



Can Vietnam Achieve Millennium Development Goal on Poverty Reduction in High Inflation and Economic Stagnation?

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Presentation outline

- Background
- Data set.
- Poverty in Vietnam.
- Projection of poverty in 2008 and 2010.
- Projection of poverty in 2008 and 2010 under High Inflation in 2008 and Economic Stagnation.
- Conclusions.

Research background

- Vietnam has committed to implementation of *Millennium Development Goal on poverty reduction* in 2000:
 - Reduce by 50 percent the ratio of people living below an international accepted poverty line between 2001 and 2010 that means from 32 percent in 2000 to around 16 percent in 2010;
 - Reduce by 75 percent the number of people living under an internationally accepted food poverty line by 2010, i.e. from 12 percent in 2000 to around 3 percent in 2010;

Research background

- In spite of remarkable achievement in poverty reduction during the recent years, Vietnam might not achieve its MDG on poverty reduction:
 - High inflation in 2008 (with CPI increased around 23 percent during the first 9 months of 2008).
 - Economic stagnation.
- This study projects the poverty measures in 2008 and 2010 in the context of high inflation and economic stagnation.

Poverty trend in Vietnam

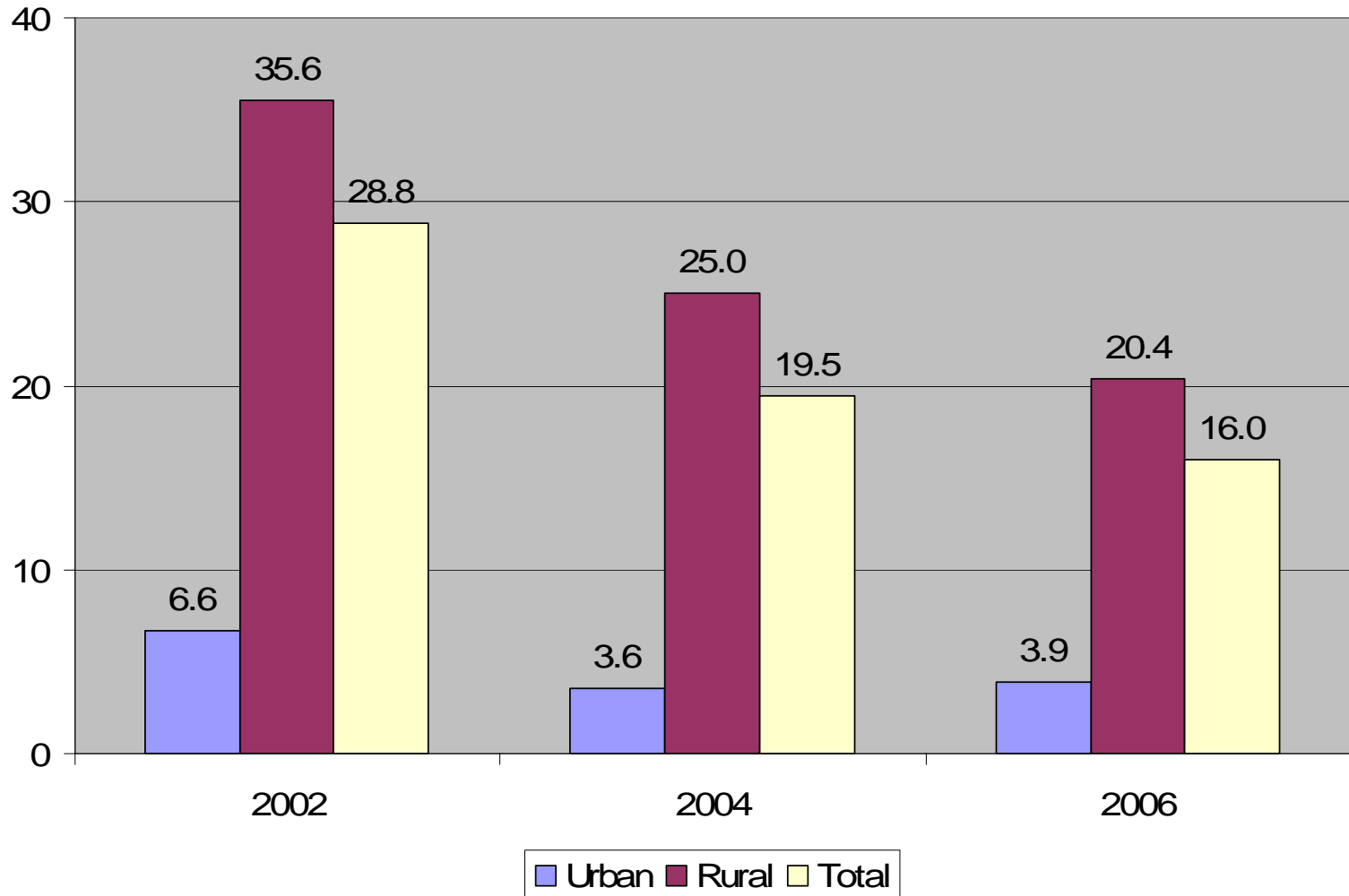
- Expenditure poverty line (thousand VND):

