Poverty Reduction in Vietnam: Role of Doi Moi and Agriculture

Munim Kumar Barai

Introduction

In the late 1980s Vietnam started seriously implementing *doi moi* or reforms that are widely held to have led to rapid and sustained economic growth. What distinguishes Vietnam's growth is that the reform measures have led to a pro-poor growth. Vietnam is turning out to be a success story in making poverty alleviation a one-generation affair. Though Vietnam still remains a low-income country with a low per capita GDP, its growth performance and future prospects are raising the expectation that it is the next economic dynamo in the region.

Vietnam's success in reducing poverty is revealed by the data of four household surveys, the last being the Vietnam Households and Livings Standard Survey (VHLSS) of 2004. During the period of 1993-2004, the poverty rate measured by per capita consumption came down from 58.1 percent to 19.5 percent, a drop of almost 39 percentage point over eleven years. The poverty rate in 2004 is one third of the 1993 level, which is exceptional if it is benchmarked against a major UN Millennium Development Goal of halving extreme poverty by 2015 (VASS, 2007). Simultaneously, remarkable progress has also been achieved in some of the associated complementary social indicators like net enrolment rate at all levels of education, access to electricity, clean water, sanitation, health facilities, health insurance coverage, possession of durable goods, etc.

The rapid and pro-poor growth that engineered the quick reduction of poverty is explained by a number of factors but the market oriented economic reforms or *doi moi* are the most important. *Doi moi* consisted of two successive reforms: the allocation of means of production to individual households followed by the liberalization and globalization of the economy. Pro-poor public spending, investment in infrastructure, and greater geographic and occupational mobility are other factors included in the explanation for growth (VASS, 2007). Possibly, the role of private sector, foreign direct investment (FDI), and the inflow of remittance can also explain economic growth and poverty reduction in Vietnam.

How far have the overall economic growth in general and changes in the agricultural sector in particular the people in the agrarian society of Vietnam? Like most developing countries, the agriculture sector still plays a dominant role in the economy of Vietnam by supporting a bigger percentage of the people with food and livelihood. Evidently, in the liberalization and globalization (LG) process of Vietnam, the agriculture sector has experienced transformations in production, consumption, and trade. This study looks into these aspects and finds that there is a relationship between the growth of agricultural production, consumption, and trade and poverty reduction in Vietnam. This study explores

the possible effects of Vietnam's accession to the World Trade Organization (WTO) on the agricultural sector and poverty.

This research project has the following broad objectives: (i) to investigate the *doi moi* measures in the economy in general and the agricultural sector in particular and the consequential changes in economic growth, agricultural production, and trade in Vietnam; (ii) to evaluate the trends in agricultural production and consumption of selected products; (iii) to examine the linkages between growth in agricultural production, consumption, and trade and poverty reduction; and (iv) to analyze the dynamics of the agricultural sector in the context of Vietnam's accession to the WTO.

The study used a primarily analytical approach to describe and analyse different economic measures, data, or indicators, for the period of 1990 to 2006. Ten agricultural products (cashew nuts, coffee, ground nuts, fish, pepper, pig meat, rice, rubber, tea, and vegetables) have been focused on to demonstrate their effects on the rise of agricultural production, per capita consumption, and per capita export income for the period of 1990 to 2005. A linear regression model was used to explain changes in poverty by agricultural production, consumption, trade, and development expenditure.

The rest of the paper is divided into five parts. Part two briefly depicts the picture of poverty in Vietnam since 1993. Part three examines the reasons for Vietnam's success in reducing poverty. Part four deals with the role of agriculture in terms of production, consumption and export of some major agricultural products for poverty reduction in Vietnam. A linear regression model has been used in this part to explain the linkage between poverty and some variables of agriculture. Part five identifies some opportunities and challenges presented by Vietnam's accession to the WTO, specifically to its agriculture sector. The paper ends at part six with some remarks.

Poverty Position: A Story of Swift Success

In Vietnam, the General Statistics Office (GSO) relies on both income and expenditures to compute a poverty rate. It defines a threshold based on the cost of a consumption basket which includes food and non-food items, with food spending being large enough to secure 2100 calories per day per person. Households are considered poor when their income or expenditure level is not high enough to afford this consumption basket. In our discussion, we follow the GSO's poverty definition.

Figure 1 shows that as recently as 1993, 58.1 percent of the population lived in poverty, compared to 37.4 percent in 1998, 28.9 percent in 2002 and only 19.5 percent in 2004. This amounts to halving poverty in less than a decade. In terms of poverty gap measurement, the gap also declines over the same period: from 18.5 percent in 1993 to 5.0 in 2004. The poverty gap is the mean distance of the population that falls below the poverty line expressed as a percentage of the poverty line.

While there might be slight variations in precise figures if other criteria were used to define and measure poverty in Vietnam, the accomplishment would certainly remain.

