

# The Impact of Fiscal Decentralisation on Economic Growth in Indonesia and Pakistan: A Comparative Study between Central Sulawesi and Balochistan

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This paper examines the impact of fiscal decentralisation on economic growth in Central Sulawesi, Indonesia, and Balochistan, Pakistan. Within the framework of a Pooled OLS (Ordinary Least Square), the fixed-effect model and random effect model were employed in this thesis on a set of dynamic panel data models with latent variables from 1990 to 2019 in Central Sulawesi, Indonesia, and from 1992 to 2019 in Balochistan, Pakistan. There are two indicators of fiscal decentralisation, namely local revenue and local expenditure, which were used to estimate the impact of fiscal decentralisation. Data for this study came from secondary sources; BPS (Badan Pusat Statistik) Indonesia and PBS (Pakistan Bureau of Statistics). The empirical findings of this study suggest that two fiscal decentralisation indicators and employment (LFPR) have a significant positive impact on economic growth in Central Sulawesi, Indonesia. However, human capital (education) is negatively correlated with economic growth in Central Sulawesi, Indonesia. On the other hand, the empirical findings of this study also suggest that two fiscal decentralisation indicators and human capital (education) have a significant positive impact in Balochistan, Pakistan. However, employment (LFPR) is negatively

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correlated with economic growth. Finally, there is a high consensus on the relationship between fiscal decentralisation and economic growth in Central Sulawesi, Indonesia, and Balochistan, Pakistan.

**Key words:** *Fiscal Decentralisation, Economic Growth, Central Sulawesi, Balochistan*

## **Introduction**

Many third-world countries appear to have suffered in the past from over centralised development efforts. More recently, many countries have attempted to reverse these trends through policies of decentralisation. The hope has been that this can overcome institutional weaknesses, modify development to be administered at the local level and produce larger, widespread participation. Indonesia and Pakistan have given considerable attention to the transformation of their governments' structure in the last few decades. Through their economic system, especially the political, administrative, and fiscal authorities, these countries have changed their power from centralised government to decentralised government. The reason behind this, according to literature such as Oates (1972), is that decentralisation is an important technique that would play a big role in improving the performance of government in providing public services specifically at the local level by increasing its efficiency. Some also believe that decentralisation can cause a positive potential impact on public finance outcomes and public welfare. Bruckner mentions one argument in his article that fiscal autonomy could result in higher per labour output and a higher growth rate (Bruckner, 2006).

Previous research has analysed the impact of fiscal decentralisation on economic growth, such as fiscal decentralisation and regional economic growth in Sumatra, Indonesia (Murshed, 2015), fiscal decentralisation and economic growth in Pakistan (Malik et al, 2019), fiscal decentralisation and economic growth: evidence from the Indian State (Ganaie et al, 2018), fiscal decentralisation and economic growth in Colombia: evidence from regional-level panel data (Lozano & Julio, 2016), impact of fiscal decentralisation on economic growth in the districts of Nepal (Devkota, 2014), fiscal decentralisation and economic growth: a nonlinear model for Provinces of Iran (Samimi et al, 2010), the practice of decentralisation in Indonesia and its implication on local competitiveness (Darmawan, 2008), fiscal decentralisation and economic growth: the role of democratic institutions (Iqbal et al, 2012) in Pakistan, and comparative decentralisation lessons from Pakistan, Indonesia and also the Philippines (Guess, 2005).

In practice, decentralisation requires the readiness of the local government to use optimal sources of local revenue such as taxes and levies to achieve better economic independence. However, Indonesia has approximately 17,000 islands, some of which like Riau and Papua are very rich in natural resources. On the other hand, some islands have poor natural resources. This is caused by differences in endowment factors like geography and the

characteristics of human resources (Khan et al, 2002). The government of Pakistan has taken various procedures and steps to further strengthen the process of fiscal decentralisation. For instance, the process of revenue sharing started right from the inception of Pakistan. Since Independence, the Niemeyer Award 1947, the Raisman Award 1952, the One-Unit Formula 1961 and 1965, and seven NFC awards have supported the 1973 constitution announcement for revenue sharing among local government. Recently, Pakistan has undertaken two major developments by signing the 7th National Finance Commission (NFC) award (through which a bulk of resources has been transferred to the provinces) and bypassing the 18th Constitutional Amendment (through which a large range of fiscal responsibilities are shifted from the centre to the provinces). These developments will result in a fundamental shift within the division of powers between the centre and the provinces. The latter would have more autonomy in performing various functions like the provision of public goods and services, and macroeconomic management (Iqbal et al, 2012).

