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AN ANALYSIS ON MANAGEMENT IMPROVEMENT AND FISCAL SUPPORT FOR VOCATIONAL EDUCATION DEVELOPMENT IN INDONESIA

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Abstract—Vocational education in Indonesia is at both vocational high school (senior high school) and academy level, which is managed by universities. Vocational education seeks to prepare students to fit the competencies demanded by the subsequent workforce and, as such, its methods of education, training and curriculum are expected to be connected to the workplace. However, the Central Bureau of Statistics of Indonesia (2018) shows that the annual average number of unemployed people in Indonesia, when viewed from the highest level of education (2013-2017), was 1,460,473 (18.40%) among Vocational Senior High School (VSHS) graduates and 218,567 (3.00%) among Vocational Academy/Diploma Program (VA/DP) graduates. There are two points considered to be the cause of this condition, namely: (1) the planning, curriculum, and implementation systems of vocational education in Indonesia are considered far from perfect; (2) specifically, the form of fiscal support from the government has not been identified for the development of vocational education. By using descriptive exploratory analysis method and with data collection methods through focus group discussion, literature study, and others, this article makes several recommendations, such as: (1) The government and related parties should look for several alternative solutions to problems in planning, curriculum, and implementation of vocational education; (2) the government should provide more specific fiscal support and incentives and (3) there should be mapping of the leading economic sectors that are expected to absorb vocational education graduates.

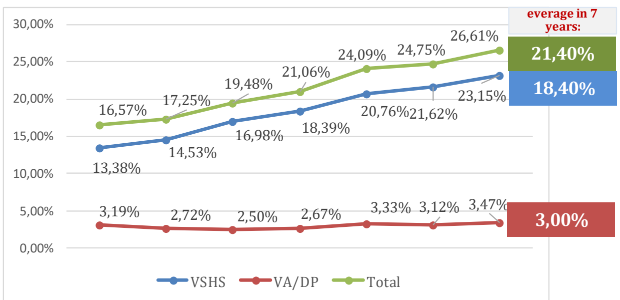
Keywords—Vocational Education, Problems, Alternative Solutions, Fiscal Incentives

I. INTRODUCTION

The quality of human resources (HR) is one of the main capitals in the development of a nation. Therefore, a development process will not meet with success without this quality of human resource. One of the factors that can produce such quality is education.

In the Republic of Indonesia Law number 20 of 2003 concerning the National Education System, it is stated that there are seven categories of education in Indonesia, including: general education, academic, religious, special, and vocational education.

Vocational education has a fundamental goal, namely that students have the skill, both in theory and practice, concerning the character and needs of the included workforce.



(Source: Central Bureau of Statistics of Indonesia, 2018 (CBSI), edited)

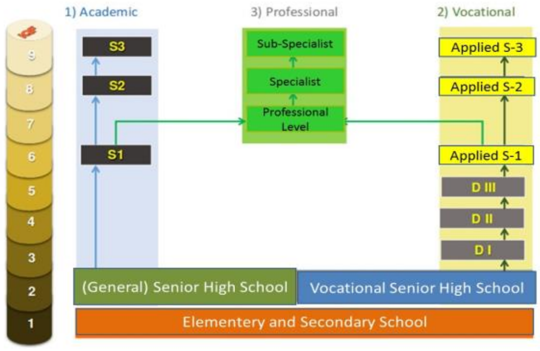
Graph 1. Open Unemployment in Indonesia from Vocational Education: 2010-2017 (%)

One of the main problems of vocational education is that it is still a 'contributor' to the unemployment rate in Indonesia. In graph 1 above, CBSI data for 2018 show that the annual average (2013-2017) number of unemployed in Indonesia when viewed from the highest number of education graduates comprises 18.40% from among VSHS graduates and 3.00% from among VA/DP graduates, or 21.40% of total unemployment. There are a number of things considered to be causes, namely: (1) the planning, curriculum, and implementation systems of vocational education in Indonesia are considered to be far from perfect; (2) specifically, the form of fiscal support from the government has not been identified for the development of vocational education.

II. LITERATURE REVIEW

A. *Vocational Education Definition and Curriculum*

According to the Ministry of Research, Technology, and Higher Education, (2016), vocational education (specifically) is a higher education diploma program that aims to prepare students to obtain jobs with certain applied skill levels, from vocational higher education programs for applied undergraduate programs to applied master's programs and up to applied doctoral programs.



(Source: Ministry of Research, Technology, and Higher Education, 2016)

Figure 1. Vocational, Academic and Professional Levels of Education

B. *Fiscal Support from the State Expenditure Side*

Prasetya (2012) says that, in macroeconomic theory, government expenditure consists of three main posts, which can be classified as follows:

1. Government expenditure for employee salaries - changes in employee salaries have an influence on macroeconomic conditions, where changes in employee salaries will affect the level of demand indirectly.
2. Government expenditure for the purchase of goods and services.
3. Government expenditure for transfer payments.

