

Impact of Subsidy Schemes on the Economic Well-Being of Households in Vietnam

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Abstract

This paper uses the Propensity Score Matching method (PSM) to determine the criteria of eligibility for production and income subsidies and the Difference-in-Difference method (DID) to evaluate the impact of these policies on households' economic well-being in Vietnam. The empirical results indicate that though these policies have not contributed to a clear economic well-being improvement of the participating households, their impacts tend to move in a positive direction. It should be noted that though these policies do not make the income/expenditure of the participating households increase, they help increase the income component from agricultural production significantly, especially for the group receiving production subsidies, and at the same time increase spending on durable goods and health care services in comparison with non-participating households.

Keywords: Difference-in-difference (DID); Propensity Score Matching (PSM); income subsidy; production subsidy; households' economic well-being.

1. Introduction

During the last few decades, Vietnam has achieved enormous economic and social success. The poverty rate has fallen sharply from 58.1% in 1993 to just 7.2% in 2015. However, the reality is that the number of households with incomes close to the poverty line is very high; the rate of households becoming poor again is high also; and the gap between the rich and the poor between regions and among population groups has not been improved. This fact raises a question for policy-makers about how to support the poor (with either income subsidy or production subsidy) to achieve sustainable poverty reduction. Economists have also tried to give an answer to this question, but unfortunately they have not found a common ground. For example, Chow (2006), Mendola (2006), and Oi and Haas (2008) argue that a production subsidy for the poor will help them improve their lives and escape from poverty more sustainably than income subsidy alone. This is because after having access to and mastering materials for production, the poor will proactively find a way out of poverty. Meanwhile, Phan Thi Nu (2010), Kumari (2013) and Tran Thi Thanh Tu et al. (2015) point out that the practical effect of these types of subsidy is not always clear.

This study was conducted to assess the effectiveness of poverty reduction policies through two types of subsidy - income subsidy and production subsidy - for the poor, thereby effectively adjusting the subsidy policies to the right beneficiaries. The study uses data extracted from the VHLSS (Vietnam Household Living Standards Survey) along with the assessments made for the 2010-2012 and 2010-2014

periods in order to find short-term and medium-term effects of these types of subsidy. The results of these subsidy policies are assessed by comparing the change in economic well-being indicators (income/expenditure) of the participating households with the non-participating ones.

The rest of the paper is structured into four main sections, in which Section 2 reviews the related studies, Section 3 identifies the theoretical model, Section 4 presents the empirical results, and Section 5 concludes and gives some policy recommendations.

2. Literature review

Assessing the impact of poverty reduction policies, Elkins et al. (2015) conducted a cross-study on the research group of 51 developing countries and a control group of 62 countries in the period of 1999-2008 using the PSM method. The results of the study indicate that the development of an appropriate poverty reduction policy system is extremely important and has a decisive impact on the outcome of poverty reduction.

Choosing an appropriate policy among various poverty reduction policies is really difficult for any government. Chow (2006) believes that the most effective solution to poverty in rural areas in China is to support agricultural land. In another study on China, Oi and Haas (2008) argue that subsidies for education in the form of tuition reduction and exemption are effective poverty reduction measures. Using the PSM method, Mendola (2006) confirms the positive impact of agricultural technology adoption on poverty reduction in rural Bangladesh. However, for farmers without arable land, this solution only helps them reduce poverty but not escape

poverty. Nyangena and Maurice (2014) investigate the impact of package adoption of inorganic fertilizers and improved maize seed varieties on yield among smallholder households in Kenya. They use the quasi-experimental DID approach combined with the PSM method to control for both the time invariant and unobservable household heterogeneity. They find that inorganic fertilizers and improved maize varieties significantly increase maize yields when adopted as a package, rather than as individual elements. Venetoklis (2004) evaluates direct wage subsidy programs to Finnish SMEs using the PSM and DID methods. The results indicate that the effects of wage subsidies are non-sustainably positive even on a short term basis. Kumari (2013) argues that poverty is a socio-economic phenomenon which is naturally complicated, so it is not enough to see it merely within the economic aspect. A poverty reduction policy will be effective if it is viewed from a macro perspective and focuses on health care, education and daily living conditions such as housing, clean water, and so on.

