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Economic growth, inequality, and poverty in Vietnam

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This study examines how poverty reduction has been associated with economic growth and inequality in Vietnam. It finds that although the speed of poverty reduction was lower in the 2000s than in the 1990s, economic growth was more pro-poor in the latter period. During the 1993–98 period, expenditure inequality increased and the poverty reduction during this period was mainly caused by economic growth. During the 2004–08 period, however, expenditure inequality decreased, thereby contributing to poverty reduction. The poverty incidence declined by around 5 percentage points, of which expenditure growth and redistribution contributed 2.8 and 2.2 percentage points of poverty reduction, respectively.

Introduction

There is a broad consensus that economic growth is a prerequisite for sustainable poverty reduction (for example, Ahluwalia et al. 1979; Fields 1989; Demery and Squire 1995; Ravallion and Chen 1997; Dollar and Kraay 2002; Ravallion 2004; Bourguignon 2003; Kraay 2006; Ram 2007). However, the extent to which economic growth can reduce poverty depends on income distribution. Several studies, for example, Ravallion (1997) and Fosu (2009), find supportive evidence from cross-country distributional data that higher initial income inequality is associated with a lower absolute elasticity of poverty to growth in average incomes. Inequality can be a factor detrimental to economic growth, thereby impeding poverty reduction (Alesina and Rodrik 1994; Persson and Tabellini 1994; Deininger and Squire 1998; Bourguignon 2003). It is possible that negative growth can lead to poverty reduction, while positive economic growth can be associated with poverty increase (Son and Kakwani 2008). Growth that is most effective at reducing poverty is not necessarily the same as growth that reduces poverty through decreasing inequality (Warr 2005).

In cases where economic growth does not drive poverty reduction, a strategy of pro-poor growth should be promoted. Economic growth is highly pro-poor when income growth is accompanied by inequality reduction (Klasen 2004, 2008). Regarding empirical studies, findings on the impact of economic growth on poverty reduction are mixed. For example, Wang et al. (2014) measured the pro-poor growth in rural China from 1989 to 2009. They found that during the 1989–2006 period, economic growth in rural China was weakly pro-poor since income distribution deteriorated. However, rural Chinese economic growth was more pro-poor between

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2006 and 2009. Fuwa et al. (2015) showed that the main driver of rural poverty reduction has shifted from agricultural to non-agricultural growth in the Philippines. De Silva and Sumarto (2014) found that the poor received proportionately less benefits from economic growth than the non-poor in Indonesia between 2002 and 2012. Ali et al. (2017) found different patterns of pro-poor growth between urban and rural areas in Pakistan between 2001 and 2012. Urban areas experienced pro-poor growth, while rural areas showed anti-poor growth. Using cross-country data, Son and Kakwani (2008) examined the pro-poorness of growth in 80 low and middle-income countries during the period 1984–2001 and they found that nearly half of the countries experienced pro-poor growth and the remainder experienced antipoor growth. Thus the existing studies show a wide diversity of empirical results, which calls for more empirical studies to better understand pro-poor growth, inequality, and poverty.

This study examines the relationship between economic growth, inequality, and poverty reduction in Vietnam during the period 1993–2008. We use the decomposition approach of Datt and Ravallion (1991) and Kolenikov and Shorrocks (2005) to analyse the effect of economic growth and inequality on poverty during the 1990s and the 2000s. We also employ Kakwani's (1980) method to estimate the elasticity of poverty to economic growth and inequality, and Kakwani and Pernia's (2000) method to calculate changes in the degree of 'pro-poorness' over time.

Vietnam is an interesting case study for several reasons. First, Vietnam is a country where the trickle-down hypothesis is supposed to hold for the past years. Economic reforms initiated in the late 1980s resulted in high growth with an average annual rate of per capita GDP growth of around 6 per cent during the 1990s and 2000s. Between 1993 and 1998, the proportion of the poor fell from 58 per cent to 37 per cent. The poverty incidence continued to fall to 19 per cent in 2004 and to 14 per cent in 2008. There was a difference in economic growth rates between the 1990s and the 2000s. Economic growth and poverty reduction speed were higher in the 1990s than in the 2000s. However, expenditure inequality increased during the 1990s but decreased slightly during the 2000s. It is not clear which period had economic growth that was more favourable for the poor.

Second, Vietnam showed a strong commitment to the 'growth with equity' strategy in the 2000s by launching numerous poverty reduction programs.[1] The government spent around VND 44,855 trillion (approximately US $2.8 billion at the time) on poverty alleviation during the 2006–10 period (Ministry of Labour, Invalids and Social Affairs 2010). Vietnam also received large amounts of overseas development assistance (ODA), with a disbursal of around US $38 billion up to 2012. If economic growth in the 2000s is found to be pro-poor, it might be evidence of success of the growth with equity strategy.