	2002	2004	2006
Overall poverty line	1917	2077	2560
Food poverty line	1382	1500	1915

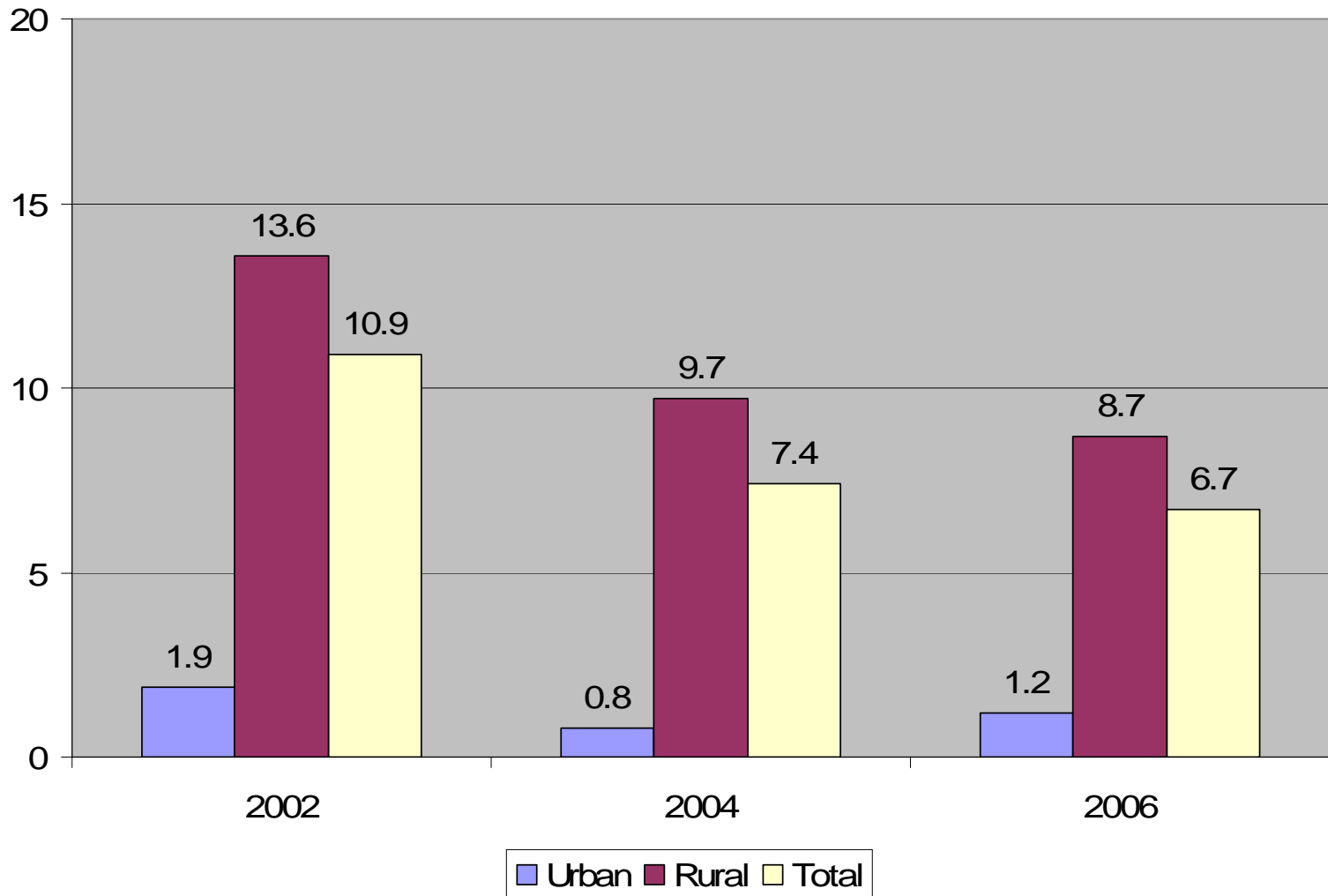
Data set

- The paper relies on available data from Vietnam Household Living Standard Surveys (VHLSS) in years 2002, 2004, and 2006:
 - The number of sampled households in VHLSS 2002, 2004 and 2006 is 29533, 9188, and 9189, respectively.
 - VHLSSs 2002 and 2004 set up panel data of 4008 households, and VHLSSs 2004 and 2006 set up panel data of 4126 households. However, there are only 1872 households covered by the three VHLSSs.