However, a number of poverty related issues have emerged in recent times. While the ethnic minorities have remained the most backward in terms of poverty, there are regional disparities in poverty as well. The North West, Central Midlands, and North Central Coast, where the ethnic minorities mostly live, have remained poor. Vietnam is also experiencing a relative rise of inequality. During 1993-2004, the Gini index for per capita expenditure has seen an overall rise from 0.34 to 0.36 in 1998, 0.37 in 2002 and to 0.37 in 2004, an inequality that has been mainly driven by the increase in equality between rural and urban areas. The ratio of per capita consumption between the richest and the poorest has similarly widened from 4.97 times to 6.27 times (VASS, 2007).

Doi Moi, Growth Strategies, and Poverty Reduction

A number of strategies to reduce poverty are the direct manifestations of *doi moi*, the political engineering that Vietnam initiated in 1986. These initial reforms under *doi moi* included:

- The decentralization of state economic management, which allowed state industries some local autonomy.
- The replacement of administrative measures by economic ones, including a market orientated monetary policy, which helped to control inflation.
- Adoption of an outward orientated policy in external economic relations; exchange rates and interest rates were allowed to respond to the market.
- Agricultural policies that allowed for long term land use rights and greater freedom to buy inputs and market products.
- Reliance on the private sector as an engine of economic growth.
- Letting state and privately owned industries deal directly with the foreign market for both import and export purposes.

(Murray, 1997)

These policies not only helped restore the Vietnamese economy but also turned it into a vibrant one. In fact, by the early 1990's Vietnam's economy became one of the fastest growing economies in the world. In 1996 Vietnam became a member of the Association of Southeast Asian Nations (ASEAN), an economic integration that was unimaginable only a few years earlier. Later in 2006, it became a member of the WTO as well.

Poverty reduction in Vietnam is largely seen as a consequence of the successful implementation of *doi moi*. However, in broader perspective, the following strategies/factors could be identified to have played important roles as well:

Growth – Pushed by Reforms: On average, Vietnam has been able to achieve 7.5 percent growth per year between 1990 and 2006, one of the highest among the developing countries. This has made it an economy of about \$61 billion in 2006 from a tiny one of about \$8 billion in 1990. During this period, the per capita GDP increased to \$726 from \$118, a rise of more than 6 times in 17 years. Vietnam's sustained and rapid growth has increased the size of the domestic market and the national economy and improved most of the indicators of social development.

Almost all of the reform measures seemed to have played roles in increasing the growth of the economy. Thanks to Resoluton 10 and the Land Law, production in the agriculture sector boomed. Similarly, the Enterprise Law of 2000 and the Law of Foreign Investment have generated a dramatic rise in the registration of new local enterprises and a rise in the flow of Foreign Direct Investments.

Pro-Poor Growth: Vietnam's poverty reduction may be aligned to the general definition of pro-poor growth. Under this approach, growth will always be pro-poor whenever poverty falls (Son, 2007). A number of figures could be produced to substantiate the pro-poor nature of Vietnam's growth. Between 1995 and 2004, average per capita income in all six trend lines, viz., national, lowest, bellow medium, medium, above medium and highest income quintiles has steadily increased. Though the amounts of increase in income for different quintiles are unequal, incomes of all the categories for the period have simply doubled.

The same has happened to the monthly average per capita expenditure too. From Figure 2, we find the distribution of per capita average expenditure for national, rural, urban and the five quintiles of people. Evidently, consumption spending has increased for all segments.

There are other measures through which the pro-poor nature of growth in Vietnam could be understood. These include the growth elasticity of poverty, the percentage of people whose monthly average expenditure falls below the poverty line, and the number of people who graduated above the line during 1993 to 2004. Putting focus on the growth elasticity of poverty, we find that the association between growth and poverty has remained very strong from 1993 to 2004. It was estimated at 0.95 for 1993-1998 and 1.32 for 1998-2002. Between 2002 and 2004 the relationship stood at as high as 2.63. A measure for the overall period of 1993-2004 shows that the growth elasticity of poverty was 0.76, which is considered to be highly pro-poor and pro-people (VASS, 2007).

Infrastructure and Rural Development Investment: In 2006, the total share of three budget expenditure items -- development expenditure, education and training, and health -- in Vietnam stood at 51.7 percent of the total. This shows a remarkable rise from their combined share of 34.5 percent in 1990 (GSO, 2007).

The Vietnamese Government consistently pursues an 'education for all' policy, particularly universal primary education. Importantly, public spending is progressive in the

sense that the poorer households receive a larger share of the subsidy than the richer households.

From 1999 to 2004, public investment of around VND 8.9 trillion was disbursed for disadvantaged communes under Program 135. The Program reports suggest that 90 percent of disadvantaged communes now have access to electricity, a broadcasting station, a primary school, a nursery school and kindergarten, and small-scale irrigation; 97 percent have vehicle-passable roads to the commune centre; 100 percent of the communes have health clinics; and 100 percent of the districts have upper secondary schools (VASS, 2007).

Results from an econometric analysis of VHLSS 2004 done by Le et al. indicate that the availability of rural roads to communes is one of the significant factors determining per capita expenditure in 2004 (Le et al., 2006). There are 8,213 markets in the country with the average of 1.1 per 10,000 people, or 0.8 per village.