Third, although there are a large number of empirical studies on poverty in Vietnam (for example, World Bank 1999, 2003; Klump 2007; Nguyen and Tran 2014; Lanjouw et al. 2017), there are only a few studies on the relationship between economic growth, inequality, and poverty reduction. Glewwe and Dang (2011) showed that both poor and non-poor households benefited relatively equally from economic growth during the 1990s. Kang and Imai (2012) found that the effect of income growth on poverty was larger during the 2002–06 period if income distribution was unchanged.

Compared to previous studies of Vietnam, this paper has several different aspects. First, it analyses the poverty-growth-inequality triangle during a long period, from 1993 to 2008, using four household surveys including the Vietnam Living Standard Surveys (VLSS) in 1993 and 1998, and the Vietnam Household Living Standard Surveys (VHLSS) in 2004 and 2008.

1 For example, two important poverty reduction programs launched since 2000 are the National Targeted Program for Poverty Reduction and the Support Program for Ethnic Minorities (Program 135).

Second, this study decomposes the change in national poverty into national growth and inequality and regional growth and inequality. Specifically, the analysis is disaggregated by geographic regions, urban and rural areas, and Kinh majority and ethnic minorities. The regional composition of growth can influence the impacts that economic growth has on poverty. Economic growth in regions where the poor are concentrated will have greater effects on poverty reduction than in other regions (see for example, Thorbecke and Hong-Sang 1996; Bourguignon and Christian 1998).

Third, this study is the first attempt to measure the degree of 'pro-poorness' of the economic growth in Vietnam using both static and dynamic approaches. Findings from the study will be useful for policymakers and researchers in Vietnam in designing policies on economic growth and poverty reduction. The findings could also be relevant for other low-income countries, especially for Asian developing countries with a similar economic structure such as Indonesia, Lao and Cambodia.

This paper is structured into four sections. The second section presents the analytical framework. The third section presents the empirical findings. While the fourth section concludes and proposes several policy implications for poverty reduction.

Analytical framework

Decomposition of poverty measures

We measure poverty using the Foster, Greer, and Thorbecke (FGT) poverty indexes (Foster et al. 1984). Commonly used FGT poverty indexes include the poverty rate, the poverty gap index, and the squared poverty gap index. The poverty gap and the squared poverty gap indexes take into account not only the proportion of the poor but also the gap between the poverty line and the poor's per capita expenditure. We focus on the poverty rate and the poverty gap index. Results from the squared poverty gap index are similar to those from the poverty gap index.

The FGT poverty measures can be characterised in term of the poverty line, mean consumption, and the Lorenz curve (Kakwani 1980, 1993):

$$P = P[\mu, z, L(p)], \tag{1}$$

where μ and z are mean consumption and the poverty line, respectively. $L(p)$ is the cumulative proportion of consumption received by the cumulative proportion of people p when consumption units are arranged in ascending order of their consumption. The value of $L(p)$ and p range from 0 to 1, and the value of $L(p)$ is always less than or equal to the value of p.

We follow Kakwani (1993) in decomposing the change in a poverty measure into two components as follows:

$$dP = \frac{\partial P}{\partial \mu} d\mu + \frac{\partial P}{\partial L} dL. \tag{2}$$

That is, the change due to consumption growth when holding the distribution of consumption constant, and the change due to the change in the consumption distribution while keeping the total consumption of the society unchanged. The first component is always negative: meaning that an increase in growth always leads to a reduction in poverty. The second component can be either positive or negative. However, it is often positive; which means that an improvement in consumption distribution can help poverty reduction.

In addition, we also used the method of Datt and Ravallion (1991) to decompose the change in poverty during a period into components associated with growth, redistribution, and a residual. The growth component of a change in poverty from the date t to the date $(t + n)$ is defined as the change in poverty due to a change in the mean consumption, from μ_t at the date t to μ_{t+n} at the date $(t + n)$, while holding the Lorenz curve L constant at some reference level L_r. Meanwhile, the redistribution component is the change in poverty due to a change in the Lorenz curve, from L_t at the date t to L_{t+n} at the date $(t + n)$,

while keeping mean consumption μ at the reference level μ_r. A change in poverty between dates t and $(t + n)$ can be decomposed as follows:

$$\begin{aligned} P_{t+n} - P_t &= P(z,\mu_{t+n};L_{t+n}) - P(z,\mu_t;L_t) \\ &= \underbrace{G(t,t+n)}_{\text{Growth component}} + \underbrace{D(t,t+n)}_{\text{Redistribution component}}, \end{aligned} \quad (3)$$

