JURNAL
TATA KELOLA DAN AKUNTABILITAS
KEUANGAN NEGARA
e-ISSN 2549-452X | p-ISSN 2460-3937

Jurnal Tata Kelola dan Akuntabilitas Keuangan Negara, Volume 8, Number 2, 2022: 213-226

Fiscal Decentralization: Is There a Simultaneous Relationship Between Regional Independence and Social Welfare?

Ikasari Khoirunisa, Agus Sunarya Sulaeman*

Politeknik Keuangan Negara STAN, Jakarta, Indonesia

ABSTRACT

Indonesia's fiscal decentralization initiative aims for two essential goals to strengthen regional financial independence and social welfare. However, intergovernmental transfers could also reduce the urgency of local governments to increase their financial independence. This study is designed to prove whether intergovernmental transfers can improve regional financial independence and social welfare. Based on a statistical test of 500 districts/cities throughout 2017—2019 using multiple linear regression analysis, more than 90% of districts/cities have yet to achieve independent financial status. In addition, regional welfare in the country is still experiencing inequality. This study's result shows Revenue Sharing Fund (Dana Bagi Hasil, DBH), General Allocation Fund (Dana Alokasi Umum, DAU), and the previous year's Physical and Non-Physical Special Allocation Funds have a significant and positive effect on regional financial independence. However, only General Allocation Funds and Non-Physical Special Allocation Funds significantly and positively affect social welfare. Whereas Revenue Sharing Fund has an insignificant and negative effect, Physical Special Allocation Funds have a significant and negative effect on social welfare. Lastly, regional financial independence has a significant positive effect on social welfare.

KEYWORDS:
Fiscal decentralization; Special Allocation Funds; financial independence; social welfare

DOI: 10.28986/jtaken.v8i2.848

*Corresponding Author
Email: asunarya@pknstan.ac.id

ARTICLE HISTORY:

Received : 6 March 2022
Revised : 20 May 2022
Accepted : 2 June 2022
Published : 28 December 2022

INTRODUCTION

Fiscal decentralization has been adopted by many countries, especially countries with many districts, such as India, Russia, Africa, Korea, China, Malaysia, and Indonesia. Some theories state that fiscal decentralization could improve public service quality and efficiency (Jha, 2012; Yushkov, 2016). Noor (2012) also believes that the nation's geographic and demographic diversity requires decentralization to achieve equitable development and social welfare. This development also pushes the regional economy, thus increasing regional financial independence. Nevertheless, some critics stated that fiscal decentralization with intergovernmental transfers could reduce the urgency of local governments to be financially independent (Masaki, 2018). Liu, Martinez-Vazquez, and Wu (2017) also said fiscal decentralization led to immense regional inequality. This occurred as not every district had enough human resources and capabilities to utilize intergovernmental transfer efficiently. This inequality also affects the distribution of regional social welfare.

Since 2001, fiscal decentralization has been more actively adopted in Indonesia and is stated in Law Number 25 of 1999 concerning the Financial Balance between Central Government and Local Governments. This regulation grants the central government more autonomy and intergovernmental transfer to the local governments. The 2020 State budget information reported that the total allocation of intergovernmental transfer funds from 2015 to 2020 had increased yearly. However, data from the Directorate General of Fiscal Balance (Direktorat Jenderal Perimbangan Keuangan, DJPK) claimed that 252 out of 508 districts/cities could not achieve their local revenue target in 2018. This number increased to 286 districts/cities in 2019. The number of districts/cities in Indonesia that fall under the Not Fiscally Independent category reaches 458 out of 508 (BPK, 2020).

The Audit Board of the Republic of Indonesia (Badan Pemeriksa Keuangan, BPK) also discovered that 468 local governments did not experience progress in their fiscal independence status from 2013 to 2020 (BPK, 2021). Of this number, 433 of them remain Not Fiscally Independent. This indicates that the ability of local governments to collect local revenue is still low. The chairman of Regional Representative Council (Dewan Perwakilan Daerah, DPD, Irman Gusman, in Jayabuana (2016), explained that local governments had not yet taken the initiative to increase their locally-generated revenue to be fiscally independent. There should be a study on whether local governments consider intergovernmental transfer as a substitute for local revenue. This case also happened in Ghana (Mogues & Benin, 2012) and Russia (Yushkov, 2016). Such a case requires further research as it relates to one of the goals of decentralization, specifically regional financial independence (Ikasari, 2015). Moreover, Indonesia is geographically and demographically rich in diversity. It is necessary to test if fiscal decentralization could enhance the local economy to become more financially independent. Based on the preceding explanation, this study aims to explore the effect of fiscal decentralization on regional financial independence and the effect of fiscal decentralization on social welfare in the local governments of Indonesia.