Coverage of Social Safety Net: Vietnam has a series of programs that transfer resources to specific population groups in communes and some of them have a deliberate poverty alleviation objective. Household-level benefits under the Hunger Eradication and Poverty Reduction (HEPR) program and commune level investments under Program 135 fall into this category. Other social transfers included social insurance, social assistance, and education fee exemption. There are also transfers aiming at mitigating adverse shocks for job loss, even if the beneficiaries are not poor to begin with, paid for by the Social Safety Net Fund for redundant state owned enterprise (SOE) workers.

Among the former are the provision of "poor household certificates" and "health insurance cards". Both of them give some entitlement to free medical treatment in government hospitals and clinics. A recent study carried out an incidence analysis of social transfers which include social insurance, social assistance, and education fee exemptions using the VHLSS 2002 and 2004 surveys found that social transfers had sizeable effects on the poverty levels in 2002 and 2004 by providing significant protection against falling into poverty (Hansen and Le, 2006).

Migration: Vietnam is experiencing physical migration of its people in two ways. First, some people are leaving the country in the quest of better jobs and higher standards of living. Second, there is another group of people who are moving from one province to another, generally from a poorer to a richer one within the national boundary, in search of occupations. Analysing the VHLSS 2004, a VASS study finds that average overseas remittances per household for the poorest quintile (they can be classified as poor, given the poverty rate of 19.5 percent in 2004) was as low as VND 99,000 against VND 3,153,000 for the richest group (VASS, 2007). On the other hand, internal migration has remained a livelihood strategy for poor people in Vietnam. A study found that 85 percent of the respondents said that there had been many people in their community working away from home and 36 percent of them said that migration helped substantially raise incomes of the recipient households (Thang, 2005).

Private Domestic and Foreign Investment: The Enterprise Law of 2000 eliminated over one hundred business licenses that in turn reduced the registration time and cost for enterprises. The vibrancy this has generated in Vietnam's private sector could be understood from the increase in number of active private enterprises, from 22,777 to 35,001 between 2001 and 2005. The employment and income effects of this development and their impacts on poverty should be a matter of investigation.

From Table A2 in the Appendix, we find that in 1990, the foreign invested sector (FIS) constituted only a 2.6 percent share of the GDP. This has increased to 12.7 percent of the economy in 2006. The job market is the area where the FIS seems to have an effect when we find that in 2000 this sector employed only 226.8 thousand persons while the level of employment has grown to 700.4 thousand persons in 2006, marking a growth of more than 208 percent in seven years.

What are the direct and indirect effects of domestic private investment and FDI in reducing poverty in the country? Though this seems to have remained a least explored area of research, the overall effects of this level of involvement of FDI should have an interface with the reduction of poverty of a segment of people at a point in time.

Role of Agriculture

In the 1990s, Vietnam has progressed from a nation of chronic food shortages to one of the world's top three suppliers of rice, coffee, cashew nuts, pepper, and rubber. But interestingly, Vietnam is showing a gradual shift from a primary sector to a manufacturing and service sector dominated economy. Since 2003 the manufacturing sector has emerged as the largest sector in the economy and the distribution of GDP for 2006 shows that the respective shares of agriculture, service, and manufacturing sectors were 20.4, 38.0 and 41.6 percent. This is not surprising but the importance of the agricultural sector has not totally diminished. This could be understood from the fact that even in 2006, this sector accounted for 55.7 percent of total employment, employing over 24 million people Vietnam (GSO, 2006; 2007), indicating the relative importance of agriculture in their overall well-being.

In the discussion of the role of agriculture in poverty reduction, we can identify the following channels through which agriculture can affect poverty: increased production led consumption or calorie intake, income (returns to labour, assets, and production) through domestic and international trade, provision of public goods (health, education, etc.) and security (capacity to mitigate risk and cope with shocks) (Conway, 2004). In most cases, however, analysis is conducted largely in terms of income poverty. The relative merits of agri-exports and production for domestic consumption have received little attention. We will try to focus on these aspects in the following discussion.

Production: The growth of agriculture production is explained here in terms of per capita/kg production of major agricultural products that constitute the largest share of the total agricultural production in Vietnam.

As can be seen in Table A3 in the Appendix, agricultural development is largely due to increase in crop output. During the period of our analysis, all the major products have grown but some of them have registered extraordinary growth in quantities. For example, production of cashew nuts grew from 23.7 thousand tons (tts) in 1992 to 235.4 tts in 2006 (a 990 percent rise), coffee from 92 tts to 853.5 tts between 1990 and 2006 (930 percent), maize from 671 tts to 3819.4 tts (570 percent), pepper 8.3 tts to 82.6 tts (960 percent), rubber 57.9 tts to 546.1 tts (943 percent) and fishery products 890.6 tts to 3695.9 tts (420 percent). Production of other heavy weighted products among our selected group like rice (186 percent), sugar cane (290 percent), vegetables (236 percent in 2005), pig meat (344 percent) also registered growth. The combined production of these products was 30966 tts in 1990, 54778 tts in 1998 and 70987 tts in 2005. The growth seems to have substantially slowed down for these products in 2003, 2004 and 2005. This happened because of the decrease or very slow growth of sugar cane and paddy. The capita/kg distribution of the products shows that while the production was 469 kg per person in 1990, the amount rose to 857 kg in 2005.