Growth and inequality within groups and total poverty

Suppose that the entire population is divided into m non-overlapping groups along ethnic, geographic, demographic, socioeconomic, or other lines. Then the FGT class of poverty measures P_α can be decomposed as follows:

$$P_\alpha = \sum_{i=1}^{m} \frac{n_i}{n} P_{\alpha i} = \sum_{i=1}^{m} f_i P_{\alpha i}, \quad (4)$$

where $P_{\alpha i}$ is the additive poverty measure of the ith group, n and n_i are the total population size and the ith group population size, respectively, and f_i is the population share of ith group. Based on the static decomposition of poverty and the contribution of population subgroups to total poverty, Kakwani (1993) developed a formula to estimate the elasticity of the total or national poverty with respect to the mean consumption and inequality of population subgroups such as urban/rural areas and geographic regions. The elasticities are useful for examining how economic growth and inequality (measured by the Gini index) within various groups of the population affect national poverty.

We also employ dynamic decomposition as in Equation (3) to derive the contribution of within-group growth and inequality on total poverty during a period. Let P_{it} denote a FGT measure for group i with the population share f_i at the date t, and there are m exclusive groups in the total population. The change in poverty between the initial date t and the terminal date $(t + n)$ can be simply decomposed as follows:

$$P_{t+n} - P_t = \sum_{i=1}^{m} \left(P_{i(t+n)} f_{i(t+n)} - P_{it} f_{it} \right). \quad (5)$$

Then the percentage contribution of the ith group to reduction in total poverty during the period from the date t to the date $(t + n)$ is:

$$\pi_i = \frac{P_{i(t+n)} f_{i(t+n)} - P_{it} f_{it}}{P_{t+n} - P_t} \times 100. \quad (6)$$

For each subgroup, we further decompose the change in poverty into the growth and inequality components using Equation (3). Then we combine the decomposition and Equation (6) to calculate the percentage contribution of growth of the ith group to the change in total poverty as follows:

$$\rho_{Gi} = \frac{P_{i(t+n)} f_{i(t+n)} - P_{it} f_{it}}{P_{t+n} - P_t} \times \frac{G_i(t,t+n)}{P_{i(t+n)} - P_{it}} \times 100, \quad (7)$$

ρ_{Gi} can be interpreted as the percentage contribution of economic growth within the ith group to the change in total poverty during the period. A greater value of ρ_{Gi} means a larger contribution of the ith group growth to the change in poverty of the whole country.

Similarly, the impact of inequality components of the ith group on total poverty can be calculated as follows:

$$\rho_{Di} = \frac{P_{i(t+n)} f_{i(t+n)} - P_{it} f_{it}}{P_{t+n} - P_t} \times \frac{D_i(t,t+n)}{P_{i(t+n)} - P_{it}} \times 100. \quad (8)$$

This index can be interpreted as the percentage contributions of changes in inequality of the ith group to the change in total poverty. The index can be negative or positive, depending on the signs of the inequality component, and whether there is a poverty reduction in the ith group during the period.

Pro-poor growth

Kakwani and Pernia (2000) propose an index to measure the degree of pro-poor growth. Suppose there is an increase in per capita consumption. If the consumption distribution is kept constant, the incidence of poverty will decrease. In this case, the pro-poor index is equal to the ratio of the change in poverty under the assumption that there is no change in consumption distribution to the actual change in poverty. It can be expressed as follows[2]:

$$\phi = \frac{P_{t+n} - P_t}{G(t,t+n)} = 1 + \frac{D(t,t+n)}{G(t,t+n)}, \qquad (9)$$

where $G(t, t + n)$ is the change in poverty due to growth, and $D(t, t + n)$ is the change in poverty due to the inequality effect.

The growth component G is always negative if there is an increase in the mean consumption μ. The redistribution component D can be either negative or positive. If the redistribution component is negative, the growth results in a new consumption distribution in favour of the poor, thereby reducing poverty unequivocally. The value of ϕ will be greater than one, and such a growth is regarded as strongly pro-poor. In contrast, if the redistribution is positive, the change in consumption distribution is pro-rich. If the ϕ value lies between 0 and 1 ($0 < \phi < 1$), the poor still benefit from growth, but the outcome is arbitrary.

