	32.57	2.78*	0.09
Total	96	100	**0.006**	**0.693**	**0.201**	122	100	218	100		

Source: Own Survey (2019)
**Significant at 10 percent level*

MSEs operate either at the main road side or out of main road. As indicated in the Table 10, in this study about 61.46 percent of the grown and 72.13 percent of the survival manufacturing MSEs operates around the main road/street. Only 38.54 and 27.57 percent of the grown and the survival manufacturing MSEs operates out of main road, respectively. There is also a difference in the growth rate between manufacturing MSEs that operate around the main road and out of the main road. Manufacturing MSEs that operates out of the main road shows higher growth (23.50%) than manufacturing MSEs that operates around the main road (17.90%). This may be due to manufacturing MSEs have an easy access for input at out of main road as compared to those MSEs operating around the main road. Moreover, the Pearson chi-square statistics (Chi^2=2.78 P=0.09) shows that there is significant association between growth of manufacturing MSEs and location. This result is consistent with previous study of Habtamu (2012), but contrary to study of Mead & Leidholm (1998) and Liedholm (2002).

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Majorities (61.47%) of the MSEs in the selected towns of central zone of Tigray region were micro enterprise and the remaining (38.53%) were small enterprises. It has been found that about 55.96% of enterprise that are survival/non-grown MMSEs and the remaining 44.04% are growing manufacturing MSEs. Concerning to the growth situation of an enterprises, the average growth rate of manufacturing micro and small enterprises shows 21.30%, 20.50%, 19.40%, and 17.40% for enterprises found in Adwa, Abiy Addi, WukroMaray, and Aksum towns, respectively.

To a very slight extent female-headed manufacturing MSEs seem grow faster than male-headed. Relating to the age of the owner/operator, the findings suggest that the age of the owner/operator is negatively associated with manufacturing MSE growth. The growth rate of manufacturing MSEs that were owned/operated by those whose age ranges from 19-28 years is higher than those whose age ranges from 29-38, 39-48 and >58 years and manufacturing MSEs that were owned/operated by those whose age is 49-58 years show a least growth rate.

The manufacturing MSEs that owned/operated by those who have a secondary education level completed were shown higher growth rate and followed by those who have completed primary grades, TVET/diploma and degree completed, while all of manufacturing MSEs that owned/operated by those of illiterate were non-growing. To conclude, there is no significant association in the growth of manufacturing MSEs in relation to the education level of the owner/operator.

Manufacturing MSEs that start operation with an initial investment size that ranges from birr 10,001-25,000 shows the highest growth rate as compared to those which start operation with an initial investment size that exceed 25,000 birr. The growth rate and initial investment size have an inverse relationship as the initial investment size exceed 25,000 birr.In relation to availability of machinery, those manufacturing MSEs have modern machinery shows higher mean of growth rate than those manufacturing MSEs has not the required machinery.

Training, infrastructure, market linkage, location and access to work premises (including difficulty to obtain working premises, inadequate and inconvenient working premises and high rent paid for working premises) were found as significant factors associated with the growth of manufacturing MSEs.

There is a big difference in mean growth rate among the manufacturing MSEs that are operating at main road side (busy street) and out of town (distant areas). The manufacturing MSEs that are operating at out of town shows the highest growth rate as compared to those that are operating at main road side. Further, the manufacturing MSEs that have a market linkage show the highest growth rate as compared to those which have no realizable market linkage/poor market linkage.In addition, infrastructural factors such as, insufficient and interruption of power, water supply, lack of sufficient and quick transportation and inconvenient road were the other external factors associated with the growth of manufacturing MSEs positively.

Recommendations

Male owned manufacturing MSEs grow faster than female owned manufacturing MSEs. Hence, the financial institution, trade and industry, women affairs and MSEs development office have to raise awareness, affirmative action and business development service by using different mechanisms such as using print and air media. Besides, education and training are required to raise awareness about how to use the profit for the

expansion of the business, engage in more profitable manufacturing firm and opportunities of taking loan. This will increase growth manufacturing MSEs owned by female.

Working premise is found to have significant positive impact on manufacturing MSEs growth. Therefore, the MSEs development office in collaboration with the municipality should strive for the manufacturing MSEs to have own working premise or construct shades and avail them at fair rent. This can be achieved by creating manufacturing MSEs working and marketing place in selected area as clusters rather than operating in a scattered manner. The other external factor that significantly determines growth of manufacturing MSEs is business training. Therefore, MSEs agency and MSEs center leaders have to devote more in working with technical and vocational education training (TVET) colleges to solve skill gaps of entrepreneurs operating in manufacturing MSEs sector. The other thing needs consideration is infrastructure facility. Therefore, regional government and partly zonal administrative should pay attention to the improvement of infrastructures such as roads, electricity, water and access to information on business opportunities. Particularly, MSEs development agencies in collaboration with the towns water resources bureau, the Ethiopian Electric Power Corporation and regional road and transport to solve the problem of interruption and inadequacy of these facilities.

Most manufacturing MSEs are located at main road side in which there is high competition and practice of copycat strategy. Therefore, the organizations that are concerned with promotion and development of MSEs have to inform the manufacturing MSEs operators about the opportunities and challenges of being located at main road side (busy street) and out of town (distant areas) through workshops, seminars, education and training to enhance the growth of manufacturing MSEs, and develop market around their business operation for those MSEs interested to locate their business in periphery or create market linkage.

To solve this problem, MSEs development agency of the selected towns needs to change the perception of the general public on local goods through extensive awareness creation mechanisms and motivation; and linking the manufacturing MSEs with suppliers working within or around the town. In addition, enterprises themselves could form market linkage at trade exhibition and bazaar by presenting their goods and then exchanging their addresses with potential and actual customers there. Enterprises can have forward linkage with customers or other resellers and backward linkage with their raw material suppliers to get needed quality and quantity of the materials which in turn help to produce quality goods that could satisfy customer's needs and wants. If customers are satisfied, they buy repetitively the enterprise's product and promote it. This also will result in an increase of manufacturing enterprise growth.

REFERENCES

Admasu, A. (2012). *Factors affecting the performance of MSEs in Arada and Lideta sub-cities, Addis Ababa.* (Master's thesis). Addis Ababa University, Addis Ababa, Ethiopia.

Ahiawodzi, A., & Adabe, T. (2012). Access to credit and growth of small and medium scale enterprises in the Ho Municipality of Ghana. *British Journal of Economics, Finance and Management Sciences,* 6 (2), 1-18.

Amha, W., & Ageba, G. (2006). Business Development Services in Ethiopia: Status, Prospects and Challenges in the Micro and Small Enterprise Sector. *International Journal of Emerging Markets,* 1(4), 305 - 328.

Arega, S., Muhammed, A., & Daniel T. (2016). Growth of Micro and Small Enterprises in Addis Ababa City Administration: A Study on Selected Micro and Small Enterprise in Bole Sub City. *International Journal of Scientific and Research Publications*, 6(1), 581 - 592

Assefa, B., Zerfu, A., & Tekle, B. (2014*). Identifying key success factors and constraints in Ethiopia's MSE Development*: *An exploratory research*, Ethiopia Development Research Institute, Addis Ababa

Belay, K., Asmera, T., & Tekalign, M. (2015). Factors that affect developments of micro and small enterprises in the Case of Mettu, Hurumu, Bedelle and Gore Towns of Ilu Aba Bora Administrative Zone: *International Journal of Scientific and Research Publications*, 5(1), 1 - 10

Bereket, T. (2010). *The Role of Micro and Small Enterprises in Employment Creation and Income Generation*: *A Survey Study of Mekelle City, Tigray Region, Ethiopia,* (Master's thesis). Addis Ababa University, Addis Ababa, Ethiopia.

Berhanu, T. (2014). *The assessment of factors that affect the growth and success of MSEs in Gurage Zone three selected Woredas*. (Master's thesis). Mekelle University, Ethiopia

Berihu, A., Abebaw Z., & Biruk T. (2014). *Identifying key success factors and constraints in Ethiopia's MSE development: An exploratory research. EDRI Research Report 18*. Addis Ababa: Ethiopian Development Research Institute

Bizusew, K. (2015): *The Challenges of Micro and Small Enterprises and Business Development Service*: (Master's thesis). Addis Ababa University.

Central Statistical Agency. (2003). *Urban informal sector sample survey.* Addis Ababa, Ethiopia. Statistical Survey, Annual Report.

Cheng, W. (2006). *Determinants of growth in small and medium enterprise: An empirical study on logistic industry in Hongkong*. (Doctoral thesis). Curtin University of Technology. Available at: http://espace.library.curtin.edu.au/R/ ?func=dbin-jump-full&object_id=18498&local_base=GEN01-ERA02

Dagmawit, A., & Yishak, G. (2016). Determinants of Micro and Small Enterprises Growth: The Case of Durame Town, Kembata Tembaro Zone, Southern Nations and Nationalities and Peoples Region, Ethiopia. *International Journal of Business and Economics Research.* 5(5), 161-175

Deribie, E.,Nigusse, G., & Mitiku,F. (2013). Filling the breach: microfinance, *Journal of business and economics management*, 1(11), 10-17

Desalegn, B. (2013). Challenges and Opportunities of Micro and Small Manufacturing Enterprises the Case of Easter Zone of Tigray: *International Journal of Science and Research***,** 5(6), 1679-1686

FDRE Ministry of Trade and Industry, (1997), Micro and Small Enterprises Development Strategy Addis Ababa: Ministry of Trade and Industry.