LITERATURE REVIEW

Research on the effect of fiscal decentralization transfer funds on regional financial independence has been conducted previously by Andriana (2020); Ginting, Hamzah, and Sofildaet (2019); Masaki (2018); also Mogues and Benin (2012). Andriana (2020) discovered that the Special Allocation Fund

(Dana Alokasi Khusus, DAK) had a significant and positive effect on the regional financial independence of 150 cities in Indonesia. In contrast, Revenue Sharing Fund (Dana Bagi Hasil, DBH) and General Allocation Fund (Dana Alokasi Umum, DAU) had no significant effect. Ginting et al. (2019) tested districts and cities in Indonesia and found that fiscal decentralization funds only posed a significant and positive effect on developed regions. Developed regions are mostly on Java Island, with a more stable local economy and greater competitive labor. Masaki (2018) discovered that the previous year's transfers significantly and positively affected the quarterly local revenue of Tanzania's districts. However, Mogues and Benin (2012) found that granting transfers to Ghana's districts reduced the district's ability and urgency to generate revenue.

Additionally, Yushkov (2016) found that decentralization of government expenditure negatively and significantly affects regional economic growth. In contrast, decentralization through intergovernmental transfer has a positive and significant effect on regional economic growth. This suggests that local governments are being too dependent on intergovernmental transfer. However, these studies did not have a single conclusion.

Along with regional financial independence, decentralization also aimed to improve the distribution quality of public services to ensure that public welfare can be equally distributed. Indonesia is a welfare state. Hence, it is reasonable that social welfare is a goal for state and local governments. Not only should the local government not only needs to be financially independent, but it also should successfully distribute services to gain a certain level of social welfare (Noor, 2012).

Law Number 23 of 2014 concerning Local Government specifies that social welfare is better measured by the Human Development Index (HDI). In 2018, United Nations Development Program (UNDP) noted that Indonesia's HDI was categorized as high for the first time after almost 30 years. UNDP also reported that the HDI inequality in Indonesia reached 17.4%, higher than the Asia and Pacific regional inequality index, which was only 16.6% (UNDP, 2019). This demonstrates that besides having a slow increase in HDI, Indonesia also has a national issue in the form of regional HDI inequality. Those issues need to be followed up.

Figure 1 shows the inequality of social welfare between regions, in line with UNDP's statement. In 2020, according to the Central Bureau of Statistics (Badan Pusat Statistik, BPS), the national HDI was 71.94, as indicated by the orange line in the figure. However, the regional HDI ranged from 31.55 to 86.61. This significant range shows that social welfare was not equally distributed. Fiscal de-

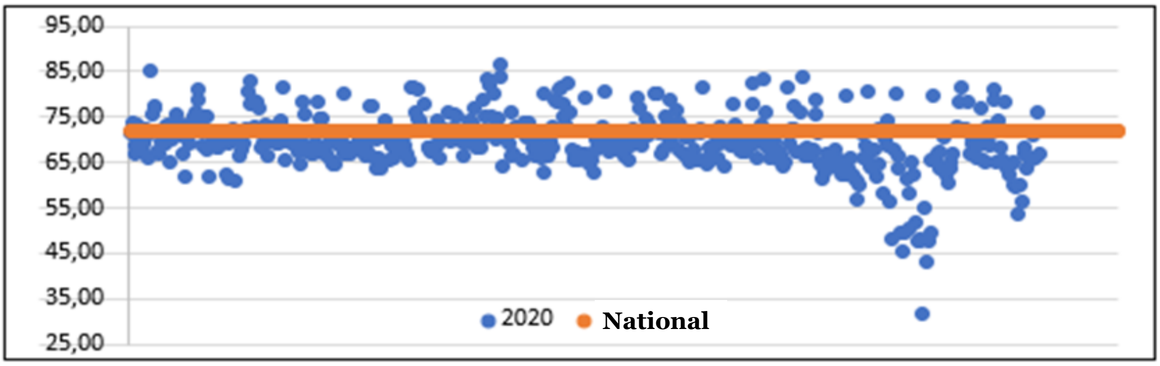

Figure 1. District/City and National HDI in 2020
Source: BPS (2021a)

centralization is expected to help all local governments to promote social welfare programs (Rahmayati & Pertiwi, 2018; Sarkoro & Zulfikar, 2016). Nevertheless, the data shows that the synergy between the central and local governments in achieving social welfare is still questionable.

There are many studies on the effect of fiscal decentralization funds on people's welfare. However, the studies have not provided conclusive results. Fatimah and Priyono (2020), Rahmayati and Pertiwi (2018), Sulaeman and Andriyanto (2021), also Sulaeman and Silvia (2019) find that only some types of fiscal decentralization funds have a significant and positive effect on regional social welfare. Additionally, Yushkov (2016) discovers that decentralization through intergovernmental transfer has a positive and significant effect on regional economic growth. It needs to be considered because regional economic growth builds regional social welfare.

Meanwhile, Mendes, Ferreira, Abrantes, and deFaria (2018) explained that union and state transfer significantly and positively affected the HDI. Siburian (2019) expressed that fiscal decentralization successfully reduced regional income inequality in Indonesia. Thus, fiscal decentralization could improve underdeveloped regions' local economies and welfare. Moreover, Ewetan, Matthew, Babajide, Osabohien, and Urhie (2020) unveiled that expenditure and revenue decentralization significantly increased economic development in the short and long run. It also should be noted that economic development is another measurement of welfare (BPS, 2021b).