Consumption: Table A4 in the Appendix contains the growth of per capita calorie intake per day (Kcal/capita/day) of products like cashew nuts, groundnuts, maize, rice, sugarcane, vegetables, freshwater fish, and marine fish and pig meat. Evidently, a significant improvement has taken place in the consumption characteristics during the period of 1990 to 2005.

Rice is by far the most important staple in the Vietnamese diet. In 1990, out of total 1774 calories that a person could take a day from all the products listed, rice accounted for 87 percent (1546 calories). Pig meat, sugar, and maize were the three other products in the basket that also supplied about 11 percent of the total. But the consumption level of these products has increased over the years to match the growth in production as well. Interestingly, though calorie intake from these products has risen from 1774 per day to 2046 between 1990 to 1999, a rise of 272 per person per day (an annual average of 34 calories), it has seen a quick rise to reach 2457 Kcal/capita/day in 2005, an increase of 411 calories in 6 years (annual average of 68.5 calorie). The impact of this development on poverty could be significant.

Agricultural Trade: Within the 1990s, Vietnam became a major factor in the world coffee, rice, and rubber exports. Exports of pork, aquaculture seafood products, and some horticultural products also increased substantially. We have seen a general increasing trend of domestic consumption in the major agricultural products, which means that there was an expansion of domestic demand for those agricultural commodities and others such as horticultural crops. Within 1985 to 2005, agricultural export revenues rose from around US\$ 100 million up to more than US\$ 4.467 billion. For the producer, there was an increase in income generation from the agricultural products in domestic markets as well. This could be seen from the producer's price index of agricultural, forestry, and fishing products that by taking 1995 as 100, rose to 118.3 in 2000, 126.2 in 2003 and 145.2 in 2005 (GSO, 2007). So, this is indicative enough of the role agriculture could play in affecting rural Vietnam.

Appendix Table A5 indicates the contributions of different agricultural products in exports from 1990 to 2005. In 1990, in the export of agricultural products, specifically rice, fish, cashew nuts, rubber, and coffee were major income earners in the total export of \$853 million of the selected products. Over the years their importance in Vietnamese exports has remained, though fishery has emerged to be top earner. In 2005, export of coffee was \$847.9 million, rubber \$787 million, rice \$612.1 million and so on. The combined earnings from these products have increased to \$2,196.0 million in 1995, \$3079.1 million in 2000 and to \$ 5790.1 million in 2005.

An estimate of per capita export income from these products shows that it increased from \$12.92 in 1990, to \$30.50, \$39.66 and \$68.47 in 1995, 2000 and 2005 respectively. That is, between 1990 and 2005, per capita export incomes from these agricultural products have grown about 530 percent. Putting the fact a bit differently, if we consider the export value from these products in 1990 as 100, then it has risen to 306.9 in 2000 and 529.8 in 2005.

Effects on Poverty Reduction: To explain the changes in poverty, we have used here the following linear regression model to help us quantitatively explain the impact of different variables on the changes in poverty reduction in Vietnam. It stands to be:

(i) $BPP_t = \beta_0 + \beta_1 AgriP_t + \beta_2 AgriC_t + \beta_3 AgriX_t + \beta_4 \Delta DevE_{t-2} + U_t$

- Where,
- BPP_t = Below Poverty Line Population in the year t. BPP figures have been calculated on the basis of simple average reduction per year from 1993 to 2004.
- $AgriP_t$ = Production of the selected Agricultural Products in the year t. The products include cashew nuts, coffee, groundnuts, maize, pepper, rice-paddy, rubber, sugarcane, tea, vegetables, fish, pig meat and poultry.
- AgriC_t = Consumption of the selected Agricultural Products in the year t. Consumption of the selected agricultural products include cashew nuts, coffee, groundnuts, maize, pepper, rice-paddy, sugarcane, tea, vegetables, fish and pig meat.

 $AgriX_t$ = Export of all Agricultural Products in that year t

- $\Delta \text{DeveE}_{t-2}$ = Share of Development Expenditure including education and health expenditure in the national budget with two years lag.
- $U_t = Error Terms$

Results of the analysis are shown in Table 1.

Thus the Model stands with the values as follows:

(ii) BPP = 69826.576 + 0.212 AgroP - 1.374 AgroC - 2.525 AgroX - 175.697 Δ DevE +U

The model has R^2 value of 0.996, meaning thereby that the independent variables can explain 99.4 percent of changes in the poverty position in Vietnam. While measuring the significance of t values of the variables, we find that all the variables are highly significant at levels between 1 and 5 percent, except the $\Delta DevE$. Though $\Delta DevE$ is considered to have an important role in reducing the poverty in Vietnam, its t-value in our model turned out to be significant at 10 percent.

