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## | RESEARCH ARTICLE

### Relevance of Vocational High Schools with Regional Superior Potential and Manpower Needs in West Sulawesi Province

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## | ABSTRACT

The aims of this study were: (i) to find out the suitability of vocational competency skills with the existence of regional superior potential in West Sulawesi, (ii) to find out the suitability between vocational competency skills and the need for manpower in West Sulawesi. This research is qualitative research with a descriptive approach using survey methods to collect data to uncover phenomena about the suitability of the expertise competencies possessed by SMKs representing the potential of the West Sulawesi region, the suitability of SMK expertise competencies with work needs in West Sulawesi and the fulfillment of SMK human resources against the needs labor. The data collection techniques used were observation, interviews, and required documentation. The results of this study indicate that the development of SMKs is not following the regional potential and workforce needs due to the lack of commitment to developing SMKs by the West Sulawesi Provincial Government, the tendency of students to prefer SMAs over SMKs, lack of availability of land to build SMKs, the tendency of students to major in SMKs. In particular, the commitment of the West Sulawesi Provincial Government is lacking in the development of SMKs rather than SMAs, and the output of SMKs is that they continue their studies rather than go straight to work.

## | KEYWORDS

SMK Development, Regional Potential, Manpower Needs

## | ARTICLE INFORMATION

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### 1. Introduction

Indonesia's existence at the new center of gravity of the global economy, namely the East Asia and Southeast Asia regions, requires Indonesia to better prepare itself to accelerate the realization of a developed country with development and prosperity results that can be enjoyed as a whole by all Indonesian people. It is in this context that the government realizes the need to draw up a Master Plan for the Acceleration and Expansion of Indonesia's Economic Development (MP3EI) by pursuing three (3) main strategies, namely first, developing regional economic potential through six (6) economic corridors covering Sumatra, Java, Kalimantan, Sulawesi, Bali-Nusa Tenggara, and Papua-Maluku. Second, the development of intra and inter-corridor connectivity on a national and international scale. Third, there is an increase in human resources and science and technology in the corridor. This step was taken to build a solid economic structure based on competitive advantage by realizing a smart and competitive Indonesian blueprint by 2025 (Slamet, 2013). This is directed in the framework of regional development.

Regional development does not only cover physical development aspects but also economic, institutional, and human aspects. Regional development through regional development requires the creation of quality human beings who have intellectual abilities, work skills, and high competitiveness. One of the problems of regional development through regional development is due to the low quality of its human resources. The role of educational institutions in the framework of improving the quality of Human Resources (HR) concerning the development and development of their region/region has attracted attention recently. Regional

development planning is aimed at seeking harmony and balance in development between regions following their natural potential and utilizing this potential in an efficient, orderly, and safe manner (Riyadi, 2000).

Riyadi (2000) states that increasing human resources in the regions through appropriate educational and training facilities can trigger regional development. Educational institutions are not only limited to carrying out education and research but also play an important role in supporting regional development through regional development in the economic, social, and cultural sectors (Arbo and Benneworth, 2007).

Government policies in the framework of increasing Indonesia's economic stability will selectively utilize many quality factors of production, including labor. The government's macro policies regarding the regional economy and financial balance between the center and the regions need the support of quality production technical capabilities and reliable managerial capabilities to revive the wheels of the national economy. Therefore, the decentralization of government requires that each region process natural resources and human resources according to the needs of the region; thus, education is needed, which leads to an increase in the standard of living of people who are more prepared and more competent by creating vocational high schools. Bambang (2006) explains that in the decentralization of education, an institution with a lower position receives the transfer of authority to carry out all educational tasks, including the use of existing facilities and the formulation of policies on financing. So, the most important issue of the decentralization of education is the administration of education; in this case, schools gain authority or authority to manage their schools.

Utilization of regional potential as a basis for development, equity, and expansion of education must be seen from three main aspects, namely: (1) geographical potential, which includes natural wealth, location of the region, and artificial resources; (2) cultural factors, beliefs, moral values, and norms that determine the personality of the people, (3) social and economic conditions, and the level of progress of the people. These three aspects exist in every region and sometimes show similarities, but very often, there are differences or variations. The opening and expansion of education require a supportive climate, a source of practice or training, and an atmosphere of acceptance and use by the community. Therefore, every effort to establish educational facilities or institutions needs to be adjusted to the existing conditions of the area so that it does not seem redundant.

