THE PLANNING OF AREA POTENCIES-BASED HUMAN RESOURCES Applied on Gerbangkertosusila Metropolitan Areas, East Java

Nazaruddin Malik, Ida Nuraini, Muhammad Sri Wahyudi Suliswanto
Faculty of Economics and Business, University of Muhammadiyah Malang, Indonesia

Abstract

This study aimed to map both area potencies and human resources, along with the factors affecting the workforce absorption in Gerbangkertosusila (Gresik, Bangkalan, Mojokerto, Surabaya, Sidoarjo, and Lamongan) Metropolitan Area. The data were analyzed using*Dynamic Location Quotient, Klassen Typology Analysis, Geographical Information SystemAnalysis*and regression analysis. The result shows that human resources quality was indicated by Life Expectancy Index (LEI) and Education Index (EI). In this case, the Life Expectancy Index (LEI) and Education Index (EI) of Bangkalan and Lamongan Regency were under the standardized LEI and EI of East Java, which was 75.62 and 77.06. While the Buying Power Index (BPI) for Gresik, Bangkalan, Mojokerto, and Lamongan Regency were under the BPI of East Java, which were 67.95. In terms of Human Development Index (HDI), Bangkalan and Lamongan Regency, and Surabaya were under the East Java's IPM which was 73.54. In the economical potencies, Surabaya and Mojokerto city had the most sectors. The highest industrial development in 2013 lies in Lamongan regency with the index of 30.32. The regression analysis showed that Economic Development, Micro Small and Medium Enterprise development (MSME), Industrial Development, and the Government Expenses altogether positively and significantly affect the Workforce Absorption. While partially, MSME Growth, Industrial Development, and the Government Expenses did not significantly impact on the Workforce Absorption; but only on the Economic Development.

Keywords*:* workforce planning, Gerbangkertosusila, area potencies.

INTRODUCTION

Demography bonus refers to the opportunities feasted by a nation resulting from the big portion of productive citizens (between 15-64 years old). This phenomenon does happen in Indonesia due to the demographical transition in the recent years, accelerated by the nation's success in decreasing the fertility level; which significantly improved the health quality and the success of developmental

programs since the New Order era until today. The number of workforces in 2019 was about 139,948,000 and is predicted to reach 146,143,400 people in 2024. The government has to prepare children of 2019 to 2024 to be the skilled future labours. If these children merely perform like today's labourers, the demography bonus would turn to be a disaster owing to its failure in presenting economical advantages. The local governments need to study the area development to support the workforce planning in their own areas. This can be generated by exploring potencies and competitiveness of each area deeper. It is caused by the society's skill which does not suit the economical potencies of their areas (Nuraini&Suliswanto, 2014).

East Java contributes about 14% of national Gross Domestic Product (GDP) with the productive citizens around 28 million people. The province is also strategically located as the gate of eastern Indonesia trading, which makes the area should be explored more in order to contribute higher to the national GDP.East Java's cities and regencies are significantly varied on workforce absorption as stated by Nuraini (2010) that the workforce absorption in the cities was highly dominated by Commerce, Hotels, and Restaurants (30.42%); followed by Services (21.52%); Processing Industries (20.15%); and Mining and Excavations (0.44%). While in regencies, the workforce absorption was dominated by Agriculture (53.32%); and followed by Commerce, Hotels, and Restaurants (15.84%). The least absorption was in Gas and Electricity (0.66%), Finance and Rentals (0.72%), and Mining and Excavations (0.76%). The factors affecting these gaps should be studied more, in addition to the existing difference of productivity level among cities and regencies. In regencies, Agriculture sectors which had the most workforce absorption shockingly placed the lowest productivity level index (3.00). The highest productivity level lied on Finance, Rental, and Service sectors (45.36), followed by Mining and Excavations (45.22), and Electricity (40.67). While in the cities, the highest productivity level lied on Electricity, Gas, and Water Supply (44.41), is followed by Industrial (41.29), and Agriculture (3.94) sectors.

Becoming the growth centre for their hinterlands, Gerbangkertosusilahas a high urbanization levelwhere workforce absorption in this area is highly increased compared to other regencies in East Java. These areas are characterized by certain factors supporting workforce absorption, so that they can be the model for other

areas in both developmental and labours planning.

Based on Regional Regulation of East Java Number 4/1996 about East Java's Regional Spatial Plan and Government Regulation Number 47/1996 about National Regional Spatial Plan, Gerbangkertosusila was designed as an Area Development Unit(SWP) of East Java. These second largest metropolitans after Jakarta, Bogor, Depok, Tangerang, and Bekasi (Jabodetabek) were meant to improve equal development inter-regions.

Thus, it becomes no wonder that Gerbangkertosusila is complicated by high level of urbanization. There lies an urgent need to investigate whether certain economy sectors mainly interest the job seekers, or merely all its economy sectors play the same role. Owing to the avoidance of urbanization negative impacts where the labour skills do not fit the labour needs, a comprehensive workforce planning – especially local economical potencies based – is required.

Based on the background above, the aims of this study is to map the new concept of human resources planning which best fits the economical potencies of Gerbangkertosusila.

REVIEW OF RELATED LITERATURE

Workforce Planning

Workforce planning is basically categorized into six, namely: 1. Predicting job opportunities or needs, 2. Predicting and planning the labourers' availability, 3. Calculating both strengths and weaknesses, 4. Education plan, 5. Training plan, and 6. Plans Adjustment (Simanjuntak, 1998).

The model of planning relations presents as follows:

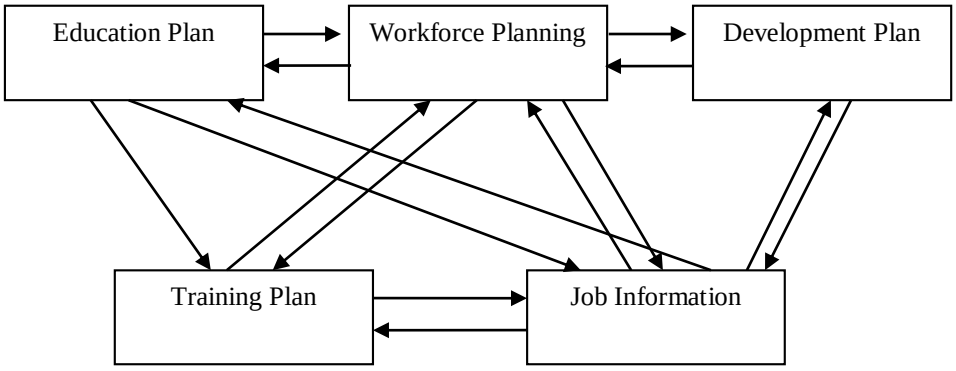

Figure 1. Model of Planning Relations (sources: Payaman J. Simanjuntak (1998: 161)).