While running the model, the sign for coefficient of AgriC, AgriX and $\Delta DevE$ turned out to be negative, which is consistent with the expectation prior to running of the regression. But for variable AgriP the sign for the coefficient is positive, defying the expectation or conventional wisdom. The F value of the model is 408.843 and significance of F change is at 1 percent level while the Durbin-Watson statistics of the variables indicate no significant correlation between the residuals.

Few more variables like agri-GDP, nonagri-GDP, producer's price index (PPI) were considered to be important in explaining the poverty reduction in Vietnam but they have been left out in running the model.

WTO and Vietnamese Agriculture

At the end of 2006, Vietnam became the 150th member of the WTO. This is seen by many as the start of a third round of reforms with far reaching economic and social implications for the country. Their perception is based of the fact that as an obligation to the accession to the WTO, Vietnam has to reform and adjust a number of measures in three major areas, namely, domestic support, export subsidization, and market access.

As we have noted, Vietnam has become a leading exporter of some key agricultural products, for instance rice, coffee, cashew nuts, pepper, and rubber. However, many products could not find their consumption because of "supply exceeding demand". Now the membership in the WTO gives it the most favoured nation (MFN) status that assures quota removal, tax reduction, and some other benefits with other WTO members. These will offer expanding Vietnamese markets for its surplus agricultural products in different parts of the world. The other benefits envisaged from the inception are access to raw materials and equipment like seedlings, new varieties, pesticides, vaccines, fertilizers, cattle feed, farming tools, processing technology at a lower price and a high quality to serve agricultural production. Improving the quality of agri-products in parallel with changing the animal and crop structure, diversifying agricultural products, and creating new products could be the other offshoots in the newer context.

But there are possible adverse effects for the agricultural sector as well. The opening up of the economy may make inroads for cheaper and qualitatively better products in the domestic markets. In the external markets, Vietnamese agri-products many not hold competitive advantage if they fail to increase efficiency and quality. One of the biggest challenges confronting the agricultural sector is the need for the processing industry to catch up with farm production as Vietnamese agricultural products are mainly unprocessed products. Studies on the possible impacts of Vietnam's joining WTO indicate mixed results, though arising benefits are expected to outweigh the costs at aggregate level. Results of a study by Rama and Kim are presented in Table 2.

The experience of Bangladesh shows that prices of most food products have gradually increased since it has joined the WTO in 1995. Bangladeshi experience indicates that the level of integration with the global economy tends to affect the domestic price of various products as well irrespective of the fact that the country might have a surplus or deficit in those products. The higher the level of integration, the higher the external contagion price effect and vice versa.

Conclusions

Doi moi and the subsequent reforms have turned Vietnam into a land of promises with higher growth, larger FDI inflows, and much less people burdened by poverty. It has been able to do that by ensuring the benefits of growth for the poor by channeling a large sum of state finances to developing rural soft and hard infrastructure and by bringing more people under different social safety schemes. Vietnam has also derived the benefits of higher protection for its agriculture sector over a longer period of time by being a late joiner of the WTO. But the delay in joining the WTO seems not to have impacted the growth of the private sector that has boomed from the early 1990s and has started to show a greater role in the economy. In fact, only a few years after the implementation of *doi moi*, many Western economists had already classified Vietnam's economy as a market economy.

The role of agriculture in fighting poverty has remained very important. This has happened through increased production, consumption, and export of all the major agricultural commodities. Vietnam has emerged as a major exporting country of many of the agricultural products.

At the moment, the emerging features of poverty reduction in Vietnam need to be carefully analyzed and addressed with appropriate intervention measures, particularly to reduce poverty among the ethnic minorities. Though the avowed policy of Vietnam is to create market socialism, the signals from the relative rise of inequality can no longer be missed for further policy interventions. The role of the government should be instrumental as the actions of other non-governmental organizations may not be effective as they have a minimum presence in Vietnam.

This research has been done under a Fellowship of the Asian Scholarship Foundation between November 2006 and August 2007. The researcher is deeply grateful to the Institute of World Economics and Politics, Hanoi for offering all sorts of supports as the host institution in completing the research. He specially acknowledges the help of Dr. Bui Quang Tuan, Dr. Debdulal Mallick, Dr. Le Thai Ai Lam and Mr. Nguyen Van Trien in this regard.

Tables and Figures:



Source: Constructed from Appendix Table A1.



Source: Constructed. Data from GSO (2007).

Table 1Results of the Regression Model

Model	Unstand Coeffi	lardized cients	Standardized Coefficients	R ²	t	sig.	F	Sig. F Change	Durbin- Watson	
	В	Std. Error	Beta					Change	vv at5011	
Constant	68505.256	1674.972		.996	40.899	.000*	408.843	.000*	1.728	
AgriP	.212	.075	.393		2.825	.026**				
AgriC	-1.374	.148	-1.115		-9.255	.000*				

AgriX	-2.525	.619	260	-4.076	.005*		
ΔDevE	-175.697	88.349	059	-1.989	.087***		

Source: Calculated. Data from Statistical Yearbooks of Vietnam, various issues, and FAOSTAT.

