Does the Pro-Poor Financial Package Work? Evidence from Vietnam

Phuc Van Phan, Martin O'Brien, Silvia Mendolia, and Alfredo Paloyo

University of Wollongong, Australia

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Discussed by Roberto Zelli - Sapienza University of Rome

Main goal of the paper

- Evaluation of the National (Pro-poor) Targeted Programs (NTPs) in Vietnam.
- Evaluation based on the impact of NTPs on poverty incidence AND inequality, simultaneously.
- Analysis is carried out at provincial level in an unbalanced panel over the period 2002-2010.

Importance of simultaneous evaluation I

- Poverty reduction may come at the expense of a more unequal distribution of income.
- Countries with low inequality perform substantially better in reducing poverty (Ravallion,2005; World Bank, 2005).
- Rising inequality impedes poverty reduction in the long-run because it prevents the poor from socioeconomic advancement (Ravallion, 2004).
- Additionally, inequality is harmful for growth itself since it obstructs the accumulation process of human capital of poor households (Cornia and Court, 2001).

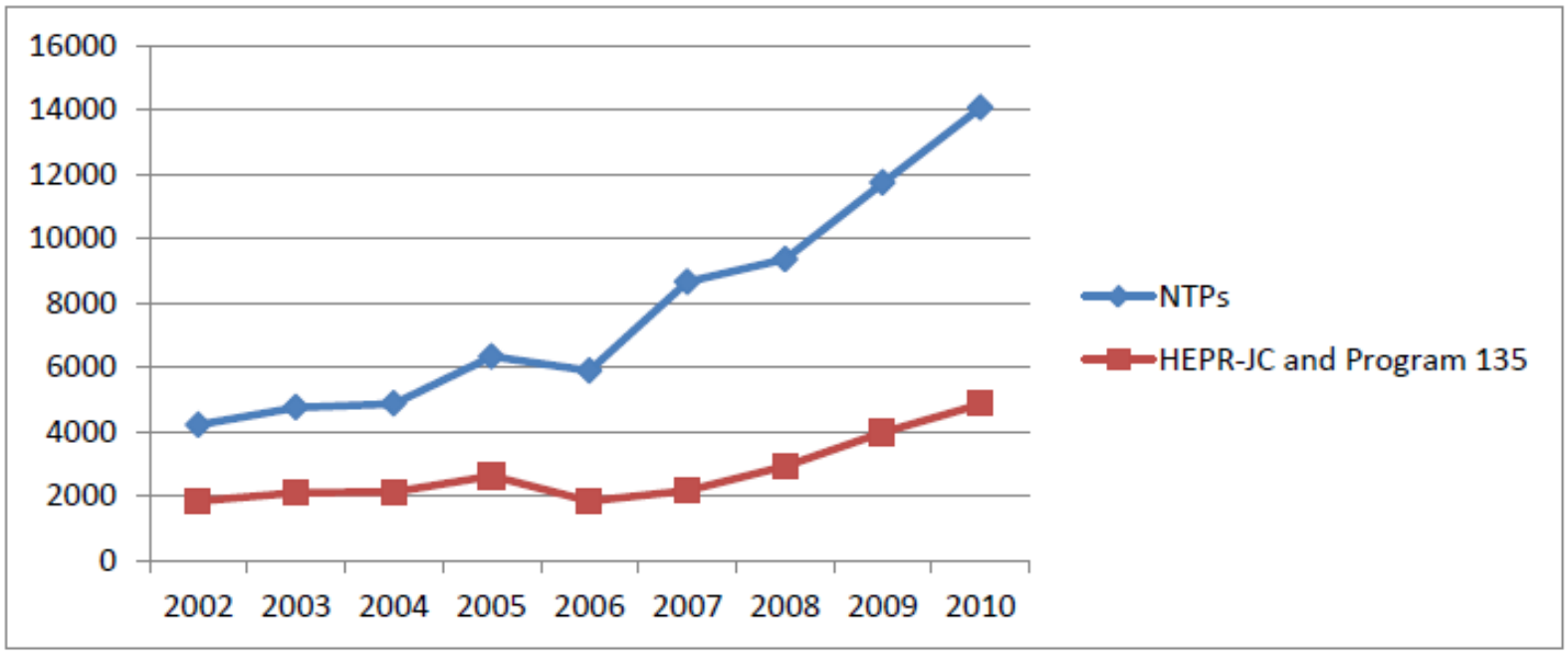
Vietnamese National Targeted Programs I

- National (Pro-poor) Targeted Programs (NTPs) are a group of strategies, policies, and financial investments delivered by the Vietnamese Government to improve multiple aspects of human wellbeing of communities and households who are most vulnerable.
- These comprise:
  1. Program 1351 (improvement of transportation capacities; provison of subsidy in-kind for targeted household; reallocation of cultivation lands for landless hhs);
  2. Hunger Eradication, Poverty Reduction, and Job Creation (HEPR-JC);
  3. Safe water and Rural sanitation;
  4. Family planning;
  5. Sociocultural enhancement;
  6. Education and Training

Vietnamese National Targeted Programs II

- The central government allocates NTPs to provinces based on preliminary information on the socioeconomic status and the amount of poor households.
- Provincial overall budget expenditure and its partition dedicated to NTPs are retrievable at Vietnamese MoF website.

Budget expenditure on the targeted programs over the 2000s (billion VND)



Data on inequality and poverty at provincial level I

- Data of expenditure per capita, poverty, and inequality are extracted from five waves of the Vietnam Household Living Standard Survey (VHLSS) 2002-2010
