



# RELATIONSHIP BETWEEN VOCATIONAL SECONDARY EDUCATION PROGRESS AND REGIONAL DEVELOPMENT IN MEDAN CITY

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## ABSTRACT

*This study aims to analyze the development of education in the Medan City area by using the region's potential as a capital for the planning and provision of secondary education facilities, in particular, vocational secondary education (SMK). The population and at the same time, the sample in this study were all public and private SMKs totaling 155 SMKs from 21 subdistricts in Medan City. Descriptive methods and non-parametric statistical analysis using the SPSS software with Spearman Rank correlation techniques. The results showed that there was a positive and significant relationship between the progress of vocational secondary education and the development of the Medan City area.*

**KEYWORDS:** *Quality of SMK Graduates, Job Opportunities, Medan City Potential*

## 1. INTRODUCTION

According to statistics and data from the Medan City Education Office in 2017, the number of vocational high school students increased significantly from 2016, from 56,637 to 292,666 students, consisting of 167,315 male and 125,351 female students.

Presidential Instruction No. 9 of 2016 on the revitalization of vocational colleges (SMK) with a goal to improving the quality and productivity of Indonesian human resources, so that the SMK curriculum is immediately improved and harmonized with the competencies according to the needs of learners (link and match) and the Presidential Regulation No. 87 Year 2017 concerning: Strengthening Character Education (PPK) strengthens the characteristics of human resources that are to be developed through the education system, in particular

for SMKs whose graduates can be specially prepared to enter the workforce.

Director-General of Basic and Secondary Education Ministry of Education and Culture Number: 4678/D / KEP? MK/16 on Vocational Secondary Education Skills Framework,' as explained by Spectrum,' is a guide in the opening and implementation of Midwives / Programs / Expertise Competencies in Vocational Schools / MAKs.

Academic planning includes multidisciplinary activities that focus on demographic, political, social, governmental, academic, educational, environmental, socio-cultural, and other factors that may directly or indirectly affect academic planning (Enoch, 1992).

This study will, therefore, focus on the level of advancement of vocational secondary education (SMK) with demand and supply that will see the



business world / industrial world of service users of vocational graduates,

### Objective of the study

This study aims to analyze the development of education in the Medan City area by using the region's potential as a capital for the planning and provision of secondary education facilities, in particular, vocational secondary education (SMK).

## 2. RESEARCH METHODOLOGY

Research has been conducted at the Medan City Education Office, SMK 1, SMK 7, SMK 9 and the Medan City Central Statistics Agency. Quantitative data are the type of data in this analysis. Secondary data are from the Medan City Education Office and primary data from vocational students. The data used are data on the number of SMK students in 2017, the number of SMK male and female students in 2017, the spectrum of SMK 1, SMK 7, SMK 9. Sedangkan data primer diambil berdasarkan angket (questioner) penelitian langsung kepada siswa SMK 1, SMK 7, SMK 9. The primary data was taken directly from the research questionnaire to SMK 1, SMK 7, SMK 9 participants. While statistics from the Statistics Agency is data on employment opportunities, which are related to the number of SMK graduates employed in 2017. The study was conducted in three SMKs, namely SMK 1, SMK 7, and SMK 9, for which the sampling data are already quite complete. This study uses a 5-year observation period from 2013 to 2017.

Data collection techniques used are documents containing data obtained from the Medan City Education Office, Statistics Indonesia, Employment Opportunities (graduates of working SMKs) according to subdistrict data from 2013 to 2017, Vocational Spectrum based on questionnaires from students of SMK 1, SMK 7, and SMK 9.).

The data analysis technique used is the multiple linear regression analysis test - F Simultaneous by using SPSS 16. Pearson correlation technique to answer the associative hypothesis of the relationship of Vocational Secondary Education Progress Level with the development of the Medan City area (interest of junior high school graduates choosing to continue their vocational high school education level (SMK).

## 3. LITERATURE REVIEW

### Regional Development through Education

Law on Government Regulation 2013, article 1(1) of the National Education System states that education is a conscious and planned effort to create an atmosphere of learning and learning process so that students can actively develop their potential for

religious spiritual strength, self-control, personality, intelligence, noble character, and the skills needed by themselves, society, nation, and state.