- Note: * Significant at 1 percent level
 - ** Significant at 5 percent level
 - *** Significant at 10 percent level

Sectoral Studies - Uncertain Results												
Sector	Economic Impact	Social Impact										
Livestock	Positive	Unknown										
Fisheries	Positive	Unknown										
Rice	Positive	Positive										
Maize	Unknown	Negative										
Sugar	Positive	Negative										
Coffee	Positive	Unknown										
Tea	Positive	Unknown										
Textile	Negative	Unknown										

Table 2
Sectoral Studies Uncertain Results

Source: Rama and Kim (2005).

References:

- Conway, T. Trade Liberalisation and Poverty Reduction. London: ODI, 2004.
- General Statistics Office. *Statistical Yearbook of Vietnam* 1994, 1998, 2000, and 2005 issues. Hanoi: Statistical Publishing House.
- General Statistics Office, 1986-2005: Vietnam- 20 Years of Renovation and Development. Hanoi: Statistical Publishing House, 2006.
- General Statistics Office, 2007. "Statistical Yearbook of Vietnam 2006," Statistical Publishing House. Hanoi.
- Hansen, Henrik. and Dang Trung Le, 2006. "Better than Its Reputation? The Incidence of Social Transfers and Education Fee Exemptions in Vietnam," Mimeo, Centre for Analysis and Forecasting. Hanoi.
- FAOSTAT. 2007. <u>http://faostat.fao.org/site/291/default.aspx</u> and then separately for production, consumption, trade, prices etc. Visited on August 03, 2007.
- ILO,http://www.ilo.org/public/english/bureau/integration/departme/internat/understanding/do wnload/vietnam/chap03.pdf

- Le, Thuc Duc, Nguyen Thang and Hoang Dat Vu, 2006, "Poverty reduction in Vietnam: Disharmonies Behind that Impressive Achievements". Paper presented to World Bank ABCED Conference. World Bank: Japan, May.
- Murray, Geoffrey. Vietnam: Dawn of New Market. New York: St. Martins Press, 1997.
- Rama, Martin and Kim Sa Le, 2005, "Impact of WTO Accession: Can They be Predicted? What to do About Them?" Paper presented at the Workshop on "Growth and Social Impacts of WTO Accession", Vietnam Academy of Social Sciences.
- Son, Hyun H., 2007, *Pro-Poor Growth: Concept s and Measures*. ADB's ERD Technical Note No. 22, June, Manila.
- Thang, Nguyen 2005. "Policies and Rural Poverty: A Vietnam Case Study Using Predictor Model for Participatory Policy Evaluation". Report for ADB's Research Project on RETA 6073.
- Vietnamese Academy of Social Sciences, 2007, Vietnam Poverty Update Report 2006: Poverty and Poverty Reduction in Vietnam, 1993-2004, The National Political Publishers.
- World Bank et al, 2003, *Vietnam Development Report 2004: Poverty*, Joint Donor Report to the Vietnam Consultative Group Meting, Hanoi, December 2-3.

Appendices

	1993	1998	2002	2004*
Poverty Rate	58.1	37.4	28.9	19.5
Urban	25.1	9.2	6.6	3.6
Rural	66.4	45.5	35.6	25.0
Kinh and Chinese	53.9	31.1	23.1	14.0
Ethnic minorities	86.4	75.2	69.3	61.0
Food poverty	24.9	15.0	9.9	6.9
Urban	7.9	2.5	1.9	3.3
Rural	29.1	18.6	13.6	8.1
Kinh and Chinese	20.8	10.6	6.5	n.a
Ethnic minorities	52.0	41.8	41.5	n.a
Poverty Gap	18.5	9.5	6.9	5.0
Urban	6.4	1.7	1.3	0.7
Rural	21.5	11.8	8.7	6.0
Kinh and Chinese	16.0	7.1	4.7	3.0
Ethnic minorities	34.7	24.2	22.8	13.0
Gini Index for Per	0.34	0.35	0.37	0.37
Capita Expenditures				
Urban	0.35	0.34	0.35	0.33
Rural	0.28	0.27	0.28	0.30

 Table A1:

 Poverty Rates and the Poverty Gap (in percent)

Source: GSO (2004). World Bank et al. (2003), VASS (2007).

Table A2: Role of FDI in Vietnam At A Glance

Year (Milli on USD)	GDP Sh FIS (at C Price of	are of onstant (1994)	Growth Rate of Industrial Output	Share Investmen (at Currer	e of at by FIS at Price)	Sha Employ F	re of yment by FIS	Share of Trade by FIS						
	(Milli on USD)	VND Trill	% of Total	Value of FIS (at Constant Price of 1994)	VND Trill	% of Total	Thou sand	% of Total	% of Export	% of Import	% of Total Trade			
1990	0.0	3.4	2.6	77.1	n.a	n.a	n.a	n.a	n.a	n.a	n.a			
1991	328.8	5.3	3.8	45.6	n.a	n.a	n.a	n.a	n.a	n.a	n.a			
1992	574.9	7.8	5.1	40.3	n.a	n.a	n.a	n.a	n.a	n.a	n.a			
1993	1017.5	9.5	5.8	13.6	n.a	n.a	n.a	n.a	n.a	n.a	n.a			