### ***Problem Statements***

Two main schools of thought can be observed in the theoretical literature on fiscal decentralisation. One group emphasises the positive impact of fiscal decentralisation, while the other rejects it by arguing that there is no guarantee of such positive impacts. Ganaie, et al (2018), Julio and Lozano (2016), Devkota (2014) and Samimi, et al (2010) all argue that fiscal decentralisation has a positive impact on economic growth. On the other hand, Malik, et al (2019), Xie, et al (1999), Davoodi and Zou (1998) and Homme (1995) argue that fiscal decentralisation has a negative impact on economic growth, especially in large and developing countries, which tend to have an issue with fiscal decentralisation because it causes greater inequality among provinces.

### **Literature Review**

#### ***Fiscal Decentralisation and Economic Growth***

Fiscal decentralisation obtained specific attention in developing countries from the 1980s. Experts believed that fiscal decentralisation is the most developed way of promoting economic growth in local regions, but fiscal decentralisation rules, regulations and methods vary across regions (Murshed, 2015). Therefore, it is crucial to undertake an analysis of the effect of fiscal decentralisation in the provinces of Indonesia and Pakistan. This chapter attempts to provide a concept and historical background of fiscal decentralisation in Indonesia and Pakistan. Wallace, Oates, Charles Tiebout, James Buchanan, and Richard Musgrave are the cofounders of fiscal decentralisation theory. Based on the theory, fiscal decentralisation is the government program to delegate fiscal power and authority to a regional or local level of government that is working below the central government, such as provinces, districts, cities and municipalities. This delegation of fiscal power does not mean that local government will only implement decisions made by the central government, but

that the local government has the power to make decisions on budgetary planning according to the needs of their regions. Therefore, fiscal decentralisation can generate specific benefits for local and regional governments.

### ***Historical Background of Fiscal Decentralisation in Indonesia***

Indonesia as a state has a vast territory, district and locality area. From one region to another region there are huge numbers of diverse ethnic and cultural groups. Furthermore, every region in Indonesia has different natural resources; some are very rich in natural resources, while others are not. Due to this, they have a different level of economic development. The main idea of fiscal decentralisation in Indonesia is to decide on budgetary planning according to a region's prior requirement. However, after achieving independence, Indonesia became a unitary nation, and all regions became more dependent on the central government.

In spite of this, in 1975 the government of Indonesia focused more on regional government to increase economic growth in regional areas. The idea is that local government can play a crucial role in better public service delivery as compared to the central government. They can make better budgetary planning decisions because they know the needs of their regional areas better than the central government. According to Ham and Hady (1998), in 1975 the government of Indonesia established and passed Law No. 5/1975 on the decentralisation system. They state that efforts to implement this law have tended to be very low because some think that this law needs to be revised. Besides this, in 1975 the central government of Indonesia wanted to take control of all local government functions. This is the main reason why Law No. 5/1975 did not work and was not effective for regional government. Since the central government of Indonesia took control of regional government functions in 1975, Law No. 5/1975 became ineffective. In 1999 the government decided to revise this law and establish Laws No. 22/1999 and No. 25/1999 (A Nasution 2016). According to Usui and Alisyahbana (2003), due to the implementation of these newer laws, Indonesia's government structure changed from a centralised government into a decentralised government. Furthermore, they state that the hierarchical relationship between the central government and regional government also changed in 1999 (Usui and Alisyahbana 2003). Law No. 22/1999 was not easy to implement because before this law Indonesia was a centralised state, but after this law, it became decentralised. It is due to the effort of the central government that they established and implements Law No. 22/1999 and Law No. 25/1999 very successfully in all regions (Brodjoneoro, 2002).

According to Suhendra and Amin (2006), the implementation of fiscal decentralisation in Indonesia has the main purposes of increasing accountability, improving transparency, increasing participation of regional government in the decision-making stage, improving the overall fiscal structure, improving public service delivery in regional areas, and to improve the social welfare of Indonesians. There are three kinds of funds transfer from central government to local government, namely revenue sharing, special allocation fund or *Dana*

*Alokasi Khusus* (DAK), and general allocation fund or *Dana Alokasi Umum* (DAU). Revenue sharing usually comes from oil and gas, property taxes and domestic personal income. DAU is thought to be the most important resource of revenue for sub-government (secondary or subordinate government), and DAK is used for funding special needs in the regions. This transfer gradually increases over time.