Based on empirical results, Kakwani and Pernia (2000) arrive at the following value judgements regarding the pro-poor growth index, ϕ: $\phi < 0$ growth is antipoor. $0 < \phi \leq 0.33$ growth is weakly pro-poor. $0.33 < \phi \leq 0.66$ growth is moderately pro-poor. $0.66 < \phi \leq 1.0$growth is pro-poor. $\phi > 1.0$ growth is highly pro-poor.

Empirical results

Poverty and inequality during 1993–2008

The study uses data from the VLSS in 1993 and 1998, and the VHLSS in 2004 and 2008. The four surveys were conducted by the General Statistics Office of Vietnam (GSO) with technical support from World Bank. The sample size of VLSS 1993, VLSS 1998, VHLSS 2004 and VHLSS 2008 is 4800, 6000, 9188, and 9189 households, respectively. The samples are representative for the national, rural and urban, and regional levels.[3] The surveys contain detailed information on household welfare including consumption expenditure.

In this paper, a household is defined as poor if its per capita consumption expenditure is below the expenditure poverty line. This poverty line is constructed by the GSO and World Bank. Basically, households on or above the poverty line have per capita expenditures that are sufficient to cover nutritional needs and basic non-food needs. The nominal expenditure poverty lines for 1993, 1998, 2004, and 2008 were 1160, 1790, 2077, and 3358 thousand VND, respectively.

During the period 1993–98, poverty declined substantially, from 58.1 to 37.4 per cent. Poverty continued to decline remarkably to 19.5 per cent in 2004 (Table 1). However, the speed of poverty reduction was slightly lower during 2004–08. In 2008, the poverty rate was 14.5 per cent. The poverty rate is very low in urban areas, so that now poverty in Vietnam is predominantly a rural problem.

Topographically, Vietnam is a very diverse country, with eight well-defined agro-ecological zones. These range from the remote and poorly endowed zones of the Northern Mountains area bordering China and the North and South Central Coast regions, through the Central Highlands, to the fertile, irrigated regions of the Red River Delta in the

2 Kakwani and Pernia (2000) used the proportional change to calculate the pro-poor growth index, but I found that the absolute value change is also suitable for calculation of this index and does not change its meaning.

3 There were also VHLSSs in 2002 and 2006. We do not use the 2006 VHLSS since it is close to the 2008 VHLSS. The 2002 VHLSS has a large sample size of 30,000 households and in our experience the quality of the 2002 VHLSS is not as good as the other VHLSSs. Thus we do not use the 2002 VHLSS.

Table 1
Poverty during 1993–2008

	Poverty rate (*H*) (%)				Poverty gap index			
	1993	1998	2004	2008	1993	1998	2004	2008
All Vietnam	58.1	37.4	19.5	14.5	0.1847	0.0954	0.0472	0.0347
Urban/rural								
Rural	66.4	45.5	25.0	18.7	0.2147	0.1179	0.0612	0.0459
Urban	24.9	9.2	3.6	3.3	0.0640	0.0174	0.0070	0.0054
Regions								
Red River Delta	61.2	29.3	12.1	8.1	0.1815	0.0624	0.0212	0.0141
Northeast	78.9	62.0	29.4	24.3	0.2707	0.1758	0.0701	0.0648
Northwest	81.0	73.4	58.6	45.7	0.2622	0.2218	0.1911	0.1367
North Central Coast	74.5	48.1	31.9	22.6	0.2468	0.1184	0.0809	0.0530
South Central Coast	47.2	34.5	19.0	13.7	0.1722	0.1017	0.0510	0.0335
Central Highlands	61.2	52.4	33.1	24.1	0.2363	0.1910	0.1065	0.0753
Southeast	40.0	12.2	5.4	3.5	0.1140	0.0299	0.0120	0.0077
Mekong River Delta	47.1	36.9	15.9	12.3	0.1382	0.0815	0.0299	0.0231
Ethnic groups								
Kinh majority	53.9	31.1	13.5	9.0	0.1602	0.0713	0.0263	0.0169
Ethnic minorities	86.4	75.2	60.7	50.3	0.3472	0.2416	0.1919	0.1512

Sources: Authors' estimates from VLSS 1993, VLSS 1998, VHLSS 2004, and VHLSS 2008.

North and the Mekong Delta in the South. Poverty declined in every region over the period 1993–98 as well as the period 2004–08, regardless of the poverty indexes used; but some regions experienced a faster decline than others. In 2008, the Northwest was the poorest region, while the Southeast was the richest.