If certain positions have fewer labourers resultingfrom thelower supply prediction compared to the needs prediction, the development planner must add several graduates through education plan. Meanwhile, if certain education levels outnumber the labourers, the workforce planner must align those labourers to other sectors through specific programs and trainings. If those solutions do not work,the government has to find other development planning such as subsidizing or investment policies.

Arranging aMaster Plan of Workers requires longer time, involves many departments and various communities as well. The prediction of required labourers must be based on the development plan conveying various economy sectors, and also the contribution of each economy sector. In terms of national income, the workers productivity in each economy sector is taken into account, altogether with education system and ability in supplying graduates of certain skills and studies.

In his study, Sunartono (2008) analyzed the improvement of working opportunities in Indonesia, in which the country's workforce problem is considerably wide and complex, covering many dimensions including economy, socio-prosperity, and also socio-politics. In terms of economy, the workforce development refers to the availability of skilled labourers which best fit the field work needs. Therefore, it is essential to build good job training, job information, and inter-work systems both regional and international. Expanding job opportunities may also support the growth of economy dimension since it can accelerate Economic Development by increasing society's income and buying power.

The creation of job opportunities is generated by improving business activities through proposed policies in production, monetary, fiscal, distribution, prices and wages, export-import activities, and the workforces itself. Thus, every step taken in the policy of job opportunity expansion and workforces will naturally involve the economy-politics dimension.

Human Resources Development

The human resources development strongly relates to the availability of opportunities and studying development, creating useful training programs

including planning, acting, and evaluating (Amstrong, 1997). In the micro level, human resources development refers to the activities designed to change the organization behavior. Likewise, the aims of human resources development is establishing organizations filled with qualified people, so that the organization's target achieved, and the working performance increased. Human resources development must also cover activities designed in anticipating changes outside the organizations.

Wahyuni and Koesmono (2010) states that both local wisdom and organization culture support the planning and development of human resources since it plays as the social glue for all of its members. This make every organization's activity is based on its wisdom values. In addition, local wisdom of motivation seems to be essential in producing qualified human resources. High motivation that best suits the organization's condition and the existing staff will result on the balance between rights and obligations of the two parties. Thus, there will be a harmonious working relation.

In his area, the regional government is responsible for its human resources development, indeed. A regional government is in charge of job opportunity supply so that the workers in its area will be employed. This can minimize the number of unemployment. Likewise, the regional government is also responsible for increasing the productivity of workers to create both high efficiency and regional competitiveness.

Factors Affecting Workforce Absorption

In his study, Rahman (2005) investigated factors affecting working opportunity in Jakarta which results that Gross Regional Domestic Product (GRDP), Investment, Provincial Minimum Wages (PMW), and workforces are simultaneously affecting the working opportunities in the country.

In addition to that, Cahyadi (2013) studied the factors affecting garment industry workers in Denpasar. The results show that both wages and investment significantly and directly affects the workforce absorption. The wages level positively and significantly affects the workforce absorption; as the garment industry develops, the need of workers follows, and thus impacting the wage

expenses of the employers. On the other hand, investment negatively and significantly affects the workforce absorption; as the investment in the form of cash will not increase the need of workers.

In their study entitled The Effects of Numbers of Workers, Education Level on Economic Development and Their Impacts on Poverty in North Sulawesi, Sunusi, K. And Rotinsulu (2014) states that Economic Development may be affected by the numbers of workers, education level, government expenses, and poverty. The number of workers in North Sulawesi keeps increasing, as well as the education level and the government expenses; different from the poverty level which annually decreased as the numbers of workers increased.

Based on those studies, it can be concluded that factors affecting workforce absorption as follows:

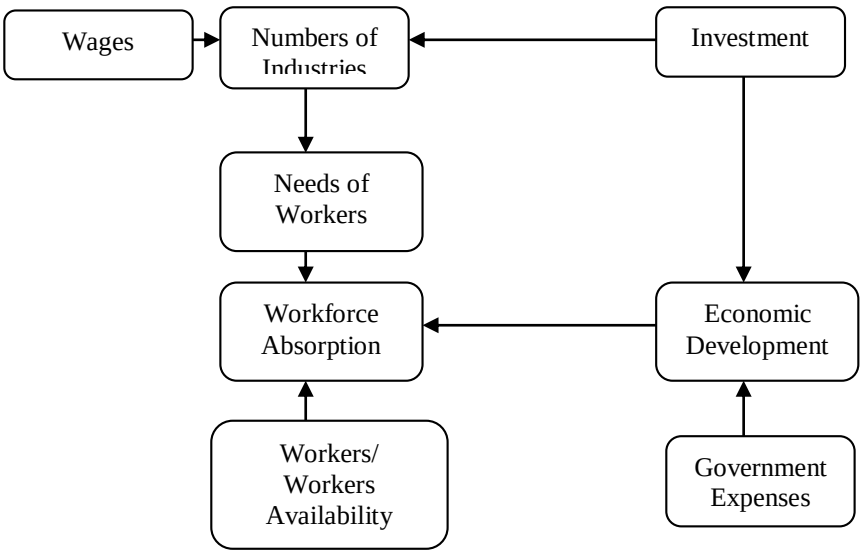

Figure 2. Factors Affecting Workforce Absorption

METHODOLOGY

The research was located in Gresik, Bangkalan, Mojokerto, Surabaya, SidoarjodanLamongan (Gerbangkertosusila). The data used were secondary data in the forms of Gross Domestic Products (GDP), numbers of absorbed workers in various economy factors, investment data, numbers of small industries and Micro Small and Medium Enterprise development (MSME), Economic Development, and regional government expenses, by documentation from Statistic Centre Department

(SCD) of East Java. The data were analyzed through Dynamic Location Quotient (DLQ), Klassen Typology Analysis, Geographical Information System Analysis, and Regression Analysis.

FINDINGS AND DISCUSSION

Mapping of Economical Potencies of Gerbangkertosusila

This section elaborates the economical potencies of each regency/ city in Gerbangkertosusila, East Java. The economical potencies of each regency/ city were based on the Static Location Quotient (SLQ) and Dynamic Location Quotient (DLQ) analysis. The SLQ result is named as *Prime*(High-Potency) *Sectors* since its **contribution** is relatively higher than the other sectors; while the result of DLQ is named as the *Potential*(Potential) *Sectors*as its **development** is relatively higher than the other sectors.