### ***Historical Background of Fiscal Decentralisation in Pakistan***

Pakistan is a country with a strong federal government and federal system. In Pakistan, there are three levels of government: the federal government, the provincial government, and the local or district government. The Pakistani federal government collects a large number of resources and redistributes them between the federal and constituent parts to correct vertical and horizontal fiscal imbalances. In Pakistan, the national finance commission (NFC) is constituted by law, and this law is used to distribute fiscal resources. There are four stages of systematic resource transfer in Pakistan. The first stage is the national finance commission (NFC). In this stage, revenue is distributed between the federal government and provincial government. The second stage is the provincial finance commission (PFC). In this stage, revenue is distributed from the provincial government to the local government. The third stage transfers revenue from the federal government to local governments. The fourth and final stage is where vertical resource sharing occurs at local levels (Jaffery & Sadaqat, 2006). The Niemeyer Award was presented in 1935 before the independence of Pakistan. The purpose of this award was resource distribution between the centre and the provinces. A tax, such as a sales tax, was collected by provincial governments, then 50 percent of the total collection was reallocated to the provinces. In 1947 Pakistan became independent from India. However, the Pakistani government was still following this award for resource distribution with some adjustments until 1952. On August 14, 1947, Pakistan achieved independence and after four months, in December 1947, the Raisman award was presented. The basic aim of this award was to control the poor financial position of the federal government of Pakistan. For this, 50 percent of sales tax was allocated to the federal government. Ahmed et al. (2007) argue that after 1955 the whole of Pakistan was split into two identities, East Pakistan and West Pakistan. Then, all four provinces of Pakistan were declared as one unit in West Pakistan. During this era, two awards were announced: one in 1961 and one in 1965. In 1970, instead of a commission, for the first time in Pakistan a committee was designed that could work under the federal finance minister, and the committee could also give recommendations for resource allocation. The committee recommended that the resource distribution between the federal government and provincial government should be 20 to 80 percent.

In 1973, the new constitution was established in Pakistan. In this constitution, special arrangements were established related to resource distribution. In this constitution, the federal government was obligated to constitute the National Finance Commission (NFC) once every five years. The basic aim of this constitution was to suggest and review resource distribution

in Pakistan. In 1974, the first National Finance Commission was established. Under this commission, the population was adopted as a criterion of horizontal resource and distribution, across all provinces. However, the vertical resource distribution was not changed by this commission; it has remained the same as the previous award. In 1979, the president of Pakistan was General Zia-ul-Haq, and this second National Finance Commission award was set up by him. The basic aim of this commission was to revise resource shares among the provinces in Pakistan. There was not any specific improvement in resource distribution under this commission in 1985. Therefore, the resource distribution among provinces still followed the 1974 commission award. This award was considered the best award, compared to the previous awards, because in this award the resources were distributed among provinces according to their population size. For instance, the Punjab province has a high population compared to the other three provinces, so the share of resource distribution to Punjab was 57.88%. In February 1997, the fifth NFC Award was established. The basic purpose of this award was to expand the DP, with the inclusion of all taxes, such as sales tax, income tax, and capital value tax, as well as all duties, such as export duties, custom duties and excise duties (Government of Pakistan, 1991). This award was announced by General Pervez Musharraf, who was the president of Pakistan at that time. This NFC award completed its tenure but without success. The basic aim of issuing ordinance No.1 of 2006 was to distribute revenue to fulfill the demands of the province, and the provincial share was also increased at that time. Simply put, the NFC Award in Pakistan was about resource distribution to the local level government, which had both positive and negative impacts. Positive in that all resource distribution took all the decision-making from the board, and negative in that there was no agreement among the provinces.

### ***Model and Specification Method***

This research aims to assess whether the implementation of fiscal decentralisation in Central Sulawesi, Indonesia, and Balochistan, Pakistan generates a statistically significant positive effect on economic growth. This research follows a model adopted from Murshed (2015) that used the pooled OLS method, the fixed-effect model and the random effect model. In general, the growth model which involves fiscal decentralisation can be represented as follow:

$$by = \alpha_0 + \alpha_1 \text{ fiscal decentralisation} + X_i \beta + \epsilon_1$$

where

by = growth rate which represented by per capita GDRP;

$X_i$  = control variables for economic growth;

$\epsilon$  = an error term;

$\alpha$  and  $\beta$  = parameters to be estimated.

Moreover, this research also considers employment and human capital as controlling variables. For employment, I used the labour force participation rate (LFPR), and for human

capital, I used senior school, vocational school and intermediate school students.