This study differs from previous studies as it combines regional financial independence and social welfare as research objects. This study examines whether fiscal decentralization affects regional financial independence and social welfare in the same way. This study also divides the variables of fiscal decentralization into DBH, DAU, Physical Special Allocation Funds (Dana Alokasi Khusus Fisik, DAK Fisik), and Non-Physical Special Allocation Funds (Dana Alokasi Khusus Non-Fisik, DAK Non-fisik). The variables have rarely been used, despite the need to ensure clarity of policy implementation for each transfer type. This study collected data from 500 districts/cities throughout Indonesia to establish more objective and thorough research, which was rarely done before.

The preceding has led to this study on the effect of fiscal decentralization on regional financial independence and social welfare. As written by Noor (2012) and BPS (2021a), in decentralization, it is important to focus on the ability of local governments to increase local revenue and distribute the revenue to improve social welfare. Regional financial independence and social welfare are the main objectives of fiscal decentralization. This study examines the existence of consistency and harmony between these two main objectives. This study also examines the effect of regional financial independence on social welfare. This has to do with the fact that the increase in locally-generated revenue should increase the flexibility of regions in carrying out public service expenditures, thereby achieving social welfare (Rahmayati & Pertiwi, 2018).

This study is based on the theory of fiscal federalism. The theory refers to the division of government functions and financial authority among the lower levels of government (Oates, 1972 in Martinez-Vazquez, Lago-Peñas, & Sacchi, 2017; Slavinskaite, 2017). This theory relates to the concept of geopolitics government management based on the geographical aspect (Rosen, 1988). In other words, the fiscal federalism theory explains that every level of government, both central and unit, should manage its government. Fiscal federalism theory underlies the transfers to regions to aid vertical and horizontal fiscal imbalances so that every region can do productive public spending (Ejobowah, 2018). The head of local governments use these transfers to deliver their best service to receive the public's sympathy, and as a result, they can be voted for again (Slavinskaite, 2017). The public's sympathy also affects their tax compliance, thereby improving local tax revenue. Moreover, the transfers are needed to improve local public facilities and human resources to enhance the quality of collecting local revenues (Masaki, 2018). On that account, fiscal decentralization and transfers can improve regional financial independence.

Fiscal federalism is also claimed to improve social welfare due to cost efficiency, time efficiency, and the higher suitability of services to the needs of the people (Jha, 2012; Rosen, 1988; Yushkov, 2016). Local governments are very well informed of local needs and preferences and can provide appropriate public goods and services (Jha, 2012; Slavinskaite, 2017). Fiscal federalism through intergovernmental transfers also gives the local government enough budget for more productive public spending (Ejobowah, 2018). Consequently, fiscal decentralization can enhance regional social welfare.

RESEARCH METHOD

The data used in this study is 500 of Indonesia's districts/cities that received fiscal decentralization funds from 2016 to 2019. Data were obtained from DJPK and BPS websites. Statistical processing was carried out through a quantitative method using multiple regression analysis of panel data. Fiscal decentralization is a system that transfers the authority from the government at the national level to the local government, including the transfer of planning, government decision-making, administrative authority, income, and spending also resources (Ghuman & Singh, 2013; Rondinelli, 1983 in Noor, 2012; Yushkov, 2016). In Indonesia, fiscal decentralization is also followed by DBH, DAU, and DAK intergovernmental transfers. In this study, fiscal decentralization is proxied by the actual amount of the DBH, DAU, and DAK (physic and non-physic) the previous year.

Regional independence (RFI) is a parameter used to measure the ability of local governments to support their government financing without external support (The World Bank, 1994 in BPK, 2020). The actual local revenue measures regional financial independence. Social welfare shows people's conditions that can adequately meet their material and social needs (Gousario & Dharmastuti, 2015). Social Welfare (KM) is measured using the Human Development Index (HDI). The following is the research formula applied in the study.

$$\textbf{LN\_RFIi,t} = \alpha + \beta1.\ \text{LN\_DBHi,t} + \beta2.\ \text{LN\_DAUi,t} + \beta3.\ \text{LN\_DAKP-1 i,t-1} + \beta4.\ \text{LN\_DAKNPi,t} + \gamma.\ \text{Control} + e \quad \text{........................(1)}$$

$$\textbf{KMi,t} = \alpha + \beta5.\ \text{LN\_KDi,t} + \beta6.\ \text{LN\_DBHi,t} + \beta7.\ \text{LN\_DAUi,t} + \beta8.\ \text{LN\_DAKP -1i,t-1} + \beta9.\ \text{LN\_DAKNPi,t} + \gamma.\ \text{Control} + e \quad \text{........................(2)}$$

RESULT AND DISCUSSION

Classical assumption tests and improvements were performed using the Chow, Hausman, and Breusch-Lagan Lagrange Multiplier (LM). The Random-Effect Model is the most suitable for the two equations used based on the test. In addition, the data has 500 cross-sections and a 3-year time series. The number of cross sections (N) is much larger than the number of time series (t), so it is more optimal to be analyzed using the Random-Effect Model (Gujarati & Porter, 2009). As the robustness checks and classical assumption tests, the author performed a multicollinear test, normality test, heteroskedasticity test, and autocorrelation test. The data has met such requirements after some remedies using statistical assumption features, such as Generalized Least Squares (GLS). Those assumption features also prevent endogeneity problems in the regression. Regression results using the Random Effects model are listed in Appendix 1.