Federal Micro & Small Enterprises development Agency (2011). *Micro and Small Enterprises Development Strategy, Provision Framework and Methods of Implementation.* Addis Ababa, Ethiopia. Unpublished Report

Garoma, B. (2012). *Determinants of microenterprise success in the urban informal sector of Addis Ababa*: (Doctoral Dissertation). Erasmus University Rotterdam.

Gebreyesus, M. (2007). *Growth of micro-enterprises: Empirical evidence from Ethiopia.* [Online] Ethiopian Development Research Institute (EDRI). http://www.csae.ox.ac.uk/confer ences/2007-EDiALaWBiDC/ papers/275-Gebreeyesus. pdf (Accessed on 11 June 2011).

Gujarati, D. (2004). *Basic Econometrics* (4th ed.). New York, NY: McGraw-Hill companies.

Habtamu, T. (2012). *Determinants of micro and small enterprises growth in Tigray regional state: Evidence from Mekelle city.* (Master's thesis). University of Mekelle). Mekelle, Ethiopia.

Haftom, H. (2013). *Factors affecting the growth of micro and small enterprises in shire Indaselassie town.* (Master's thesis). University of Mekelle. Mekelle, Ethiopia.

Hailay, A. (2014). *Determinants of Micro and Small Enterprises Growth in Feresmay Town, Tigray:* (Master Thesis). Mekelle University, Mekelle, Ethiopia.

Hasnu, S., & Amjam, S. (2007). Factors determining success of microenterprises: Evidence from district Peshawar. *Gomal University Journal of Research*, *23*, 38-45.

Hosmer, D., & Lemeshow, S. (1980). A goodness of fit test for the multiple logistic regression model. *Communications in Statistics Journal*, *10* (1), 1043-1069.

Hove, P. & Tarisai, C. (2013). Internal factors affecting the successful growth and survival of small and micro agri-business firms in Alice communal area. *Journal of Economics, 4*(1), 57-67.

Ishengoma, E. & Kappel, R. (2008). Business constraints and growth potential of micro and small manufacturing enterprises in Uganda. *GIGA Journal of Research Programme, 5*(78), 1-29..

Kefale, M., & Chinnan, K. (2012). Employment growth and challenges in small and micro enterprises in Woldiya. *Educational Research and Essays, 1*(2), 21 – 26.

Kidane, A., Hepelwa, K. Mdadila, H., & Leel, A. (2015). Assessment of the social and economic role of MSEs in Tabora, Tanzania *Journal of Development and Agricultural Economics*, 7(2), 72-79

Kinda, T. & Loening, J. (2008). *Small enterprise growth and therural investment climate: Evidence from Tanzania.* Policy Research Working Paper Series 4675, The World Bank.

Kokobe, S. (2013). *Determinants of micro and small enterprises growth: the case of Addis Ababa MSEs.* (Master's thesis), University of Addis Ababa. Addis Ababa, *Ethiopia*

Lilian, K. (2013). *Factors Influencing The Growth Of Youth Owned Micro And Small Entreprises In Tigania West Division, Meru County, Kenya.* (Master Thesis): University Of Nairobi

Mbugua, J., Mbugua, S.,Wangoi, M., Ogada, J., & Kariuki, J. (2013). Factors affecting the growth of micro and small enterprises: A Case of Tailoring and Dressmaking Enterprises in Eldoret, Kenya.*International Journal of Business and Social Science, 4* (5),1-9.

McPherson, M. (1996). Growth of micro and small enterprises in South Africa. *Journal of Development Economics*, 48 (2), 253-277.

Mead, C., & Liedholm, C. (1998). Dynamics of micro and small enterprises in developing countries. *World development, 26*(1), 61-74.

MoFED (Ministry of Finance and Economic Development), (2010). *Growth and Transformation Plan of Ethiopia 2010/11-2014/15. Addis Ababa.*

MoTI (Ministry of Trade and Industry). (2011*). Micro and Small Enterprises Development Strategy.* Addis Ababa, Ethiopia.

Mukund, C. (2013). Challenges and Opportunities in Micro, Small and Medium Enterprises in India: *International Conference on Management, Humanity and Economics*

Mulu, G. (2007). *Growth of Micro-Enterprises: Empirical evidence from Ethiopia.* Ethiopian Development Research Institute (EDRI), Ethiopia.

Netsaalem, B. (2011). *Factors Affecting The Performance Of Micro And Small Enterprises: The Case Of Harar, Ethiopia*: (Master's thesis). Haramaya University. Ethiopia.

Osotimehin, O., Jegede, A., Akinlabi, H., & Olajide,T. (2012). An Evaluation of the Challenges and Prospects of Micro and Small-Scale Enterprises Development in Nigeria. *American International Journal of Contemporary Research,* 2(4), 174-185

Parker, J. (1995). *Patterns of business growth: Micro and small enterprises in Kenya*. (Doctoral dissertation). Michigan State University, East Lansing, Michigan.

Ruth, N. (2013). Factors Influencing Growth of Women owned Micro and Small Enterprises: A Survey of Kitale Municipality.*International Journal of Academic Research in Business and Social Sciences,* 3 (10), 182-196

Saravanan, K., Mohideen, M., & Seid, H. (2014). Nature and characteristics of MSEs in India. *International Journal of Scientific and Research Publications, 4 (8), 22-38*

Selamawit, N., Aregawi, G., & Nigus, A., (2014). *Determinants of Access to finance for MSEs*.

Sherefa, M. (2012). *Performance of Micro and Small Enterprises and their Role in Enhancing Local Economic Development*: A Case Study in Gullele Sub City of Addis Ababa. (Master's thesis). Addis Abeba University.

Tasisa, A. (2014). *The Contribution of Micro and Small Enterprises in Community Development in Addis Ababa Gullele Sub City*. Master's thesis, Addis Ababa University

Worku, S. (2004). *Socio- economic determinants of growth of small manufacturing enterprises in Addis Ababa, (*Master's thesis). Addis Ababa University

Zemenu, A., & Mohammed, M. (2014). Determinants of Growth of Micro and Small Enterprises in ETHIOPIA: A Case of MSEs in Mekelle City, Tigray. International *Journal of Advance Research in Computer Science and Management Studies,* 2(6), 149-157

The impact of manager's experiences in entrepreneurship evidence from Kosovo SME's

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Abstract

This research accords with a detailed overview of management in general regarding SME growth development in Kosovo. So, it deals with the main factors such as the main components of management and its impact on the success and development, the techniques, and the approaches to assess the SME economic system and their development. There is no unique model which explains the managing or manager's experience and firm growth in the complexion of management theories. We have also pointed out the life cycle phases of firms that are not constructed on economic theory but have received considerable attention from managerial theories of enterprises. So, chronologically was analyzed SME development in general, given that Kosovo has a liberal trade regime characterized by simplicity and neutrality of business or SME registration. In our data analysis, we applied Cronbach's alpha for reliability analysis and linear regression. The findings of the paper show that two main topics are management experience and the growth of the sector where they operate has a significant impact. The revision opens a challenge besides wide-ranging debate taking place entrepreneurship and supervision skills in Kosovo. However, this examination has to do with evidence in Kosovo and cannot be generalized to all countries. This investigation is one of the rare researches in this field in Kosovo, which deals with the topic of SME development. This treatment approach should be used by applying dynamic approaches as well as other factors.

Keywords*: Development & Research, Management, SMEs.*

JEL Classification: J50, L25, O32, C31.

INTRODUCTION

The influence of SME division on the economy has attracted the courtesy of researchers in industrialized as well as unindustrialised countries. Currently, SMEs are known to be the drivers of trade and industry through the generation of new jobs, contributions to GDP, technological innovations, and other economic and social expansion aspects. Their role, as well as importance, have been seen especially in

unindustrialised countries, due to their basic ability to solve various economic difficulties arising after the process of alteration from a central economy to an open market economy.

The purpose of this research is to investigate the role and importance of managerial experience in the field of entrepreneurship, as well as its impact on the growth and development of SMEs in Kosovo. Kosovo is almost the last country in the region, respectively in the countries of the Western Balkans, to begin the process of transition to a market economy. In this context, SMEs can play an increasingly important role in this delayed transition trajectory, especially given that the private sector in Kosovo consists almost entirely of SMEs (there is only a certain number as enterprises large, and in recent years their structure has begun to change). For this reason, the SME sector is evident to be the main contributor to the generation of new jobs and increased income. Increasing their number also contributes to creating a competitive environment for business development.

Kosovo is a significant place for commercial progress, due to its reasonable benefits such as a young and well-qualified people, natural possessions, favorable climatic environments, new infrastructure, a fiscal policy with the lowest fiscal policy in the region, a geographical location with right of entry to the regional marketplaces, and new opportunities after the ratification of Stability Association Agreement with the European Union. Businesses in Kosovo face many managerial issues, which if neglected, will negatively affect their efficiency.

