THE IMPACT OF FISCAL DECENTRALIZATION ON POVERTY REDUCTION IN VIETNAM

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ABSTRACT

In Vietnam, the issue of decentralization and implementation of decentralization have been a concern for a long time. This study focuses on the impact of fiscal decentralization on poverty reduction in Vietnam. Based on the provincial data with the use of the two-stage least squares method (2SLS), the estimation results obtained for the two periods show that fiscal decentralization had an impact on income/expenditure poverty reduction in the period from 2010–2015 and it had no significant effect on multidimensional poverty reduction in the period from 2016–2019. The study also found that economic growth, education and local welfare spending had an impact on poverty reduction in both stages, in which the impact of economic growth is relatively large, while the impact of welfare expenditures is relatively small in the locality. Improving infrastructure through information networks and increasing participation of people at the grassroots level have no impact on income/expenditure poverty reduction and multidimensional poverty in both the 2010–2015 and 2016–2019 periods.

Contribution/Originality: This study is the first to evaluate the impact of fiscal decentralization on poverty reduction in Vietnam.

1. INTRODUCTION

Decentralization plays an important role and is mentioned by many theoretical and experimental studies in the socioeconomic field. Decentralization is defined as the process of transferring powers and responsibilities from the central government to local governments or to the private sector. The concept of decentralization covers four aspects – administration, financial management, politics and market. From the perspective of financial management, fiscal decentralization is always an issue that economists are interested in researching in public financial management.

Extensive theoretical and empirical studies around decentralization have also confirmed its role in poverty reduction, especially in developing countries. From a theoretical point of view, many studies have been carried out and presented convincingly on the analytical framework and transmission mechanism of the impact of decentralization on poverty reduction (Davoodi & Zou, 1998; Jütting, Corsi, & Stockmayer, 2005; Steiner, 2005; Xie, Zou, & Davoodi, 1999). These theoretical studies inherit, develop and gradually form a clear analytical framework with many impact channels, including political impact and economic impact (Jütting et al., 2005). In particular, the
The concept of poverty is viewed in multiple dimensions from the following aspects: voicelessness, vulnerability and access to services (Jütting et al., 2005). Based on the research of Jütting et al. (2005), Steiner (2005) adds that the impact of decentralization on poverty reduction is shown through its ability to enhance the opportunities to improve the living conditions of the poor through jobs, financial services, infrastructure and public services. Enabling empowerment means involving citizens in decision-making, while increasing security in relation to reducing vulnerability to threats, such as economic shocks, natural disasters, and disease. Additionally, another mechanism by which decentralization can influence poverty is through its influence on governance. Decentralization can promote good governance by improving accountability, increasing consumer participation in decision-making, and promoting competition between jurisdictions (Faguet, 2009; Kubal, 2006; Shah, 2006; Tanzi, 1996; Usui, 2007; Von Braun & Grote, 2002). By bringing consumers and suppliers of public goods closer together, it is easier for government officials to be held accountable (Usui, 2007). Because good governance can affect poverty reduction (Chakravarti, 2005; Tebaldi & Mohan, 2010), it is possible that decentralization is related to poverty.

In a brief review, studies on decentralization and poverty are quite rich and form a complex but clear and convincing theoretical framework. However, from an economic financial perspective, how fiscal decentralization plays a role in poverty reduction has only been empirically researched. Therefore, the results obtained are of a different nature depending on the context of the country in which the study is conducted. There is a group of empirical studies that show no reliable evidence for the impact of fiscal decentralization on poverty reduction (Chaudhuri, Kurniawati, & Sumarto, 2019; Crook, 2003; Hutahean, 2020; Mwiathi, Wawire, & Onono, 2018). In contrast, some other empirical studies show that the effect is quite pronounced, but this effect can be positive (Dada, 2015; United Nations, 2005) or negative (Kaka, 2018; Silas, 2017) depending on the national context.

In Vietnam, in the early stage of "Doi Moi" (translated as "restoration"), the issue of decentralization was seriously recognized by the Party and included in the Resolution of the 6th Party Congress (1986) with specific contents and resolutely implemented by the division managers. Over time, decentralization has gradually been improved clearly in the government's resolutions. Until 2004, decentralization was officially recognized in Resolution 08/2004. Accordingly, fiscal decentralization has been increasingly clarified and included as one of the main contents of the public financial management activities of the Vietnamese government. Along with the task of promoting fiscal decentralization, the task of poverty reduction is also the leading task of Vietnam in the roadmap toward the realization of the 17 Sustainable Development Goals (SDGs) (UN, 2015). Effective strategies in the right direction help Vietnam continuously achieve goals on the poverty reduction front. During the period from 2016 to the present, poverty indicators are officially measured in Vietnam as multidimensional with multiple approaches instead of income or expenditure poverty according to the previous assessment. Therefore, it is more difficult to analyze the effects of fiscal decentralization on poverty reduction than before, but it is necessary to provide reliable empirical evidence that contributes to the achievement of the SDGs on poverty reduction in the new global economic context until 2030.