Fiscal Decentralization and Regional Financial Independence

Based on the tests conducted, DBH, DAU, and the previous year's Physical and Non-Physical DAK significantly and positively affect regional financial independence. This result is in line with the theory of fiscal federalism. According to the theory, delegating authority to local units will enhance fiscal and service quality to meet people's satisfaction as local government needs to be re-elected (Slavinskaite, 2017). These results align with Ginting et al. (2019) and Masaki (2018). Ginting et al. (2019) revealed that transfer funds significantly and positively affected regional financial independence in developed districts/cities.

Meanwhile, Masaki (2018) researched the Tanzanian government and concluded that intergovernmental transfers encouraged local governments to increase their regional financial independence. Masaki (2018) wrote that one benefit of transferring funds is to improve the quality of local government services, which can increase people's satisfaction and trust in the government. If people feel satisfied and have greater trust, it would lead to them voluntarily paying taxes. As a result, tax compliance will be enhanced, thus improving local tax collection. Therefore, it is strengthening regional financial independence.

However, the results of this study are not in line with Mogues and Benin (2012) also Yushkov (2016). In Ghana, local governments have limited authority over local revenue collection (Mogues & Benin, 2012). Yushkov (2016) also stated that local units do not have sufficient revenue to finance their programs in Russia. As a result, they depend on subsidies. Because of this, local governments strongly depend on transfers from the central government.

This study found that DBH significantly and positively affected regional financial independence. This is consistent with the theory of fiscal federalism and Masaki's explanation (2018). However, this result is not in line with Andriana (2020), who reveals that DBH has no significant effect on the following year of regional financial independence. Andriana (2020) explains that such a difference occurs as DBH is mainly used for operating expenses. This effect occurs immediately in the year concerned, not the following year. The result indicates that local governments have implemented DBH to improve the quality of public service delivery and basic services. These services significantly and positively affect people's satisfaction and tax compliance. Therefore, regional financial independence is increased. Improvements in local government services have also led people to prefer government-provided services over private sector services. It will increase the Other Local Own-sourced Revenue (Lain-lain PAD yang sah), particularly from Regional Public Service Agency (Badan Layanan Umum Daerah, BLUD). The improved locally-generated revenue will strengthen regional financial independence.

This study revealed that DAU significantly and positively affected regional financial independence. It is consistent with the theory of fiscal federalism and Masaki's research (2018). Nevertheless, this result differs from Andriana's (2020) finding that DAU does not significantly affect regional financial independence the following year. This is presumably because the benefits of DAU are directly received in the same year. The majority of DAU is used for personnel expenditure. In line with Masaki (2018), this expenditure can improve the performance and dedication of employees in providing services to people. This can affect people's satisfaction and tax compliance. The personnel expenditure can also increase employee income and expenses. It can enhance the regional economy as people can pay regional taxes and levies. It can also enhance the regional economy as people spend more on local producers. As a result, this will strengthen regional financial independence.

This study also found that Physical and Non-Physical DAK had a significant and positive effect on regional financial independence. It is in line with the theory of fiscal federalism and an explanation by Masaki (2018). This result is also in line with the results of Andriana (2020), who finds that DAK has a significant and positive effect on the following year of regional financial independence. Andriana (2020) emphasizes that local governments have implemented DAK optimally for infrastructure development and thus can encourage the regional economy. The improvement of the regional economy will strengthen regional financial independence.

Local governments have used the Physical DAK to meet public expectations regarding the quality of local government infrastructure, particularly in delivering their basic services, such as education, health, roads, and others. Ewetan et al. (2020) said that local governments used decentralization from the central government to develop their infrastructure. People will feel more satisfied with the government if there is adequate infrastructure development. Such satisfaction will enhance people's tax compliance, strengthening regional financial independence.

The results of this study indicate that the Non-Physical DAK has a significant and positive effect on regional financial independence. Non-Physical DAK is used to finance school operations, health facilities, regional civil servant allowances, and others. It shows that the local governments have implemented the Non-Physical DAK to improve the quality of education, health, and other public services. This improvement can increase people's satisfaction and tax compliance, strengthening regional financial independence.

In addition to examining the types of fiscal decentralization funds, this study also uses control variables in the previous year's capital expenditure, size of the local government, poverty rate, population number, and type of the local government. Based on the test results shown in Appendix 1, it was concluded that all of the control variables had a significant effect on regional financial independence. The previous year's capital expenditure had a significant positive effect as improvements in the quality of buildings and office equipment for basic services could increase the citizen's satisfaction and tax compliance (Masaki, 2018).