Prime sectors refer to those with higher role in a certain area than the similar sector in other areas, while *Potential* sectors are those with faster potential development than other areas. An area's economy sectors are strong when it is not only serving market on its own, but also serving others'with faster development.
Based on the previous table, Mojokerto and Lamongan Regency have around five sectors which all of them play as the *Prime* sectors. The *Prime* sectors in Mojokerto Regency are Mining and Excavation; Processing Industry; Building/ Construction; Transportation and Communication; and Finance, Rentals and Company Services. Likewise,Lamongan Regency has Industrial Processing; Building/ Construction; Commerce, Hotels and Restaurants; Transportation and Communication; and Finance, Rentals, and Company Service. Bangkalan Regency is the lowest one with only two *Prime* sectors: Building/ Construction, and Services.

The most *Potential* sectors are located in Mojokerto *and* Surabaya City with six potential sectors. *Potential* sectors of Mojokerto City are Electricity and Water Supply; Building/ Construction; Commerce, Hotels and Restaurants; Transportation and Communication; Finance, Rentals and Company Services, and Services. Surabaya City is equipped with Processing Industry; Electricity and Water Supply; Building/ Construction; Commerce, Hotels and Restaurants; Transportation and Communication; and also Finance, Rentals, and Company

Services. Otherwise, Bangkalan, Mojokerto, Sidoarjo, and Lamongan Regency have only three*Potential* sectors.

After determining the *Prime* and *Potential* sectors, the economical potencies from each regency/ city would be next defined by combining the analysis result (economic potencies matrix). The combination of both *Prime* and *Potential* sectors aimed to figure out the*Prime* sectors and sub-sectors with higher potency than other areas. Based on the combination, sectors and sub-sectors are categorized into four, namely: 1) *Prime* sectors (*Prime* and *Potential* sectors); 2) *Developing* sectors (*Potential* sectors and non-*Prime* sectors); 3) *Potential* sectors (*Prime* sectors and non-*Potential* sectors); and 4) *Under-developed* sectors (neither*Prime* nor*Potential* sectors).

Based on the classification, the Prime Sectorsis classified as the best since it has both *Prime* and *Potential* sectors which distinct them to the similar sectors in other areas. This kind of sectors, in the long-term purpose, becomes the development's top priority in the hope to trigger the development of other sectors. Although classified as the non-*Prime*, the Developing Sectors role quite stronger than those of similar sectors in other areas. In order to be *Prime* sectors in the future, this sector must accelerate the development of its potency even though it is not the priority.

Potential sectors actually belong to the *Prime* ones with less strong roles than similar sectors in other areas. Although this sector does not quite have the potency,it had better also be prioritized because its capability of serving both local and inter-regional markets which becomes the additional value on its areas.

The Under-developed sectors are categorized as the lowest, with neither *Prime* nor *Potential*sectors. Regencies classified as this one must be strongly stimulated in order to play a meaningful economy role.

Table1. The Category of Sectors inGerbangkertasusila

No.	Sector/Sub-sector	Regency/City					
		Sidoarjo	**Mojokerto**	**Lamongan**	**Gresik**	**Bangkalan**	**Mojoke City**
1	Agriculture	Developing sector	Potential sector	Potential sector	Under-developed sector	Potential sector	Under develop secto
2	Mining and	Under-developed	Prime	Under-	Potential	Under-	Under

	Excavation	sector	sector	developed sector	sector	developed sector	developed sector	
3	Processing Industry	Potential sector	Prime sector	Developing sector	Prime sector	Under-developed sector	Under-developed sector	
4	Electricity and Water Supply	Potential sector	Under-developed sector	Under-developed sector	Potential sector	Under-developed sector	Potential sector	
5	Building/construction	Under-developed sector	Developing sector	Developing sector	Prime sector	Prime sector	Prime sector	
6	Commerce, Hotel and Restaurant	Developing sector	Under-developed sector	Prime sector	Developing sector	Under-developed sector	Potential sector	
7	Transportation and Communication	Potential sector	Developing sector	Developing sector	Developing sector	Potential sector	Prime sector	
8	Finance, Rentals, and Company Service	Under-developed sector	Developing sector	Developing sector	Under-developed sector	Under-developed sector	Prime sector	
9	Services	Developing sector	Under-developed sector	Potential sector	Under-developed sector	Prime sector	Prime sector	

Sources: Researchers'Analysis, 2015

Based on Table 1, the most dominant Prime Sector is Mojokerto City with four sectors: 1) Building/ Construction, 2) Transportation and Communication, 3) Finance, Rentals, and Company Service, and 4) Services. Meanwhile, Sidoarjo Regency is the only one with no Prime Sector.