2. LITERATURE REVIEW

Studies on the impact of decentralization on poverty reduction began to appear since the study of Jütting et al. (2005). The study argues that implementing a consistent and clear decentralization strategy will be a promising tool for improving institutional capacity and quality at the local level. Although most developing countries are experiencing some form of decentralization, the actual extent of implementation varies widely. The study also highlights the need to strengthen institutional capacity to successfully implement pro-poor policies.

Regarding the study of Jütting et al. (2005), Steiner (2005) contributes to providing insights into the impact of decentralization on poverty. Research also shows that decentralization affects poverty not only by increasing the independence of lower levels of government spending but also by delegating the power to increase local tax revenues. The report by the United Nations (2005) also argues that decentralization, if implemented appropriately, can play an important role in poverty reduction. This impact is realized through improved service delivery to the poor,
participatory planning and implementation of special development activities and programs for the benefit of the poor, and opportunities for the poor to articulate their needs and preferences and improve local governance.

In a recent study, Von Braun and Grote (2002) have shown that decentralization can directly and indirectly affect poverty and the impacts could be positive or negative depending on the nature of the goods provided (public or non-public) together with how the hierarchical organization is designed. A recent study by Harris and Posner (2021) on this issue also adds an additional dimension to the relationship between decentralization and poverty. Research shows that decentralization creates greater opportunities for local officials to divert resources for political or personal ends. Therefore, the impact on poverty reduction from decentralization also depends on the political factors of the region.

There have been many empirical studies on the impact of fiscal decentralization on poverty reduction, although the results are very different (Tran, 2020). Research on this topic can be divided into two main streams. The first line of empirical research provides credible evidence of positive effects of fiscal decentralization on poverty reduction. A study by Dada (2015) in Nigeria from 2002 to 2010 found that the higher the fiscal decentralization, the lower the mortality rate and the higher the literacy rate. This positive impact is independent from the size of the population and the value of the province’s revenue. This helped reduce poverty in Nigeria during the study period. Going deeper into the direction of dissecting the aspects of multidimensional poverty more closely, the studies also obtained interesting experimental results. Ramírez, Díaz, and Bedoya (2016) suggest that, in Colombia, the impact of fiscal decentralization has a positive effect on reducing the proportion of the multidimensionally poor and the multidimensional poverty gap. Moreover, the fiscal decentralization policy should be developed according to the specific spatial characteristics of each province, which will reduce multidimensional poverty more effectively. Taking a different view of the dimensions of multidimensional poverty, Sutiyono (2016) showed that the positive impact of decentralization is more perceived on the accessibility of public services and improved infrastructure but less on income generation and social protection for the poor in Indonesia. Further dissection of fiscal decentralization in empirical studies has led to some remarkable points. A study by Silas (2017) in Kenya from 2002 to 2014 found that the effect of fiscal decentralization on poverty and human development depends on the nature of the decentralization and the degree of fiscal decentralization. However, the province’s very high rates of revenue may not necessarily serve the interests of the poor. The degree of impact also depends on the implementation stages. If fiscal decentralization is assessed under two criteria, namely revenue and expenditure of the local level and transfers between levels, research by Nursini (2019) on 33 provinces in Indonesia from 2010–2016 shows that provincial governments’ income and transfers between levels have a statistically significant impact on poverty reduction goals, while provincial government spending has no significant impact.

The second line of empirical research leads to conclusions without clear evidence for the impact of fiscal decentralization on poverty reduction. Research by Crook (2003) concluded that decentralization is unlikely to lead to many pro-poor outcomes without serious efforts to strengthen and expand accountability mechanisms at both the local and country levels in the context of Sub-Saharan African countries. From 2010 to the present, empirical studies have raised suspicions regarding this effect. Kusumaningrum (2013) came to the conclusion that there is no clear pattern linking fiscal decentralization with poverty reduction in the context of Indonesia. In the same context, Maharajabdinul, Paddu, and Abd (2015) also came to the same conclusion, but the results make it clear that fiscal decentralization can have an impact on poverty reduction indirectly through investment and growth in the eastern provinces of Indonesia. In another study on Indonesia, Putra (2017) states that it is necessary to re-evaluate the process of fiscal decentralization and consider its impact on poverty reduction effectively. Chaudhuri et al. (2019) found no correlation between the poverty reduction progress and local government spending on education, health and social protection. This suggests that fiscal decentralization in proportion to local government spending on social programs may not be effective in reducing poverty. Finally, there is a relatively new study by Hutahaean (2020) with qualitative methods, policy/programme analysis approaches and secondary data. This study shows that decentralization policies are not directly related to poverty reduction.
3. MODELS, METHODS AND DATA