Therefore, the growth regression can be modified as follows:

$$Y(i,t) = \beta_0 + \beta_1 FD(i,t) + \beta_2 employ(i,t) + \beta_3 educ(i,t) + \beta_4 dj + e$$

$Y(i,t)$  = The economic growth representing the per capita Gross Domestic Regional Product

$FD$  = Fiscal decentralisation indicator which involves two decentralisation indicators ( $FD1$  and  $FD2$ )

$FD1$  = Ratio of local government expenditure to total national expenditure

$FD2$  = Ratio of local government revenue to total national revenue

$Employ$  = Labour force participation rate (LFPR)

$Educ$  = Senior high, vocational and intermediate school students

$dj$  = Dummy variable

= 0 for 1990 to 2000 (year before implementing decentralisation in Indonesia) and for 1992 to 2002 (year before implementing decentralisation in Pakistan)

= 1 for 2001 to 2019 (years after implementing decentralisation in Indonesia) and for 2003 to 2019 (years after implementing decentralisation in Pakistan)

## Data and Methodology

This research used a panel data set based on the provincial level from Indonesia and Pakistan. The data cover 29 years from 1990 to 2019 for Central Sulawesi, and 27 years from 1992 to 2019 for Balochistan (the reason being there was no data available on the official website of the Pakistan Bureau of Statistics (PBS) and Pakistani Ministry of Finance before 1992). Data used in this paper are secondary data, which consist of the gross domestic regional product (GDRP), local and national revenue, local and national expenditure, employment (LFPR), and human capital (education), taken from data compilations by the Indonesia National Statistics Bureau (BPS) of the Republic of Indonesia and the Pakistan Bureau of Statistics (PBS) of the Republic of Pakistan.

## FINDINGS AND ESTIMATION RESULT

### *Analysis of the Model (Central Sulawesi)*

#### *Estimation of Fiscal Decentralisation Effect on Economic Growth Indicator 1(FD1) in Central Sulawesi, Indonesia*

The estimation result for this section can be seen in Table 4.1. In this table, I present one set of empirical results. These results are the outcomes of estimation involving  $FD1$ , which was measured as the ratio of local government expenditure to national government expenditure using the technique of ordinary least square (OLS), fixed effect and random effect model. The first result is of the effect of fiscal decentralisation on economic growth in Central

Sulawesi from 1990 to 2019, using indicator 1 (FD1). According to pooled OLS, fixed effect and random effect method in columns (a), (b) and (c), all of the methods indicate positive results. The coefficient of fiscal decentralisation indicator 1 (FD1), has a value of 420.4638. This coefficient is positive and statistically significant at a 1% significance level. However, the coefficient of employment (LFPR) variable is also statistically significant at a 1% significance level. On the other hand, the coefficient of human capital (education) in OLS and fixed effect model is negative and statistically significant at a 1% significance level. However, in a random-effect model, the coefficient of human capital (education) is positive but not statistically significant at all significance levels (1%, 5%, and 10%). This is explained in more detail in the Discussion section. From the statistical results, the value of the r-square for the OLS model is quite high.

### ***Estimation of Fiscal Decentralisation Effect on Economic Growth Indicator 2(FD2)***

Based on the results of estimation using OLS, fixed-effect model and random effect model, indicator FD2, which was measured as the ratio of local government revenue to national government revenue, the relationship between fiscal decentralisation and local economic growth was then examined. The same procedure with the previous estimation followed, namely using three methods of panel data. This result tells us that fiscal decentralisation indicator 2 has succeeded in pointing out the effects of fiscal decentralisation on economic growth. This result can be seen in Table 4.2, whereby all estimation results based on OLS, fixed-effect model and random effect model gave positive significant results for the coefficient FD2, which are statistically significant at 1% significance level in OLS and fixed effect model but in the random effect model, is not significant at all significance levels (1%, 5%, and 10%). For controlling variables, the coefficient of employment (LFPR) is positive and statistically significant at a 1% significance level. On the other hand, the coefficient of human capital (education) in OLS and fixed effect model is negative and statistically significant at a 1% significance level, but in the random-effect model, the coefficient of human capital (education) is positive but not statistically significant at all significance levels (1%, 5%, and 10%). This is explained in greater detail in the Discussion section. From the statistic result, the value of the r-squared of pooled OLS model is quite high as compared to the fixed effect and random effect model.

Table 4.1 Estimation Using Fiscal Decentralization Indicator 1 (FD1) in Central Sulawesi

**Dependent variable: per capita GRDP**

Variables	Pool OLS (a)	Fixed Effect (b)	Random Effect (c)
<b>FD indicator 1</b>	420.4638*** (188.62)	420.4638*** (188.62)	396.7976 (279.79)
<b>Employment(LFPR)</b>	0.0275*** (0.0092)	0.0275*** (0.0092)	0.05116*** (0.0123)
<b>Education</b>	-5.03e-06*** (2.41e-06)	-5.03e-06*** (2.41e-06)	3.18e-07 (3.30e-06)
<b>Constant</b>	4.9291*** (0.6220)	5.3396*** (0.6551)	3.4726*** (0.8407)
<b>Dummy</b>	0.6596*** (0.1144)		
<b>Number observation</b>	30	30	30
<b>R-square</b>	0.8227	0.3393	0.5940