An area that has abundant natural resources and human resources capable of utilizing and developing technology, will develop faster than other regions that are not sufficiently superior human resources (Nacrowi, 2001). According to Garcia Gracia, Jorge and Soelistianingsih, (1998) "Education constitutes and effective efforts to increase the rate of growth and reduce inequality in provincial GDB percapita".

Still according to Nacrowi, 2001, in the long-run human capital is an autonomous regional priority, given the role of natural resources is increasingly limited, therefore it is necessary to have reliable human beings as development agents.

Evans (1978), that vocational education is part of the education system that prepares a person to be more able to work in one occupational group or one occupation than in other fields of work. The purpose of vocational secondary education according to Law No. 20 of 2003, is divided into general objectives and special objectives.

The general aim of vocational secondary education is

1. Increasing students' faith and devotion to God Almighty,
2. Develop the potential of students to become citizens of noble, healthy, knowledgeable, capable, creative, independent, democratic and responsible,
3. Develop the potential of students to have a national outlook, understand and appreciate the cultural diversity of the Indonesian nation, and
4. Develop the potential of students to have a concern for the environment by actively participating in maintaining and preserving the environment and utilizing natural resources effectively and efficiently.

The specific objectives of vocational secondary education are as follows:

- (a) Preparing students to become productive people, able to work independently, fill existing job openings as middle-level workers by competencies in the chosen expertise program,
- (b) Preparing students to be able to choose a career, be tenacious and persistent incompetence, adapt to the work environment and develop professional attitudes in the area of expertise they are interested in,
- (c) Equipping students with science, technology, and art to be able to develop themselves in



the future both independently and through higher education levels, and

- (d) Equipping students with competencies by the chosen expertise program. Vocational Schools have many expertise programs. The expertise program carried out in SMK adjusts to the needs of the existing workforce. The expertise program at the Vocational School level also adjusts to the demands of society and the market.

In the spectrum of vocational secondary education expertise in 2017, there are 7 areas of expertise, namely: Agribusiness, Agrotechnology, Business Management, Technology and Engineering, Information and Communication Technology, Health, Arts Crafts and Tourism.

In 2019 the area of expertise in the intermediate program PMK expertise becomes 9 areas of expertise, 48 expertise programs, and 142 expertise competencies divided into 108 skills competency in 3-year education programs and 34 competencies in 4-year education program expertise (Table 1).

The Ministry of Industry said that the industry still has several problems at the micro level including the problem of lack of quality and quantity of human resources (Ministry of Industry, 2007). This means that the industry wants the world of work because labor is a factor of production that greatly affects the productivity of the business world and the industrial world.

Theodore W. Schuilz, 1971, an economist who discusses the role of education and research on investment in human capital by comparing the two other expert opinions, he concluded that investment in education was increasing, because the results could be calculated while others were somewhat it is difficult to explain the increase in income as a result of that investment where the quality of components such as knowledge, skills and other similar characteristics have a special effect on the ability of humans to carry out productive tasks.

### **Relationship between the Number of Vocational Secondary Education Progress Levels and the Number of Vocational Schools.**

That the level of advancement in vocational secondary education is growing, which can be seen from the increasing number of interested students who register and the development of majors from year to year. To adjust the demands of the development/progress of the business and industrial world (DUDI) which demands expertise in the field of economics to develop/move the wheels of businesses and other industries to develop so that the Government, in this case, the world of education continues to try to improve the progress of vocational high school education in order meet the demands of globalization.



#### 4. RESULT

Data on the number of SMKs by district in Medan from 2013 to 2017 is presented in Table 1.