a. Regression Model

Based on research by Canare (2020), the impact of fiscal decentralization on poverty reduction at the provincial level in Vietnam is estimated through the following model:

\[
POV_{it} = \alpha + \beta_1 \cdot FD_{it} + \beta_2 \cdot X_{it} + \mu_{it} \tag{1}
\]

Where:

- \(POV_{it}\) is the poverty rate in province \(i\) in year \(t\), calculated as the ratio of the number of households in the poor group to the total number of households in the province. From 2010 to 2015, the poverty rate was calculated based on income or expenditure poverty criteria only. From 2016 to 2019, the poverty rate is calculated based on the multidimensional poverty line.
- \(FD_{it}\) is the variable that represents fiscal decentralization. According to Oates (1972), fiscal decentralization can be measured by assessing local revenue and expenditure in the total budget revenue or expenditure. Specifically, this variable is measured by the following two criteria: (i) the percentage of revenue originating from the province with the total revenue of province \(i\) in year \(t\); (ii) the percentage of expenditure originating from the province to the total expenditure of province \(i\) in year \(t\). Larger indicators represent higher levels of fiscal decentralization.
- \(X_{it}\) is the vector of the control variables, \(\mu\) is the error, and \(i\) and \(t\) are province and year, respectively. The coefficients \(\alpha\), \(\beta_1\) and \(\beta_2\) measure the response of poverty to the change of fiscal decentralization and the control variables in the model.

To select reasonable control variables, the study is based on the results of the empirical evaluation of factors affecting multidimensional poverty in the context of countries similar to Vietnam in terms of economic development. According to research by Santos (2013) and Pham and Riedel (2019), economic growth has a great impact on the role of multidimensional poverty reduction in countries around the world; this impact is even larger than previous income poverty. Balisacan and Fuwa (2004) conducted a study on the Philippines and emphasized that social services and social welfare will have a great impact on the ability to reduce poverty in this country. In addition, other factors such as education and health also play a great role in poverty reduction. Similar to these studies, Wasudawan, Shakur, and Ab-Rahim (2021) found that infrastructure and education are the two most important factors affecting poverty reduction in Nigeria. Another important factor affecting multidimensional poverty is governance and institutional quality (Chakravarti, 2005; Le, 2019; Tebaldi & Mohan, 2010).

Based on these studies, the control variables included in the model are: (1) the province's GRDP value; (2) the average number of high school classes in the province representing the educational factor; (3) the average number of hospital beds in the province for health care; (4) the average provincial expenditure representing welfare for the year; (5) the province's average number of internet subscribers representing infrastructure; and (6) citizen participation rates at the grassroots level representing the institution.

b. Estimation Methods and Data

According to Canare (2020), the ratio of revenue originating from the province/city to the total revenue of the province/city can cause endogenous conditions. The proportion of revenues originating from the province/city can affect its poverty level. Conversely, the poverty rate also has an impact on the proportion of revenues originating in that province/city. If a province/city has a high poverty rate that tends to increase, labor productivity will decrease. This may limit the city/province's ability to raise capital through local revenue sources. In addition, a high poverty rate in a province/city may lead to a decrease in its number of enterprises due to lower business profits relative to provinces with lower poverty rates. As a result, the taxes and fees collected by the provincial/city government will be relatively reduced. On the other hand, the proportion of revenue originating from the province/city may also be affected over time and depends on the local socioeconomic development situation as well as the government's policies and strategies for local development in a certain period. Thus, this ratio in year \(t\) can be correlated with itself in the
The presence of endogenous variables will lead to cases such as omitting the variable, errors in the variable or being simultaneously determined by other explanatory variables. Ordinary least squares (OLS), random effects model (REM), or fixed effects model (FEM) estimates are no longer suitable to obtain reliable estimators. Therefore, to solve the endogeneity problem in this case, a two-step estimation method (2SLS) is used to analyze the effect of fiscal decentralization and other factors on poverty. After that, it is necessary to perform endogeneity and reliability tests of the research model when using the 2SLS method.