In this paper, particular importance is given in explaining and predicting management perspectives, in the given competitive market, human and material resources, and other competing capabilities that must be built on the basis of market situation and analysis. In the given competitive market, which has to be built on the basis of market situation and analysis, considering the production orientation is very necessary for Kosovar enterprises, in particular new product management, their specifics, and strategies which should be a guide for business in market economy conditions (Krasniqi, 2013). This treatment of these elements is done with the aim of advancing and managing as successfully as possible the enterprises in Kosovo, where production management should always be in line with market demand.

LITERATURE REVIEW

Nowadays, the management pursues and encourages each one in different ways. Managers run wholesale and retail businesses, hospitals and schools, art organizations, governments, and military organizations, so the question is: who are these managers and what do they work for?. These managers coordinate and control organizational resources, guide their people to the future, and assist their organizations in tracking technological and other shifts that represent the starting point for fulfilling social expectations (Krasniqi, 2013). Managerial learning streams through the speedy transfer of knowledge. This is done through sharing and interpreting information (De Long, & Fahey, 2000). The point to which a company is dedicated to education is a planned high-quality because education is an ability, and necessitates skills and courses that must be motivated for the knowledge to be established and dispersed. In an increasing quantity of initiatives, the verdict to highlight structural education is reproduced in their authorized position that places learning first (Lackéus, 2015).

Therefore, more knowledge and expertise dispose of an entrepreneur is able to carry out appropriate actions also perform better (Frese & Gielnik, 2014). Based on this fact, the authors Deáková, Drážovská, Grznárik, & Kondášová (2010) have recognized the

vital personal expertise that an entrepreneur would own is resolution, determination, innovation, and impression as well as a proactive approach. Entrepreneurs have a tendency to choose themselves as an area of the professional that receipts consistency between their specific characteristics and requirements for success.

In addition, they lean towards to manage their business through their strong and specific talents (Sidik, 2012). The greatest widespread arguments in entrepreneurship examination have conventionally revolved around micro-level factors including opportunity recognition, motivation, financing, and performance. Opportunity documentation is considered a mainstream essential issue in entrepreneurship research, given that it is an important entrepreneur capability and a source of competitive improvement (DeTienne & Chandler., 2004). As well, opportunity identification has been linked to differences in human capital variables including education and exertion experience, advanced levels of subsequent industry or entrepreneurial experience as well as capability in management employees (Carter, Brush, Greene, Gatewood, & Hart, 2003; Carter, Gartner, Shaver, & Gatewood, 2003). Based on Coad (2007), the development of small companies is a particularly erratic phenomenon. Entry rates of new firms are high; however, an enormous number of these entrants can be expected to go bankrupt within a few years.

Bartelsman, Scarpetta, & Schivardi (2005) analyze the post-entry performance of new firms in 7 OECD countries, the results disclose that about 20-40 percent of entering companies are unsuccessful inside the first two years, while only about 40-50 percent persist beyond the seventh year. Businesses must be skilled to promptly extent new knowledge to all of their entities and use it in their efforts to generate growth or prosperity (Independent Group of Scientists appointed by the Secretary-General, 2019). Speedy information transfer is also dynamic in entrepreneurial undertakings, particularly in global markets (Zahra, Ireland, & Hitt, 2000). Structural knowledge is a precondition for invention and new undertaking establishment or commercial processes. Scholars in the field of entrepreneurship and planned organization have initiated that organizational knowledge is associated with the company's capability to renovate and constantly advance reasonable advantages (Ireland, Hitt, Camp, & Sexton, 2005; 2001). Emerging new knowledge from organizational knowledge decreases the probability that the company's capabilities will be out-of-date. As an alternative, capabilities that are grounded on benefits continue dynamic, and they fluctuate allowing to environmental eventualities (Kathleen & Jeffrey, 2000).

METHODS

The operational approach contains a mixture of primary as well as secondary data, through analysis of literature and observed studies. In direction to realize this examination, the practical fragment relied on gathering and dealing out data in the field, done surveys. The attention of our study remained on 500 initiatives commencing diverse regions of Kosovo. It is worth mentioning that we were a part of the Economic and Education Consulting LLC (2017) team in section development (E&E Consulting, Kosovo).

The sample is stratified into three core segments in directive to make a distinction among production trade and services. Likewise, the sample is stratified in relationships of size which in itself remains small and medium enterprises. All firms included in the analysis are defined by the EU definition. The appointment were directed consuming the face-to-face technique through the responsible persons in several enterprise mainly

owners or general managers.

The outcomes recommend that issues such as SME management, circumstances of the financial segment, and organization of the SMEs, corporate environment, and tactics to national markets circumstance effective Entrepreneurship and SME Strategic Development. More explicitly the research is grounded on a statistical examination of data composed from a sample developed by the E&E Consulting, including 500 companies in Kosovo. The opinion poll grouped quantitative and qualitative data (entrepreneurship reasons, firm performance, corporate atmosphere perception, and entrepreneurship and strategic management activities information). In overall, the reaction rates of corporate managers stayed from 90-95% (from 447 – 486 respondents, nevertheless in certain specific questions, the reaction rates were lower).

To test the growth rate compared with the last year (PG), we have applied regression research by applying additional controller factors: have you been employed before (*ebsb*), years of experience (*yesb*), having a BP before starting your own business (*hbpsb*), actually do you have a BP (*abp*), founder age (*fa*), manager/owner age actually (*m/oa*), opinion about sector growth (*osg*), and opinion about profitability (*ofpi*).

The equation is specified as follows:

$$PG_{cly} = C + \beta_1 ebsb_t + \beta_2 yesb_t + \beta_3 hbpsb_t + \beta_4 abp_t + \beta_5 fa_t + \beta_6 m/oa_t + \beta_7 osg_t + \beta_8 ofpi_t + \varepsilon_t$$

RESULTS AND DISCUSSION

The legal status of initiatives and their size also has an impact on the form of management. The study outcomes display that between SMEs in Kosovo, there is still no separation of property and management meanings. In fact, of all the businesses surveyed we can realize that 68% of them are managed by the owners, 20% by the chosen managers, 4% by the general executives, while 8% fulfilled the "other" point. Although comparable condition dominates the worldwide level, the gender gap in decision-making in SMEs is moderately evident. In the sample, 94% of managers/administrators decision-makers in SMEs is male and only 6 % corresponding with the female gender.

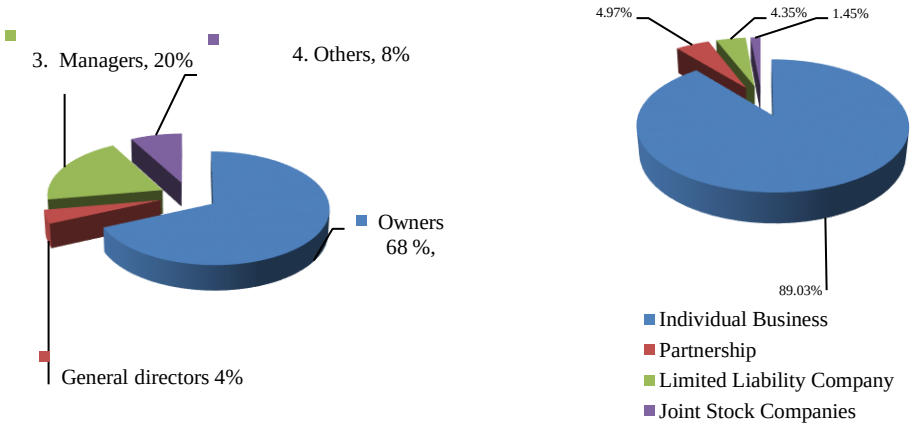

Figure 1. SME Managing and businesses by owners in %

The Figure 1 shows that individual businesses dominate respectively with 89.03% followed by partnerships with 4.97%, then LLC (Limitede Liability Company) with 4.35 % and JSC (Join Stock Companies) 1.45%. It is worth stating that this structure

corresponds to the structure of total documented businesses in Kosovo. Regarding Figure 2, the relations between business founders, it is clear that family relations dominate (65.24%) followed by professional ties (24.39%) and joint ventures (7.32%). This overview shows clearly that a large number of enterprises in Kosovo have family liaison and partnership. Despite this, the lack of external stakeholders in the enterprise outcomes as an obstacle to the expansion of firm's strategic management where the main focus is the growth of the company and its stability.