Table 1

Number of Vocational Schools by Sub-District in Medan City (2013-2017)						
No.	Sub-District	Year/Unit				
		2013	2014	2015	2016	2017
1	Medan Tuntungan	6	6	6	7	7
2	Medan Johor	9	8	8	9	10
3	Medan Amplas	14	14	14	13	13
4	Medan Denai	6	6	6	7	6
5	Medan Area	4	3	3	3	3
6	Medan Kota	13	12	12	12	12
7	Medan Maimun	2	2	2	2	2
8	Medan Polonia	1	1	1	1	2
9	Medan Selayang	8	8	8	8	7
10	Medan Sunggal	13	12	13	13	12
11	Medan Helvetia	19	19	19	17	16
12	Medan Petisah	7	7	7	7	7
13	Medan Barat	4	3	3	4	4
14	Medan Timur	13	12	12	11	13
15	Medan Perjuangan	8	8	8	8	8
16	Medan Tembung	11	10	10	10	11
17	Medan Deli	1	1	1	1	1
18	Medan Labuhan	6	5	5	6	6
19	Medan Marelan	11	10	10	10	11
20	Medan Belawan	4	3	3	3	4
Total		160	150	151	152	155
Growth (%)			-7,20	0,42	3,66	7,11

Source: Medan City Education Agency (processed).

The number of SMK units in Medan showed an increasing trend from 2013 to 2017.

One of the qualities of graduates of an educational institution can be seen from the achievement of students' academic achievement, including passing scores that meet specified standards. In this study, the

quality of SMK graduates in Medan is proxied by the average national examination (UN) score by sub-district.



**Table 2**  
**Vocational National Exam (UN) Score Results by Sub-district in Medan City (2012-2016)**

No.	Sub-district	Year				
		2012	2013	2014	2015	2016
1	Medan Tuntungan	53,07	53,53	53,72	70,34	69,20
2	Medan Johor	54,71	55,08	55,71	69,20	67,84
3	Medan Amplas	55,56	55,18	55,47	66,92	67,81
4	Medan Denai	53,64	53,71	54,87	74,09	76,49
5	Medan Area	52,83	52,17	52,82	70,13	69,28
6	Medan Kota	54,78	55,39	55,71	70,08	69,60
7	Medan Maimun	52,08	53,79	54,12	68,66	68,56
8	Medan Polonia	52,84	53,07	54,29	69,13	68,34
9	Medan Selayang	54,57	55,08	55,36	71,14	71,28
10	Medan Sunggal	55,12	55,89	56,07	61,78	58,47
11	Medan Helvetia	54,80	55,84	56,15	70,87	67,61
12	Medan Perisah	53,26	53,52	54,17	68,54	69,63
13	Medan Barat	53,72	53,66	54,69	73,45	76,76
14	Medan Timur	54,76	55,14	55,82	67,81	68,79
15	Medan Perjuangan	54,07	54,64	55,12	63,07	62,50
16	Medan Tembung	53,47	54,91	55,59	72,40	70,34
17	Medan Deli	53,06	53,76	54,67	70,15	70,99
18	Medan Labuhan	53,08	53,49	54,79	71,49	66,64
19	Medan Marelan	52,25	53,73	53,88	75,59	77,36
20	Medan Belawan	52,06	52,68	53,81	73,36	75,97
Mean		53,69	54,21	54,84	69,91	69,67

Source: Medan City Education Agency (processed).

The data above shows an increase in the average national vocational high school (SMK) scores in Medan City year by year which also reflects the quality of vocational school graduations in the city of Medan which has increased even though in 2016 there has been a decline again.

To get a figure on the level of employment opportunities or it can be called the labor market

scrap power of SMK graduates, calculated from the number of SMK graduates who work in the City of Medan according to the District.