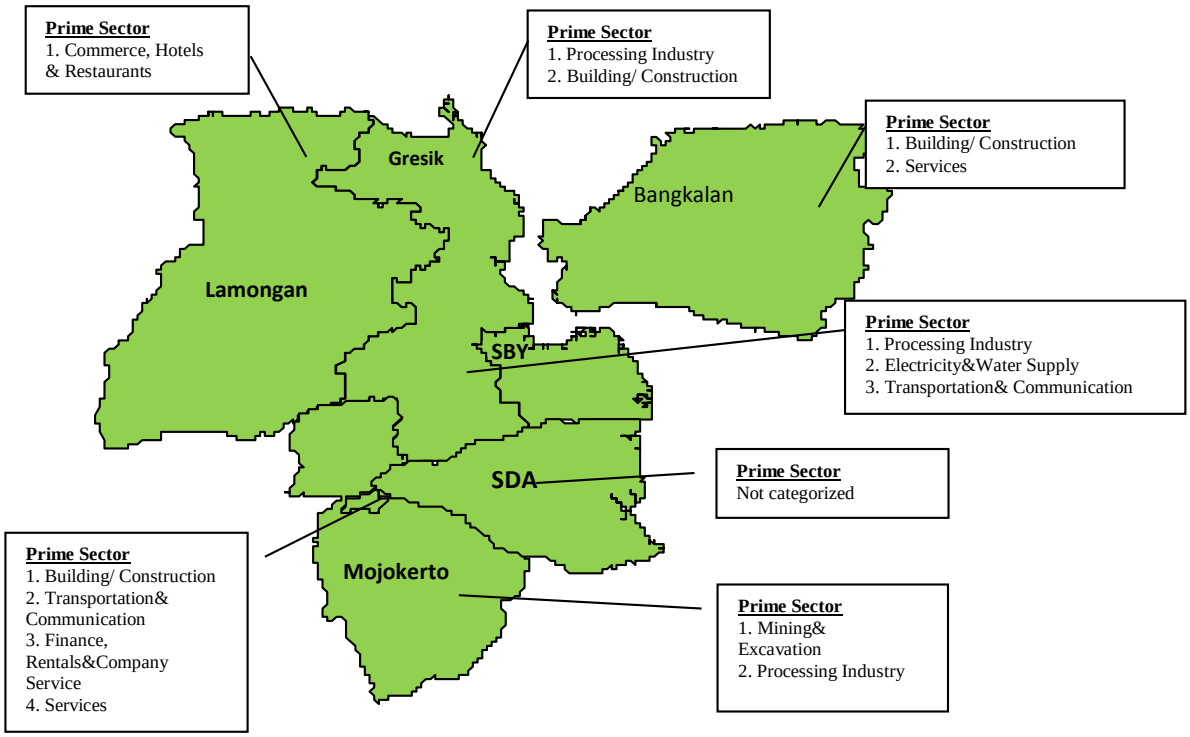

Figure 3. Map of Economy Potency in Gerbangkertasusila
(Sources: Researchers' Analysis, 2015)

Industrial Growth in Gerbangkertosusila

In 2013, the highest industry growth was in Lamongan Regency with the index of 30.32. Meanwhile, other regencies/ cities such as Surabaya, Sidoarjo or Mojokertodid not grow significantly do to thethe insufficient capacity. In Bangkalan Regency, the supporting factor for the industrial growth requires improvement. Comparing to East Java's industrial growth, Gresik and Lamongan Regency has grownfar above the trend. The industrial development also affects the creation of new job opportunities and the enlargement of enterprise.

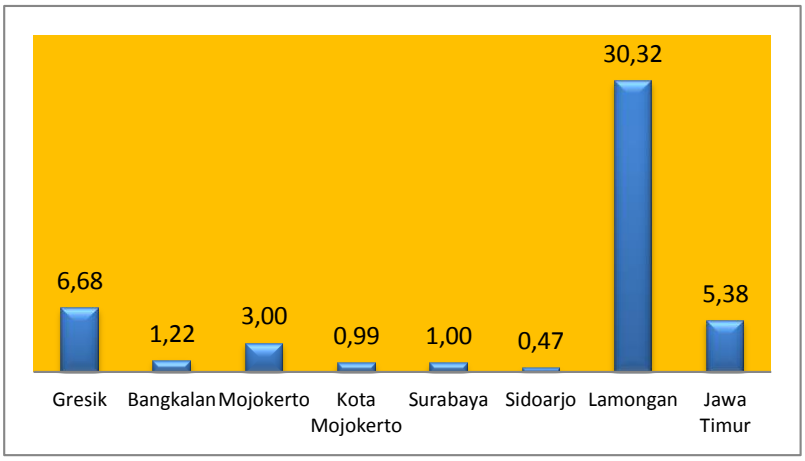

Figure4. Industrial Growth in Gerbangkertosusila
(Source: Macro-Economy Indicator data in East Java's Socio-economy, 2014)

Human Resources Development

Life Expectancy Index

An indicator of prosperity is the aspect of life expectancy. This is measured by the approach of life expectancy index within birth notated by e 0. Since Indonesia does not have a good registration system, e 0 thus measured through the indirect method. This method uses two data bases taken from the mean of children born alive and the mean of living children per women between 15-49 years old within five years period.

Life Expectancy Index (LEI) of East Java in 2013 is 75.62. Bangkalan's and Lamongan's LEI were under the province's index. In Gerbangkertosusila, the highest IHH lied in Mojokerto City with the index of 79.13, followed by Surabaya and Gresik City with the index of 78.54 and 77.61.

Education Index

Education index is amongst the essential factors in determining the quality improvement of human resources. This potentially affects an individual's life quality improvement. Education component is measured through two indicators; those are literacy, and studying period.

The data sources of these indicators were taken from Citizen Census and National Citizen Census. The numbers of literacy were measured through the ability of reading and writing, while the studying period was measured by three variables simultaneously: studying participations, levels/ schools being undergone, and the education level finished.

In 2013, Education Index (EI) of East Java reached 77.06. Bangkalan and Lamongan Regency placed under the province's standard. The highest EI in Gerbangkertosusila was in Surabaya with the index of 88.09, followed by Sidoarjo Regency and Mojokerto City with the index of 88.01 and 87.55

Buying Power Index

The indicators used in this component are the suited real average per capita. Each component was firstly measured to result index between 0 (the worst) and 1 (the best). Then, the index was transformed into hundreds for better understanding (multiply by 100).Buying Power Index (BPI) describedsociety consuming level as the reflection of income or prosperity level.

In 2013, East Java's BPI reached about 67.95. While the BPI of Gresik, Bangkalan, and Lamongan Regency positioned under the province's BPI. The highest BPIofGerbangkertasusilawas on Surabaya City with the index of 70.28, Mojokertoand Sidoarjo City followed with 69.31 and 69.05.

Human Development Index

Human development Index (HDI) is the other success indicator of a certain national and regional development. This index can depict the society's life quality from both economical and non-economical aspects. In the measurement, it involves the variables of individual, rather than accumulative or collective variables, such as Economic Development which is measured by the change of citizen's total output

regardless the producers.

In the efforts of human resources improvement, HDI plays as an important variable in which a holistic human development influences life quality and social environment.

East Java's HDI in 2013 reached 73.54. While the HDI of Bangkalan and Lamongan Regency placed under the province's HDI. The highest HDI was in Surabaya with 78.97, followed by Mojokerto and Sidoarjo City with the HDI of 78.66 and 78.15

Unemployment Level

Unemployment is the next indicator in measuring both quality and equity of Economic Development. A good Economic Development will positively benefit its citizens, such as opening new work fields. Naturally, new work fields decreases the numbers of unemployed and increases the citizen's per capita income.

Unemployment refers to the citizens within productive age who are unemployed, in the process of seeking jobs, preparing business, already employed but not yet started working, or even do not search for a job because they feel like will be impossibly hired (being discouraged). Unemployment becomes society's burden which requires prompt solutions. The higher unemployment numbers will impact society's income and prosperity level.