The size of the local government has a significant and positive effect because larger regions tend to have a good economy and human resource capacity to enhance regional financial independence (Gomes, Alfinito, & Albuquerque, 2013). The poverty rate has a significant and negative effect as it prevents people from being able to pay regional taxes (Masaki, 2018; Mogues & Benin, 2012). The population number has a significant positive effect because a small population tends to be followed by fewer potential taxable objects (Gomes et al., 2013). The type of local government has a significant positive effect because cities tend to have a more developed economy and higher quality of human resources than districts.

Based on the previous discussion, it can be concluded that the implementation of fiscal decentralization through the transfer of DBH, DAU, and the previous year's Physical and Non-Physical DAK significantly increased regional financial independence. Local governments do not consider transfer funds as a substitute for regional revenue. However, data from BPK (2020, 2021) shows that 90% of the districts/cities in Indonesia are still experiencing a stagnant status of Not Fiscally Independent. One might reasonably suppose that the increase in the needs of local government spending is faster and more significant than the increase in regional revenue. In addition, throughout 2018-2019, many districts/cities still have not reached the PAD target yet. Local governments are expected to improve the quality of regional services and enhance innovations and supervision of the local revenue collection process. Thus, such actions can further strengthen regional financial independence. The central government plays an important role in providing assistance and training to local governments to enhance the economy and improve the quality of regional services.

Fiscal Decentralization and Social Welfare

Fiscal federalism theory explains that delegating authority to lower government units will increase social welfare (Rosen, 1988). By delegating authority, public services are more efficient and reasonably meet people's needs (Jha, 2012). Ejobowah (2018) also stated that fiscal federalism through intergovernmental transfers gives local units enough budget to carry out more appropriate public spending. Mendes et al. (2018) found that transfers from the federal and state governments significantly and positively affected social welfare. The transfer funds play a significant role as the available amount of transfer funds is far greater than the funds that local units can provide. Transfer funds usually have specific goals and thus can directly improve the quality of education and public health. Siburian (2019) found that fiscal decentralization significantly reduced regional income inequality. More efficient public service and goods could be provided because of fiscal decentralization. It can offset unequal income distributions (Siburian, 2019).

Moreover, Ewetan et al. (2020) conclude that fiscal federalism can enhance Nigeria's economic development in both the short and long run. Fiscal federalism pushes local governments to be able to spend more on infrastructure. It will enhance the regional economy (Ewetan et al., 2020). However, the results of Massardi and Abrantes (2015) are different. Massardi and Abrantes (2015) find that transferring funds significantly and negatively affects social welfare. It is because transfers reduce disparities between regions, so regions with low socio-economic development will receive larger transfer funds.

As previously mentioned, the implementation of the DAU and Non-Physical DAK is in line with the theory of fiscal federalism and the research of Mendes et al. (2018). However, DBH and Physical DAK implementation still needs to be further explored as they are inconsistent with the theory and research. This study concludes that DBH does not significantly affect social welfare. This result is in line with the research by Fatimah and Priyono (2020) also Rahmayati and Pertiwi (2018) conducted in districts/cities in Central Java Province. According to Rahmayati and Pertiwi (2018), this effect occurs due to restrictions on the use of Tobacco Excise DBH, Reforestation Fund DBH, and 25% of DBH for infrastructure. Regions are not entirely free to use DBH according to the needs and preferences of the people. Nonetheless, these results do not align with Sulaeman and Silvia (2019), which explains that DBH has balance features as not all funds have usage restrictions. In light of this, DBH significantly and positively affects regional financial independence.

There are inconsistencies and asynchronous results because DBH has a significant and positive effect on regional financial independence in the previous equation. The insignificant effect in the second equation occurs given that DBH is partly used in public service function spending, as previously explained. This spending can indeed increase the citizen's satisfaction and tax compliance. However, this spending is focused on the effectiveness of public services and bureaucracy, which are not directly related to the people's social and economic welfare. This is presumably the cause of Indonesia's inequality and slow improvement of social welfare.

This study also learned that DAU significantly and positively affected social welfare. These results align with the theory of fiscal federalism and the result of Fatimah and Priyono (2020) also Sulaeman and Silvia (2019). The most significant portion of the DAU is used for personnel expenditure, increasing employee consumption, and improving the regional economy (Sulaeman & Silvia, 2019). Moreover, DAU is also a transfer utilized to improve public service quality and enhance people's welfare (Ewetan et al., 2020). However, the results of this study are not in line with Rahmayati and Pertiwi (2018), who conclude that the DAU does not significantly affect the social welfare of the districts/cities in Central Java Province.

The fiscal decentralization policy through DAU transfers has been improving social welfare effectively. Local governments have effectively used the DAU for personnel expenditure and another spending to improve the quality of education, health, and the economy according to the needs and preferences of the people. Improving the quality of education, health, and the economy will also improve social welfare. Therefore, DAU has a significant and positive effect on social welfare. This is synchronous with the previous equation results, which explain that DAU has also succeeded in having a significant and positive influence on regional financial independence.