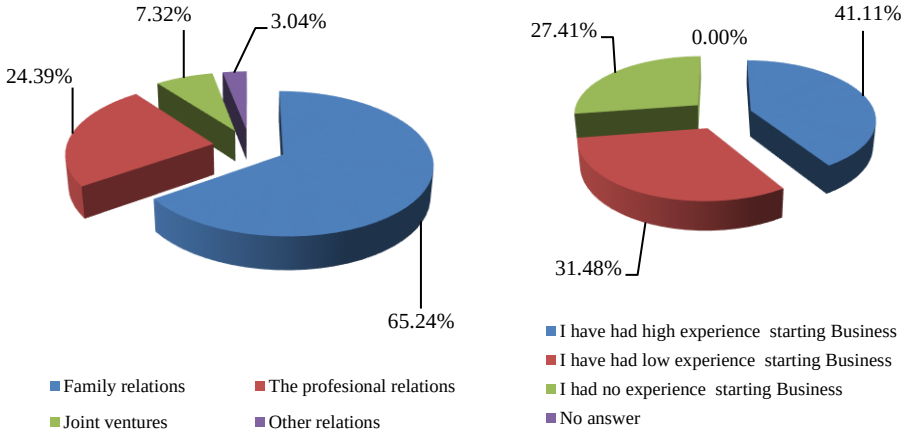

Figure. 2. Founders' relations and experience before starting business

Concerning the experience of the business founders, it shows that 41.1% had an experience, even though 31.5% said they had slight experience tracked by 27.4% who declare no experience at the moment when they make a decision to establish a business. The age group of enterprise founders is an imperative part of studying SME progress, assuming the physical, academic, professional, and experience of managing SMEs. From the table below we can see that most of the founders when they started the business were from 27 - 37 years old, while at present we have an average of 38 - 42 years old. Entrepreneur's founders at the stage when they started the business were 32.27 years old and 39.98 years old at the time of the research. In assumption, we can say that the mature and experienced individuals started to manage their business. A percentage of women as business founders were about 9.4%.

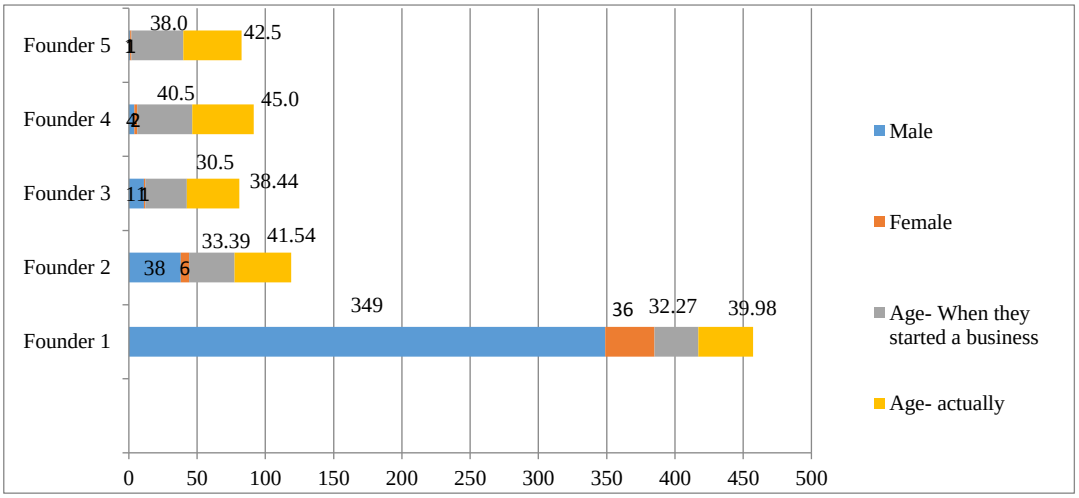

Figure. 3. The structure of SME founders by age average

Regarding the scale of education, as shown in Figure 4, it turns out that about 56 percent of respondents have completed high school, 38 percent are faculty, 4 percent primary school, and 2 percent have completed postgraduate studies.

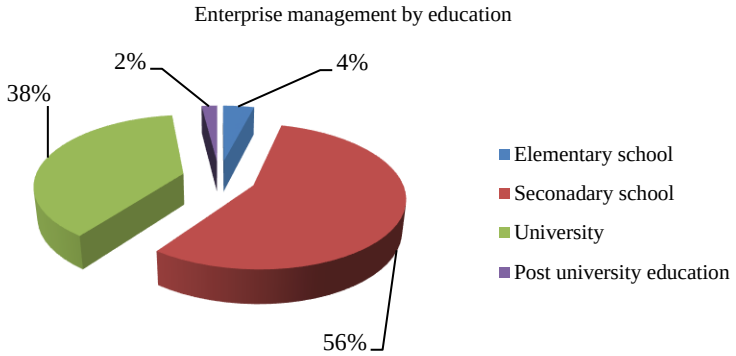

Figure. 4. Enterprise management by education

Earlier is stressed on top of this part we are going to do the examination also clarification of the outcomes obtained within the investigation. The investigation begins with a statistical outline, continued with Cronbach's Alpha analysis and multivariate regression examination to test their impact on the "Percentage growth compared to last year".

The results from research study (Table 1) stand as follows: a). The common of managers/owners have been employed before they begin their business; b). The average of years of expertise before they started a business is 7.3; c). The common started a business beyond having a BP prepared but in point of fact they recognize a value of BP idea to be prepared in advance; d). The average of founder age is 32.27 years and mangers/owners age is near 40; e) The opinion about sector growth and firm's profitability is positive and optimistic.

Table 1. Descriptive statistic

	N	Minimum	Maximum	Mean	Std. Deviation
Have you been employed before you started business	479	1	2	1.49	.500
Years of experience before starting a business	280	0	40	7.30	6.874
Having a BP before starting a business	494	1	2	1.75	.432
Actually do you have a BP	492	1	2	1.68	.465
Founder age	239	16	69	32.27	9.202
The manager/owner age actually	308	22	78	39.98	10.768
What is your opinion about sector growth where you operate	494	1	3	1.80	.740
What is your opinion about firm's profitability in your industry	474	1	4	2.37	.798
Valid N (list wise)	148				

Starting the results produced by the descriptive facts to the question of have, you were employed before opening your corporate, as of 479 questionnaires resulted in a middling value of 1.49, however, what was their work experience before they started their business was with an average value of 7.30. Reliability analysis data in our study stand close to a perfect steadiness, but based on many revisions the constant of (Cronbach's Alpha) above 0.60 is considered adequate. However, in our situation, this

coefficient is 0.678.

To evaluate the level of influence inside the chosen indicators we tend to execute the multifactor analysis. During this occasion, the dependent factors are chosen "Percentage growing compared with the previous year". From the applied examination the outcomes show that from the eight controlling factors, only three of them devise a major impact on "Percentage growing related with the previous year". The multifactor analysis of business barriers on the percentage of SME growth compared with the previous year was significant by years of experience beforehand starting a business (Sign 0.017) , "Knowledge about sector growth where they operate" – with importance 0.015 and Have you been engaged before you started the business – with importance 0.021 (Table 2).

Table 2. Model summary

Model	R	R^2	R^2 Adjusted	Std. Error of the Estimate	Durbin-Watson
	.627a	.584	.527	.0312506	1.721

a. Dependent Variable: Percentage growth compared with last year

The following table shows the summary of the linear regression model with the following data: R, R^2, and R^2 adjusted, as well as the estimated standard error. The results obtained from the model data show that the dependent variable has a strong correlation with the explanatory variables at the level of .627, respectively 62.7 percent. While R^2 in our analysis is .584, which shows that 58.4 percent of the dependent variable is explained by the independent variables. The adjusted R^2 is equal to .527, which indicates that 52.7 percent of the variation of the dependent variable is explained by the variation of the independent variables. The Durbin-Watson test was used to analyze the data on whether the serial correlation is available. The result obtained in our case is 1.721, which is within the specified interval and that the data have no correlation or auto-correlation between the residual values.

Table 3. The linear data regression – coefficients

Model	Unst. B	Coeff. Std. Error	St. Coeff. Beta	t	Sig.
(Constant)	32.480	16.818		1.931	.006
Have you been employed before you started business	9.867	4.808	.092	1.012	.021
Years of experience before starting a business - *yesb*	11.1982	.405	.235	2.428	.017
Having a BP before starting a business	3.615	6.235	.067	.580	.563
Actually do you have a BP	3.488	5.766	.068	.605	.546
Founder age	.004	.415	.002	.010	.992
The manager/owner age actually	-.064	.353	-.030	-.182	.856
What is your opinion about sector growth where you operate	-15.094	3.117	-.147	-1.63	.015
What is your opinion about firm's profitability in your industry	-1.102	3.367	-.030	-.327	.744

a. Dependent Variable: Percentage growth compared with last year

The controlling variable *"yesb"* is importantly associated with percentage growth paralleled to last year, as the p-value is 0.017. The study is in relation to the studies conducted by the authors (Frese and Gielnik, 2014), where according to them it turns out

that the added awareness and experience an entrepreneur consumes, he has the talent to perform unconventional. The confirmed result gives us indications that work expertise in the past takes dominant importance in the growing and extension of corporate activities, who is confirmed even during the carrying out of the questionnaire has resulted in an average of 1.5 years have had work experience before to start corporate activities.

The highest influence constant on a firm's growth was observed in question what is your opinion about sector growth where you operate, with a contrary constant of -15.094 and one with high-reliability sign [P=0.015]. The last variable that has an important positive result is "were you employed by any company before you started your private", with an importance level of 95.0 percent. And centered on this, it turns out that expertise or previous work knowledge has an influence on increasing management activities.