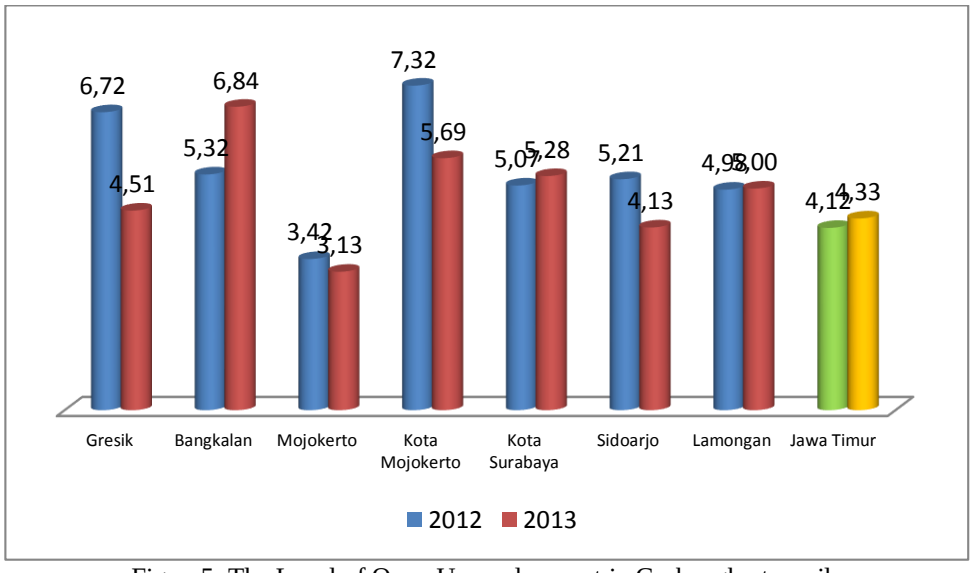

Figure5. The Level of Open Unemployment in Gerbangkertosusila
(Source: Macro-Economy Indicator data in East Java's Socio-economy, 2014)

Level of open unemployment in Mojokerto and Sidoarjo Regency was lower than East Java's. Meaning that compared to the other five regencies/ cities included in Gerbangkertosusila, these regencies are better in terms of work field availability. On the other hand, the other five regencies/ cities open unemployment level were above the province's trend.

Sectored Workforce Absorption

Every region is distinctively characterized so that its economical potencies differ as well. This of course made different level of workforce absorption.

Figure 2 depicts that the majority of Bangkalan, Mojokerto, and Lamongan Regency's citizens work in the Agriculture (paddy and spices) with the percentage of 59.55%, 25.08%, and 52.22%. While the majority of Gresik and Sidoarjo Regency's citizens work in Processing Industry with the percentage of 27.44% and 32.93%. The majority of Surabaya and Mojokerto City's citizens work in Commerce with the percentage of 26.61% and 28.46%.

Table2. Sectored Workforce Absorption inGerbangkertosusila

No.	Work fields	Gresik	Bangkalan	Mojokerto	Mojokerto City	Surabaya City	Sidoarjo	Lamongan
1	Agriculture (Paddies and Spices)	22.64	59.55	25.08	1.87	0.41	5.48	52.22
2	Horticulture	0.35	0.22	0.55	0.06	0.11	0.30	0.16
3	Farming Fields	0.13	0.10	1.45	0.11	0.09	0.18	0.25
4	Fisheries	4.15	2.25	0.11	0.06	0.46	1.08	6.36
5	Animal Husbandry	0.49	3.22	1.74	0.27	0.13	0.38	0.62
6	Forestry	0.11	0.06	0.17	0.04	0.10	0.17	0.08
7	Mining and Excavation	0.47	0.37	0.93	0.15	0.23	0.27	0.12
8	Processing Industry	27.44	3.77	24.66	23.91	16.65	32.93	5.60
9	Gas and Electricity	0.50	0.11	0.30	0.61	0.66	0.79	0.18
10	Construction/ Building	5.49	3.40	5.46	5.20	5.96	5.44	2.65
11	Commerce	15.69	11.35	15.75	26.61	28.46	19.61	13.54
12	Hotels and Restaurants	1.87	0.24	2.86	4.12	2.90	1.63	1.59
13	Transportation and Storages	3.53	3.77	4.60	5.47	7.59	5.24	2.65
14	Information and Communication	0.44	0.17	0.34	0.81	1.35	0.95	0.22

No.	Work fields	Gresik	Bangkalan	Mojokerto	Mojokerto City	Surabaya City	Sidoarjo	Lamongan
15	Finance and Insurance	0.62	0.16	0.74	2.81	2.65	1.70	0.45
16	Educational Service	4.54	3.08	3.65	5.92	3.98	4.26	4.08
17	Health Service	0.97	0.54	0.87	2.29	1.96	1.56	0.70
18	Society Service	8.41	6.42	9.44	19.01	21.87	14.75	6.79
19	Others	2.16	1.20	1.29	0.67	4.45	3.27	1.74

Source: Data of Citizen Census 2010 – Statistic Centre Department (analyzed)

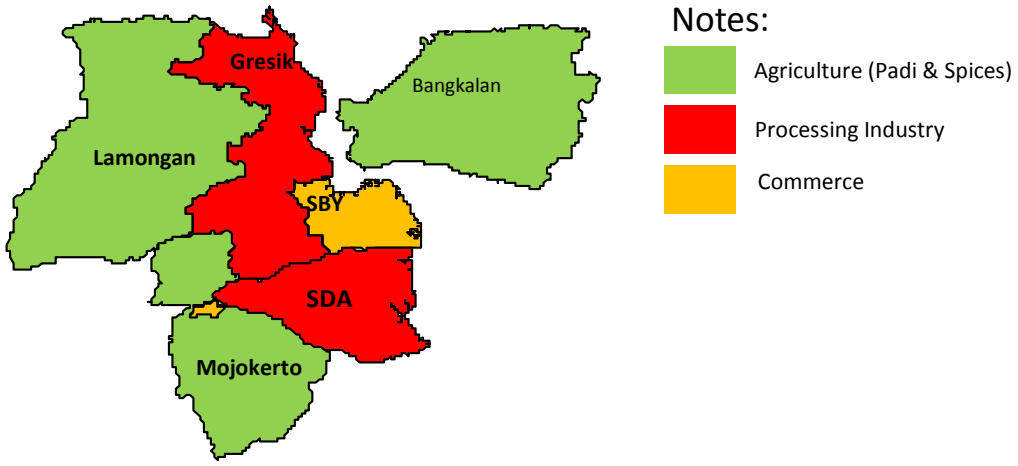

Figure 6. Mapping of Sectored Workforce Absorption (Source: Researchers' Analysis, 2015)

Workforce Productivity

Workforce productivity in Gerbangkertosusila was analyzed by comparing the numbers of workforces in each economy sector to the outputs of those sectors.