This study also found that Physical DAK had a significant negative effect, in contrast to Non-Physical DAK, which had a significant and positive effect on social welfare. Fatimah and Priyono (2020), Rahmayati and Pertiwi (2018), also Sulaeman and Silvia (2019) found that DAK did not have a significant effect on social welfare. Sulaeman and Silvia (2019) reveal that the implementation of DAK in Indonesia still needs to be explored further as there are problems from the reporting to the spending of the funds. Based on the Work Visit Report of the State Financial Accountability Agency (Badan Akuntabilitas Keuangan Negara, BAKN) to Central Java Province in 2016, it was discovered that there were problems in the allocation and realization of DAK. Some regions did not apply for DAK but received additional DAK. On the contrary, some regions submitted project proposals but did not receive additional DAK allocations.

Physical DAK has a significant negative effect due to the problems associated with implementing Physical DAK in the regions (Sulaeman & Silvia, 2019). The 2018 Central Government Financial Reports (Laporan Keuangan Pemerintah Pusat, LKPP) showed that the actual Physical DAK in 2018 decreased since several local governments did not meet the administrative requirements for the distribution of Physical DAK. These unmet requirements were delays in submitting reports on the use of funds, contract synchronization problems, land certificate ownership issues, and many others. It showed that the local government's commitment to fulfilling the project proposals was still not optimal. Moreover, the local government had a limited number of qualified human resources to implement self-managed development projects in the regions. Administrative problems arising from the transition of regional leaders can also cause delays in the distribution of Physical DAK due to the postponed decisions made by local governments (Kementerian Pendidikan dan Kebudayaan, 2019). LKPP 2019 also showed several contractual problems in regional projects, which caused the Physical DAK to be undistributed.

Based on the previous equation test, Physical DAK significantly and positively affects regional financial independence. However, Physical DAK significantly and negatively affects social welfare in the second equation. It is because a decrease in the actual Physical DAK can interfere with the implementation of local revenue collection, although it statistically still can improve social welfare. This suggests that for the period tested, local governments use more portion of the Physical DAK to improve local tools and human resources to collect local revenue instead of directly improving social welfare.

The test results show that the Non-Physical DAK significantly and positively affects social welfare. Implementing the Non-physical DAK transfer policy has been effectively enhancing social welfare. It is in line with the previous equation test results in which the Non-Physical DAK significantly and positively affects regional financial independence. Regional governments have effectively used Non-physical DAK to improve education, health, and financial services. These improvements enhance regional financial independence and social welfare.

Similar to the first equation, the second also examines social welfare control variables. The results show that all control variables significantly affect social welfare. The previous year's capital expenditure had a significant negative effect as it was aligned with the Physical DAK described previously. The size of the local government has a significant positive effect because larger regions have adequate economic and human resource capacity (Gomes et al., 2013). The poverty rate has a significant and negative effect as it hinders the people's economic capability to achieve a state of welfare. The Population has a significant and negative effect due to limited employment opportunities, thereby increasing the inequality of social welfare (Kim & Samudro, 2017). The type of local government has a significant positive effect because urban areas tend to be the center of socio-economic development, thus allowing them to have improved welfare (Sulaeman & Andriyanto, 2021).

The preceding explanation shows that implementing fiscal decentralization policies in the form of DAU and Non-Physical DAK has effectively improved social welfare. However, DBH and Physical DAK still require further explanation. It is necessary to strengthen the commitment of local governments in carrying out the projects' administrative regulations for the distribution of funds to run successfully. The role of the central government is also needed to supply training related to the planning process and project supervision so that local governments will be more prepared to carry out a project.

Regional Financial Independence and Social Welfare

This study result showed that regional financial independence significantly and positively affected social welfare. This is in line with the theory of fiscal federalism, which explains that the delegation of authority to local units can increase economic efficiency and achieve social welfare (Jha, 2012; Rosen, 1988). The results of this study also align with Mendes et al. (2018), Rahmayati and Pertiwi (2018), also Sulaeman and Silvia (2019). Sulaeman and Silvia (2019) explained that regional financial independence made the regions directly determined the allocation of productive spending for social and economic services. This will facilitate the distribution of services, hence improving social welfare.

CONCLUSION

This study finds that fiscal decentralization successfully increases regional financial independence. The urgency of local governments in collecting local revenues has not decreased even though they have received transfer funds. This is consistent with the theory of fiscal federalism. This study also finds that the transfer policy of the DAU and Non-Physical DAK has succeeded in enhancing social welfare. However, implementing DBH and Physical DAK still needs further evaluation. It shows a mismatch between regional financial independence and social welfare for DBH and Physical DAK. This needs to be further explored. This study also concludes that regional financial independence has improved social welfare. Regional governments have used their revenue for productive spending to enhance social welfare. Regional financial independence and social welfare are important elements in fiscal decentralization. It is expected that the regional government will continue to maximize the use of transfer funds in order to improve regional financial independence and social welfare.