1994	2040.6	11.4	6.4	12.8	n.a	n.a	n.a	n.a	n.a	n.a	n.a
1995	2556.0	13.2	6.7	8.8	22.0	30.4	n.a	n.a	27.0	18.0	21.6
1996	2714.0	15.7	7.3	23.2	22.7	26.0	n.a	n.a	29.7	18.3	22.8
1997	3115.0	19.0	8.2	24.4	30.3	28.0	n.a	n.a	35.0	27.6	30.8
1998	2367.4	22.6	9.2	21.0	24.3	20.8	n.a	n.a	34.3	23.2	28.2
1999	2334.9	26.5	10.3	21.8	22.7	17.3	n.a	n.a	40.6	28.8	34.6
2000	2413.5	29.6	10.8	21.8	27.2	18.0	226.8	0.6	47.0	27.8	37.1
2001	2450.5	31.7	10.8	12.6	30.0	17.6	362.1	0.9	45.2	30.7	37.7
2002	2591.0	34.0	10.9	15.2	34.8	17.4	439.6	1.1	47.1	33.9	40.0
2003	2650.0	37.6	11.2	18.0	38.3	16.0	519.9	1.3	50.4	34.9	41.8
2004	2852.5	41.9	11.6	17.4	41.3	14.2	630.9	1.5	54.7	34.7	43.8
2005	3308.8	47.5	12.1	21.2	51.1	14.9	673.4	1.6	57.2	36.9	46.4
Prel.2	4082.9	54.1	12.7	18.8	63.3	15.9	700.4	1.6	n.a	n.a	n.a
006											

Note: FIS – Foreign Invested Sector. Sources: Constructed from various issues of Statistical Yearbook of Vietnam.

 Table A3: Production of Some Selected Agricultural Products 1990-2006

(Thousand Tons)

							(=		= = = = = = = = = = = = = = = = = = = =								
Products	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Agro-GDP (Trill. Dong at current price)	20667	41893	49061	53929	64877	85508	92406	99352	114418	128416	129141	130178	145021	153955	172495	183342	196988
Cashew nut	n.a	n.a	23.7	46.6	52	50.6	59.1	66.9	54	35.6	67.6	73.1	128.8	164.4	204.7	240.2	235.4
Coffee	92	100	119.2	136.1	180	218	320.1	420.5	409.3	553.2	802.5	840.6	699.5	793.7	836	752.1	853.5
Groundnut	213.2	235.8	226.7	259.3	294.4	334.6	357.7	351.3	386	318.1	355.3	363.1	400.4	406.2	469	489.3	n.a
Maize	671.0	672.0	747.9	882.2	1143.9	1177.2	1536.7	1650.6	1612.0	1753.1	2005.9	2161.7	2511.2	3136.3	3430.9	3756.3	3819.4
Pepper	8.6	8.9	7.8	7.5	8.9	9.3	10.5	13	15.9	31	39.2	44.4	46.8	68.6	73.4	80.3	82.6
Rice-Paddy	19,225.1	19,621.9	21,590.3	22,836.6	23,528.3	24,963.7	26,396.7	27,523.9	29,145.5	31,393.8	32,529.5	32,108.4	34,447.2	34,568.8	36,148.9	35,832.9	35826.8
Rubber	57.9	64.6	67	96.9	128.8	124.7	142.5	186.5	193.5	248.7	290.8	312.6	298.2	363.5	419	481.6	546.1
Sugar cane	5,397.6	6,162.5	6,437.0	6,082.7	7,550.1	10,711.1	11,430.3	11,920.9	13,843.5	17,760.3	15,044.3	14,656.9	17,120.0	16,854.7	15,649.3	14,948.7	15,678.6
Теа	145.1	148.8	163	169.8	189.2	180.9	210.5	235	254.5	316.5	314.7	340.1	423.6	448.6	513.8	570	612.1
Vegetables	3,380.0	3,373.7	3,456.9	3,652.4	3,966.8	4,325.6	4,400.0	5,484.9	5,667.5	6,203.7	6,490.1	7,241.8	7,372.3	7,601.2	7,784.1	7,999.5	n.a
Fishery (catch and aquaculture)	890.6	969.2	1016	1100	1465	1585.4	1701	1730.4	1782	2006.8	2250.5	2434.7	2647.4	2859.2	3142.5	3465.9	3695.9
Pig meat	728.6	715.5	820.0	878.0	957.7	1012.5	1052.0	1154.2	1228.0	1318.4	1409.0	1515.3	1653.6	1795.4	2012.0	2288.3	2505.0
Poultry	156.3	158.7	181.2	194.2	200.6	206.9	220.4	233.8	242.2	261.0	292.9	308.0	338.4	372.7	316.4	321.9	344.4
Total	30966.0	32231.6	34833.0	36295.7	39613.7	44849.8	47778.4	50905.0	54779.9	62164.6	61824.7	62327.6	67958.6	69268.9	70795.4	70986.8	n.a
Per Capita/kg	469.1	479.3	508.8	521.1	559.3	622.9	653.0	685.0	726.1	811.7	796.4	792.2	852.4	856.2	863.1	854.2	n.a

Source: Compiles from GSO (2007), FAOSTAT (2007). Data from FAOSTAT, <u>http://faostat.fao.org/site/291/default.aspx</u>, visited on August 03, 2007. Poultry data for 1990-1999 have been estimated.