Table 3. The Comparison of Workforce Absorption and Sectored Production in Gerbangkertosusila

No.	Work fields	Gresik	Bangkalan	Mojokerto	Mojokerto City	Surabaya City	Sidoarjo	Lamongan
1	Agriculture, Animal Husbandry, Forestry, and Fisheries	-	-	-	-	-	-	-
2	Mining and Excavation	+	+	+	-	-	-	+
3	Industry and Processing	+	+	+	-	+	+	-
4	Gas, Electricity, and Water Supply	+	+	+	+	+	+	+
5	Construction	-	+	-	-	+	-	+
6	Commerce, Hotels & Restaurants	+	+	+	+	+	+	+
7	Transportation and Communication	-	+	-	+	+	+	-
8	Finance, Rentals, and Company Services	-	+	-	-	-	-	-
9	Services	-	+	-	-	-	-	-

Sources: Researchers' Analysis

Notes: + = small workforce absorption with big contribution to GRDP
- = big workforce absorption with small contribution to GRDP

Based on Table 3, the less productive sectors in Gresik Regency was Agriculture; Building/ Construction; Transportation and Communication; Finance, Rentals, and Company Services; and Services. It is caused by the imbalance between sectored GRDP contribution and the number of labourers in those sectors. While the less productive sector in Bangkalan Regency was Agriculture. The less productive sectors in Mojokerto Regency were Agriculture; Building/ Construction; Transportation and Communication; Finance, Rentals and Company Services; and Services. Less productive sectors in Mojokerto City were Agriculture; Mining and Excavation; Processing Industry; Finance, Rentals, and Company Services; and Services. In Surabaya City, the less productive sectors were Agriculture; Mining and Excavation; Finance, Rentals, and Company Services; and Services. The less productive sectors in Sidoarjo Regency were Agriculture; Mining and Excavation; Building and Construction; Finance, Rentals and Company Services; and Services. Last, less productive sectors in Lamongan Regency were Agricultutre; Processing Industry; Transportation and Communication; Finance, Rentals and Company Services; and Services.

Factors Influencing Workforce Absorption

Panel Analysis Data with Fixed Effect approach were employed to investigate the influence of Economic Growth (X1),MSME Growth (X2), Industry Growth (X3) and Government Expenses (X4) towards workforce absorption (Y) in Gerbangkertasusila, East Java. This model was assumed to be the best method for the study. The analyzedmodel result interprets as follows:

Gresik Regency : LY = 4.1997 + 0.1124 LX1 + 0.0025 LX2 + 0.00007 LX3 + 0.0095 LX4
Bangkalan Regency : LY = 4.2260 + 0.1124 LX1 + 0.0025 LX2 + 0.00007 LX3 + 0.0095 LX4
Mojokerto Regency : LY = 4.2255 + 0.1124 LX1 + 0.0025 LX2 + 0.00007 LX3 + 0.0095 LX4
Mojokerto City : LY = 4.2116 + 0.1124 LX1 + 0.0025 LX2 + 0.00007 LX3 + 0.0095 LX4

Surabaya City : LY = 4.1879 + 0.1124 LX1 + 0.0025 LX2 + 0.00007 LX3 + 0.0095 LX4
Sidoarjo Regency : LY = 4.2081 + 0.1124 LX1 + 0.0025 LX2 + 0.00007 LX3 + 0.0095 LX4
Lamongan Regency : LY = 4.2144 + 0.1124 LX1 + 0.0025 LX2 + 0.00007 LX3 + 0.0095 LX4

Notes:
LY = Log (Workforce absorption)
LX1 = Log (Economic growth)
LX2 = Log (MSME growth)
LX3 = Log (Industry growth)
LX4 = Log (Government expenses)

β0 shows the constant value of each regency/ city. Based on the table, the highest β0 was in Bangkalan Regency with 4.2260, meaning thatthe workforce absorption (LY) about 4.226% in Economic Growth (LX1), MSME Growth (LX2), Industry Growth (LX3), and Government Expenses (LX4) was equal to zero point (constant). On the other hand, Surabaya City had the lowest β0of 4.1879, which means the workforce absorption (LY) about 4.188% in Economic Growth (LX1), MSME Growth (LX2), Industry Growth (LX3), and Government Expenses (LX4) was equal to zero point (constant). In conclusion, the dependence of workforce absorption towards independent variables (Economic Growth, MSME Growth, Industry Growth, and Government Expenses) in Bangkalan Regency was lower than other regencies/ cities, while Surabaya City was very dependent tothe conditions of the independent variable.

In addition, β1 was coefficient regression of Economic Growth (LX1) variable for Gerbangkertosusila of 0.1124; meaning that there was positive impact of 0.1124% between Economic Growth andworkforce absorption. If Economic Growth (LX1) increased 1%, workforce absorption (LY) would also increase to 0.1124%. In contrast, if Economic Growth (LX1) decreased 1%, workforce absorption (LY) would decrease to 0.1124%. Meanwhile, β2 was the coefficient regression of MSME growth (LX2) variable for Gerbangkertasusilaof 0.0025; referring to the positive impact of 0.0025% between MSME Growth and workforce absorption. If MSME Growth (LX2) increased 1%, workforce absorption (LY) would also increase to 0.0025%. In contrast, if MSME Growth (LX2) decreased 1%, workforce absorption (LY) would decrease to 0.0025%.

β3 was the coefficient regression of Industry Growth (LX3) variable for Gerbangkertosusilaof 0.00007; referring to the positive impact of 0.00007% between Industry Growth and workforce absorption. If Industry Growth (LX3) increased 1%, workforce absorption (LY) would also increase to 0.00007%. In contrast, if Industry Growth (LX3) decreased 1%, workforce absorption (LY) would decrease to 0.00007%. Meanwhile, β4 was the coefficient regression of Government Expenses (LX4) variable for Gerbangkertasusilaof0.0095; it means there was positive impact of 0.0025% between Government Expenses and workforce absorption. If Government Expenses (LX4) increased 1%, workforce absorption (LY) would also increase to0.0095%. In contrast, if Government Expenses (LX4) decreased 1%, workforce absorption (LY) would decrease to0.0095%.