The local government is expected to continue innovation and maintain supervision regarding collecting local own-source revenue. It is also expected to increase commitment to implementing regional projects so physical DAK can be better disbursed and optimize transfer funds and regional financial independence to improve social welfare. At the same time, the central government is expected to increase training for local governments. The training should be related to the innovation and supervision regarding collecting local own-source revenue and the planning, implementation, and supervision of projects in the regions.

REFERENCES

Andriana, N. (2020). Pengaruh dana perimbangan dan belanja modal terhadap kemandirian daerah. Jurnal *Pajak dan Keuangan Negara, 2*(1), 105–113.

BPK RI. (2020). Laporan Hasil Pemeriksaan atas Laporan Keuangan Pemerintah Pusat Tahun 2019: Laporan Hasil Reviu atas Kemandirian Fiskal Pemerintah Daerah Tahun Anggaran 2018 dan 2019. Jakarta: BPK RI.

BPK RI. (2021). Laporan Hasil Pemeriksaan atas Laporan Keuangan Pemerintah Pusat Tahun 2020: Laporan Hasil Reviu atas Kemandirian Fiskal Pemerintah Daerah Tahun 2020. Retrieved from https://www.bpk.go.id/assets/files/lkpp/2020/lkpp_2020_1624341245.pdf

BPS. (2021a). *Indeks pembangunan manusia 2020*. Retrieved from https://www.bps.go.id/publication/2021/04/30/8e777ce2d7570ced44197a37/indeks-pembangunan-manusia-2020.html

BPS. (2021b). *Statistik keuangan pemerintah kabupaten/kota tahun 2019-2020*. Jakarta: Badan Pusat Statistik.

Ejobowah, J. B. (2018). The second-generation theory of fiscal federalism: A critical evaluation. Perspectives *on Federalism, 10*(1), 222–245. DOI: 10.2478/

pof-2018-0011

Ewetan, O. O., Matthew, O. A., Babajide, A. A., Osabohien, R., & Urhie, E. (2020). Fiscal federalism and economic development in Nigeria: An auto-regressive distributed lag approach. *Cogent Social Sciences, 6*(1). DOI: 10.1080/23311886.2020.1789370

Fatimah, A. N., & Priyono, N. (2020). Kontribusi PAD, dana perimbangan, belanja daerah terhadap kesejahteraan masyarakat di Jawa Tengah. *JAAF (Journal of Applied Accounting and Finance), 4*(2), 75–92.

Ghuman, B. S., & Singh, R. (2013). Decentralization and delivery of public services in Asia. *Policy and Society, 32*(1), 7–21. DOI: 10.1016/j.polsoc.2013.02.001

Ginting, A. M., Hamzah, M. Z., & Sofilda, E. (2019). Pengaruh dana perimbangan terhadap kemandirian keuangan daerah. *Indonesian Treasury Review Jurnal Perbendaharaan Keuangan Negara dan Kebijakan Publik, 4*(2), 105–127. DOI: 10.33105/itrev.v4i2.126

Gomes, R. C., Alfinito, S., & Albuquerque, P. H. M. (2013). Analyzing local government financial performance: evidence from Brazilian municipalities 2005-2008. *Revista de Administração Contemporânea, 17*(6), 704–719. DOI: 10.1590/s1415-65552013000600005

Gousario, F., & Dharmastuti, C. F. (2015). Regional financial performance and human development index based on study in 20 counties/cities of level I region. *The Winners, 16*(2), 152. DOI: 10.21512/tw.v16i2.1568

Gujarati, D. N., & Porter, D. C. (2009). *Basics Econometrics* (5th ed.). New York: Douglas Reiner.

Ikasari, P. (2015). Pengaruh dana alokasi umum, dana alokasi khusus, dan belanja modal terhadap tingkat kemandirian keuangan daerah (Studi kasus pada kabupaten/kota di DIY periode 2007-2014) [Universitas PGRI Yogyakarta]. Retrieved from http://repository.upy.ac.id/234/1/ARTIKEL SKRIPSI PUTRI.pdf

Jayabuana, N. (2016, August 16). Mendorong kemandirian daerah. *Media Indonesia.* Retrieved from https://mediaindonesia.com/ekonomi/61862/mendorong-kemandirian-daerah

Jha, P. C. (2012). Theory of fiscal federalism: An analysis. *Munich Personal RePEc Archive, 41769*, 1–33. Retrieved from https://mpra.ub.uni-muenchen.de/41769/

Kementerian Pendidikan dan Kebudayaan. (2019). *Pemanfaatan Dana Alokasi Khusus Fisik Bidang Pendidikan (Pertama).* Jakarta: Pusat Penelitian Kebijakan Pendidikan dan Kebudayaan, Badan Penelitian dan Pengembangan, Kementerian Pendidikan dan Kebudayaan.