Overall poverty



Food poverty



Method to project poverty

- Step 1: Estimate the relation between per capita income at the time t and assets at the time $(t-1)$ using the panel data from surveys at the time t and $(t-1)$:

$$\ln(Y_{it}) = \beta_0 + \ln(Y_{i(t-1)})\beta_1 + X_{i(t-1)}\beta_2 + \varepsilon_{it}$$

- Step 2: Apply the estimated relationship from (3) to the survey at the time t to predict households' per capita income at the time $(t+1)$:

$$\ln(\hat{Y}_{i(t+1)}) = \hat{\beta}_0 + \ln(Y_{it})\hat{\beta}_1 + X_{it}\hat{\beta}_2 + \hat{\varepsilon}_{i(t+1)}$$

Method to project poverty

- Predict per capita consumption expenditure:

$$\hat{C}_{i(t+1)} = \frac{C_{it}}{Y_{it}} e^{\hat{\beta}_0 + \ln(Y_{it})\hat{\beta}_1 + X_{it}\hat{\beta}_2 + \hat{\varepsilon}_{i(t+1)}}$$

- Estimate the overall and food poverty indexes using the predicted per capita expenditure. The standard errors of the estimates will be calculated using bootstrap techniques.

Poverty estimates

	Overall poverty		Food poverty	
	2008	2010	2008	2010
Rural	16.8	11.9	7.8	5.4
	[0.6]	[0.7]	[0.4]	[0.5]
Urban	3.6	2.6	1.3	1.0
	[0.4]	[0.5]	[0.3]	[0.3]
All Vietnam	13.3	9.5	6.1	4.2
	[0.5]	[0.5]	[0.3]	[0.4]

Project poverty in high inflation and economic stagnation

- Step 1: Estimate the nominal income of households by:

$$\hat{Y}_{i(2008)}^N = \hat{Y}_{i(2008)}^R \frac{CPI_F Y_{i(2006)_A} + CPI_{NF} Y_{i(2006)_NA} + Y_{i(2006)_W}}{Y_{i(2006)}}$$

- Step 2: Estimate the nominal per capita expenditure as follows:

$$\hat{C}_{i(2008)}^N = \hat{Y}_{i(2008)}^R \frac{C_{i(2006)}}{Y_{i(2006)}}$$

Project poverty in high inflation and economic stagnation

- Step 3: Estimate the real per capita expenditure:

$$\hat{C}_{i(2008)}^R = \hat{C}_{i(2008)}^N \frac{C_{i(2006)_F} / CPI_F + C_{i(2006)_{NF}} / CPI_{NF}}{C_{i(2006)}}$$

- Step 4: Poverty indexes are estimated using the predicted per capita expenditure from step 3.

Project poverty in high inflation and economic stagnation

- To project poverty in 2010 in the case of economic stagnation, the paper assumes that economic growth rate during 2008-2009 is half of that during 2006-2007:
 - We assume that the annual economic growth rate during 2008-2009 is around 4 percent, the economic rate for the four years period will be 26 percent. Thus, per capita income in the presence of economic stagnation for 2010 is approximately per capita income in the absence of economic stagnation for 2010 multiplied by $(126/136)$.

Poverty estimates

	Overall poverty		Food poverty	
	2008	2010	2008	2010
Rural	19.1	14.0	9.3	6.6
	[0.6]	[0.8]	[0.5]	[0.5]
Urban	5.1	3.3	1.9	1.3
	[0.5]	[0.5]	[0.3]	[0.3]
All Vietnam	15.4	11.1	7.3	5.2
	[0.5]	[0.6]	[0.4]	[0.4]

Conclusion

- It is found that high inflation can increase the overall poverty rate in 2008 by around 2.1 percentage points. However, Vietnam can achieve its MDG on reduction of the overall poverty by 2008, since the projected poverty incidence in 2008 is 15.4 percent in the presence of high inflation.
- If Vietnam can control inflation and maintain the economic growth rate during 2008-2009 equal to half of the growth rate during 2006-2007, the overall poverty incidence can be around 11.1 percent in 2010.

Conclusion

- The MDG objective on reduction of food poverty might not be achieved, since the point estimates of the food poverty incidence are higher than the targeted rate of 3 percent.
- If high inflation together with economic crisis happen during the period 2008-2009, Vietnam might not achieve the MDG on both overall and food poverty reduction. In this case, income redistribution can be important measure to maintain the poverty reduction.

Thank you very much!