Regions have the authority to determine policies for the development of vocational education programs following the regional context. In this case, the government must see the superior potential of the region in establishing SMKs in West Sulawesi Province. The SMK education program can be directed to produce a workforce or human resources (HR) that is more productive and able to utilize the potential of the regional economy to increase economic turnover so that, in the long run, it will increase regional independence. The SMK education program is oriented towards preparing students to be able to work in certain fields; therefore, the opening of the program must be based on very specific reasons (justification). The justification for opening an SMK education program is determined by the real need that is felt in the field in the form of workers who need to be educated at SMK. Vocational schools are not feasible if, in the field, there is no need for staff to be educated at these schools.

The opening of new skill competencies in SMK has increased significantly. This is evidenced by the increasing number of skills competencies in SMKs in various regions in recent years. The opening of SMK is carried out by public or private agencies. This is done to meet the ratio of the number of SMK and SMA spread across Indonesia. This development should be carried out with consideration and analysis adjusted to the local potential of each existing area. This is a very important issue so that the development of SMKs in various places can be carried out accordingly and respond to the challenges and potentials in each of these regions.

The development of competitive vocational schools should be a reference for the development of vocational education. The opening of SMK should be based on the characteristics and needs that exist in each region. The current reality regarding the opening of SMKs is more impressive to meet the ratio demands that have been planned and deviate from the substance that should be. This is an important discussion because it relates to the competence of the workforce produced by vocational education institutions that are developed in each region.

Based on the description above, the opening of SMK or new majors at SMK is important to meet the needs of graduates in the industrial world. Some of the reasons for establishing new SMKs, new skills competencies, or changing public schools into vocational schools include: (1) vocational schools are schools with their brand, namely with the slogan "SMK Can", which can attract the attention of parents who want their children to graduate and go straight to work ; (2) the availability of facilities from the government that support "vocational" programs; and (3) fulfilling the needs of the workforce or supplying employment for industrial needs. The development of SMK is very important to increase the nation's competitiveness and optimize the potential and local wisdom of each region.

SMK development should pay attention to regional needs. Some of the considerations in opening an SMK are as follows: (1) public interest in the vocational school that is being built means that it is based on the request of the local community; (2) high regional potential means the development of an SMK is based on the characteristics of the industry in the area, and (3) government mandate which has been studied in various ways means a decision from the local government considering that there are no vocational schools around the area. Based on the description above, the development of SMKs in the regions should have development references. This aims to direct the principled development of the needs and sustainability of the implementation of vocational education. Several things that need to be considered in developing SMK are regional characteristics, local government regulations, community awareness, school readiness, and local industrial characteristics. These five things are very important to support the implementation of the development of competitive vocational education following the local wisdom of each region.

The results of the researcher's initial observations regarding the existence of vocational high schools, which generally exist in the province of West Sulawesi, are that most of the schools that exist today were born without having to consider the potential of the area in West Sulawesi so that graduates from these Vocational Schools have not been fully absorbed by the industrial world and have not been able to increase the stability of development regional economy. Management of vocational schools in West Sulawesi Province until 2022 has recorded 131 schools. Of the 131 SMKs, they are divided into 9 areas of expertise, including technology and engineering, energy and mining, information and communication technology, health and social work, agribusiness and agrotechnology, maritime, business and management, tourism, and arts and creative industries. Some of the competency skills in West Sulawesi Vocational Schools include automotive light vehicle engineering, welding techniques, electric power installation techniques, motorcycle engineering and business, refrigeration and air conditioning engineering, building construction, sanitation and maintenance, building modeling and information design, engineering computers and networks, nursing assistant, food crop agribusiness and horticulture, forest inventory and mapping techniques, commercial ship engineering, fishing vessel nautical, online business and marketing, office automation and management, accounting and institutional finance, fashion, skin beauty and signs, and hospitality. Of the 131 SMKs, there are only 59 SMKs that are following regional potential or equal to 45% of the existing SMKs. Whereas BPS data for West Sulawesi Province shows that the most prominent regional potentials are agriculture, plantations, forestry, fisheries, wholesale trade, retail, restaurants and hotels, and processing industries.