Our result is in line with the authors Deáková, Drážovská, Grznárik, & Kondášová (2010). Results for indicators having a BP before starting a business and currently having a BP, have proven to be insignificant. The results of the study are in inverse cohesion with the studies conducted by the authors (Morris & Sexton, 1996; Zahra & Garvis, 2000), where they argue that these indicators have unsustainable positive correlations. This result is reasonable by analyzing the specific circumstances of the business environment in Kosovo. Other indicators that have proved insignificant are founder age and actually owner/manager's age. The results are correlated with the study conducted by the author Honjo (2015), who argues that individual age is not found to be a significant predictor of entrepreneurship choice and thus it shows the irrelevancy of individual age to business start-ups.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The private segment in Kosovo contains micro, small, medium and large enterprises. SME constitutes 99% of all companies in Kosovo, indicating a massive potential in the generation of new jobs and economic development. The first step is to encourage as many SMEs to enter the formal sector regarding regulatory procedures for businesses, whereas the second step that came from our research is improving the "Non-adequate level of employee skills" and "Manager/owner skills".

A study utilized advanced technique to spot as well as to measure the influence of managing, firm, and environmental elements on firm growth. Cronbach's Alpha was utilized for a reliability scale for indicators and also the multivariate analysis model was designed to examine the impact of managing issues, firm, strategy, and the institutional situation on firm growths'. Econometric marks exhibition is that the expertise and division inside which these companies operate have a significant impact on firm growth. The examination results stand almost reliable with the expectations set, besides the investigation of the regression model gives us evidence that proves that the experience and possession of adequate knowledge in the field in which the business operates are substantial, and have impacts on increasing / decreasing SME's. This revision paves the way for new discussions in the field of entrepreneurship and research as well as encourages the application of approaches or techniques with statistical dynamics, as well as applying other issues that may have an impact on SME's.

Recommendations

Improving organizational change management and the need for SMEs to be managed by executive managers or management teams is another recommendation,

having in mind that about 70% of SMEs are managed by owners. Increasing awareness about starting a business by analyzing opportunities to realize a business idea and starting a business with a prepared business plan. Increasing awareness about the importance of business knowledge and experiences. Increasing awareness of entrepreneurs for start-ups to have a prepared Business Plan which can be organized by the Ministry of Trade and Industry and other donors i.e. EU and USAID by financing training and other informative methods

Penetration in the regional and international markets with the quality of services especially in different IT services because of the high percentage of youngsters who have multi-language (especially in the English, German, Italian languages) and advanced skills in the IT sector.

REFERENCES

Bartelsman, E., Scarpetta, S. & Schivardi, F. (2005). Comparative Analysis of Firm Demographics and Survival: Evidence from Micro-Level Sources in OECD Countries (June 2005). *Industrial and Corporate Change*, 14(3), 365-391, 2005. Available at SSRN: https://ssrn.com/abstract=914655

Carter, N., Brush, C., Greene, P., Gatewood, E., & Hart, M. (2003), Women entrepreneurs who break through to equity financing: the influence of human, social and financial capital, *Venture Capital Journal*, 5(1), 1-28. https://doi.org/10.1080/1369106032000082586

Carter, N.M., Gartner, W.B., Shaver, K.G. & Gatewood, E.J (2003). The career reasons of nascent entrepreneurs. *Journal of Business Venturing*, 18(1), 13-39 doi:10.1016/S0883-9026(02)00078-2

Coad, A. (2007). *Firm growth: a survey*. Documents de travail du Centre d'Economie de la Sorbonne, Université Panthéon-Sorbonne (Paris 1), Centre d'Economie de la Sorbonne, https://EconPapers.repec.org/RePEc:mse:cesdoc:r07024

De Long, D. & Fahey, L. (2000). Diagnosing cultural barriers to knowledge management. The *Academy of Management Executive*, 14(4), 113-127. https://doi.org/10.5465/ame.2000.3979820

Deáková, K., Drážovská, K., Grznárik, D., & Kondášová, I. (2010). *Entrepreneurship*. Bratislava: SOPK.

DeTienne, D.R. & Chandler, G.N. (2004). Opportunity identification and its role in the entrepreneurial classroom: a pedagogical approach and empirical test. *Academy of Management Learning & Education.* 3(3), 242-257. https://doi.org/10.5465/AMLE.2004.14242103

Economic and Education Consulting LLC. (2017). *SME Research Report.* Prishtinë.

Frese, M. & Gielnik, M. M. (2014). The Psychology of Entrepreneurship. *Annual Review of Organizational Psychology and Organizational Behavior*, 1(1), 413 – 438. https://doi.org/10.1146/annurev-orgpsych-031413-091326

Independent Group of Scientists appointed by the Secretary-General, Global Sustainable Development Report. (2019). *The Future is Now – Science for Achieving Sustainable Development.* New York: United Nations

Honjo, Y. (2015). Why are entrepreneurship levels so low in Japan? *Japan and the World Economy*, 36, 88-101.

Ireland, D.R., Hitt, M.A., Camp, M.S., & Sexton, D.L. (2001). Strategic entrepreneurship: entrepreneurial strategies for wealth creation. *Strategic Management Journal*, 22(6-7), 479-491. DOI: 10.1002/smj.196

Kathleen, M.E. & Jeffrey, A.M.. (2000). Dynamic Capabilities: What Are They. *Strategic Management Journal*. 21(10-11), 1105-1121 https://doi.org/10.1002/1097-0266(200010/11)21:10/11<1105::AID-SMJ133>3.0.CO;2-E

Krasniqi, E. (2013). *Integrimi i aktiviteteve të Ndërmarrësisë dhe Menaxhimit strategjik të NVM-ve në Kosovë; Tiranë*. (Doctoral Dissertation). Avaible at: http://www.doktoratura.unitir.edu.al/wp-content/uploads/2014/01/Doktoratura-Enver-H.-Krasniqi-Fakulteti-Ekonomik-Departamenti-i-Manaxhimit.pdf.

Lackéus, M. (2015). Entrepreneurship in Education: What, why, when, how. In *Entrepreneurship360 Background Paper*, Paris, France: OECD

Morris, M.H., & Sexton, D.L. 1996. The concept of entrepreneurial intensity: Implications for firm performance. *Journal of Business Research*, 36(1), 5-13.

Ireland, R.D., Hitt, M.A., Camp, S.M. & Sexton, D.L. (2005). Integrating Entrepreneurship and Strategic Management Actions to Create Firm Wealth. *Academy of Management*, 15(1), 49-63. https://www.jstor.org/stable/4165710

Sidik, G.I. (2012). Conceptual framework of factors affecting SME development: Mediating factors on the relationship of entrepreneur traits and SME performance. *Procedia Economics and Finance*, 4, 373–383. DOI 10.1016/S2212-5671(12)00351-6

Zahra, S.A., Ireland, R.D. & Hitt, M.A. (2000). International expansion by new venture firms: International diversity, mode of market entry, technological learning, and performance. *The Academy of Management Journal*, 43(5), 925-950 https://doi.org/10.5465/1556420

Zahra, S., & Garvis, D. 2000. International corporate entrepreneurship and firm performance: The moderating effect of international environmental hostility. *Journal of Business Venturing*, 15(5), 469-492.

Business ethics: A connection to good corporate governance implementation

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Abstract

The main purpose of this study is to discuss business ethics and good corporate governance implementation. Business ethics is the foundation of good corporate governance implementation in a company. The existence of ethics in the company is expected to be a benchmark for measuring moral values, especially policies. It is also expected that the application of good business ethics elevates the implementation of good corporate governance. The establishment of supervisory institutions in public sector organizations is also expected to be the best way to eliminate the ethical violation. Thus, good business practices and the environment in Indonesia can be achieved.

***Keywords**: Business ethic, Good corporate governance, Public sector*

JEL Classification: M1, M2

INTRODUCTION

In the business world, companies that are engaged in services, trade, and manufacturing that have developed rapidly will always be faced with the problem of management and control of the company. So that companies can survive and thrive in the competitive business environment, then the company needs to make efforts to secure and manage the company. One of the efforts is to implement good corporate governance in the company.

In the implementation of good corporate governance in a company, it is inseparable from the rules that must be accepted and obeyed by the company, both legal rules and moral or ethical rules (Risanty & Kesuma, 2019; Oluwafisoye, & Akande, 2013). The Indonesian Institute for Corporate Governance (IICG) noted that one of the main reasons for a company implementing good corporate governance in compliance with regulations and ethics.

The business ethics practices require employees and company leaders to do everything on behalf of the company and it can be a standard as well as guidance for all employees including management (Arjoon, 2005; Brooks & Dunn, 2012; Ernawan, 2016). Business ethics in a company is a form of the implementation of good corporate governance principles (Zabihollah, 2009).

Corporate governance emerged in the 1990s when deregulation and internationalization of the capital market began. Then followed by institutional

investment through pension funds start to grow in the United States and the United Kingdom (Kamal, 2010). Corporate governance is more related to the essential factor in the company such as ownership, control, and corporate accountability. And also how a company encourages economic objectives associated with a number of ethical values and broader social considerations (Ramakrishnan, 2007).