**Table 3**  
**Job Opportunities for SMK Graduates by Sub-District in Medan City (2012-2016)**

No.	Sub-District		Year/Person				
			2012	2013	2014	2015	2016
1	MedanTuntungan	Medan	4.961	5.332	5.714	6.244	6.225
2	Johor		7.614	8.183	8.791	9.628	9.621
3	Medan Amplas		7.028	7.554	8.181	9.032	9.100
4	Medan Denai		8.587	9.229	9.820	10.652	10.544
5	Medan Area		5.846	6.283	6.670	7.220	7.132
6	Medan Kota		4.395	4.724	5.015	5.429	5.363
7	Medan Maimun		2.399	2.578	2.738-	2.966	2.931
8	Medan Polonia		3.238	3.480	3.732	4.080	4.071
9	Medan Selayang		6.075	6.529	7.041	7.742	7.767
10	Medan Sunggal		6.831	7.342	7.798	8.444	8.344
11	Medan Helvetia		8.800	9.457	10.098	10.992	10.918
12	Medan Petisah		3.740	4.020	4.269	4.622	4.566
13	Medan Barat		4.288	4.609	4.895	5.301	5.238
14	Medan Timur		6.579	7.071	7.507	8.126	8.027
15	Medan Perjuangan		5.656	6.078	6.457	6.993	6.910
16	Medan Tembung		8.094	8.698	9.239	10.004	9.885
17	Medan Deli		10.336	11.109	12.008	13.234	13.308
18	Medan Labuhan		6.812	7.321	7.843	8.567	8.539
19	Medan Marelán		8.909	9.574	10.542	11.834	12.100
20	Medan Belawan		5.788	6.220	6.607	7.155	7.071
Total			125.976	135.391	144.967	158.265	157.659
Growth (%)				7,47	7,07	9,17	-0,38

Source: Medan City Education Agency (processed).

The description of an increase in the number of job opportunities or vocational graduates working in Medan reflects the increasing demand or interest in the business/industry world (DUDI) in Medan to get skilled and specific SMK alumni or graduates to work in their companies. The number of job opportunities or SMK graduates working in Medan from 2012 to 2015 showed an increasing trend, and in 2016 showed a declining trend again.

### **The Relationship between Level of Education Progress with the Quality of Vocational School Graduates with Job Opportunities**

The job opportunities referred to in this study are residents of SMK graduates in Medan who are working (not unemployed). Based on the research

results, there is a tendency to increase the quality of SMK graduates (UN scores) as well as the number of SMK graduates working by Districts in Medan City. For this reason, it is necessary to further analyze the relationship between the quality of SMK graduates (average UN scores) and job opportunities (SMK graduates working) according to the Kecamatan in Medan City. The analysis was also carried out using the random sampling correlation approach with the help of the SPSS program. The results of the analysis are presented in Table 5.





Table 4

The Results of the Analysis of the Relationship between the Quality of Vocational School Graduates and Vocational Opportunities for Workers in the City of Medan

**Descriptive Statistics**

	Mean	Std. Deviation	N
Score of national exam	60.4640	8.52359	5
Total_Oppportunity	1.4445E5	14044.15661	5

**Correlations**

		Total of Vocational School	Total of student
Pearson Correlation	Score of national exam	1.000	.900
	Total_Oppportunity	.900	1.000
Sig. (1-tailed)	Score of national exam	.	.019
	Total_Oppportunity	.019	.
N	Score of national exam	5	5
	Total_Oppportunity	5	5

Source: Data Processed with SPSS

In the correlation matrix it is found that the number is 0.019 which is significant for the relationship between independent variables with the dependent variable value below 0.05 ( $<0.05$ ), so it can be concluded that there is a very significant relationship between the correlation and the correlation between the UN Value variable with the Number of Job Opportunities.

Thus, it means that statistically the hypothesis is also accepted so that it can be concluded

that there is a positive and significant relationship between the quality of SMK graduates (average UN SMK scores) and job opportunities (SMK graduates working) in Medan. This result indicates that the more qualified SMK graduates the more easily absorbed in the labor market (work).

Below is a list of 2019 vocational secondary education competency majors.