The potential for Natural Resources (SDA) and Human Resources (HR) in West Sulawesi Province is quite large; the population is 1,436,842 people, and this population is the potential for Human Resources (HR). Of the total population, 31.99% did not finish elementary school; 34.38% graduated from elementary school; 9.75% graduated from junior high school, 17.51% graduated from high school, and the remaining 6.35% graduated from S1-S3 (BPS Sulawesi Barat, 2022). This shows that the human resources of West Sulawesi Province are classified as low. If human resources are developed into skilled workers through vocational education, then the potential for human resources is very large to support regional development. For this reason, there needs to be harmony between regional development policies and regional potential development and also supported by human resource development. The implementation of the policy is to prioritize the existence of vocational schools that can accommodate middle school-age residents to obtain vocational school education, and then graduates of these vocational schools can develop regions and carry out development in West Sulawesi Province. If this can be implemented, the positive impact that will be obtained is the achievement of an increase in human resources so that people will concentrate on natural resource processing activities in their area, and then people will be reluctant to look for work in big cities and reduce urban levels.

It is hoped that the above will become the main basis that needs to be studied regarding the regional potential of West Sulawesi Province so that vocational high schools are born following regional potentials to be able to improve people's living standards and improve the regional economy. In addition, a synergy between the world of education and industry and stakeholders in West Sulawesi Province is urgently needed. The knowledge and skills developed in schools need to be adapted to the needs of the community, with the hope that vocational high school can reduce the social problems faced as it is today. For example, there is unemployment in the area, and high crime rates occur because it is only a matter of survival (finding food); moreover, education must be able to increase knowledge so that it can solve contextual problems faced daily. Based on the description above, it is necessary to study the mapping of regional potential areas so that they can be used as a basis for mapping regional potential-based SMKs. The purpose of the research is to determine the suitability of vocational competency skills with the regional potential of West Sulawesi Province. To find out the suitability of vocational competency skills with the needs of workers in West Sulawesi. To find out that SMK human resources have met the needs of workers in West Sulawesi.

## 2. Research Method

This study uses a qualitative research method with a descriptive approach, namely by collecting data at a certain time to describe the actual situation, identifying existing standards compared to existing conditions, or determining the relationship between specific events.

### **2.1 Place and time**

The research sites in West Sulawesi Province include the districts of Polewali Mandar, Majene, Mamuju, Central Mamuju, Pasangkayu, and Mamasa. The time of implementation of this research was carried out from November 2022 - March 2023

### **2.2 Population and Sample**

The population in this study were heads of education and culture offices, heads of vocational schools, heads of PTK, school principals, and teachers of vocational expertise in West Sulawesi Province. The samples used were 131 schools.

### **2.3 Data collection technique**

The data collection techniques used in this study are:

#### **2.3.1 Observation**

Observations were made at every SMK in West Sulawesi Province to look objectively at school facilities and infrastructure, teaching and learning activities, completeness of laboratory equipment, competency skills, implementation of production units at SMKs, and areas of expertise developed at SMKs.

#### **2.3.2 Interview**

Interviews were conducted with the heads of the education and culture offices of West Sulawesi Province and heads of SMKs in West Sulawesi Province. In this interview, the researcher collected information about the response of the government and school principals to the presence of SMK, areas of expertise of school principals, teachers of expertise, student interests, SMK graduates, curriculum, production units, and teaching factories.

#### **2.3.3 Documentation**

The documentation technique is the collection of data obtained from documents and libraries as material for analysis. The technique used to record secondary data available in the form of archives for documents.

### **2.4 Data analysis technique**

Several steps must be taken in qualitative data analysis, namely data reduction, data presentation, and conclusion.

## **3. Result and Conclusion**

### **3.1 Regional Potential of West Sulawesi Province.**

Based on the mapping of the contribution to GRDP, four main economic sectors have been found, which are regional potentials. The four main sectors are agriculture, forestry, and fisheries; the construction sector, the wholesale, retail, restaurant, and hotel sectors; and the manufacturing sector.

### **3.2 Main Employment**

Based on mapping the level of employment absorption for the last 5 years (2018-2022), four sectors were found to absorb the highest number of workers. The four employment sectors include the agriculture, forestry, and fisheries sectors, the wholesale, retail, restaurant, and hotel trade sectors, the manufacturing sector, and the construction sector. These four sectors have a total workforce absorption in 2022 of 542,484 people. Meanwhile, for employment, it can be seen from the average increase in labor every year. These four sectors have the number of additional workers, as shown in Table 4.

Table 4. Comparison of the main employment sectors and employment

Main Employment Annual Labor Absorption	Main Employment Annual Labor Absorption
Agriculture, forestry, and fishing	64.836 people
Wholesale trade, retail, restaurants, and hotels	24.503 people
Processing industry	11.685 people
Construction	7.474 people
Total	108.498 people

### **3.3 SMK Development Priorities**

Priorities for the development of SMKs are found in the five areas of expertise developed in all SMKs in West Sulawesi Province. The five areas of expertise include technology and engineering, agribusiness and agrotechnology, information and communication technology, tourism, business, and management. In detail, the number of areas of expertise, expertise programs, and expertise competencies for these 5 priority areas of expertise can be seen in the following table.