Table 4.2 Estimation Using Fiscal Decentralization Indicator 2 (FD2) in Central Sulawesi

**Dependent variable: per capita GRDP**

Variables	Pool OLS (a)	Fixed Effect (b)	Random Effect (c)
<b>FD indicator 2</b>	417.8412*** (188.57)	417.8412*** (188.57)	344.1713 (281.48)
<b>Employment</b>	0.0268*** (0.0092)	0.0268*** (0.0092)	0.0502*** (0.0123)
<b>Education</b>	-5.00e-06*** (2.41e-06)	-5.00e-06*** (2.41e-06)	8.98e-07
<b>Constant</b>	0.4962*** (0.2484)	2.2747*** (1.125)	3.5544*** (0.8472)
<b>Dummy</b>	0.6596*** (0.1144)		
<b>Number of Observation</b>	30	30	30
<b>R-square</b>	0.8223	0.3056	0.5864

Source: researchers own calculation based on provincial statistics of Central Sulawesi dataset from 1990 to 2019

Note: Standard errors are presented in parentheses

Level of significance is indicated by \*\*\*, \*\*, and \* which indicate 1, 5 and 10% significance level respectively

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### ***Analysis of the Model (Balochistan)***

#### ***Estimation of Fiscal Decentralisation Effect on Economic Growth Indicator 1 (FD1) in Balochistan, Pakistan***

The estimation results for this section can be seen in Table 4.3. In this table, I present one set of empirical results. These results are the outcomes of estimation involving FD1, which is measured as the ratio of local government expenditure to national government expenditure using the techniques of OLS, fixed-effect model and random effect model. The first result concerns the effect of fiscal decentralisation on the economic growth of Balochistan from 1992 to 2019, using indicator 1 (FD1). According to pooled results of OLS, fixed effect and random effect models in columns (a), (b), and (c), all of the models indicate positive results. The coefficient of fiscal decentralisation indicator 1 (FD1) has a value of 17.53. This coefficient is positive and statistically significant at a 1 % significance level. However, the coefficient of employment (LFPR) variable is also statistically significant at a 1% significance level, but the coefficient of labour force participation rate (LFPR) is negative. On the other hand, the coefficient of human capital (education) in OLS, fixed-effect model and random effect model is positive and statistically significant at a 1% significance level. This is explained in more detail in the Discussion section. From the statistical results, the r-square values of all models are quite high.

#### ***Estimation of Fiscal Decentralisation Effect on Economic Growth Indicator 2 (FD2) in Balochistan, Pakistan***

Based on the estimation results using OLS, fixed-effect model and random effect model, indicator FD2, which is measured as the ratio of local government revenue to national government revenue, the relationship between fiscal decentralisation and local economic growth was examined. The result can be seen in Table 4.4, which shows that all estimation results based on OLS, fixed-effect model and random effect model give positive significant results for coefficient FD2 and are statistically significant at a 1% significance level. For controlling variables, the coefficient of employment (LFPR) is negative and statistically significant at a 1% significance level. On the other hand, the coefficient of human capital (education) in OLS, fixed-effect model and random effect model is positive and statistically significant at a 1% significance level. This is explained in more detail in the Discussion section. From the statistical results, the r-square values of all three models are relatively high.

Table 4.3 Estimation Using Fiscal Decentralization Indicator 1 (FD1) in Balochistan

**Dependent variable: per capita GRDP**

Variables	Pool OLS	Fixed Effect	Random Effect
	(a)	(b)	(c)
<b>FD indicator 1</b>	17.5307***	17.5307***	18.0228***
	(2.3179)	(2.3179)	(2.3690)
<b>Employment(LFPR)</b>	-0.0236***	-0.0236***	-0.0246***
	(0.0051)	(0.00512)	(0.0052)
<b>Education</b>	0.000012***	0.0000126***	0.0000145***
	(1.73e-06)	(1.73e-06)	(1.32e-06)
<b>Constant</b>	4.3297***	4.3763***	4.3567***
	(0.2458)	(0.2455)	(0.2529)
<b>Dummy</b>	0.7674		
	(0.0482)		
<b>Number observation</b>	28	28	28
<b>R-square</b>	0.9487	0.9420	0.9430

Table 4.4 Estimation Using Fiscal Decentralization Indicator 2 (FD2) in Balochistan

**Dependent variable: per capita GRDP**

Variables	Pool OLS	Fixed Effect	Random Effect
	(a)	(b)	(c)
<b>FD indicator 2</b>	11.84944***	11.849***	12.7806***
	(4.3435)	(4.3435)	(4.2352)
<b>Employment</b>	-0.0188***	-0.018***	-0.0196***
	(0.0082)	(0.00823)	(0.0081)
<b>Education</b>	0.0000131***	0.000013***	0.0000148***
	(2.97e-06)	(2.97e-06)	(2.43e-06)
<b>Constant</b>	4.1612***	4.2086***	4.1694***
	(0.41056)	(0.4124)	(0.4101)
<b>Dummy</b>	0.07807		
	(0.0795)		
<b>Number of Observation</b>	28	28	28
<b>R-square</b>	0.8648	0.8589	0.8591

Source: researchers own calculation based on provincial statistics of balochistan dataset from 1992 to 2019

Note: Standard errors are presented in parentheses

Level of significance is indicated by \*\*\*, \*\*, and \* which indicate 1, 5 and 10% significance level respectively.