In Vietnam, studies on poverty reduction have generally provided positive evidence for the poverty reduction purpose, but have come to quite different conclusions about the selection and prioritization of groups of policy solutions. Nguyen Ngoc Son (2012) states that the three most effective poverty reduction and life quality improvement solutions for low-income people in Vietnam are reduction and/or exemption from medical examination and treatment costs, tuition fees and provision of preferential credits. Vuong Quoc Duy (2012) examines the impact of credit support on the living standards of households using the PSM method.

The results of this study suggest that this policy makes low-income households spend more on health and education, thus benefiting them in the long run. However, Phan Thi Nu (2010), when assessing the impact of credit support for the poor in rural areas in Vietnam by the DID method, finds that credit support increases the expenditure of poor households but does not increase their income. The best way to escape poverty sustainably is to invest in education. Tran Thi Thanh Tu et al. (2015) also argue that in the short term, formal credit access has no impact on improving living standards except for education. Providing preferential loans is not sufficient for poverty reduction and hunger alleviation. This kind of financial support is only effective when poor households are fully advised on how to use the funds. Ho Dinh Bao (2016) reviewed the impact of the income subsidy and production subsidy on the economic well-being of poor households using a combination of the PSM and DID methods with the VHLSS data for 2012 and 2014. The study concludes that there is an increase in both income and expenditure for the group receiving an income subsidy; meanwhile the group receiving a production subsidy shows no change in their income. The question is, can we see a sustainable impact of the subsidies, especially the production subsidy, on economic well-being of the poor if they are considered for such a short period of time?

In short, the impacts of each type of subsidy for the poor have been viewed differently. This fact requires that studies be conducted with longer data series and with appropriate methods in order to better assess the impact of subsidy programs.

3. Theoretical model

The objective of the policy impact assessment is to examine the change in welfare status of the beneficiaries before and after policy participation. In general, evaluations are usually performed on the same target group. However, in reality, even without policies, the welfare status of the target group may still change in the direction of the policy objective, i.e., the change may occur but not be due to the policy. Therefore, the policy impact assessment should follow a basic principle that compares the “well-being status of the research group” to the “well-being status of the control group.” The specification of the “control group” should be conducted as carefully as possible and the specified control group must satisfy the following two criteria: (i) not involved in the policy and not remotely affected by the policy; and (ii) as similar to the participating group as possible.

This study uses the PSM method to determine the criteria of eligibility for subsidy programs and the DID method to assess the impact of these programs on the economic well-being of poor households.

3.1. Determining the criteria of eligibility for subsidy programs using the PSM method

The nature of the PSM approach is to construct a “control group” using statistical methods. Based on the observed characteristics of the participating group and the non-participating group (the control group), we constructed an index, also known as a propensity score.

This method is constructed based on the following two key assumptions. First, the assumption of *conditional independence* implies that, after controlling the observed factors, the difference in policy impact on the participating

group and the control group does not depend on the policy allocation; Second, *there is a region of common support* (or *overlap condition*) that is the area where there are propensity scores of both the treated group and the control group; thus ensuring to find observations in the control group which have common characteristics to those in the participating group. Observations out of this region will be excluded.

To determine the probability (propensity score) of each group, we constructed a regression model with a binary dependent variable and explanatory variables as observable characteristics of the group. Regression results are used to define the region of common support and to allocate observations into blocks while ensuring that the observable characteristics are not (quite) different between the two groups in each block.

3.2. Assessing policy impact by the DID method

This method evaluates the impact of subsidy programs by comparing changes in the economic well-being status before and after the policy between treated group and control group.

The difference in well-being status is calculated by

$$D = E[(Y_i - Y_i^0) | T = 1] - E[(Y_i - Y_i^0) | T = 0]$$

Of which, T is a dummy variable that accepts value 1 if the object participates in the subsidy program and value 0 if the object does not receive a subsidy, Y_i is the income (or well-being) of object i . $E[(Y_i - Y_i^0) | T = 1]$ measures the average level of impact of the subsidy program on the participating households' well-being in comparison to their well-being status before

Table 1: Illustration of the DID method

	Year = 0	Year = 1
$T = 0$	$\hat{Y} = \beta_0$	$\hat{Y} = \beta_0 + \beta_2$
$T = 1$	$\hat{Y} = \beta_0 + \beta_1$	$\hat{Y} = \beta_0 + \beta_1 + \beta_2 + \beta_3$
$\Delta\hat{Y}$	β_1	$\beta_1 + \beta_3$
	Double difference value	$DID = \beta_3$

participation. The difference in well-being of the participating group before and after the policy is called the first difference. Similarly, $E[(Y_i - Y_i^0)|T = 0]$ measures the average level of change in income (or well-being) of non-participating households within the period from the time of policy application up to the time of study. The difference in the degree of change in well-being between the two groups is called the double difference (or difference-in-difference).