From these panel regression data, economic growth (X1); MSME Growth (X2); Industry Growth (X3); and Government Expenses (X4) had positive impact toward Workforce absorption (Y).

Statistical tests showed that F count of 2.913 with F table (α = 0.05; db regression = 4: db residual = 24) was 2.78. since F count > F table of 2.913 > 2,78, thus the influence of Economic Development (X1), MSME Growth (X2), Industrial Growth (X3), and Government Expenses (X4) toward Workforce Absorption (Y) was significant.

T-test was employed to investigate whether each independent variable partially affected dependent variable significantly. T-test between Economic Development and Workforce Absorption showed that t count = 2.217, and t table (α = 0.05; db regression = 4: db residual = 24) was 2.064. Since t count > t table of 2.217 > 2.064, thus Economic Development was significant with the error margin of α = 5%. T-test between MSME Growth and Workforce Absorption showed t count = 0.906, and t table (α = 0.05; db regression = 4: db residual = 24) was 2.064. Since t count < t table of 0.045 < 2.064, thus Industrial Development did not significantly affect with the error margin of α = 5%. In conclusion, Workforce Absorption was not significantly affected by the Industrial Development on α = 5%. T-test between Government Expenses and Workforce Absorption showed that t count = 0.932, and t table (α = 0.05; db regression = 4: db residual = 24) was 2.064.

Since t count < t table of 0.932 < 2.064, thus the influence of Government Expenses was insignificant with the error margin of $\alpha = 5\%$. Nevertheless, it was significant on the error margin of $\alpha = 50\%$ (t table was 0.685). It can be concluded that Workforce Absorption was not significantly affected by Government Expenses on $\alpha = 5\%$

The model validity test was shown through the determination coefficient value. Both determination coefficient (R2) and the suited ones showed determining variable in elaborating the variety of dependent variables. When R2 was closer to 1, it can be justified that the model developed better with the assumption of linear regression.

Based on the regression analysis, the determination coefficient was 0.6314, meaning that 63.14% Workforce Absorption variable would be elaborated by its independent variable: Economic Development, MSME Growth, Industrial Development, and Government Expenses. The rest 36.86% of Workforce Absorption variable would be elaborated by other variables excluded from this study.

Within the research period, the probability value might be employed to find the most dominant variables affecting Workforce Absorption level in Gerbangkertosusila. Independent variables with lowest probability value were the most dominant values toward the dependent ones.

Based on the analysis in comparing the probability values of each variable, it was concluded that Economic Development significantly and dominantly affected the Workforce Absorption, followed by Government Expenses, MSME Growth, and Industrial Growth in the second, third, and fourth places.

The least influence of Government Expenses (significance on $\alpha = 50\%$) showed that government finance allotment was not well-absorbed by the workforces. The Government Expenses in Gerbangkertosusila failed to accelerate Workforce Absorption; otherwise, it was more supported by variables other than Government Expenses.

While the low influences of MSME Growth and Industrial Growth were mostly caused by different characteristics of each area in Gerbangkertosusila. Therefore, the majority of absorbed workers in the difference sectors were not

merely caused by both MSME and Industrial Growth solely. It can be concluded from the previous analysis showing that the majority of Bangkalan, Mojokerto, and Lamongan Regency's citizens working in the agriculture of paddies and spices. The vast citizens of Gresik and Sidoarjo Regency were in the Processing Industry, while the majority of Surabaya and Mojokerto City were in Commerce. This condition made both MSME and Industrial Growth develop faster in Gresik, Sidoarjo, Surabaya, and Mojokerto City.

Economical Potencies Programs in Gerbangkertosusila

Generally, Gerbangkertosusila was officially established as the National Activity Centre (PKN) which functions to national service. Gerbangkertosusila is also a Metropolitan focuses on the strengthening of industrial, commerce, and commercial service sectors covering corridors located near Suramadu Bridge in Bangkalan Regency and Surabaya City, Surabaya's Central Business District, Surabaya's High Tech Industrial Park, and Sidoarjo Regency.

Based on the area mapping, the Gerbangkertosusila development policy is proposed as follows:

1) Surabaya, Sidoarjo, and Mojokerto City
    a. Completing infrastructures in the forms of equipmentsand properties supporting economy activities
    b. Improving equipmentsand properties supporting the spread of commodities, harvests, and industrial materials, as well as improving citizen's mobility
    c. Developing agro industry centrals
    d. Developing activities in the urban including fisheries, industries, and service commercials
    e. Developing tourism areas
    f. Developing inter-accessibility among residential centrals
    g. Developing industries based on extractive industrial agriculture harvests and manufactures in the forms of industrial areas (Shore-base Industry State)
    h. Building regional eco-friendly and hi-tech recycle centrals
    i. Developing small industries/ handcrafts

j. Developing renewable energy
k. Improving beneficial investment

2) Gresik and Lamongan
   a. Improving prime agriculture in food supply to support food defense and processing industries
   b. Improving fisheries products and competitiveness
   c. Developing residential areas
   d. Improving life quality around industrial areas through the establishment of supporting areas
   e. Developing stream industrial activities to improve work fields and accelerating sectored development
   f. Improving capacities and accesses within areas connected industrial areas and exporting harbors
   g. Developing industries supporting *Prime* sectors
   h. Improving transportation accesses toward industries
   i. Developing marketing facilities with regional services
   j. Developing commerce and service facilities to support urban activities caused by multiplier effects of the development of *Prime*sectors (agriculture for food supply, fisheries, and industries)
   k. Developing tourism areas

3) Bangkalan
   a. Supporting the development of agriculture, fields, animal husbandry, and fisheries as the prime sectors in the Economic Development in Bangkalan Regency and Madura Island
   b. Developing agro-politan clusters in both Bangkalan Regency and Madura Island based on the renewable and sustained natural resources
   c. Building agribusiness sectors in both Bangkalan Regency and Madura Island supported by independent area-based infrastructure which are more equal. Areas' infrastructure focuses on the improvement of production, distribution, and prime commodity marketing

d. Developing commercial and agribusiness services supporting economy activity in both Bangkalan Regency and Madura Island
e. Expanding products and improving society's economy by connecting local and regional markets
f. Improving human resources focuses on agribusiness, particularly innovating researches in creating comparative advantages on *Prime*sectors
g. Strengthening organizational coordination within agro-politan clusters in both Bangkalan Regency and Madura Island in synergizing development
h. Improving cooperation with other parties involved in area development which are capable of supporting the development of *Prime*sectors
i. Creating conducive investment climate in terms of regulations, security, social stability, infrastructure supply, and qualified human resources

Workforce Development Program in Gerbangkertosusila

To reduce the unemployment level caused by the unsuitability between workers' skills and work fields' needs, the following table may become guidance for the government or job seekers, especially for those resided in Gresik, Bangkalan, Mojokerto, Surabaya, Sidoarjo, and Lamongan.