The data used in the study were taken from the Statistical Yearbooks of 63 provinces/cities in Vietnam from 2010 to 2019. The data in the Statistical Yearbooks are self-aggregated and are compiled by the Statistical Offices of the provinces. The publication method is based on the appraisal of the General Statistics Office of Vietnam. The data on gross regional domestic product (GRDP), the province’s average number of general education classes, the average number of hospital beds, the province’s average expenditure on welfare, and the average number of internet subscribers of the province/city are published annually during the period from 2010–2019. The PAPI1 index representing the level of citizen participation at the grassroots level is taken from The Viet Nam Provincial Governance and Public Administration Performance Index (2020). However, due to the change in poverty approach, from 2016 the General Statistics Office changed the poverty measurement from income/expenditure poverty to multidimensional poverty, where multidimensional poverty is defined to include the income/expenditure of poor households and is missing three out of the ten dimensions measured in the multidimensional poverty measurement system. Therefore, the study will be divided into two research periods, including the 2010–2015 period with the poverty rate measured by expenditure/income poverty, and the 2016–2019 period with the poverty rate measured by multidimensional poverty.

4. RESULTS AND DISCUSSION

The results estimated by the 2SLS for the period from 2010–2015 with poverty rates as measured by income/expenditure poverty are shown in Table 1.

<table>
<thead>
<tr>
<th>Explanatory variable</th>
<th>2SLS</th>
<th>Standard error (SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProRe</td>
<td>-0.057***</td>
<td>0.023</td>
</tr>
<tr>
<td>LnGRDP_per</td>
<td>-3.022***</td>
<td>0.665</td>
</tr>
<tr>
<td>Edu_per</td>
<td>4.307***</td>
<td>0.245</td>
</tr>
<tr>
<td>Infra_per</td>
<td>0.006</td>
<td>0.001</td>
</tr>
<tr>
<td>Wel_Per</td>
<td>-0.002*</td>
<td>0.003</td>
</tr>
<tr>
<td>PAPI1</td>
<td>-0.001</td>
<td>0.003</td>
</tr>
<tr>
<td>cons</td>
<td>-2.632*</td>
<td>3.195</td>
</tr>
</tbody>
</table>

Tests of endogeneity
Ho: variables are exogenous
Durbin (score) $\chi^2(1) = 2.77462$ (p = 0.0958)
Wu–Hausman $F(1.294) = 2.72617$ (p = 0.0998)

Testing of instrumental variables ProRe:
R-sq. = 0.477    Adjusted R-sq. = 4664
Partial R-sq. = 0.4276
F (1.294) = 220.399  Prob. = 0.0000

Note: *** p < 0.01; *p < 0.1.

The estimated results show that fiscal decentralization at the provincial level has important implications for poverty reduction in income/expenditure. Every 1% change in the ratio of locally sourced revenue to total local revenue has a poverty reduction effect of about 0.057%. The average GDP growth of the locality and the average number of high school classes both had a great impact on poverty reduction in the locality in the period from 2010–2015. The estimated results show that economic growth has a great impact on poverty; 1% growth respectively can
reduce the poverty rate by three percentage points. Meanwhile, the education factor has a positive impact on the poverty rate. With the population increasing rapidly in most provinces, the average number of high school classes tended to decrease during the study period, which led to a positive impact on the poverty rate of the province. Another interesting sign is that social welfare expenditure of the province also plays a role in poverty reduction, although the magnitude of the impact is minimal among other factors. In addition, the estimated results show that infrastructure and PAPI are not significant for the province’s poverty reduction goal.

The results estimated by the 2SLS for the 2016–2019 period with poverty rates as measured by multidimensional poverty are shown in Table 2.

### Table 2. Impact of fiscal decentralization on poverty reduction in the period from 2016–2019.

<table>
<thead>
<tr>
<th>Explanatory variable</th>
<th>2SLS</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProRe</td>
<td>-0.002</td>
<td>0.018</td>
</tr>
<tr>
<td>LnGRDP_per</td>
<td>-3.564***</td>
<td>0.872</td>
</tr>
<tr>
<td>Edu_per</td>
<td>7.276***</td>
<td>0.812</td>
</tr>
<tr>
<td>Infra_per</td>
<td>-0.000</td>
<td>0.001</td>
</tr>
<tr>
<td>Wel_Per</td>
<td>-0.003***</td>
<td>0.001</td>
</tr>
<tr>
<td>PAPI1</td>
<td>-0.609</td>
<td>0.066</td>
</tr>
<tr>
<td>-cons</td>
<td>-14.176***</td>
<td>5.322</td>
</tr>
</tbody>
</table>

Tests of endogeneity
Ho: variables are exogenous
Durbin (score) chi2(1) = 0.056363 (p = 0.0812)
Wu–Hausman F(1,294) = 2.72617 (p = 0.08155)

Testing of instrumental variables ProRe:
R-sq. = 0.8580  Adjusted R-sq. = 0.8548
Partial R-sq. = 0.8208
F (1,242) = 1108.77  Prob. = 0.0000

Note: *** p < 0.01.