3.3. Estimation procedures

This study employs the PSM method and the DID method at the same time in order to identify the control group based on propensity scores that help overcome the common situation where it is unable to control the characteristics of both groups before calculating the DID index.

First of all, we use a Probit or a Logit model to estimate propensity scores:

$$Pscore = P(C_i = 1) = \alpha_0 + \sum_{\alpha_j} X_{ji} + u_i \quad (1)$$

Where C_i is a binary variable, $C_i = 1$ if the household participates in the subsidy program; X_{ji} is the household's characteristics.

Then, we identify the region of common support and exclude the observations that lie out of this region. At the same time, we allocate the eligible observations into blocks based on the propensity scores ensuring that the average

value of each variable controlling the characteristics of the participants balances with that of the comparable group in each block.

Finally, we use the results of the following regression model to assess the subsidy impact by the DID method:

$$Y_i = \beta_0 + \beta_1 T_i + \beta_2 Year + \beta_3 (T \times Year) + \varepsilon_i \quad (2)$$

Of which, $Year$ is the time variable before and after policy participation. The coefficient of the interactive variable T and $Year$ is the DID value which describes the subsidy impact. Table 1 below presents the way to calculate the DID value.

4. Empirical results

This study evaluates the impacts of production and income subsidy programs carried out in 2010 on the well-being of participating households in 2012 and 2014, i.e. two and four years after receiving the support. The following calculation and analysis are based on the VHLSS (Vietnam Household Living Standards Survey) data set in 2010, 2012, and 2014.

4.1. Statistical description of data

Table 2 illustrates the division of 11 particular subsidy policies in 2010 into two main groups and the percentage of households involved in each policy. It is evident that the *Reduction of Exemption from costs of medical checks/treat-*

Table 2: Rates of participation in subsidy schemes in 2010 (%)

	Subsidy schemes	Participation rate (%)
Production subsidies	Vocational training for the poor and low-income earners	0.10
	Providing productive land for poor ethnic minority households	0.07
	Incentive to agriculture, forestry and fishery	8.04
	Subsidized petroleum/kerosene for fishing boat(s)/vessel(s)	0.11
	Preferential credit for the poor	11.98
	Support in machinery, production inputs (fertilizer, animal breeds, seedlings, ...)	8.71
Income subsidies	Support in purchasing health insurance card	11.02
	Reduction of/Exemption from costs of medical checks/treatment for the poor	13.30
	Reduction of/Exemption from tuition fees for the poor	5.28
	Support in housing and residential land for poor households	1.26
	Food aid	5.17

Source: VHLSS 2010

ment for the poor saw the highest participation rate (13.30%), followed by the *Preferential credit for the poor* and *Support in purchasing health insurance card* with rates of 11.98% and 11.02%, respectively. On the contrary, the policy with the lowest number of benefitted house-

holds was *Providing productive land for poor ethnic minority households*, which accounted for a mere 0.07% of total households. Overall, there were 2017 households receiving assistance for production means and 1628 households receiving an income subsidy out of a total

Table 3: Characteristics of subsidy receiving households in 2010

Criteria	Households receiving production subsidy	Households receiving income subsidy
Average household size (number of people)	4.347	4.171
Average monthly income per person (thousand VND)	869.615	645.141
Average area of arable land (m ²)	9445.781	9693.789
Average age of household heads (years)	45.162	47.071
Average years of schooling of household heads (years)	6.319	4.783
Average dependency ratio (%)	32.60	41.29
Percentage of male-headed households (%)	84.18	76.23
Percentage of married heads of households (%)	98.31	97.36
Percentage of household heads working away (%)	1.64	0.80
Percentage of households with members working away (%)	10.31	8.91
Percentage of rural households (%)	89.14	90.36
Percentage of ethnic minority households (%)	41.99	50.06

Source: VHLSS 2010

of 9402 households surveyed in 2010.