Effective corporate governance is very important especially for companies in developing countries because it can generate clarity, managerial excellence, and help increase capital (Doidge, Karolyi, & Stulz, 2007; Silanont, 2012).

Companies in developing countries tend to prefer to spend a minimum on governance, and determination of the minority stakeholder's rights usually resolved at the state level, not at the enterprise level (Doidge, Karolyi & Stulz, 2007). Evidence from developing countries such as Lebanon shows that governance practices are relatively late to develop and there is limited study on governance practices in particular state-owned enterprises environment (El-Kassar, Messarra & Elgammal, 2015). Meanwhile, in Egypt through the Egyptian Institute of Directors become initiators in introducing a system of corporate governance in the Middle East and North Africa (MENA) region. This introduces a corporate governance code for state-owned enterprises and small and medium-sized enterprises (Gamal, 2009).

In Indonesia, since the economic crisis at the end of 1997, problems regarding good governance began to emerge. This has caused many companies to reform and change governance in the management of companies, including Indonesian state-owned enterprises. The reformation of a state-owned enterprise in Indonesia was marked by the release of State-Owned Enterprises Ministerial Decree No. KEP-117/M-MBU/2002 dated July 31, 2002, regarding the application of good corporate governance principles in Indonesia. This is one of the efforts of the Indonesia Ministry of State-Owned Enterprises to strengthen the implementation of good corporate governance in every state enterprise to compete in the evolving business world.

Nevertheless, Indonesian state-owned enterprises have a strong determination to implement good corporate governance principles. Indonesian state-owned enterprises in implementing good corporate governance practices should focus on the encouragement of the application of good corporate governance principles. One effort that can be done is by improving compliance with ethics (Zabihollah, 2009).

Several previous studies have emphasized the important role of ethics in corporate governance (El-Kassar, Messarra & Elgammal, 2015; Othman & Rahman, 2011; Othman, Rahman & Shamsudin, 2012). In Malaysia, Othman & Rahman (2011) examined the role of ethics in corporate governance. The results show that ethical positions, ethical principles, as well as the ethical structure are important requirements for promoting governance practices. Meanwhile, Othman, Rahman & Shamsudin (2012) find that ethics plays an essential role in corporate governance practices. In the context of Lebanon and Egypt, El-Kassar, Messarra & Elgammal (2015) point out that a higher level of ethics and practices lead to a greater level of corporate governance practices.

The findings of previous studies show a significant influence on business ethics on the implementation of good corporate governance in Indonesia. A study on the effect of business ethics and corporate culture on the implementation of good corporate governance principles conducted by Ariesti, Yolanda & Hia (2014) found a positive and significant effect between business ethics on the implementation of the principles of good corporate governance. Meanwhile, Sari (2011) also conducted a study on the effect of business ethics, code of conduct, shareholders and dividend policy on good corporate governance implementation. The result of this study finds a significant effect of business ethics, code of conduct and policies on the implementation of good corporate governance.

From the results of these studies, it appears that business ethics is an important factor in promoting good corporate governance implementation.

The objective of this paper is to discuss the concept of business ethics and the relationship to good corporate governance implementation. Further, this paper consists of several sections as follows. Section one presents the background and the concept of the business ethic. Section two provides a brief discussion related to the principles of business ethics. Section three discusses the problems in business ethics. Section four provides discussion related to the function of business ethics and its relation to good corporate governance. Finally, section five presents conclusions and recommendations.

BUSINESS ETHICS: A BACKGROUND AND CONCEPT

Business ethics and values are essential elements in a competitive business environment. Through applying the proper business ethics, all business activities will be able to generate various benefits, both material and non-material benefits such as good image, trust, and sustainability of the company (Ariesti, Yolanda & Hia, 2014).

Johnson & Scholes (1998) state that ethics is a branch of philosophy, the main objective is to study behavior, both moral and immoral. To providing reasonable considerations and finally reaching an adequate recommendation which is certainly acceptable to a particular group or individual. Also, Petersen (2013) postulates that ethics is a set of principles of right conduct or a system of moral principles.

Moreover, the Encyclopedia of Economics, Business and Management states that business ethics are the norms or values that guide the behavior and actions of the entrepreneur and the managers of these organizations (Magdalena, 1992). Meanwhile, Bertens (2000) define business ethics as a science of what is good and what is bad, about what people should do and what they should not do that applies in business practices

From the above definition, it can be concluded that business ethics concentrates on moral norms and values held by individuals, groups, and companies. Moreover, business ethics is a study of good and bad aspects of business interactions with stakeholders by using management and legal knowledge to achieve the goals of the company.

The background to the formulation of a business ethic is a powerful way to institutionalize ethics in the structure and activities of a company. Business ethics is a form of application of the principles in the company (Yosephus, 2010). Business ethics has a very essential role, which if it can be applied consistently, then it can form a solid company and has high competitiveness (Oluwafisoye, & Akande, 2013). Because the core of the business is mutual trust then honesty is the main factor. Honesty is one of the principles of business ethics. Thus, business ethics becomes a decisive factor in business success and is a form of translation of the practice of good corporate governance principles in the company (Effendi, 2005). If the company has its ethics, it means that the company has several advantages compared to companies that do not have it.

In general, the purpose of business activities is not merely to gain the maximum profit by justifying any means. Companies that run their business activities with the appropriate ethics does not mean not being able to compete with competitors, it may be considered by their consumers as a committed to good ethics (Sabirin, 2016).

Gaining profits by not implementing business ethics in a company and dishonesty of employees can lead to a deterioration of business (Ernawan, 2016; Preble & Reichel, 1998; Sabirin, 2016). Meanwhile, the company that cares about the interests of all individuals involved in business activities will be able to maintain the continuity of its business (Ernawan, 2016). In addition, running company operations with good ethics and trust will be able to make overall business activities better, both for consumers or users and also for all stakeholders who are interested in it (Akman, 2011).

There are seven important points obtained by a company through the implementation of business ethics (Sukrisno, 2012), among others: 1) Increased company credibility. Applying appropriate business ethics internally, each employee will follow the same ethical standards. They will also take similar policies, decisions and procedures in every activity and cases that may encounter; 2) Remove the gray area in ethics. For instance, the bribery, the use of child labor and company obligations to protect the environment and surrounding communities; 3) Explains how a company is capable to assess its social responsibility; 4) Establish a mechanism that allows for self-regulation, both for internal companies and their business environments; 5) For listed companies, the application of good ethics is capable of improved investor confidence and at the same time attracts the interest of potential investors; 6) Enhances competitive advantage in a company; 7) Establish a corporate image (positive image) and for long-term goals, able to maintain the company's sustainability.

WHY DOES A BUSINESS MUST BE ETHICAL?

Why does a business need ethics? Isn't the activity of business only aimed to gain profit as much as possible? Will the ethical behavior adopted by the company prevent them from competing with their competitors?

To answer these questions, Post, Preston, & Sachs (2002) explains seven reasons that encourage a company to conduct its business ethically, among others: 1) Realizing public expectations that the company operates ethically. A company that ignores ethical issues will be subject to criticism and even punishment. For example, a company related to a case of gratuity in connection with a program or project. This bribe will benefit certain individuals or groups. Obviously, the bribery act is unethical. This makes the company's stakeholders will be disappointed. And for companies that run unethical and immoral businesses, they will be criticized and even deal with penalties; 2) Prevent a company from taking actions that are detrimental to other stakeholders. For example, the unprofessional management of a landfill conducted by a company. This will result in a landslide disaster that has befallen the population of the surrounding population and cause losses to the community around the landfill. Another example is the Lapindo Mudflow problem. As a result, the negative effects are truly extraordinary. The damage resulted in economic disruption, especially East Java. The loss caused by the mudflow has hampered eroded economic potential due to loss of economic activity. Not to mention the immaterial losses suffered by the surrounding community, which cannot be paid no matter how much its value; 3) Improve the performance of the company. There have been many studies that show a significant relationship between corporate control that emphasizes the implementation of ethics and responsible behavior on the one hand with better organizational performance on the other hand. The results of these studies are believed that when applied in the context of Indonesian companies, then it is likely to have a positive impact on the performance of companies in Indonesia which will ultimately impact the progress of the country's economy; 4) Improve the quality of business relationships by implementing business ethics such as commitment, honesty, and anti-bribery. The application of business ethics such as honesty, commitment and anti-bribery will elevate trust between the parties involved in business relations with other parties. If the application of this ethic is carried out properly, then it will be able to minimize various cases of corruption, collusion, and other abuses in Indonesia in general. And also capable to educate and increase the morale of the nation in particular; 5) Prevent a company from avoiding abuse by employees or competitors. For example, a fraud act such as collusion and the misuse of company assets committed by the owner or leaders and other employees of the company. This is one of the critical factors causing company disaster and bankruptcy compared to other factors. Therefore, as mentioned above that the application

of ethics such as honesty, commitment, and dedication is the essential factor in elevating a company; 6) Avoiding violations of workers' rights. A company is considered ethically if the company fulfills workers' normative rights. Workers' normative rights such as adequate salary and working conditions, implementation of a fair work assessment, a clear reward, and punishment policy. At the time of making a decision that could have an impact on workers, a company must pay attention to the expected reaction by the labor union. As representatives of workers, labor unions can accommodate the acquisition of normative rights that must be obtained by workers, in accordance with labor laws and applicable government regulations. The imposition of the will or unethical act unilaterally by the employer could result in strikes and mass demonstrations that could harm the company; 7) Prevent a company from a legal issue as a result of not applying business ethics. A company is required to implement business ethics in conducting its business. In order to prevent (represented by the leaders of the company) from getting legal sanctions because they have conducted their business unethically.