- VHLSS used to compute the values for provinces:
  - Gini coefficient of expenditure is used as proxy for income inequality
  - Poverty measured in terms of head count ratio (HCR) with urban and rural poverty lines constructed by GSO-WB (in 2002 only one line)

Within-province inequality in Vietnam - distribution

Year	Mean Gini	SD	Min	Max	Observations
2002	30.5	3.22	21.8	37.8	42
2004	31.8	3.98	25.0	39.6	47
2006	32.3	4.32	23.8	41.7	49
2008	32.1	4.34	25.9	46.8	47
2010	32.4	4.79	23.9	42.1	43
Whole sample	**31.8**	**4.19**	**21.8**	**46.8**	**228**

Poverty lines (000 VND) and poverty incidence in Vietnam - distribution

Year	2002	2004	2006	2008	2010
Official rural GSO-WB line	160	170	200	290	400
Official urban GSO-WB line		220	260	370	500
Official poverty rate	28.9	18.1	15.5	13.4	14.2

Source: The General Statistics Office of Vietnam (GSO) (2009, p.618) for poverty indicators 2002; (2011, p.693) for years 2004 – 2010.

Variable description

Variable	Description
p_{it}	Average HCR (%) of province *i*, being subject to the national poverty lines adjusted by the inflation rate at wave t
Gini	Gini index of consumption expenditure per capita within province *i* at wave *t*, varying in the 0-100 scale
ntp_{it}	Natural logarithm of average NTPs spending per capita in thousand VND of province *i* at time *t*
exp_{it}	Natural logarithm of average annual expenditure per capita in million VND of province i at time *t*
edu_{it}	Average school grades completed by adults aged 15 or over in province i at time *t*
ia_{it}	Ratio of production output value between industrial and agricultural sector in province *i* at time *t*.

Structure and estimation I

- Units of analysis: provinces over 5 biennial waves (2002-2010).
- The "causal effects" of NTPs are examined at both the current and one-wave lagged (t-1). Because the current value of NTPs depends upon the previous socioeconomic condition, it is as an endogenous variable.
- Additional variables (expenditure per capita, educational attainment, and industrial-agricultural output ratio) are included as a control vector. They are considered as exogenous.
- Poverty and inequality are persistent, so the regressors include the dependent variables lagged once.
- It is a dynamic panel data model whose parameters are estimated using the panel GMM Estimator (Arellano and Bond estimator): A first difference model is estimated by IV with lagged regressors used as (internal) instruments.