The data calculated in Table 3 show that households provided with production means assistance had a lower *average area of arable land* and a lower *average dependency ratio* as well as a lower *average age of household heads* while the *average income* and *education level* of the heads of these households, despite being rather low, were still considerably higher than that of households receiving income subsidies. The *percentage of male-headed households* and the *proportion of migrant workers (heads/members)* in households getting aid for production means were also higher compared to the income-subsidized group. These two groups, however, had relatively similar proportions of *rural households* and *ethnic minority households* (with just slightly higher figures for the group receiving income aid). These characteristics indicate the rational directions of subsidy policies implemented in 2010 in Vietnam.

4.2. Empirical results

To assess the impacts of these policies on the assisted households in the years 2012 and 2014, we merge the 2010 dataset with each of the data sets in 2012 and 2014, thus obtaining two respective sets of balanced panel data including 4234 observations for the analysis in the two-year period from 2010 to 2012 and 2041 observations for the period from 2010 to 2014.

First of all, we used the PSM method to identify control groups with comparable characteristics to participating households in the subsidy schemes. Table 4 presents the results from the Probit models estimating the probability of households participating in subsidy programs with independent variables being characteris-

tics of households and household heads (The common support condition is imposed and the balancing property of the propensity score is set and satisfied in all regressions.) These results reveal that signs of the all estimated coefficients seemed to be consistent with the reality as well as the households' characteristics illustrated in Table 3 above and showed little difference between the two sets of data in the two periods.

Particularly, the *age* variable of household heads invariably tended to have a negative impact on the likelihood of participation in both subsidy programs but this effect was more evident in the production subsidy programs. This is because people's potential and ability to work will decline with age, so the older the household heads become, the less likely they will receive production support. Higher *income per person* also reduced the probability of receiving production subsidies although the magnitude of this impact was relatively small.

Meanwhile, both *years of schooling* and *highest qualification of household heads* had significant negative relationships with the probability of receiving income subsidies but changed in the same direction as the likelihood of receiving production subsidies, which indicates that the latter form of subsidy focused on the group with better educational backgrounds due to its potential to bring greater efficiency. Households with *unmarried heads* or with *high dependency ratios* had a markedly higher probability of receiving income subsidy than other households, while the positive effects of *household size* and the dummy variable *Household members working away from home* were only statistically significant for the likelihood

Table 4: Results from the Probit models estimating the probability of participating in subsidy policy groups in 2010 with two sets of data

Variables	2010 – 2012						2010 – 2014					
	Production subsidy			Income subsidy			Production subsidy			Income subsidy		
	Coefficients	SE	Z-stats	Coefficients	SE	Z-stats	Coefficients	SE	Z-stats	Coefficients	SE	Z-stats
Characteristics of household heads												
Gender	0.091	0.062	1.45	-0.027	0.065	-0.42	0.137	0.090	1.52	-0.115	0.088	-1.30
Age	-0.005***	0.002	-2.75				-0.006**	0.003	-2.18	-0.005**	0.003	-1.96
Years of schooling				-0.079***	0.008	-10.53	0.016	0.011	1.42	-0.065***	0.011	-5.87
Highest qualification	0.033*	0.019	1.73	-0.014	0.020	-0.71	0.021	0.030	0.70	-0.052*	0.029	-1.79
Marital status	-0.132	0.163	-0.81	-0.542***	0.151	-3.59	-0.162	0.225	-0.72	-0.565***	0.198	-2.85
Household heads working away	0.339	0.239	1.38	-0.221	0.316	-0.70	0.150	0.362	0.42	0.099	0.425	0.23
Characteristics of households												
Household size	0.029*	0.016	1.84	0.018	0.016	1.14	0.037	0.024	1.56			
Dependency ratio				0.473	0.093	5.11				0.559***	0.137	4.08
Total area of land (m ²)	7.47e-07	2.12e-06	0.35	-2.42e-06	2.31e-06	-1.05	-1.61e-06	3.18e-06	-0.51	1.17e-06	3.27e-06	0.36
Household members working away				0.086	0.085	1.01	0.303***	0.107	2.84	0.072	0.118	0.61
Urban or Rural household	-0.491***	0.068	-7.22	-0.495***	0.073	-6.80	-0.589***	0.101	-5.83	-0.483***	0.102	-4.75
Income per person in 2010	-0.0003***	0.00003	-9.24				-0.0003***	0.00005	-6.33			
Ethnicity	-0.776***	0.058	-13.30	-1.110***	0.060	-18.52	-0.818***	0.087	-9.41	-0.987***	0.087	-11.35
Constant	0.377**	0.186	2.02	0.819***	0.167	4.89	0.328	0.271	1.21	1.080***	0.248	4.35