Ip (2003) suggests several key features of business ethics in the context of a state-owned enterprise environment: 1) A high level of convergence of values and shared vision. The majority of employees must be able to accept the mission, vision, principles and the company's core values. The company must guarantee that the business must be ethical, and the company takes ethics seriously. Employees must be proud to be members of the company so this shows that the company is very ethical regarding relationships with its employees; 2) Ethical workplace and ethical workforce. Companies should support an ethical business outlook. The company's management must be able to maintain the morality of coworkers, the morality of unit/department managers, and identify units/departments to take business ethics seriously; 3) Strong moral leadership. Companies must be able to maintain high-level morality to the Chief Executive so that it gives legitimacy and a strong moral mandate to lead as well as influential in corporate ethics. Also, overall coworkers and managers must have good ethical performance; 5) The positive influence of corporate culture and ethics. The relationship between corporate culture and business ethics undoubtedly has a positive and important impact on company assets. The Chief Executive has a role in connecting many of the company's successes such as establishing or increasing trust, motivation, harmony, loyalty, job satisfaction, pleasure and productivity with its corporate culture and business ethics.

PRINCIPLES OF BUSINESS ETHICS

In general, the principles implemented in good business activities are closely related to the norms and values system that are recognized and adopted by every social community (Silanont, 2012). Keraf (1998) explains the five essential principles in implementing business ethics as follows: 1) Autonomy. This principle implies the attitude and ability to make appropriate decisions and actions based on good ethics and norms; 2) Honesty. The principle of honesty should include in carrying out the terms of every agreement and contract, the supply of goods and services of comparable quality and price, and in internal work relationships in a company; 3) Fairness. This principle requires that any interested party should be treated equally in accordance with the rules and laws that are fair and based on the objective rational criteria, as well as accountable; 4) Mutual benefit. This principle requires that every business activity must be carried out by considering the benefit of all interested parties; 5) Moral integrity. This principle is mainly internalized as an internal demand in the business person or company so that it is necessary to perform business activities while maintaining a good image of the company.

Indeed, many large companies have to take appropriate steps towards the implementation of the principles of business ethics, despite the principle adopted may vary (Sabirin, 2016). First, establish what is known as corporate culture (corporate

culture). This corporate culture was first built on the basis of a company's founder's vision or business philosophy as a person's appreciation of good business (Sabirin, 2016). This vision is then applied to the company, which means that this vision then becomes the attitude and behavior of the organization of the company both outward and inward (Ernawan, 2016). Then, a business ethos is to develop, a habit that was instilled in all employees since they were recruited in the company or continuously evaluated in the context of refreshment in the company (Ariesti, Yolanda & Hia, 2014; Ernawan, 2016; Sabirin, 2016).

This ethos is the soul that unites and at the same time encourages all employees to behave and pattern the same behavior based on the principles adopted by the company (Ariesti, Yolanda & Hia, 2014; Sabirin, 2016). Whether or not a business ethos develops is determined by the leadership style within the company

PROBLEMS IN BUSINESS ETHICS

Business ethics is a guide to distinguish between right and wrong, especially provide knowledge to every leader in the company to consider in taking strategic decisions related to the complex moral issues. However, in reality, not every company has implemented business ethics properly, most business people ignore and often violate the ethics and regulations.

Various problems in the company functions often lead to problems of business ethics, such as the functions of: 1) Accounting. The function of accounting is one of the essential components of the company. Honesty, integrity, and accuracy are conditions that must be fulfilled by this function. The problems that commonly arise in ethics in the accounting function include provides different reports for the interests of different parties, to gain benefit from the financial statements (Sukrisno, 2012). The company's internal financial statements are made differently from the financial statements for banks and tax reports. The company's accounting department intentionally changed the financial data to obtain personal profit from the preparation of these fictitious reports; 2) Finance. Misappropriation of business ethics in the financial function will cause significant losses for the investor (Sukrisno, 2012). For example, when applying for a loan from a bank, the company provides a financial statement that has been 'modified' so that it looks like the company has a good financial environment and eligible for credit. The company's financial condition is not as good as reported; 3) Production and Marketing. The relationship between companies and consumers tends to be vulnerable to ethical issues, both in production and marketing functions (Sukrisno, 2012). Problems often arise where consumers are disadvantaged by companies related to bad products. For example, problems associated with a net weight of a product, composition, or the different benefits that are informed by the manufacturer. To address these issues, the Indonesian government enacted Law No. 8 of 1999 concerning consumer protection that protects consumers from unethical practices carried out by companies; 4) Information Technology. Sophisticated technology, social media presence, and ease of transactions in cyberspace also trigger problems in the function of information technology. For instance, when a consumer submits their complaint about a product in cyberspace, then this information will quickly spread widely. If the company is not aware and pay attention to the problem wisely, it will harm the company's image (Yosephus, 2010). Other violations such as online transactions, which are often found fraudulent sites, when the buyer has made a transaction however, the goods are not sent.

Companies that uphold business ethics and moral values will prevent any actions that will harm consumers. For instance, the company immediately pull their products that are defective or do not meet the standards and can even harm consumers.

BUSINESS ETHICS AND ITS RELATION TO GOOD CORPORATE GOVERNANCE

Each company applies different business ethics, this is because the company's operations are very diverse and specific in various units of work or function (Preble & Reichel, 1998; Risanty & Kesuma, 2019). In general, there are several benefits to implementing business ethics in a company (Keraf, 1998; Petersen, 2013), including: 1) Creating consumer trust. Companies that maintain business ethics and moral values will be able to increase customer loyalty. Loyalty arises because consumers believe that companies will avoid fraud and other negative actions that will detrimental to consumers; 2) Good corporate image. A better corporate image capable to give a positive response from its consumers. With this response, companies will become famous and improve their products/services; 3) As a motivation for employees. Employees who uphold high ethics and moral values in the work environment will have high motivation. By considering their company, gaining trust and positive responses from consumers, this will certainly make employees proud as part of the company. This also will increase morale and motivate employees to work better; 4) Generate profits for the company. With high trust, a company will enhance its image and employee motivation, so the company is able to generate an optimal profit.

Petersen (2013) postulates that trust should be built on a corporate foundation of ethical principles that consisting of transparency, competence, and integrity. Moreover, ethics plays an essential role in fraud prevention and it is a shared responsibility among members of the organization (Petersen, 2013).

The importance of business ethics in good corporate governance practices (Petersen, 2013) is as follows: ethics is the foundation of corporate governance, ethics is able to ensure the sustainability of business activities and maintain a good corporate reputation that is built on the foundation of a strong ethical culture. The application of ethical behaviors in companies will ultimately create good corporate governance (Petersen, 2013). The company management will ensure and protect the interests of the stakeholders so that the company has high responsibilities. Thus, the company will get the trust of various parties, such as creditors, shareholders, employees, and other stakeholders. And finally, the adoption of the ethical code will improve company integrity and good corporate governance.

Corporate governance will be implemented effectively if each company is committed to maintaining high integrity in implementing its activities (Risanty & Kesuma, 2019; Sutojo & John, 2005). With a commitment to integrity, the company will achieve high confidence of the stakeholders so that it can maintain its business for the long term (Sabirin, 2016). Moreover, the management of the company should provide accurate and relevant information for their stakeholder. In other words, a company is also required to have high accountability as well as transparency.

In order to enhance high integrity, every company must adopt ethical principles (Kurniawan, 2013). The management of a company should implement ethical behaviors in every decision to achieve high integrity. The utilitarianism and deontology can be used to deliver ethical behavior in decision-making in a company (Kurniawan, 2013; Sabirin, 2016). Decision-making does not only focus on personal or group interest, but the interest of society as a whole includes the interests of the company and its stakeholders (Oluwafisoye, & Akande, 2013).

Moreover, solid corporate governance can be achieved by implementing a principle, best practices, fairness, honesty, integrity, and the way the company carries out all its activities (Arjoon, 2005). Although the company must be profitable to survive and grow, the achievement must remain based on ethics. Companies are also required to use a set of policies that can cover the environmental protection, whistleblowing, ethical programs

and compliance mechanisms that can support companies to establish an image and reputation, loyalty and trust from consumers as well as enhance employees commitment and loyalty (Arjoon, 2005; El-Kassar, Messarra & Elgammal, 2015). Moreover, ethical compliance contributes to the stability of companies because it inspires trust, leadership, management, and administration (Arjoon, 2005).