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## DISCUSSION

### *The Effect of Fiscal Decentralisation on Local Economic Growth in Central Sulawesi*

Based on the estimation results of fiscal decentralisation indicator 1 (FD1) and indicator 2 (FD2), we can see that there are positive significant results of the correlation between both indicators and economic growth in Central Sulawesi, Indonesia. Under fiscal decentralisation indicator 1 (FD1), there is a positive impact of fiscal decentralisation on economic growth in Central Sulawesi, Indonesia. Table 4.1 shows that the coefficient of fiscal decentralisation indicator 1 (FD1) is positive and significant at a 1% level of significance (except in the random effect model). This means that if the ratio of local government expenditure to total national government expenditure increases by 1%, economic growth (per capita RGDP) will increase by 420.4633%, holding the other variables constant. That condition indicates that the local government of Central Sulawesi could manage well the allocation of expenditure.

Under fiscal decentralisation indicator 2 (FD2), fiscal decentralisation is based on the ratio of local government revenue to total national government revenue. Table 4.2 shows that the coefficient of fiscal decentralisation indicator 2 (FD2) is positive and significant at a 1% level of significance (except in the random effect model). This means that if the ratio of local government revenue to total national government revenue increases by 1% economic growth (per capita RGDP) will also increase by 417.8412%, holding the other variables constant. That condition indicates that fiscal decentralisation in Indonesia does support the provincial government in increasing local revenue using general allocation funds, special allocation funds, and its revenue from taxes and other sources. It gives evidence that local government in Central Sulawesi could receive a sufficient source of local revenue. This statement is supported by Devkota (2014), who argued that fiscal decentralisation is supportive of provincial and district per capita RGDP growth if the local government is receiving sufficient revenue from the central government, and if freedom of own-source revenue of local government increases.

### *The Effect of Other Independent Variables on Local Economic Performance in Central Sulawesi*

Independent variables that are used to control the effect of fiscal decentralisation on economic growth are employment, human capital and the dummy variable. There is consensus from a previous empirical study that reflects that those controlling variables are considered as determinant variables affecting the significance of economic growth (RJ Barro · 1999). The significant controlling variable is employment. Here, I am using the labour force participation rate (LFPR) to represent employment because LFPR measures an economy's active labour force and is the sum of all economically inactive people divided by the working-age population. It refers to the number of people who are either employed or are actively looking for work. It is estimated that there is a positive significant relationship

between the employment variable and economic performance, which means that the employment variable in Central Sulawesi has a statistically significant contribution to economic growth. It also means that in Central Sulawesi more economically inactive people are working and fewer are looking for work, which is a good sign, because “job creation produced by economic growth enhances opportunities [for] employment which in turn increases the income of poor people, and creat[es] necessary conditions for achieving a higher level of economic growth in the future” (Sudrajat, 2008).

Another significant controlling variable is human capital. Here, I use senior high school and vocational school students in Central Sulawesi to show the impact of education on economic growth. Education is believed to have a positive connection, especially at the microeconomic level, because it could deliver economic benefits to individuals. Although the benefit of education is different for every individual, my regression results show that the education variable negatively and significantly affects local economic growth in Central Sulawesi. This could be explained by how education contributes to stimulate economic growth. This finding supports the theory of Woller and Phillips (1998) and Limi (2005), who argue that it might be because the number of people who finished senior high school and vocational school is not that significant, or that education may have a short term negative effect but maybe in the long term education will be positively significant. In this research, the coefficient value of human capital (education) in Central Sulawesi is  $-5.03e-06$ , which is very low. According to that coefficient value, we can say that education harms economic growth in the short term. However, it will have a positive impact in the long term, because these senior high school and vocational students will earn their Bachelor and/or Masters degree, so in the long term, they will contribute to economic growth. The last significant controlling variable is the dummy variable. Before the implementation of decentralisation in Indonesia, the intercept in the pooled OLS model in FD1 is 4.9291, and after implementation of that law the intercept increases by  $(4.9291+0.6480)$ . On the other hand, in FD2, before the implementation of decentralisation in Indonesia, the intercept is 4.9617. However, after the implementation of that law, the intercept increases by  $(4.9617+0.6596)$ . This means that fiscal decentralisation has a bigger effect on economic growth.