Notes:

Gender is a dummy variable that is coded as 1 for male heads of households and 0 for females;

Marital status is a dummy variable that is coded as 1 for married heads of households and 0 for unmarried;

Household heads working away and household members working away are dummy variables that are coded as 1 if Yes and 0 if No;

Urban or Rural household is a dummy variable that is coded as 1 for urban households and 0 for rural households;

Ethnicity is a dummy variable that is coded as 1 if ethnicity of household head is Kinh and 0 otherwise;

Highest qualification is coded as 0, 1, 2, 3, and 4 for no qualification, primary school, lower secondary school, higher secondary school, and higher qualification, respectively

*, **, *** indicate statistical significance at 10%, 5%, 1% levels, respectively.

Table 5: Impacts of subsidy schemes in 2010 on the well-being of participating households in 2012 and 2014

Criteria of well-being	2012		2014	
	Production subsidy	Income subsidy	Production subsidy	Income subsidy
Revenues (thousand VND)				
Total annual income	-5914.693*** (2065.151)	-6500.895*** (1785.944)	-3560.718 (3182.112)	-7716.713** (3142.263)
Revenues from salaries/ wages	898.4123 (1297.648)	346.2062 (1135.293)	3313.32 (2209.442)	-182.5199 (1745.259)
Revenues from agricultural production activities	2294.858*** (741.9126)	1728.875** (830.4355)	3725.47*** (1154.058)	2754.857** (1176.489)
Revenues from non-agricultural production activities	31.84937 (761.12)	263.3064 (756.9382)	248.311 (1273.664)	421.4418 (1088.78)
Expenditures (thousand VND)				
Total expenditure	-1571.647* (858.3898)	-1559.677** (708.649)	380.5331 (1208.574)	-319.5888 (1115.119)
Education expenditures	-422.73*** (161.5863)	-41.6578 (135.8687)	-538.8295** (253.2859)	-267.1212 (224.4205)
Healthcare expenditures	60.25179 (105.5601)	-146.5999 (132.2284)	319.6057 (201.9964)	251.025 (182.6435)
Food and drink expenditures	-66.57256 (45.29706)	0.655940 (57.761)	-71.02101 (76.31632)	-112.5332 (89.71471)
Expenditures on durables	59.90632 (210.1624)	505.3697** (216.6465)	912.0991** (359.6011)	1144.598*** (377.8775)
Recurrent expenditures on housing, electricity, water, and daily-life waste	-273.4365*** (81.41568)	-379.368*** (74.29173)	-211.2146 (144.2776)	-534.7581*** (153.9764)
Investment in production and business	-2051.708* (1158.395)	654.5942 (1185.989)	-1993.063 (2183.668)	-38.49895 (1939.079)

Notes: Bootstrapped standard errors in parentheses;

*, **, *** indicate statistical significance at 10%, 5%, 1% levels, respectively.

of households receiving production subsidies. Moreover, *rural* and *ethnic minority households* were very much more likely to receive both types of subsidy than the remaining groups since their coefficients were all negative, highly significant and had the highest absolute value of all estimated coefficients in the model.

From these estimated results, we proceed to determining the region of common support and remove the observations that lie beyond this area. The DID method is then applied to analyze the impacts of the subsidy schemes on the well-being of participating households. The results are presented in Table 5.

It can be seen that participating in both types of assistance programs in 2010 has not shown any significant positive impact on improving the *total income* of households involved in 2012 and 2014. Specifically, in 2012, the increases in total income of households receiving income subsidies and production subsidies were approximately 6.5 million VND and 5.9 million VND lower than the corresponding increases of households that did not take part in any program, respectively. Yet, the situation seemed to make progress in the year 2014 when these negative influences were less significant for the income-subsidized households, and es-

pecially, were no longer statistically significant for those receiving assistance in the form of production means, which suggests that these policies might have certain effectiveness lags in enhancing households' welfare.