There are 54 ethnic groups in Vietnam, of which the lowland ethnic Vietnamese, known as Kinh, are the dominant group and account for around 85 per cent of the population. The other ethnic groups are mostly located in upland areas, with poverty related to the problems of inadequate infrastructure and physical and social isolation. Poverty is much higher for ethnic minorities than for Kinh.

Table 1 also presents the estimates of the poverty gap index. The pattern of the poverty squared gap index is similar to that of the poverty gap index. Thus, we do not present the analysis using the squared gap index.

Table 2 shows that the average annual growth of per capita expenditure was around 7.5 per cent in the 1993–98 period and 4.5 per cent in the 2004–08 period. The rate of expenditure growth was different for population subgroups. Interestingly, the urban areas experienced a higher growth rate of expenditure than rural areas during 1993–98, but during 2004–08 the rural areas had substantially higher expenditure growth than the urban areas. Poor regions such as the Northwest and Central Highlands also had a very high rate of expenditure growth during the 2000s. Ethnic minorities had a slightly higher rate than Kinh.

Table 2 also presents the percentage change in the Gini index during 1993–98 and 2004–08. The Gini index increased by 5.97 per cent from 0.33 to 0.35 during the 1993–98-period. However, the 2004–08-period experienced an improvement in expenditure equality with the Gini index declining 3.8 per cent from 0.37 to 0.356. This was because disadvantaged groups such as rural and ethnic minority households had a higher expenditure growth rate than urban and Kinh households.

Growth and inequality decomposition

Responses of poverty to economic growth and inequality were estimated using the Kakwani method of static decomposition. Table 3 shows that poverty was more responsive to

Table 2
Changes in per capita expenditure and the Gini index during 1993–2008

	Percentage change in mean per capita expenditure		Percentage change in Gini index of per capita expenditure	
	Change 1993–1998 (%)	Change 2004–2008 (%)	Change 1993–1998 (%)	Change 2004–2008 (%)
All Vietnam	43.5	18.90	5.97	−3.82
Urban/rural				
Rural	33.2	26.49	−2.94	3.65
Urban	54.3	5.65	0.91	4.48
Regions				
Red River Delta	54.2	23.91	1.90	0.69
Northeast	33.2	18.40	7.79	−1.71
Northwest	15.7	33.77	−0.67	4.02
North Central Coast	52.2	28.06	16.24	0.94
South Central Coast	27.2	22.30	−2.68	−8.15
Central Highlands	18.5	36.35	−4.13	−0.85
Southeast	76.6	4.36	−1.20	4.54
Mekong River Delta	19.4	19.60	−5.96	−2.00
Ethnic groups				
Kinh majority	45.6	19.04	5.41	−4.00
Ethnic minorities	30.2	23.67	−5.00	−1.17

Sources: Authors' estimates from VLSS 1993, VLSS 1998, VHLSS 2004, and VHLSS 2008.

mean expenditure over time. The higher elasticity values imply that the speed of poverty reduction was higher than the speed of expenditure growth, provided the growth process did not lead to an increase in inequality. Most elasticities of poverty to inequality

Table 3
Elasticity of the poverty rate and poverty gap index to mean expenditure and inequality

	Elasticity to mean expenditure (%)				Elasticity to inequality (%)			
Groups	1993	1998	2004	2008	1993	1998	2004	2008
Elasticity of poverty rate (H0)								
All Vietnam	−1.09	−1.16	−1.24	−1.38	0.15	0.63	1.42	1.78
Urban/rural								
Rural	−1.23	−1.52	−1.61	−1.63	−0.05	0.32	1.01	1.37
Urban	−1.28	−1.68	−1.72	−1.82	1.06	2.85	4.54	4.47
Ethnic groups								
Kinh majority	−1.13	−1.27	−1.56	−1.73	0.23	0.84	2.03	2.52
Ethnic minorities	−0.82	−1.18	−1.20	−1.24	−0.25	−0.18	0.08	0.23
Elasticity of poverty gap index								
All Vietnam	−2.15	−2.92	−3.13	−3.17	1.42	3.13	5.73	6.37
Urban/rural								
Rural	−2.09	−2.86	−3.09	−3.08	0.88	1.81	3.56	4.44
Urban	−2.90	−4.28	−4.11	−5.14	4.24	9.97	14.49	16.05
Ethnic groups								
Kinh majority	−2.36	−3.37	−4.15	−4.33	1.67	3.88	7.70	8.76
Ethnic minorities	−1.49	−2.11	−2.16	−2.33	0.25	0.54	1.22	1.62

Sources: Authors' estimates from VLSS 1993, VLSS 1998, VHLSS 2004, and VHLSS 2008.