Economically, the transfer payment has the same status and influence as the employee salary post although they are different administratively. Transfer payment here means direct payments or gifts to citizens, such as payment of subsidies or direct assistance to various groups of people, pension payments, and interest payments for government loans to the public.

Thus, in terms of state finance, fiscal support and incentives (in terms of expenditure) for improving vocational education can be done in various forms depending on the priority needs and which parties need to obtain fiscal support on the country's expenditure side.

C. *Fiscal Support from the State Revenue Side*

Fiscal support from the side of state revenues is usually in the form of tax incentives. Waluyo and Wirawan (2002 cited in Aziz et al., 2013) stated that taxes are: "contributions to the state (which can be imposed) owed by those who are obliged to pay according to regulations with no immediate performance, and whose benefits are to finance the general expenditure of the state to organize a government." From the definition above, it can be concluded that the definition of tax is as follows:

1. Tax is the contribution of the people collected under the Law and its implementing rules.
2. Taxes can be coercive.
3. The tax collected by the state in this case is by the government.
4. There is no direct counterpart of the government to taxpayers.
5. Tax is used to finance general government expenses.

D. *Taxation Incentives*

Tax incentives are tax facilities given by the state to third parties in certain sectors and times that have specific objectives. Tax incentives are tax facilities provided by the government to stimulate taxpayers to invest in certain business fields.

III. METHODS

Concerning the description and brief explanation on the background above, the author wants to: (1) explore some alternative solutions to problems in planning, curriculum, and implementation of vocational education, causing the contribution to unemployment to remain large,

(2) identify forms of fiscal support that the Government of Indonesia can do to develop vocational education in a better direction.

The method of data collection was done through focus group discussion (FGD) by inviting several related ministries/institutions such as the Ministry of Research and Higher Education and the Ministry of Industry. In addition, data were also collected from various existing literature and best practices from other countries. The types of data collected are secondary data from several K / L such as the Ministry of Finance, CBSI, and other agencies.

The analytical method used in this article is explorative **qualitative method analysis**, namely by exploring potential developing problems and alternative solutions that can be offered to improve vocational education as well as identifying types of support and fiscal incentives for vocational education both existing and potentially applicable.

IV. RESULT AND DISCUSSIONS

A. *Improvement in Vocational Education Planning and Curriculum*

Good planning in this type of education requires solid cooperation between state ministries and relevant state institutions, such as the National Development Planning Agency as a program and activity planning body in Indonesia, the Ministry of Education as the executor and coach of vocational education in Indonesia, the Ministry of Manpower and the Ministry of Industry as partner in the preparation of planning, curriculum and liaison between education providers and the business world and industry that will absorb graduates of this vocational education. Cooperation and coordination is very necessary, including for:

1. Determining the vocational education sector/sectors to be worked on
2. Determining the type of priority work that will be targeted
3. Determining the business world and the world of industry that are prioritized to be filled by vocational education graduates
4. Determining the pace of funding and the location of the vocational school/college
5. Determining who is the target of students, how to recruit them, and others.
6. Calculating whether the government and the workplace are able to answer the challenges of the needs and beneficiaries of graduates / output of the vocational education above.

Aspects of vocational education planning, for example, include re-prioritizing any vocational education sector that must be worked out immediately and those which can be postponed. Then, it is necessary to plan how many vocational students will be educated in each year, how many vocational graduates are expected each year, and how many teachers, lecturers, experts and vocational practitioners are needed to educate and train these students.

The problems of vocational education curriculum in schools and academies is whether it is in accordance with National Education Standards (NES) that have been made by the government, namely, graduate competency standards, standards for teaching and learning activities, teacher/lecturer standards, content standards (learning resources), and others. On the other hand, the national education system related to the curriculum is known as the Indonesian National Qualifications Framework (INQF). INQF is a competency qualification framework that can juxtapose, equalize and integrate between the field of education and the field of job training and work experience in the framework of granting recognition of work competencies in accordance with the structure of work in various sectors. Article 29 of the Republic of Indonesia Law number 12 of 2012 concerning higher education states that the IQF (Indonesian Qualification Framework) is a learning achievement gap that equates graduates of formal, non-formal, informal or work experience in order to recognize work competencies according to the work structure in various sectors.

In addition to the IQF, the curriculum made must also refer to the Indonesian National Work Competency Standards (INWCF). The national education system explains that INWCF is a guideline for measuring key competencies in curriculum writing. INWCF is a formulation of work capabilities that includes aspects of knowledge, skills and/or expertise, as well as work attitudes that are relevant to the implementation of duties and terms of office stipulated by legislation.