### ***The Effect of Fiscal Decentralisation on Local Economic Growth in Balochistan***

Based on the estimation results of fiscal decentralisation indicator 1 (FD1) and indicator 2 (FD2), we can see that there are positive significant results of the correlation between both indicators and economic growth in Balochistan. Fiscal decentralisation indicator 1 (FD1) shows that there is a positive impact of fiscal decentralisation on economic growth in Balochistan. Table 4.3 shows that the coefficient of fiscal decentralisation indicator 1 (FD1) is positive and significant at a 1% level of significance in all three models. This means that if the ratio of local government expenditure to total national government expenditure increases by 1%, economic growth (per capita RGDP) will increase by 17.53%, holding the other variables constant. That condition indicates that the local government of Balochistan could

manage well the allocation of expenditure, similar to the local government of Central Sulawesi. Under fiscal decentralisation indicator 2 (FD2), fiscal decentralisation is based on the ratio of local government revenue to total national government revenue. Table 4.4 shows that the coefficient of fiscal decentralisation indicator 2 (FD2) is positive and significant at a 1% level of significance in all three models. This means that if the ratio of local government revenue to total national government revenue increases by 1%, the economic growth (per capita RGDP) will also increase by 11.84, holding the other variables constant. That condition indicates that fiscal decentralisation in Pakistan does support the provincial government in increasing local revenue using sharing of different funds, and its revenue from taxes and other sources. This provides evidence that the local government of Balochistan has sufficient sources of local revenue, just as the local government of Central Sulawesi does. This is also supported by Devkota (2014), who argues that fiscal decentralisation is supportive of provincial and district per capita RGDP growth when the ratio of local revenue to total national revenue, and the ratio of local expenditure to total national expenditure will increase with time. Secondly, he argues for increasing in human capital, like more educated people, because good human capital can adopt new technology and learn new skills, and then RGDP growth will also increase.

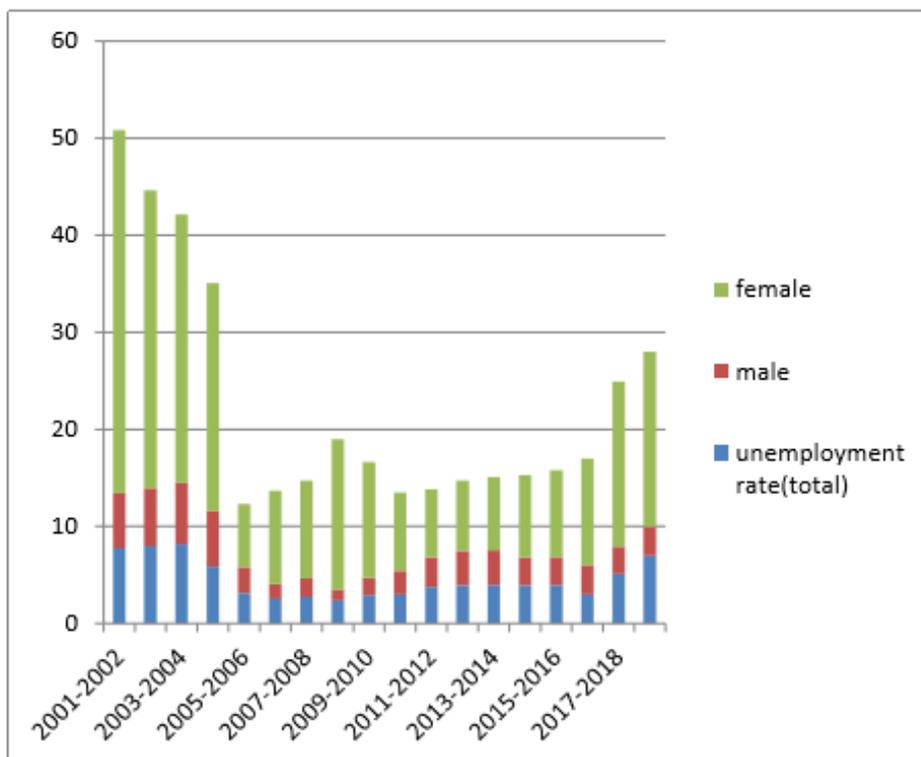
#### ***Effects of Other Independent Variables on Local Economic Performance in Balochistan***