Table 4
Growth and inequality decomposition of poverty changes

	The period 1993–1998 (in percentage points)			The period 2004–2008 (in percentage points)		
	Poverty reduction	Growth component	Inequality component	Poverty reduction	Growth component	Inequality component
Change in poverty rate						
All Vietnam	−20.75	−23.15	2.40	−5.02	−2.79	−2.22
Urban/rural						
Rural	−20.84	−19.93	−0.91	−6.29	−6.48	0.20
Urban	−15.76	−15.59	−0.17	−0.26	−0.92	0.66
Ethnic groups						
Kinh majority	−22.72	−24.80	2.09	−4.56	−2.42	−2.14
Ethnic minorities	−11.26	−12.21	0.95	−10.32	−8.20	−2.13
Change in poverty gap index						
All Vietnam	−0.0893	−0.1039	0.0146	−0.0125	−0.0082	−0.0043
Urban/rural						
Rural	−0.0967	−0.0918	−0.0049	−0.0153	−0.0205	0.0052
Urban	−0.0466	−0.0467	0.0001	−0.0016	−0.0015	−0.0001
Ethnic groups						
Kinh majority	−0.0890	−0.1003	0.0113	−0.0094	−0.0059	−0.0036
Ethnic minorities	−0.1056	−0.1024	−0.0032	−0.0407	−0.0402	−0.0005

Sources: Authors' estimates from VLSS 1993, VLSS 1998, VHLSS 2004, and VHLSS 2008.

are negative, meaning that an improvement in income equality results in a reduction in poverty. Poverty in urban areas and in the Kinh group was very sensitive to inequality. A small improvement in expenditure distribution can lead to a large reduction in poverty.

Table 5
Subgroup contributions to change in the national poverty rate during 1993–1998 and 2004–2008 (%)

	The period 1993–1998			The period 2004–2008		
	Poverty reduction	Growth component	Inequality component	Poverty reduction	Growth component	Inequality component
All Vietnam	100	111.59	−11.59	100	55.58	44.42
Urban/rural						
Rural	85.98	82.24	3.74	99.86	102.88	−3.02
Urban	14.01	13.86	0.15	0.12	−0.43	0.55
Regions						
Red River Delta	27.50	26.32	1.18	17.30	16.22	1.08
Northeast	19.04	20.36	−1.33	12.30	9.18	3.12
Northwest	0.27	0.29	−0.02	4.93	4.66	0.28
North Central Coast	13.80	15.93	−2.13	26.30	22.16	4.14
South Central Coast	7.39	7.47	−0.07	9.34	6.06	3.28
Central Highlands	−2.42	−2.73	0.31	7.99	8.15	−0.16
Southeast	21.91	21.45	0.46	5.33	−2.96	8.29
Mekong River Delta	12.53	12.64	−0.11	16.54	16.63	−0.09
Ethnic groups						
Kinh majority	96.78	105.67	−8.89	80.51	42.72	37.78
Ethnic minorities	3.22	3.49	−0.27	19.47	15.47	4.00

Sources: Authors' estimates from VLSS 1993, VLSS 1998, VHLSS 2004, and VHLSS 2008.

Table 6
Subgroup contributions to changes in the national poverty gap index during 1993–1998 and 2004–2008 (%)

	The period 1993–1998			The period 2004–2008		
	Poverty reduction	Growth component	Inequality component	Poverty reduction	Growth component	Inequality component
All Vietnam	100	116.30	−16.30	100	65.60	34.40
Urban/rural						
Rural	90.09	85.52	4.57	97.47	130.60	−33.13
Urban	9.90	9.92	−0.02	2.51	−2.35	4.86
Regions						
Red River Delta	25.17	26.38	−1.21	12.27	15.04	−2.77
Northeast	20.09	23.94	−3.85	5.61	12.69	−7.09
Northwest	0.70	0.74	−0.04	9.67	11.75	−2.08
North Central Coast	16.94	20.74	−3.81	31.09	30.86	0.22
South Central Coast	8.54	6.48	2.06	12.27	7.78	4.49
Central Highlands	−1.71	−1.28	−0.43	11.38	14.48	−3.10
Southeast	15.29	16.36	−1.08	5.04	−2.81	7.85
Mekong River Delta	15.00	10.21	4.79	12.72	14.78	−2.06
Ethnic groups						
Kinh majority	87.43	98.57	−11.14	66.65	41.83	24.82
Ethnic minorities	12.57	12.19	0.38	33.32	32.91	0.41

Sources: Authors' estimates from VLSS 1993, VLSS 1998, VHLSS 2004, and VHLSS 2008.