Table 5. Profile of priority areas of expertise

Areas of expertise	Expertise Competency Program	Expertise Competency Program
Technology and Engineering	5	10
Agribusiness and agrotechnology	5	10
Information and communication technology	1	3
Business and management	3	4
Tourist	4	4
Total	18	31

#### 4. Discussion

##### 4.1 Conformity of SMK Expertise Competence and Regional Potential

The four economic sectors that constitute regional potential are the agricultural, forestry, and fisheries sectors; the wholesale trade sector, retail, restaurants, and hotels, the manufacturing sector, and the construction sector. Of the 39 skill competencies, there are only.

Table 6. Expertise Competency and Regional Superior Potential

Regional Leading Potential	Skill competence Ideal Skills Competency of Vocational High School	Skill competence Ideal Skills Competency of Vocational High School
Agriculture, Forestry, and Fisheries	30	17
Wholesale trade, retail, restaurants, and hotels	7	5
Processing industry	6	4
Construction	4	3
Total	47	29

##### 4.2 Conformity of SMK Skills Competency and Manpower Needs

The main occupations in West Sulawesi Province are agriculture, forestry and fisheries, wholesale trade, retail, restaurants and hotels, the processing industry, and construction. In the context of the development of SMK in West Sulawesi Province, these four employment sectors have an average number of employees each year of 108,497 people. Meanwhile, SMK graduates, for these 4 sectors, were only able to graduate 58,425 people. There are 3 out of 9 areas of expertise in SMK that are following the main employment fields in West Sulawesi Province. Meanwhile, there are 26 out of 39 skill competencies following the main employment fields in all SMKs in West Sulawesi Province.

Table 7. Comparison of main employment sectors and skills competencies

Main Employment	Annual Manpower Requirement	Expertise competence
Agriculture, forestry, and fisheries	64.836 people	1. Agribusiness of food crops and horticulture 2. Agribusiness of plantation crops 3. Forest product production technology 4. Forest resource conservation techniques 5. Forest rehabilitation and reclamation techniques 6. Nautics of fishing vessels 7. Nautics of commercial ships 8. Commercial ship engineering 9. Freshwater fisheries agribusiness 10. Agribusiness of brackish water and sea fisheries 11. Seaweed agribusiness
Wholesale trade, retail, restaurants, and hotels	24.503 people	1. Online business and marketing 2. Retail 3. Hospitality 4. Catering

Processing industry	11.685 people	1. Fashion 2. Catering 3. Agribusiness processing of agricultural products 4. Agribusiness processing of fishery products 5. Clinical and community pharmacy 6. Motorcycle engineering and business 7. Automotive light vehicle engineering 8. Welding techniques. 9. Dressmaking
Construction	7.473 people	1. Modeling design and building information 2. Business and construction and property 3. Construction of roads, irrigation, and bridges
Total	108.497 people	26

Elfendri & Bachtiar (2004) explains the calculation of the advantages and disadvantages between labor supply and labor demand with the equation:  $E_t = S_t - D_t$ . With  $E_t$  = excess or deficiency between supply and demand for labor,  $S_t$  = supply of labor in year  $t$ , and  $D_t$  = demand for labor in year  $t$ .

If  $E_t > 0$ , it means that there is an excess supply of labor compared to the demand for labor. This condition shows the tendency of unemployment. From the results of calculations between supply and demand for labor in West Sulawesi Province, there is an  $E_t$  value  $< 0$ . So, for the main sector, there is no tendency for unemployment to occur because there is a small supply of needs and high absorption in the main employment sector. Meanwhile, the non-primary employment sector has a level of need for a workforce of 5223 for a year, and the supply of vocational high school graduates is 5517 people a year. If calculated, then  $E_t > 0$ , then there tends to be unemployment for SMK graduates who are following the non-primary employment sector.

## 5. Conclusion and Suggestion

Based on the results of this study, some conclusions were found related to the development of vocational schools in terms of the aspect of labor needs and regional potential of West Sulawesi Province. The development of vocational schools in West Sulawesi Province can be summarized as follows:

1. The competency skills of Vocational High Schools do not follow the existence of regional superior potential in West Sulawesi,
2. The competency skills of Vocational High Schools are not following the needs of the workforce in West Sulawesi

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