B. *Adjusting to changes and developments in the types of work in the modern world*

Another thing that needs to be taken into account is the selection of vocational education fields in order to consider priority scale according to the needs in the field. This is because not all types of vocational education in the current period are needed and in accordance with the workplace that will be targeted.

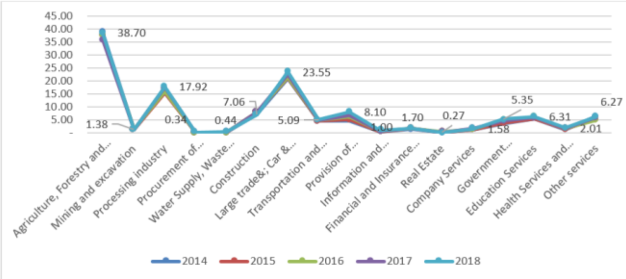
The Indonesian Government has selected six sectors (other than the main employment sector) which are expected to absorb large numbers of workers and drive Gross Domestic Product (GDP). Based on data from the Ministry of Manpower of the Republic of Indonesia, the six sectors in Table 1 below can absorb labor in more real terms each year.

TABLE 1. 6 GOVERNMENT PRIORITY SECTORS FOR VOCATIONAL EDUCATION

Sector / Field	**Number of Manpower Absorption / Year**
Manufacturing	575,000 workers
Agribusiness	195,843 workers
Tourism	3,333 workers
Health	6,018 workers
Digital economy	5,172 workers
Migrant workers	243,265 workers

(Gumelar, 2018)

The Indonesian government should also encourage capacity building for formal education graduates who are associated with mastery of information and communication technology, especially the mastery of ICT in the main sectors of employment including pre-employment education and training on agricultural technology, trade and processing industries. This is because the three main sectors of employment are those absorbing the most workers in recent years. It can be seen in Graph 3 below that, in the last eight years, the sectors which have dominated the labor market share of the average Indonesian population aged 15 years and over, are Agriculture, absorbing + 38.38 million (specifically in 2018, 33.70 million), the Manufacturing Industry sector, absorbing + 16.13 million (specifically in 2018, 17.92 million), and the Large Trade sector, etc. absorbing + 21.38 million (specifically in 2018, 23.55 million).



(Source: CBSI, August 2018, edited)

Graph 2. Population 15 Years and Over Who Works According to the 2011-2018 Main Employment Field

C. *Increase Training Programs*

There are several other programs that can be done to complement the government's efforts (in particular) to produce the quality of human resources that are expected to be absorbed in the world of work. Among others, these are:

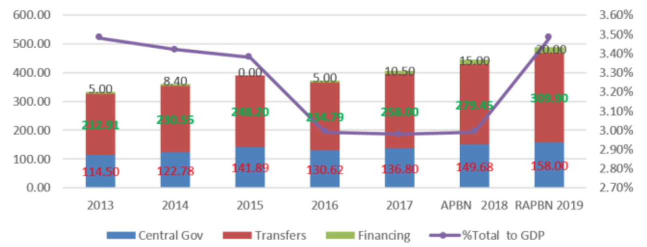
1. Construction of Community polytechnics/academies in industrial estates or local excellence in certain regions. The Community Academy organizes Diploma 1 and Diploma 2 vocational education in one or several specific branches of science/technology based on local excellence or to meet special needs. Students who have completed this education program will receive a Primary Expert and Young Expert certificate.
2. Development of link and match in SMK and industry. The Ministry of Industry targets 2,600 Vocational Schools (SMK) and 750 industries to be involved in the link and match of vocational education programs in 2019. However, as of the tenth stage of the program's launch, the number involved has exceeded the target by reaching 2,612 Vocational Schools and 899 industries.
3. Industrial vocational education towards dual systems. Vocational education has the advantage of applying practical aspects supported by the right theory. This is what distinguishes it from academic education in general which prioritizes theoretical aspects. The right proposition between practice and theory is the key to the successful implementation of the vocational education process. As an illustration, curriculum and learning in vocational universities use dual systems 3-2-1 with the first three semesters of education on campus followed by two semesters of industry internships, and ending with one semester to complete education on campus or in industry.
4. The existence of close coordination and cooperation between various parties concerned so that the preparation of a competent workforce that can give birth to qualified and capable human resources capable of answering the challenges of ICT development and changes in the type of work described above can be achieved properly.

D. *Increase the Certification Program*

One form of certification that is relevant to improving the quality of human resources is competency certification. Competency certification is defined as the process of providing competency certificates carried out systematically and objectively through competency tests that refer to work competency standards, both nationally and internationally.