The absolute value of the poverty elasticity to mean expenditure being higher for the poverty gap index indicates that the impact of expenditure growth on the severely poor is larger than its impact on the moderately poor. Table 3 also presents the poverty elasticity to inequality. Poverty became more sensitive to inequality over time, and the negative impact of inequality on the severely poor was larger than its impact on the moderately poor. Note that the poverty indexes are more elastic to expenditure inequality than to expenditure growth. This suggests the important role of reducing inequality in reducing poverty.

Table 4 shows the decomposition of poverty reduction during the 1990s and 2000s into expenditure growth and expenditure redistribution components. Expenditure growth is the main contributor to poverty reduction. Interestingly, the inequality component increased poverty in the 1990s but reduced poverty in the 2000s.

Changes in inequality within rural areas and within urban areas reduced rural and urban poverty during the 1990s but increased poverty during the 2000s. Which means that inequality between regions as well as between urban and rural areas increased during the 1990s but declined during the 2000s.

Sectoral growth and inequality

Table 5 presents the percentage contribution of growth and inequality of population subgroups to reductions in national poverty. (The population shares of subgroups are shown in Appendix A) In the 2000s, the remarkable reduction in total poverty came mainly from economic growth within the rural areas, with a contribution of 103 per cent to the reduction in the poverty incidence. This was because poverty in Vietnam is a predominantly rural problem. High income growth in the rural

Table 7
Elasticity of national poverty to mean expenditure and inequality of subgroups in 2008 (%)

	Poverty rate (%)		Poverty gap index	
	Growth Component	Inequality Component	Growth Component	Inequality Component
All Vietnam	−1.38	1.78	−3.17	6.37
Urban/rural				
Rural	−1.57	1.33	−2.96	4.27
Urban	−0.06	0.14	−0.21	0.64
Regions				
Red River Delta	−0.13	0.20	−0.32	0.64
Northeast	−0.21	0.17	−0.43	0.63
Northwest	−0.15	0.06	−0.35	0.37
North Central Coast	−0.34	0.25	−0.91	1.17
South Central Coast	−0.17	0.20	−0.16	0.31
Central Highlands	−0.17	0.17	−0.35	0.67
Southeast	−0.08	0.18	−0.23	0.73
Mekong River Delta	−0.19	0.22	−0.30	0.49
Ethnic groups				
Kinh majority	−0.70	1.02	−1.67	3.38
Ethnic minorities	−0.74	0.14	−1.43	1.00

Sources: Authors' estimates from VHLSS 2008.

areas leads to a large decline in national poverty.

Across the regions, expenditure growth in the Red River Delta made the greatest contribution to reductions in total poverty during the 1993–98 period, while the North Central Coast was the region with the highest contribution to poverty reduction during the 2004–08 period (see Table 6). Expenditure growth and inequality among ethnic minorities made very small contributions to poverty reduction during the 1993–98 period; but made much larger contributions to poverty reduction during the 2004–08 period compared with the Kinh majority.

To achieve the target of total poverty alleviation, socioeconomic policies should focus on regions that have high elasticities of total poverty with respect to growth and inequality. Table 7 presents elasticities of national poverty to economic growth and inequality changes within regions in 2008. It shows that total poverty is much more elastic to growth and inequality in rural areas than in the urban areas. Maintaining a low level of inequality within rural areas plays an important role in alleviating national poverty, especially the severity of poverty.

By regions, the incidence of national poverty is most elastic to the expenditure growth of the North Central Coast and the Northeast. Poverty is also highly elastic to inequality in the North Central Coast, the Red River Delta, and the Mekong Delta.

As for the ethnic minority groups, increasing their expenditure average is more important than reducing their expenditure inequality if the objective is to reduce the total poverty incidence. However, for Kinh, reducing their expenditure inequality is more important in alleviating national poverty.