**Table 5**  
**Vocational School Recapitulation**

No.	Areas of expertise	Expertise program	Expertise competency		
			3 years	4 years	Total
1.	Technology and Engineering	13	42	16	56
2	Energy and Mining	3	5	1	6
3	Information and communication technology	2	5	1	6
4	Health and social workers	5	6	1	7
5	Agribusiness and Agrotechnology	5	13	7	20
6	Maritime affairs	4	9	1	10
7	Business and management	3	5	0	5
8	Tourism	4	5	3	8
9	Arts and Creative Industries	9	18	4	22
Total		48	108	34	142

Curriculum subdit, PMSK Directorate



### **Vocational Education Factors that Support Regional Development Planning in Medan City**

Based on the description of the regional characteristics, Medan City can be described as an area that has the potential to be developed as one of the major regional and regional economic centers on Sumatra Island. This potential can be seen from the position, function, and role of the important and strategic city of Medan as the main gateway to service activities, trade in goods and domestic and regional/international finance in western Indonesia.

Under the National Spatial Plan, North Sumatra Province RTRW, Medan-Binjai-Deli Serdang-Karo Spatial Plan (Mebidangro) and Medan City Spatial Plan, Medan City's main potentials for regional development are: 1) as a center for activities nationally, 2) as a national strategic area, 3) as the capital of the province of North Sumatra, 4) as a service center, trade, industry, tourism, education and health, and 5) as a dynamic actor and locomotive for the growth of its hinterland areas. so that it can be projected to become one of the new Metropolitan Cities in Indonesia.

The above findings shows that education is one of the potentials that need to be developed in the Medan City area, Medan City as an education center. Medan City with the characteristics of economic structure as a city of trade, industry and services is not excessive if secondary education in the city of Medan is also directed to the development of vocational schools both in quality and quantity.

Data obtained from the Medan City Education Agency Office and the Medan City Central Statistics Agency (BPS) show that the development of education provided especially in vocational schools in the City of Medan has experienced quite an increase which is evident from the increase in the number of vocational schools in Medan during the 2013-2016 period. The progress of organizing vocational education in Medan can also be seen from the increasing interest of the community of junior high school graduates to continue their education to vocational schools, improving the quality of vocational school graduates as seen from the national exam scores of vocational students and increasing the absorption of vocational school graduates in the labor market during the 2012-2016 period.

Based on the results of research that has been done, the researchers concluded that there were several factors related to vocational education (SMK) in supporting regional development planning in Medan, including 1) the number of vocational students who showed interest in the community of junior high school graduates to continue their education to vocational schools, 2) the number vocational education for junior high school graduates,

3) ability of SMK to produce quality graduates, and 4) business / industrial world (DUDI) that absorbs vocational education graduates in the labor market.

Thus, the factor of vocational education is something that needs to be considered for the Medan City government in order to support regional development planning in Medan City. Researchers also underline how vocational education is between two forces, namely the junior high school graduates market where vocational education "buy" their inputs and the labor market where vocational education "sell" their output. This means that various determinants such as school fees, school facilities and the socioeconomic background of junior high school graduates, which explain why junior high school graduates choose (or not choose) vocational education need to be considered. On the other hand, the desires of the business/industrial world (DUDI) in the City IV Medan region are also considered. For example, regions or districts that are "concentrated" with workers in the industrial sector certainly need diploma graduates in the industrial sector or districts with workers in the hospitality sector, of course, need diploma graduates in the hotel sector and so on.

### **5. DISCUSSION**

Based on the results of research that has been done, the researchers concluded that there are several factors related to vocational education (SMK) that need to be considered for the Medan City government in order to support regional development planning in Medan City, including: 1) the number of SMK students, (2) the number of units SMK, (3) quality of SMK graduates, business / industrial world (DUDI).

#### **1. Number of Vocational Students**

The availability of Vocational Schools increasingly provides great opportunities for the community or junior high school graduates to continue their education to Vocational Schools. The results of research findings indicate a tendency (trend) to increase the number of vocational students in Medan. The picture of an increase in the number of vocational students in Medan reflects the increased interest of the community or junior high school graduates to continue their education to vocational schools.

Based on the data, the research findings show that until 2016 there was an increase in the number of vocational students in Medan. The results of the analysis of the research findings show that in the 2015-2016 period there was an increase in SMK enthusiasts in the City of Medan by 0.64%. The growth of enthusiasts or the number of vocational students also occurred in several districts in Medan during the 2015-2016 period. Thus, the interest of the community or junior high school students who





continue their education to vocational high school needs to be a concern of the government, so various determinants such as school fees, school facilities and the socioeconomic background of junior high school graduates, which explains why junior high school graduates choose (or don't choose) vocational schools also needs to be considered.