The estimated results for the period from 2016–2019 show that there is a difference compared to the 2010–2015 period. The provincial fiscal decentralization in the earlier period was significant for income poverty reduction, but in the later period it was not significant for multidimensional poverty reduction. Similar to the previous period, the province’s economic growth, education and social welfare expenditures are all significant for the multidimensional poverty reduction goal. The role of provincial economic growth in poverty reduction in the 2016–2019 period is even greater than in the previous period. Each percentage point of average GRDP growth will have the effect of reducing about 3.5 percentage points of multidimensional poverty (about three percentage points in the 2010–2015 period). The impact of local social welfare expenditures also contributes to multidimensional poverty reduction. With every 1% increase in the average value of social welfare spending, it can encourage multidimensional poverty reduction by about 0.3% (in the previous period it was about 0.2%). In addition, there is still no reliable link between improving local infrastructure and perfecting institutions that have an impact on the province's multidimensional poverty reduction goal.

Thus, through the estimation results of the two phases, some of the highlights are as follows:

1. Provincial-level fiscal decentralization (expressed as the ratio of local revenue to total local revenue) has a positive impact on income/expenditure poverty reduction in the period from 2010–2015, but there is no evidence for the impact on the multidimensional poverty reduction target in the period from 2016–2019. This shows that fiscal decentralization can have a positive effect on household income and may not necessarily have a positive effect on improving the quality of life of households in terms of other dimensions such as education or health.

2. Local economic growth remains a major contributor to poverty reduction in both study periods. GRDP had an even stronger poverty reduction effect during 2016–2019 when poverty was measured using a
multidimensional scale. In addition, factors of education and local social welfare also had an impact on poverty reduction. Provincial social welfare expenditures tended to increase, which had a more positive and stronger impact on multidimensional poverty reduction than income poverty reduction.

(3) Infrastructure and grassroots participation were not significant for poverty reduction in both the 2010–2015 and 2016–2019 periods.

To summarize, even if local governments are able to strengthen fiscal decentralization at the grassroots level, it is still a challenge to invest in developing all aspects of people's lives in a comprehensive way. The provinces have implemented direct poverty reduction programs quite effectively, which directly affect the income of poor households. With budget autonomy still limited, the uniform deployment and expansion of health, education, housing, information, employment, water, and sanitation services to support poor households has not yet achieved remarkable results in the short period of time from 2016 to 2019.

5. CONCLUSION

This study focuses on the impact of fiscal decentralization on local poverty reduction goals for the period from 2010–2019 in Vietnam. Due to the change in the meaning and method of measuring poverty, the study was conducted in two phases, from 2010–2015 and from 2016–2019, respectively, with poverty indicators measured by the income/expenditure poverty line and the multidimensional poverty line. The estimated results obtained for the two periods show that fiscal decentralization had an impact on income/expenditure poverty reduction in the 2010–2015 period but not on multidimensional poverty reduction in the 2016–2019 period. Economic growth, education and local welfare spending all had an impact on poverty reduction in both stages. The impact of growth is relatively large on poverty reduction, while the impact of local welfare expenditure is quite small. Improvements in infrastructure through information networks and increased participation of the people at the grassroots level had absolutely no influence on poverty reduction in both the 2010–2015 and 2016–2019 periods.

The above results show that to achieve effective multidimensional poverty reduction, we need more comprehensive efforts to maintain achievements in the future. Poverty reduction policies based on direct income support have been effective, but in the new context, poverty reduction policies need to pay attention to other aspects of poor people's lives, such as healthcare, education, the contribution of the people at the grassroots level, and improving infrastructure.

The results of this study open up a number of issues that need to be studied further. If the level of fiscal decentralization is increasing, has it been effective in improving the lives of the poor? Is the budget allocation structure for socioeconomic development goals at the provincial level appropriate and is the implementation process transparent and effective? In addition, there should be more research on the rational structure of local budget allocation and how to implement transparent and effective poverty reduction projects to have a more positive impact on multidimensional poverty reduction in the future.

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