Pro-poor index

Table 8 presents estimates of the pro-poor index within regions and groups. The pro-poor index is smaller than one during 1993–98, but larger than one during 2004–08; which means that the growth in Vietnam is pro-poor, and highly pro-poor during

Table 8
Pro-poor index for economic growth during 1993–1998 and 2004–2008

	The period 1993–1998			The period 2004–2008		
	Poverty rate (%)	Poverty gap index	Squared gap index	Poverty rate (%)	Poverty gap index	Squared gap index
All Vietnam	0.90	0.86	0.85	1.80	1.52	1.36
Urban/rural						
Rural	1.05	1.05	1.06	0.97	0.75	0.65
Urban	1.01	1.00	1.00	0.28	1.07	1.60
Regions						
Red River Delta	1.04	0.95	0.89	1.07	0.82	0.62
Northeast	0.93	0.84	0.86	1.34	0.44	0.10
Northwest	0.94	0.95	1.04	1.06	0.82	0.68
North Central Coast	0.87	0.82	0.81	1.19	1.01	0.87
South Central Coast	0.99	1.32	1.48	1.54	1.58	2.04
Central Highlands	0.89	1.34	2.19	0.98	0.79	0.66
Southeast	1.02	0.93	0.86	1.80	1.79	1.78
Mekong River Delta	0.99	1.47	1.69	0.99	0.86	0.88
Ethnic groups						
Kinh majority	0.92	0.89	0.87	1.88	1.59	1.55
Ethnic minorities	0.92	1.03	1.12	1.26	1.01	0.85

Sources: Authors' estimates from VLSS 1993, VLSS 1998, VHLSS 2004, and VHLSS 2008.

2004–08. For the whole country, the poor benefited proportionally much more than the rich during 2004–08.

Interestingly, the pro-poor index within urban and rural areas is larger than one during 1993–98, but lower than one during 2004–08, which means that within urban and rural areas the poor benefited proportionally more than the non-poor during 1993–98 but proportionally less than the non-poor during 2004–08. By region, the poor in Southeast and South Central Coast regions experienced the benefits from within-group economic growth proportionally much more than the rich during 2004–08. The economic growth of ethnic minorities was highly pro-poor but less pro-poor than the economic growth of the Kinh during 2004–08. This means that the poor Kinh benefited more from economic growth than the ethnic minority poor.

The pro-poor indexes of the poverty gap and squared gap measures are lower than the pro-poor index of the poverty rate. This implies that the poorest benefited proportionally less than the poor who were closer to the poverty line.

Conclusions

During the 1990s and 2000s, poverty declined remarkably in Vietnam. However, poverty remains very high in mountainous regions where there are large proportions of ethnic minority people. Poverty in Vietnam is found to be highly sensitive to economic growth. If income distribution is kept unchanged, poverty can decline faster than the rate of economic growth. Poverty is more responsive to inequality than to economic growth; which implies that if there is an increase in inequality, the extremely poor will be most seriously affected.

Vietnam experienced high economic growth during the 1993–98 period. Both poor and non-poor benefited from the economic growth. However, expenditure distribution deteriorated, hampering the impact

of growth on poverty reduction. Economic growth during the 2004–08 period was lower. However, both expenditure growth and inequality reduction contributed to poverty reduction during the 2004–08 period. The poverty incidence was reduced by around 5 percentage points, of which expenditure growth and expenditure redistribution accounted for 2.8 and 2.2 percentage points of poverty reduction, respectively. Compared with the 1990s, a larger number of poverty reduction programs were implemented during the 2000s. Thus the 'growth with equity' strategy that Vietnam chose to follow was successful. The pro-poor index is less than one for the period 1993–98, but larger than one for the period 2004–08. Therefore, the poor benefited proportionally more than the rich from economic growth during the 2000s.

In the coming years, the government should still follow a strategy of pro-poor growth to reduce poverty. Poverty is now more sensitive to inequality reduction than expenditure growth. There is a requirement for more pro-poor growth for ethnic minorities and people in mountainous regions. Pro-poor policies can be both direct and indirect. Direct policies can be the provision of social safety nets such as health insurance, education, and cash transfers, while indirect policies such as vocational training and microcredit can aim at increasing off-farm employment and raising agricultural pro-ductivity.

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Appendix

Population shares by groups (%)				
Groups	1993	1998	2004	2008
All Vietnam	100	100	100	100
Urban/rural				
Rural	80.09	77.57	74.2	72.4
Urban	19.91	22.43	25.8	27.6
Regions				
Red River Delta	20.24	22.85	21.8	21.9
Northeast	14.30	11.81	11.4	11.3
Northwest	2.65	2.85	2.95	3.2
North Central Coast	12.77	13.84	12.88	12.3
South Central Coast	9.44	8.48	8.55	8.4
Central Highlands	2.32	3.67	5.65	6.1
Southeast	15.92	15.00	15.91	16.6
Mekong River Delta	22.37	21.50	20.86	20.1
Ethnic groups				
Kinh majority	86.92	85.85	87.37	86.7
Ethnic minorities	13.08	14.15	12.63	13.3

Sources: Authors' estimates from VLSS 1993, VLSS 1998, VHLSS 2004, and VHLSS 2008.