E. *Fiscal Support From State Expenditure*

In the Macroeconomic Framework Document - Principles of Fiscal Policy (KEM-PPKF 2019) the Ministry of Finance of the Republic of Indonesia stated that one of the development priorities is to create quality human resources by encouraging productivity and competitiveness through education, health, vocational, R & D and science and technology.



(Source: Ministry of Finance, Financial Note and Tea Draft of Budget 2019 (Aziz, 2018))

Graph 3. The Development of the Education Budget in Indonesia: 2013-2019 - (IDR Trillion & Overall % to GDP

In general, the education budget allocation from the APBN has actually been very high because it has reached 20% of the total budget. It can be seen in Graph 3 above that the national education budget allocation shows a very large and increasing number, both in nominal and percentage terms of GDP, for example, in 2013 the budget allocation for overall education was Rp332.41 trillion.

If it is detailed by programs/activities, the amount of state expenditure allocations for vocational education cannot be identified. As in Table 2 below:

TABLE 2. TARGET OF THE EDUCATION BUDGET IN DRAFT BUDGET 2019

No	Description	Unit	Targets
1	Smart Indonesian Program (PIP)	Student	20,1 juta
2	Tuition Assistance For Prospective Poor Students (Bidikmisi)	Student	471.800
3	School Operational Assistance (BOS)	Student	57,0 juta
4	Teacher Professional Allowance (civil servant)	Teacher	1.464.670
5	Teacher Professional Allowances (non civil servant)	Teacher	485.010
6	Construction/rehabilitation of units	Units	93.200

(Source: Ministry of Finance, Financial Note and Draft of Budget, 2019)

The author also shows some samples of incentive policy in the field of State Expenditures that have been running in other countries, as in Table 3 below.

TABLE 3. SAMPLES OF INCENTIVES ON THE SIDE OF STATE EXPENDITURE (IN OTHER COUNTRIES)

No	Types of Incentives for State Expenditures	No	Types of Incentives for State Expenditures
1	Public spending on Providers	4	Student Assistance
2	VET Student Loans	5	Support for the National Training system
3	Support for Apprentices	6	Program for Access to Training

(Source: Burke, 2018)

F. Fiscal Support through State Revenue

a) Tax Holiday and Tax Allowance

A tax holiday is a tax exemption given to a newly built company in a country for a certain period, while the tax allowance is a tax reduction calculated based on the amount of investment invested.

b) Tax Deduction and Super Deductible Tax

The Indonesian Government is finalizing the rules regarding super deductible tax or a reduction of taxes above 100%. These fiscal incentives will be given to industries involved in vocational education programs as well as conducting research and development activities (R&D) to produce innovation. The Ministry of Industry has proposed a tax reduction scheme for industries that conduct vocational training and education by 200%. This is related to the development of vocational education according to the sectoral priority scale chosen by the government, as in the list of sectors mentioned above.

Therefore, the policy of giving tax incentives with the model in Table 4 above - according to the author - can be applied to these six priority sectors, naturally with some necessary adjustments so that the provision of tax incentives is effective, and has a positive effect on the development of vocational education and the country in general.

The author also shows a number of samples of tax incentive (State Revenue) policies that are already running in other countries, as in Table 4 below.

TABLE 4. SEVERAL INCENTIVE SAMPLES ON THE STATE REVENUE SIDE

No	Country and Tax Incentives	Main Goals
1	France Income tax credits for education expenses in higher education and in secondary education	Support taxpayers who have dependent children following studies in a secondary school or in a higher education establishment
2	Ireland Tax relief tuition fees	Provide a financial stimulus for individuals to engage in training activities
3	Austria Training tax allowance	Foster enterprises' investments in human resources
4	Etc	

(Source: Cedefop, 2009)

V. CONCLUSION

In Law number 20 of 2003 concerning the National Education System (Sisdiknas) it is stated that there are seven categories of education in Indonesia, including general, academic, professional, vocational, and special education. Vocational education is education that seeks to equip students with competencies that are expected to suit the world of work that will be required later. In general, there are three types/sources of fiscal support from the state (APBN) to other parties (community/business world/BUMN, etc.), namely: fiscal support sourced from the state expenditure side; fiscal support from state revenues, such as the provision of tax holiday incentives, tax allowance, and others; and fiscal support in terms of financing such as the granting of State Capital Assistance (PMN) to state companies, international institutions, business entities, or other legal entities.

Some final conclusions:

1. There is an effort to explore several alternative solutions to problems in planning, curriculum, and implementation of vocational education because the contribution to unemployment is still large.
2. There are efforts to identify the forms of fiscal support that the Government of Indonesia can do to develop vocational education in a better direction, including by taking lessons in implementing fiscal incentives from other countries.
3. Mapping of the labor market is needed so that there is a balance between the supply and demand side of the power.

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