## 2. Number of Vocational High School Units

Medan City with the characteristics of economic structure as a city of trade, industry and services is not excessive if secondary education in the city of Medan is also directed to the development of vocational schools. The Importance of Vocational Schools according to the Directorate of Vocational High School Development (Depdiknas, 2007), can be explained with the following 4 (four) things:

- a. SMK produces specific human capital, rather than general human capital. In vocational high schools, students are programmed to commit to certain specific skills so that they can concentrate more on efforts to hone and develop those skills. The more specialized the skills of the SMK alumni, the easier it will be to develop those skills.
- b. Diversity of skill paths in SMK reflects the differentiation of students / graduates from one student / other graduates. Differentiation of the expertise paths in SMK implies the specifications of one particular graduate against one other graduate so that SMK graduates are relatively "not lost in the crowd" among other high school graduates. In short, SMKs make graduates not losing in the crowd. This provides a menu for dimia iisaha and the industrial world (DUDI) to get specific SMK alumni and match their needs.
- c. Through vocational high schools, students can "shorten the period of study" so as to reduce the economic burden on parents of students for their children's education.
- d. Through vocational schools too, vocational students can "extend their apprenticeship periods," thereby reducing the on-the-job-training costs that DUDI should carry.

Looking at the Ministry of National Strategic Plan in the Long Term Development Plan (RPJP), in 2025 the mandate ratio between the number of SMA: SMK reaches 30%: 70%. This means that in the future the government through the Ministry of National Education will focus more on vocational education (vocational) with the reason that SMK graduates will be better prepared to occupy existing jobs in the business and industrial world rather than preparing graduates who are expected to continue their education to tertiary institutions. Especially with the fact that many high school graduates (SMA) also directly work, not continuing their education to

higher education. The target of the Ministry of National Education Strategic Plan will indeed be undertaken jointly between the government and the community. It means that it is not possible for all of them to be built and provided by the government, considering that the development budget for SMKs is greater than the construction of high schools. general.

Based on data from research findings obtained from the Department of Education and the Central Statistics Agency of Medan, it was found that the number of vocational schools in Medan showed an upward trend in 2013 to 2016, although in 2013 it decreased compared to 2012. The number of vocational schools in the City Medan in 2014 reached 151 SMKs or increased by 0.42% compared to 2013 (150 vocational schools). In 2015, there were 152 or an increase of 3.66% compared to 2014. In 2016, there were 155 or an increase of 7.11% compared to 2015. Until 2016, the largest number of Vocational Schools were in Medan Helvetia Subdistrict, 16, while in Medan Deli subdistrict until 2016 there were only 1.

The growth in the number of SMKs in the City of Medan can reflect the government's efforts to raise the level of education for high school-age residents in the City of Medan. The more vocational schools available, the greater the chance for the community or junior high school students to continue their education to vocational school so as to increase the level of population participation in school. Vocational Schools also increasingly have a strategic role in the development of human resources considering the government, including the Medan City government, continues to encourage the interest of junior high school graduates to continue their studies at vocational schools.

## 3. Quality of Vocational School Graduates

One of the qualities of graduates of an educational institution can be seen from the achievement of students' academic achievement, including passing scores that meet specified standards. Quality or quality in the context of education includes the quality of inputs, procedures and the quality of output. Educational output is school performance which is the achievement of the resulting school and school processes / behavior. This is usually indicated by the quality of school output ie graduates who can be seen from the academic and non-academic achievements of their students. The quality of output becomes important because it is the spearhead in determining the quality of education. Educational institutions / schools can be said to be of high quality if school performance, especially student achievement, shows high achievement, one of which is in academic achievement, which is the passing score that meets specified standards.