Table 4. Economical potencies and the Required Labour Based on Skills

Area	Economical Potencies	Required Labour Skills
Gresik	1) Processing Industry, 2) Mining and Excavation, 3) Electricity and Water Supply, 4) Building/ Construction, 5) Commerce, Hotel, & Restaurant, 6) Transportation and Communication	1) Industrial Fields (production, administration, finance, human resources, marketing) 2) Entrepreneurship 3) Mining Experts (production, finance, human resources, marketing) 4) Electricity Experts 5) Construction/ Building Experts (labourers, skilled labourers, architects, administrators, finance) 6) Drivers, Machinists, Pilots 7) Information Technology Experts (technicians, operators, programmers)
Bangkalan	1) Agriculture, 2) Building/ Construction, 3) Transportation and Communication, 4) Services	1) Farming Experts 2) Construction/ Building Experts (labourers, skilled labourers, architects) 3) Drivers, Machinists, Pilots 4) Information Technology Experts (technicians, operators, programmers) 5) Administrative Experts 6) Experts in Services, Health, Beauty, Marketing, and so forth)

Area	Economical Potencies	Required Labour Skills
Mojokerto	1) Agriculture, 2) Mining and Excavation, 3) Processing Industry, 4) Building/ Construction, 5) Transportation and Communication, 6) Finance, Rentals, and Company Services	1) Farming Experts (Farm workers, Engineers) 2) Mining Experts (production, administration, finance, marketing) 3) Industrial Experts 4) Skilled labourers 5) Drivers, Machinists, Pilots 6) Information Technology Experts (Computer and cell phone technicians) 7) Business Experts
Mojokerto City	1) Electricity and Water Supply, 2) Building/ Construction, 3) Commerce, Hotel, & Restaurant, 4) Transportation and Communication, 5) Finance, Rentals, and Company Services 6) Services	1) Electricity Experts 2) Skilled labourers 3) Business Experts 4) Drivers, Machinists, Pilots 5) Information Technology Experts (Computer and cell phone technicians) 6) Financial Experts 7) Administrative Experts
Surabaya	1) Processing Industry, 2) Electricity and Water Supply, 3) Building/ Construction, 4) Commerce, Hotel, & Restaurant, 5) Transportation and Communication, 6) Finance, Rentals, and Company Services	1) Industrial Experts 2) Electricity Experts 3) Skilled labourers 4) Business Experts 5) Drivers, Machinists, Pilots 6) Information Technology Experts (Computer and cell phone technicians) 7) Financial Experts
Sidoarjo	1) Agriculture, 2) Processing Industry, 3) Electricity and Water Supply, 4) Transportation and Communication, 5) Commerce, Hotel, & Restaurant, 6) Services	1) Farming Experts 2) Industrial Experts 3) Electricity Experts 4) Drivers, Machinists, Pilots 5) Information Technology Experts (Computer and cell phone technicians) 6) Business Experts 7) Administrative Experts
Lamongan	1) Agriculture, 2) Processing Industry, 3) Building/ Construction, 4) Commerce, Hotel, & Restaurant, 5) Transportation and Communication, 6) Finance, Rentals, and Company Services 7) Services	1) Farming Experts 2) Industrial Experts 3) Skilled labourers 4) Business Expert 5) Drivers, Machinists, Pilots 6) Information Technology Experts (Computer and cell phone technicians) 7) Financial Experts 8) Administrative Experts

Source: Researchers' Analysis, 2015

CONCLUSIONS, SUGGESTIONS, AND LIMITATIONS

Managing qualified human resources requires the mapping of economical potencies of an area since it helps determining the required skills in the hope of developing the economical potencies of the related area. This synergy will fit the required skills with the workers' skills. Every region has its different economical potencies, so that it obviously needs different workers' skills. The policy of education curriculum had also better be based on the needs of each region in order to prepare suitable graduates needed by the regions.

This study was limited to the quantitative approach in which the results are also limited on the published data by the government. Thus, it is expected to the next researches in deeper investigation on the conditions of each regency/ city by qualitative approach.

REFERENCES

Amstrong, M. A. (1997). Handbook of Personel Management Practice. London: Kogan Page.

Cahyadi, L. D. C. (2013). *Analisis Faktor-faktor yang mempengaruhi Penyerapan Tenaga Kerja Pada Industri Kreatif di Kota Denpasar*. (S2), Udayana, Denpasar.

Nuraini, I., & Suliswanto, M. S. W. (2014). *Perencanaan Ketenagakerjaan Melalui Sinergitas Potential Ekonomi dan Potential Sumber Daya Manusia.* Paper presented at the Seminar Nasional: Meningkatkan Kesejahteraan Masyarakat Melalui Ekonomi Kerakyatan dan Peran Posdaya, Malang.

Rahman, E. (2005). *Analisis Faktor-faktor yang Mempengaruhi Kesempatan Kerja di DKI Jakarta.* (S2), Universitas Sumatera Utara, Medan.

Simanjuntak, P. J. (1998). Pengantar Ekonomi Sumber Daya Manusia. Jakarta: Lembaga Penerbit FE UI.

Sunartono. (2008). Analisis Kesempatan Kerja di Indonesia. *Jurnal Sains dan Teknologi Indonesia*, *10*(1), 48-53.

Sunusi, D. K., K., A., & Rotinsulu, D. (2014). Analisis Pengaruh Jumlah Tenaga Kerja, Tingkat Pendidikan, Pengeluaran Pemerintah Pada Pertumbuhan Ekonomi dan Dampaknya Terhadap Kemiskinan di Sulawesi Utara Tahun 2001-2010. *Jurnal Efisiensi*, *14*(2), 120-137.

Wahyuni, D. U., & Koesmono, T. (2010). Perencanaan dan Pengembangan Sumber Daya Manusia Berbasiskan Kearifan Lokal pada Aspek Budaya dan Motivasi Sebagai Unsur dalam Hubungan Industrial. *Jurnal Mitra Ekonomi dan Manajemen Bisnis*, *1*(1), 11-26.