Nevertheless, as can be seen, apparently the *revenues from agricultural production activities* of all households receiving subsidies improved substantially right from 2012 with highly significant estimated coefficients. The income subsidy programs resulted in dramatic increases in households' income from agricultural production activities, which were 1.7 million VND higher than those that did not receive support in 2012 and climbed to 2.8 million VND in the next two years. The positive impacts of production subsidies on income from agricultural production were even more impressive with greater statistical significance (1%) with the difference between the treatment and control group reaching 2.3 million VND in 2012 and rising to 3.7 million VND in 2014, which reveals to some extent the effectiveness and proper orientation of these policies. Besides, these two kinds of subsidy schemes also tended to have positive impacts on the *income from non-agricultural production activities* of assisted households and raised the level of influence over time, with the direct income subsidies having larger effects, though all the relating coefficients were not statistically significant. Furthermore, this provision of assistance seems to have no evident impact on the wages or salaries of the participating households.

The increase in *total expenditure* of aided households also tended to be nearly 1.6 million VND lower than that of the control group in

2012 for both forms of subsidy policy. Nonetheless, in 2014, the difference decreased and was no longer statistically significant for the households provided with income subsidy, whereas the support relating to production means proved its positive impact on the households' total expenditure with the relative gain (the difference in differences of the changes in total expenditure) of almost 381,000 VND although this effect was not statistically significant.

In the structure of expenditure, compared to non-subsidized groups, the aided households tended to spend more on *healthcare services* but the most marked increase was seen in *expenditures on durables*, indicating that they seemed to be able to pay more attention to improve their health as well as their quality of life. Specifically, the changes in spending on durable goods of income-subsidized households were approximately 500,000 VND and 1.1 million VND higher than that of unsubsidized ones two and four years after benefitting from the policy, respectively, with a very high statistical significance (1%), while the figures for households receiving production subsidies were 60,000 and 912,000 VND, respectively. On the contrary, however, the increases in *spending on education and housing, electricity, water, and daily-life waste* of supported households were significantly lower, partly because the aid itself had helped them minimize these costs. Additionally, the increase in *food and drink expenditures and investment in production and business activities* of the households receiving production subsidies was always lower than that of the non-subsidized ones, whereas the figures for households provided with direct in-

come subsidy were only higher than that of the unsupported group in 2012 and then became lower in the subsequent two years, somewhat pointing out the unsustainable short-term impacts of this latter form of subsidy, although the estimated coefficients involved were not statistically significant.

In summary, the empirical research findings indicate that even though these subsidy schemes could not significantly improve the welfare of poor households during the period under study, the impacts of these policies all tended to progress over time. One noteworthy fact highlighted by the figures is that although the aided households could not increase their total income or total expenditure, they boosted considerably their income compositions from both agricultural and non-agricultural production activities while spending more on durable goods and medical services thanks to these subsidy policies.

5. Conclusion

This study was conducted to specify criteria of eligibility for income subsidy and production subsidy and to estimate the impact of these programs on the economic well-being of poor households in Viet Nam.

The results from the PSM model show that the variables such as age and educational levels of household heads and the dummy variables such as region and ethnics decide the possibility for participating in both income and production subsidy programs. In addition, the other variables that determine the possibility for participating in the production subsidy program are household size, average income and the dummy variable of households with the head or members working far away from home, and

those variables determining the possibility for participating in the income subsidy program are the dependency ratio and marital status of the household head.

The results from the DID model show that the participation in the subsidy programs in 2010 has not proved to have a positive impact on the *total income* of households four years after that, but has increased their income from agricultural production significantly and over time, especially for the households participating in the production subsidy program. The results also indicate the sign of improvement in the income from non-agricultural production for both household groups. This shows that there is a lag in the impact of these programs on the ability to improve the well-being of the households. At the same time, the programs have not shown positive effect on the *total expenditure* of the recipients. Regarding expenditure components, the households receiving subsidies tend to increase their spending on durable goods and health services, meanwhile reducing spending on education and living expenses in comparison to non-assisted households. For the households receiving income subsidy in particular, the amount spent on foodstuffs and production and business shows a sign of improvement after only two years, but then falls. This suggests that the impact of this type of subsidy seems unsustainable.

The above empirical results indicate that a production subsidy is probably more effective than an income subsidy in terms of the well-being improvement for the poor. This quite coincides with the results of many international studies. However, the magnitude of the impact of these programs in Vietnam remains rath-

er modest. In order for these programs to be right-targeted and to have positive and sustainable impacts on recipients' economic well-being, there needs to be more elaborate and in-

depth studies with longer time series data in order to determine the right criteria for eligibility and to support the implementation, monitoring and assessment better.

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