The quality of SMK graduates in Medan City is proxied by the average value of the National Examination (UN) by District. Based on the findings of the study showed an increase in the average value of the National Examination Vocational School in Medan during the 2012-2015 period which at the same time reflected the quality of vocational school graduates in the City of Medan increasingly experiencing an increase even though in 2016 there was a decline. The description of the increase in the average national vocational high school scores in Medan reflects the better quality of vocational graduates in Medan. This also reflects that an increase in the number of SMKs in Medan is sufficient to guarantee or not reduce the quality of its graduates.

The results of the analysis also showed that there was a significant relationship between the quality of SMK graduates (the average value of the National Vocational High School National Examination) with job opportunities in the city of Medan. These results indicate that the more qualified SMK graduates the more easily absorbed in the labor market (work). Thus, the quality of vocational school graduates who are proxied from the average national exam scores is also one of the factors that needs to be a concern and consideration for the government in supporting regional development planning in Medan.

#### 4. Business World / Industrial World (DUDI)

In addition to promising junior high school graduates to take alternative education, vocational schools also promise businesses and the industry industry (DUDI) to get skilled and specific SMK alumni. The business world and the industrial world are stakeholders for education graduates, especially vocational education where the industrial world needs a workforce that is capable of adaptive and has competency expertise in accordance with DUDI needs.

The research findings obtained from the data from the Medan City Statistics Agency show that the number of SMK graduates working in Medan from 2012 to 2015 has increased. In 2012 the number of SMK graduates working was 125,976 people. In 2013 it increased by 7.47% compared to the previous year which was 135,391 inhabitants. In 2014 it increased to 7.07% or 144,967 people. In 2015 it increased again by 9.17% or to become 158,265 people. In 2016 the number of vocational graduates who worked became 157,659 or growth decreased by -0.38% (negative sign means the growth has decreased).

The description of the increasing number of vocational graduates working in Medan reflects the increasing demand or interest in the business / industry world (DUDI) in Medan to get skilled and specific vocational high school graduates or graduates to work in their companies. If you look closely, based on EPS data the City of Medan shows that there is

competition between vocational high schools and senior high schools. The increase in the employment of graduates from vocational high schools in 2013 to 2015 was accompanied by a decrease in the employment of high school graduates. Whereas in 2016, the opposite happened, namely an increase in absorption of the workforce of senior high school graduates accompanied by a decrease in employment of graduates of vocational high school graduates.

Basically Vocational high schools prepare and create skilled and quality graduates for the labor market, in which there is an interaction between DUDI and vocational high school graduates. It is not difficult to find the logic behind the interaction between graduates of Vocational High School and DUDI in the labor market. The more qualified a graduate of Vocational High School is, the easier that person is employed by DUDI or the more qualified a Vocational High School graduate is, the easier the person wins the competition in the labor market.

Based on this information the planning and development of vocational education with DUDI in Medan needs to get serious attention from the Medan city government. The involvement of DUDI to plan and develop vocational education in Medan is worth exploring. Because if the labor graduates of vocational high schools needed by DUDI are available, the company financing in terms of training and training for employees to match the competencies expected will be reduced. With a favorable approach for the government and DUDI, this can certainly be a bargaining position so that DUDI is ready to support the addition of less vocational high school education facilities in the city of Medan.

DUDI support can be of various types, especially readiness to use graduates, apprenticeship facilities, or curriculum design to suit DUDI's work, it does not even exclude the possibility to participate in funding, depends on the agreement of mutually beneficial agreements and the wise use of the government's legal position as responsible for the success of national education. This means that the government has the opportunity to hold DUDI to play a role in realizing the opening mandate of the 1945 Constitution "to educate the nation's life".

Thus, factors of vocational education are things that need to be considered for the Medan City government in order to support regional development planning in Medan City, including: 1) the number of vocational high school students who show interest in the community of junior high school graduates to continue their education to secondary schools vocational, 2) number of units of vocational high school for junior high school graduates, 3) quality of vocational high school graduates to be able to compete in the labor market, and 4) business /



industrial world (DUDI) absorbing graduates of vocational secondary school in the labor market .

## 6. CONCLUSION

There is a positive and significant relationship between the advancement of vocational secondary education level with regional development in the city of Medan.

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