Kim, E., & Samudro, Y. N. (2017). The impact of intergovernmental transfer funds on interregional income disparity in Indonesia. *International Journal of Urban Sciences, 21*(1), 22–40. DOI: 10.1080/12265934.2016.1240626

Liu, Y., Martinez-Vazquez, J., & Wu, A. M. (2017). Fiscal decentralization, equalization, and intra-provincial inequality in China. *International Tax and Public Finance, 24*(2), 248–281. DOI: 10.1007/s10797-016-9416-1

Martinez-Vazquez, J., Lago-Peñas, S., & Sacchi, A. (2017). the Impact of Fiscal Decentralization: a Survey. *Journal of Economic Surveys, 31*(4), 1095–1129. DOI: 10.1111/joes.12182

Masaki, T. (2018). The impact of intergovernmental transfers on local revenue generation in Sub-Saharan Africa: Evidence from Tanzania. *World Development, 106,* 173–186. DOI: 10.1016/j.worlddev.2018.01.026

Massardi, W. de O., & Abrantes, L. A. (2015). Esforço fiscal, dependência do fpm e desenvolvimento socioeconômico: Um estudo aplicado aos municípios De Minas Gerais. *Revista de Gestão, 22*(3), 295–313. DOI: 10.5700/rege564

Mendes, W. de A., Ferreira, M. A. M., Abrantes, L. A., & deFaria, E. R. (2018). The influence of economic capacity and the formation of public revenues on human development. *Revista de Administracao Publica, 52*(5), 918–934. DOI: 10.1590/0034-761220170004

Mogues, T., & Benin, S. (2012). Do external grants to district governments discourage own revenue generation? A look at local public finance dynamics in Ghana. *World Development, 40*(5), 1054–1067. DOI: 10.1016/j.worlddev.2011.12.001

Noor, M. (2012). *Memahami desentralisasi Indonesia*. Yogyakarta: Interpena.

Rahmayati, A., & Pertiwi, I. F. (2018). Pengaruh pendapatan asli daerah dan dana perimbangan terhadap indeks pembangunan manusia. *Journal of Islamic Finance and Accounting, 1*(1). DOI: 10.22515/jifa.v1i1.1149

Rosen, H. S. (1988). Fiscal federalism: Quantitative studies. *Gramlich 1987,* 151–154. DOI: 10.7208/chicago/9780226726236.001.0001

Sarkoro, H., & Zulfikar, Z. (2016). Dana alokasi khusus dan pendapatan asli daerah terhadap indeks pembangunan manusia (studi empiris pada Pemerintah Provinsi se-Indonesia tahun 2012-2014). *Riset Akuntansi dan Keuangan Indonesia, 1* (1), 54–63. DOI: 10.23917/reaksi.v1i1.1972

Siburian, M. E. (2019). Fiscal decentralization and regional income inequality: evidence from Indonesia. *Applied Economics Letters, 27*(17), 1383-1386. DOI: 10.1080/13504851.2019.1683139

Slavinskaite, N. (2017). Fiscal decentralization and economic theory. *Review of Business and Legal Sciences, 26,* 86–98. DOI: 10.26537/rebules.v0i26.1005

Sulaeman, A. S., & Andriyanto, N. (2021). Optimalisasi pengelolaan dana alokasi khusus (DAK) untuk mendorong pertumbuhan pembangunan daerah di Indonesia. *Jurnal Akuntansi Aktual, 5(*2), 175–200.

Sulaeman, A. S., & Silvia, V. (2019). Pendapatan asli daerah,transfer daerah, dan belanja modal, pengaruhnya terhadap pertumbuhan ekonomi regional di Indonesia. *Jurnal Aplikasi Akuntansi, 4*(1), 97–112. DOI: 10.29303/jaa.v4i1.61

UNDP. (2019). *Human Development Report 2019*. Retrieved from https://hdr.undp.org/content/human-development-report-2019

Yushkov, A. (2016). Fiscal decentralization and regional economic growth: Theory, empirical studies, and Russian experience. *Voprosy Ekonomiki, 2*(2016), 94–110. DOI: 10.32609/0042-8736-2016-2-94-110

APPENDIX

Appendix 1. Regression Results Using Eviews

Variable	Equation I: KD	Equation II: KM
LN_KD		0.0757*
		(0.0949)
LN_DBH	0.0529*	0.1124
	(0.0385)	(-0.0657)
LN_DAU	0.0005***	0,0000***
	(0.5139)	(5.0417)
LN_DAKF_1	0.0784*	0.0000***
	(0.0446)	(-0.2340)
LN_DAKNF	0.0030***	0.0000***
	(0.1253)	(1.0394)
LN_BM_1	0.0014***	0.0127**
	(0.1278)	(-0.1554)
LN_UKURAN	0.0017***	0.0000***
	(0.1037)	(0.4908)
PPMISKIN	0.0000***	0.0000***
	(-3.6729)	(-35.8524)
JPEND	0.0000***	0.0000***
	(0.0007)	(-0.0017)
JEN	0.0000***	0.0000***
	(0.5962)	(6.0055)
C	0.4926	0.0000***
	(-0.0643)	(-95.3958)
Observations	1.5000	1.5000
R^2	0.5395	0.6991
Adj. R^2	0.5367	0.6971
Prob. F stat.	0.0000	0.0000

*, **, *** shows the significance with the alpha sequentially being 10%, 5%, and 1%