The independent variables that are used to control the effect of fiscal decentralisation on economic growth are employment (LFPR), human capital (education) and the dummy variable. Here I use the labour force participation rate (LFPR) to represent employees. Based on my estimation, there is a negative significant relationship between the employment variable and economic performance, which means that the employment variable in Balochistan does not have a statistically significant contribution to economic growth. It also means that in Balochistan more economically inactive people are looking for work and fewer are working, which is not a good sign. These results support the theory proposed by John (2018), which states that if the number of unemployed or inactive people looking for work increases, it will have a negative impact on economic growth. To tackle this issue we have to formulate policies to ensure entrepreneurship development, such as the deregulation of the labour market, which is likely to reduce unemployment and improve economic growth. For this, I have collected data from the Pakistan Bureau of Statistic's website to see the trend of the unemployment rate of both men and women aged ten (10) years and above, as seen in Figure 5.1. The data are from 2002 to 2019. Pakistan has been applying decentralisation since 2003, and I wanted to know the unemployment rate during this decentralisation period. As we can see in Figure 5.1, the unemployment rate was increasing, especially from 2016 to 2018, and we can also see that the female unemployment rate was very high compared to the male unemployment rate.

Another significant controlling variable is human capital (education). Here I use intermediate school students, including art, engineering and medical students in Balochistan, to show the

impact of education on economic growth. Based on the regression test results, the variable education points out that this variable affects positively and significantly on local economic growth in Balochistan. The most interesting finding of this result supports the theory proposed by Tadaro (2009), who explains how human capital, especially education, contributes to economic growth. He also argues that education contributes to economic growth, that through increasing education it will create a more productive and skillful labour force. The last significant controlling variable is the dummy variable. Before the implementation of decentralisation in Pakistan, the intercept in the pooled OLS model in FD1 is 4.3297, and after implementation of that law the intercept increases by  $(4.3297+0.0767)$ . On the other hand, in FD2, before the implementation decentralisation in Pakistan, the intercept is 4.1612, while after implementation of that law the intercept increases by  $(4.1612+0.0780)$ . This means that fiscal decentralisation has a more significant effect on economic growth in Balochistan, Pakistan.

**Figure 5.1 Unemployment Trend in Balochistan, Pakistan**



Source: PBS (Pakistan Bureau of Statistics)

## Conclusion

The main objectives of this paper are to provide theory and evidence on the relationship between fiscal decentralisation and economic growth in two countries, namely Pakistan and Indonesia. Fiscal decentralisation has been implemented since 2001 in Indonesia and since

2003 in Pakistan. The present application of fiscal decentralisation in Indonesia and Pakistan features the delegation of political and administrative power to lower levels of government and provides sufficient funds transfer to finance administration activities.

This research aims to find out whether fiscal decentralisation in Central Sulawesi, Indonesia, and Balochistan, Pakistan, significantly determines economic performance in these two regions. This research uses: the 1990 to 2019 rounds of panel data from one province in Sulawesi island called Central Sulawesi, Indonesia, and the 1992 to 2019 rounds of panel data from one province in Pakistan called Balochistan; empirical analysis of the ordinary least square (OLS), fixed effect and random effect model, which employed specific variables; gross domestic regional product (GRDP) which generated by Central Sulawesi and Balochistan and regarded as the most important variable to measure fiscal decentralisation; two fiscal decentralisation indicators, FD1 being expenditure and FD2 being revenue; and two more variables considered as determinants of economic growth, namely employment (LFPR) and human capital (education).

I also used the dummy variable to study the impact before and after the implementation of decentralisation in both countries. Surprisingly, this research found that FD1 and FD2 have statistically positive significant results on economic growth in Central Sulawesi and Balochistan, which means that fiscal decentralisation does promote economic performance in these provinces. The most interesting finding is that the results support the theory proposed by Ganaie, et al (2018), Julio and Lozano (2016), Devkota (2014), Samimi, et al (2010) and Zhange and Zou (1998), who found that fiscal decentralisation had a positive effect on economic growth.

Meanwhile, variables of determinant growth such as human capital (education) and employment (LFPR), which align with theory from previous empirical studies, have a statistically different impact on economic growth. In Central Sulawesi, education has a negative significant impact on economic growth, but in Balochistan education has a positive significant impact on economic growth. On the other hand, employment (LFPR) has a positive significant impact in Central Sulawesi. This means that more people are working in Central Sulawesi. However, in Balochistan, employment (LFPR) harms economic growth because more people are looking for work. Simply put, the unemployment rate is higher in Balochistan and lower in Central Sulawesi.

Finally, I would like to say that my findings do not necessarily reflect the situation in all provinces in Indonesia and Pakistan because these provinces are extremely different in terms of culture, size, natural resources and population. To adequately capture the condition in other provinces, a comprehensive empirical study must be performed in these provinces as well, because different behaviours can raise different conflicts, while different resources could increase the competition among provinces.



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