Rossouw (2005) states that corporate governance practices have different ethical properties and entire aspects become a means of ensuring that the company will act fairly, accountable, responsible and transparent. El-Kassar, Messarra & Elgammal (2015) suggest that in order to improve corporate governance and ethical compliance, companies must: 1) Establish an ethical code, disseminated to all employees and ensure they implement the code of conduct; 2) Establish a system of reward and punishment for employees who adhere to good ethical code and those who do not, as well as protect whistleblowers; 3) Use moral strategies when providing strategic planning and making decisions; 4) Establish a program to improve and help the implementation of the corporate culture; 5) Prioritizing the interests of the organization and stakeholders above personal advantages.

Empirical evidence from previous studies has emphasized the important relationship of ethics in corporate governance. Othman & Rahman (2011) prove that ethics plays an important and significant role in corporate governance. They point out that ethical positions (independent bodies and whistleblowers), ethical principles (corporate philosophy) and ethical structure (ethical reporting and code of ethics) are important requirements for governance practices.

Meanwhile, findings from the study of Othman & Rahman (2012) shows that the role of ethics in corporate governance consists of three perspectives, (1) corporate governance as a code of ethics, (2) ethical inclusiveness in governance (3) ethics as an affiliate of corporate governance. In Egypt and Lebanon provide empirical evidence that ethics has a positive and significant impact on all major corporate governance categories (El-Kassar, Messarra & Elgammal, 2015). The study provides evidence that a higher level of ethical behavior and practices will lead to better levels of corporate governance practices. In addition, the category of corporate social responsibility is predominantly influenced by the ethical category, as well as the principle of transparency, the role of the audit committee and board of directors.

In the context of companies in Indonesia, based on the Indonesian good corporate governance code, the company's basic values must include reliability, fairness and honesty and show that company values should consider the key features of the company, such as its character, sector business and geographical location (Kamal, 2010). This code of ethics also suggests that companies should implement business ethics as a guide in conducting business and interacting with stakeholders (Kamal, 2010). Moreover, this code considers that the implementation of corporate values and business ethics will sustainably support the realization of the corporate culture. And also, the code requires companies to establish business ethics and describe it in a code of ethics (Kamal, 2010).

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The weak application of corporate governance is often referred to as one of the reasons for the weak implementation of ethical behavior in business. This will cause investor mistrust so that it can have a negative impact on the business itself. Ethics plays an important role in a business, both as business conducted in the scope of private and the public sector (a government institution). The existence of ethics is expected to be a benchmark for measuring moral values, especially policies that resulted in business.

Generally, business is only generated as a tool to achieve maximum profit. There are more important things that need to be a concern by the company and the public sector in addition to profit, namely the need for ethical business.

In principle, business activities are carried out and directed by and for humans. So, indeed it takes a set of rules that regulate so that people do not become victims of these business activities. Ethical standards established in business ethics must be a general awareness of business activities. Principles in the application of business ethics can not only be applied within the scope of private companies but can also be the scope of the public (government).

As explained earlier, business ethics has a very important relationship with the achievement of good corporate governance. Business ethics form the basis of corporate governance, resolves business competition, and the company's reputation is built on the principles of a strong ethical culture.

Recommendations

It is expected that the application of proper business ethics will provide an important role in establishing good corporate governance. Thus, the overall principles of good corporate governance will realize. The establishment of supervisory institutions is also expected to be the best way for eradicating corruption, collusion, and nepotism. Therefore, healthy business practices and the environment in Indonesia can be achieved.

REFERENCES

Akman, V. (2011). Empirical look at the factors affecting perception of business ethics in Turkey. *Emerging Markets Journal*, 1(1), 1-11. DOI 10.5195/emaj.2011.5

Ariesti, S., Yolanda, H., & Hia, Y. D. (2014). Pengaruh etika bisnis dan budaya perusahaan terhadap pelaksanaan prinsip good corporate governance pada kantor pusat Bank Nagari. *Jurnal Pendidikan Ekonomi*, 4 (2), 1-6.

Arjoon, S. (2005). Corporate governance: An ethical perspective. *Journal of Business Ethics*, 61(1), 343-352

Bertens, K. (2000). *Etika*. Jakarta: Gramedia Pustaka Utama

Brooks, L. J., & Dunn, P. (2012). Business & Professional Ethics for Directors, Executives and Accountants (6th edition). Ohio: South-Western College Publishing.

Doidge, C. A. Karolyi, A. & R. Stulz (2007). Why do countries matter so much for corporate governance? *Journal of Financial Economics*, 86 (1), 1–39

Effendi, M. A. (2005). Peranan etika bisnis dan moralitas agama dalam implementasi GCG. *Jurnal Keuangan dan Perbankan (JKP)*, 2(1), 1, 49-58.

El-Kassar, A. N., Messarra, L. C., & Elgammal, W. (2015). Effects of ethical practices on corporate governance in developing countries: Evidence from Lebanon and Egypt. *Journal of Corporate Ownership & Control*, 12 (3), 494-504

Ernawan, E. R. (2016). *Etika Bisnis*. Bandung: Penerbit Alfabeta

Gamal, E. D.A. (2009). A Pause for Self-Assessment. *The Executive Quarterly*, 1, 2-3.

Ip, P. K. (2003). Business ethics and a state-owned enterprise in China. *Business Ethics: A European Review*, 12(1), 64-77. https://doi.org/10.1111/1467-8608.00306

Johnson, G., & Scholes, K. (1998). *Evaluation in Strategic Management*. New Jersey: Prentice Hall

Kamal, M. (2010). Corporate governance and state-owned enterprises: A study of Indonesia's code of corporate governance. *Journal of International Commercial Law and Technology*, 5(4), 206-224.

Keraf, S. (1998). *Etika Bisnis: Tuntutan dan Relevansinya*. Yogyakarta: Penerbit Kanisius.

Kurniawan, A. (2013). Etika bisnis di Indonesia. *Jurnal Akuntansi*, 15(01), 1-30.

Magdalena, L. (1992). *Ensiklopedia Ekonomi, Bisnis, dan Manajemen*. Jakarta: Cipta Adi Pustaka

Oluwafisoye, O. & Akande, O. (2013). *Business Ethics and Corporate Social Responsibility: The perception of employees on business ethics in an organization*. (Master's thesis). School of Management, Blekinge Tekniska Högskola. Available at: https://www.diva-portal.org/smash/get/diva2%3A831055/FULLTEXT01.pdf

Othman, Z. & Rahman, R. A. (2011). Exploration of ethics as moral substance in the context of corporate governance. *Asian Social Sciences*, 7(8), 173-182.

Othman, Z., Rahman, R. A., & Shamsudin, F. M. (2012). The role of ethics in corporate governance. *Jurnal Pengurusan*. 35, 13 – 20.

Petersen, A. (2013). *The Importance of Governance and Business Ethics*. Chartered Institute of Purchasing and Supply of Africa.

Post, J.E., L. Preston, & S. Sachs (2002). Managing the extended enterprise: The new takeholder view. *California Management Review*, 45 (1), 6-28

Preble, J. F., & Reichel, A. (1998). Attitude toward business ethics of future managers in the USA and Isreal . *Journal of Business Ethics*, 7(12), 941 - 949

Ramakrishnan, R. (2007). *Inter-relationship between business ethics and corporate governance among Indian Companies*. International Seminar At The Institute of Management, NIRMA University, Ahmadabad. https://ssrn.com/abstract=1751657

Risanty, R., & Kesuma, S. A. (2019). Good university governance: experience from Indonesian university. *Jurnal Perspektif Pembiayaan Dan Pembangunan Daerah*, 6(4), 515-524. https://doi.org/10.22437/ppd.v6i4.6195

Rossouw, G. J. (2005). Business ethics and corporate governance in Africa. *Business & Society*, 44(1), 94-106.

Sabirin, S. (2016). *Etik dan Good Corporate Governance (GGC) Sebuah Cara Mewujudkan Entitas Bisnis yang Sehat. Kompasiana Ekonomi*. Available at: https://www.kompasiana.com/sabirinsaiga/57df999e7593733941aef017/etik-dan-good-corporate-governance-ggc-sebuah-cara-mewujudkan-entitas-bisnis-yang-sehat?page=all.

Sari, K. (2011). *Pengaruh etika bisnis, pedoman perilaku, pemegang saham dan kebijakan dividen terhadap implementasi GCG pada Bank Sumut*. (Master's thesis). Universitas Sumatera Utara.

Silanont, S. P. (2012). *Business ethics perception of thai workforce: a study of age, gender, education, management experience and ethics training*. School of Business and Technology of Webster University

Sukrisno, A. (2012). *Etika Bisnis dan Profesi*. Jakarta: Penerbit Salemba Empat

Sutojo, S., & John, A. E. (2005). *Good Corporate Governance: Tata Kelola Perusahaan Yang Sehat*. Jakarta: PT.Damar Mulia Rahayu

Yosephus, S. (2010). *Etika Bisnis: Pendekatan Filsafat Moral Terhadap Perilaku Pembisnis Kontemporer*. Jakarta: Yayasan Pustaka Obor

Zabihollah, R. (2009*). Corporate Governance and Ethics*. USA: John Wiley and Sons.

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