Determinants of within-province inequality

Dependent variable: Gini	OLS	system GMM
$Gini_{(t-1)}$	0.475***	0.338***
	(0.057)	(.114)
ntp_t	-0.003	0.857
	(0.449)	(1.21)
$ntp_{(t-1)}$	1.417***	1. 358**
	(0.498)	(.582)
exp_t	9.373***	8.92**
	(2.811)	(3.68)
$exp_{(t-1)}$	-6.626**	-3.629
	(2.989)	(4.06)
ia_t	0.024	-0.019
	(0.050)	(.062)
edu_t	-0.626**	-0.839**
	(0.266)	(.370)
2010	(.)	(.)
2008	-0.411	7.433
	(1.880)	(13.32)
2006	-0.788	8.825
	(1.103)	(11.82)
2004	0.120	10.61
	(0.657)	(10.82)
2002		11.18
		(9.89)
constant	12.257***	
	(3.509)	

Source: MoF online data of budget spending; VHLSS 2002-2010; GSO's Statistical Yearbooks (various years); Own calculation

Note: SE in the bracket; * $p<.1$, ** $p<.05$, *** $p<.01$

Adjusted R2 (OLS) = 0.462; Observations = 159

Determinants of within-province poverty incidence

Poverty HCR (p_t)	OLS	system GMM
$p_{(t-1)}$	0.666***	.392***
	(0.074)	(.110)
ntp_t	-1.667**	-.559
	(0.788)	(1.78)
$ntp_{(t-1)}$	3.506***	2.862
	(1.080)	(1.72)
exp_t	-23.533***	-26.615***
	(5.064)	(5.74)
$exp_{(t-1)}$	3.472	-3.008
	(5.297)	(6.786)
ia_t	0. 400***	.586***
	(0.092)	(.152)
edu_t	-0. 633	-2. 100***
	(0.441)	(.677)
2010	(.)	(.)
2008	0. 238	67.42***
	(3. 383)	(22.19)
2006	-1.063	63.61***
	(2.000)	(19.25)
2004	-6.085***	59.41***
	(1.342)	(17.42)
2002		56.44***
		(15.58)
constant	35.624***	
	(6.689)	

Source: MoF online data of budget spending; VHLSS 2002–2010; GSO's

Main empirical results I

- There is not adequate evidence to support the link between NTPs and poverty reduction.
- Inequality is likely to widen when NTPs increase, *ceteris paribus*.
- Pro-poor targeted policies seem ineffective or inappropriately implemented.
  - NTPs include various components that favour economic growth and are not poverty-oriented.
  - Implicit effects of NTPs on poverty trough a third factor (i.e. productivity).
  - Governance issues (benefits captured by more powerful non-poor groups, corruption, complexity of decision processes,..).
- Government should make the NTPs more transparent, that financial support goes correctly to the poor households and communities.

Remarks I

- Data limitation that may affect the results:
  - Lack of information on spending in each specific program at provincial level;
  - Only partial coverage of provinces: for around one third of the 63 provinces/municipalities NTPs are not properly recorded in detail by MoF. Missing at random or selection bias?
  - VHSS: is the sample size in each province big enough for estimation of poverty and inequality with sufficient precision? Overall sample size is 9,000 households each wave (with the exception of 2002: 29,000). How to improve the precision of the estimates (e.g. SAE)?
- Model estimation:
  - Due to data limitation, unable to disentangle the effects of the specific tasks of the programs; these programs may have divergent effects that could compensate;
  - Causal effects? More careful to talk about associations;
  - Indirect effect e.g. through education or through per capita expenditure;

Remarks II

- What about between-province inequality? E.g., the increase of NTPs could increase within-province inequality but reduce between-province inequality.
- Arellano and Bond GMM estimator is the suggested practice. OLS estimator is inconsistent. Better to replace OLS estimation with estimates obtained with other consistent estimators (like FGLS or ML(FIML) with some additional assumptions on the initial conditions)