	CI ' T (I D			
Table A4: Per Capita	Calorie Intake Per	r Day (Kcal/capita/day) of Selected Major	Agricultural Products

Products	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Cashew nuts	6	3	2	3	5	7	9	9	7	6	8	10	11	15	23	33
Groundnuts	7	11	14	16	17	17	18	18	19	19	20	21	23	25	25	24
Maize	45	51	56	61	61	58	56	55	56	60	67	75	85	95	105	115
Rice/Paddy	1,546	1,627	1,699	1,747	1,736	1,709	1,685	1,669	1,663	1,666	1,679	1,703	1,739	1,786	1,839	1,893
Sugarcane	52	52	55	63	74	82	87	101	105	116	124	130	133	131	124	124
Vegetables	8	8	9	9	9	10	11	12	13	14	15	15	16	16	15	15
Freshwater Fish	6	6	6	7	9	10	10	10	9	11	12	12	13	16	16	16
Marine Fish	13	11	10	11	12	12	14	13	14	14	13	14	11	15	15	15
Pig Meat	91	97	105	113	121	125	127	129	134	140	150	162	176	192	207	222
Total	1774	1866	1956	2030	2044	2030	2017	2016	2020	2046	2088	2142	2207	2291	2369	2457

Source: Constructed. Data from FAOSTAT (2007), http://faostat.fao.org/site/291/default.aspx , visited on August 03, 2007.

Products	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Cashew nuts	95.9	107.6	100.4	68.5	96.4	58.7	35.3	61.7	73.8	58.3	111.3	139.9	182.2	244.3	345.6	386.6
Coffee	59.7	53.0	73.1	92.2	409.0	663.8	428.2	629.4	704.0	629.9	601.7	460.2	397.3	510.4	672.8	847.9
Groundnuts	19.3	33.0	24.6	43.1	91.3	77.9	77.2	39.3	22.2	18.2	24.0	25.9	28.2	29.6	24.9	29.7
Maize	5.6	7.2	11.9	7.5	13.7	5.0	39.3	10.4	1.0	0.8	12.1	3.2	1.4	2.1	12.6	2.7
Pepper	15.0	11.3	12.0	14.0	45.2	56.7	67.5	103.4	87.0	161.8	133.7	67.1	82.8	102.9	143.1	139.8
Pig meat	0.4	1.0	13.1	8.4	8.7	22.1	13.3	20.4	18.2	9.4	17.5	43.9	25.3	19.0	41.6	28.4
Rice	345.4	336.9	393.8	347.7	435.9	459.6	587.3	534.5	524.2	861.2	463.9	324.9	313.8	412.7	537.7	612.1
Sugar Cane	2.7	3.1	3.3	6.1	2.3	7.3	1.7	5.1	1.4	5.1	14.1	11.1	2.8	7.2	1.3	2.1
Теа	4.9	4.3	7.2	10.3	11.1	11.4	19.3	25.7	26.4	23.0	31.8	35.8	40.9	40.1	57.9	54.6
Vegetables	4.8	6.9	6.1	6.4	14.4	18.1	29.9	25.5	27.3	25.7	24.6	28.6	31.3	38.6	48.2	66.7
Rubber	60.3	50.0	65.1	75.0	139.0	194.0	163.0	191.8	127.5	146.8	166.0	171.0	268.0	378.0	597.0	787.0
Fishery	239.1	285.4	307.7	427.2	551.2	621.4	696.5	782.0	858.0	971.0	1,478.5	1,816.0	2,021.7	2,199.6	2,408.1	2,732.5
Total	853.2	899.6	1,018.2	1,106.5	1,818.2	2,196.0	2,158.6	2,429.1	2,470.8	2,911.2	3,079.1	3,127.5	3,395.8	3,984.5	4,890.8	5,690.1
Per Capita Export (USD)	12.92	13.38	14.88	15.89	25.67	30.50	29.51	32.69	32.75	38.01	39.66	39.75	42.59	49.25	59.62	68.47
Growth over 1990	100	103.5	115.1	122.9	198.6	236.0	228.3	252.9	253.4	294.1	306.9	307.5	329.6	381.1	461.3	529.8
All Agri Exports	783.2	628	827.6	919.7	1252.6	1745.8	2159.6	2231.3	2274.3	2545.9	2563.3	2421.3	2396.6	2672	3383.6	4467.4

 Table A5: Export Earnings form the Major Agri-products, 1990-2005 (Million US\$)

Note: Data for rubber export of 1990, 1992 and 1994 are estimated. Sources: Constructed. Data from FAOSTAT (2007), <u>http://faostat.fao.org/site/291/default.aspx</u> visited on August 03,, Fishery data from Data from GSO (1995, 1998, 2003, 2007), 2007, rubber data from ILO.