Poverty, Inequality and the Non-farm Economy: The Case of Rural Vietnam

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Abstract

Most Asian economies have made huge progress in poverty reduction in recent years and Vietnam especially is one of the showpieces in income poverty reduction. Furthermore, the transition from a centrally planned economy towards an open market economy has resulted in successes in many fields. Despite these overall achievements, regional and provincial disparities remained and in some cases even increased. Poverty in remote regions is still at high levels, and privatization has been successful mainly in the boom regions of Hanoi and Ho Chi Minh City.

With agricultural production being constantly faced with environmental hazards like droughts, flooding and crop/livestock pests, the rural non-farm economy becomes a key component in poverty reduction strategies, especially in rural areas. By providing additional income sources to the rural population, the non-farm economy will serve as one means of increasing the resilience of these households to setbacks. Besides providing the opportunity to diversify income, wage employment in the non-farm economy will increase incomes, as wages are generally higher than in the agricultural sector.

Three data sources are utilized to investigate the influence of non- and off-farm income sources on poverty and inequality in rural areas. These are (i) a dataset of about 2,200 rural households in three remote provinces of Middle Vietnam, (ii) about 130 medium- and large-scale companies and (iii) a panel dataset of about 3,200 rural households from all provinces of Vietnam.

The analysis leads to the finding that besides generally known influential household characteristics, increased off-farm income shares, even in remote regions, increases household incomes and consumption asset holdings. Furthermore, inequality among households with higher shares of income apart from farming activities is less pronounced. Using the broader panel data for the whole of rural Vietnam, the intertemporal dimension with regard to income structure has been added. Based on the same household types used in the focused analysis of the three provinces, the changes in income portfolios were analyzed for the 2002–2004 period. The results showed that households' income structure is extremely volatile, with households changing from pure agricultural production to pure non-farm employment as their means of generating income. Based on these results, households were grouped according to their 2002 and 2004 portfolios, and the concept of pro-poor growth was used to investigate their performance. The results showed that house-

holds changing their income sources were worse off in terms of poverty and income when compared to non-switching households, for the first period. The positive assessment is based on their intertemporal performance of poverty and inequality reduction due to their higher growth rates.

Considering the lower poverty rates for households that generate higher shares of income from sources other than farming, and the better performance of households that adjust their income portfolio, the provision of alternative sources of income in the non-farm sector was found to be central to poverty reduction in rural areas. Therefore, company data were analyzed, aiming at the identification of the bottlenecks in their growth. Based on the special characteristics of Vietnam as a transition economy, the focus was set on institutional factors. In terms of employment and profit, these factors were shown to have an influence on companies' performance. Furthermore, the conditions in the research provinces, although all of them are in Middle Vietnam and among the poorest of the Vietnamese provinces, are considerably different. Based on their different history and location and current conditions, the needs of companies are very different. Besides their common need for skilled workers, some require better infrastructure to connect to the markets, some lack reliable regulation by the provincial governments and some others need a more open minded pro-private business attitude by the local authorities.

All in all, improvement of the local conditions of doing business are of central importance for the reduction of rural poverty and the reduction of inequality within the country. Furthermore, a "one strategy fits all" solution on how to achieve increased investments and growth in remote provinces cannot be given due to the different needs and conditions.

Keywords: Rural Vietnam, Poverty, Household income composition

Zusammenfassung

Die meisten asiatischen Staaten haben in den letzten Jahren enorme Fortschritte im Bereich der Armutsreduzierung gemacht. Vietnam stellt in diesem Prozess eines der Musterbeispiele dar und hat die Milleniumsziele der Vereinten Nationen zum Teil schon heute erreicht. Auch die Bemühungen im Rahmen des Transformationsprozesses, von einer zentral organisierten Planwirtschaft hin zu einer offenen Marktwirtschaft, zeigen bereits Erfolge. Trotz dieser beeindruckenden Bilanz gibt es auch hier noch viele Regionen die noch nicht von diesen Erfolgen profitieren konnten. Immer noch gibt es Gebiete in denen Armut weit verbreitet ist und die Privatisierung von Staatsunternehmen aufgrund von geringeren Marktchancen wenig erfolgreich verlief. Die Erfolgsregionen sind hauptsächlich in den ökonomischen Zentren um Hanoi und Ho Chi Minh zu finden.

Des Weiteren ist die landwirtschaftliche Produktion speziell in den Küsten- und Bergregionen permanent der Gefahr von Umwelteinflüssen wie Dürren, Überflutungen, Pflanzenschädlingen oder Tierseuchen ausgesetzt. Daher werden Beschäftigungsmöglichkeiten im außerlandwirtschaftlichen Bereich als Schlüssel zur Armutsreduzierung gerade in ländlichen Räumen angesehen. Neben den in der Regel höheren Löhnen, die in diesem Bereich erzielt werden, würden diese der ländlichen Bevölkerung weitere Einkommensquellen öffnen und somit ihre Anfälligkeit gegenüber Rückschlägen in anderen Bereichen reduzieren.

Um die Einflüsse von Beschäftigungen außerhalb der selbstständigen landwirtschaftlichen Produktion zu analysieren, werden hier drei Datenquellen herangezogen. Diese sind: (i) ein Datensatz von circa 2.200 ländlichen Haushalten aus drei der ärmsten Provinzen Vietnams, (ii) Daten von ungefähr 130 großen und mittleren Unternehmen in denselben Provinzen und (iii) ein Paneldatensatz von nahezu 3.200 Haushalten aus ländlichen Gebieten ganz Vietnams.

Basierend auf Datensatz (i) wurde verdeutlicht, dass neben oftmals fokussierten Haushaltseigenschaften gerade höhere Anteile an Einkommen aus Angestelltenverhältnissen oder selbstständiger außerlandwirtschaftlicher Tätigkeit das Einkommen und die Konsumgüterausstattung von ländlichen Haushalten zu einem großen Teil beeinflussen. Außerdem ist die Ungleichverteilung von Einkommen im Vergleich zu landwirtschaftlichen Haushalten weniger stark ausgeprägt. Aufbauend auf diesen Ergebnissen werden die Paneldaten (ii) genutzt, um die Veränderungen der Einkommensstruktur im Zeitverlauf zu untersuchen. Die Ergebnisse für die

Periode 2002–2004 zeigten, dass die Einkommensstruktur sich in vielen Fällen erheblich veränderte. Diese Veränderungen sind teils extrem und Haushalte wechseln ihr Portfolio vollständig von reiner landwirtschaftlicher Produktion hin zu einer komplett von der selbstständigen Produktion abgewendeten Zusammenstellung. Im Folgenden wurden die Einkommenszuwächse und ihre Verteilung über die Einkommensperzentile betrachtet. Die Ergebnisse zeigen deutlich, dass Haushalte die ihr Portfolio angepasst haben, wesentlich besser abschneiden. Sie realisieren höhere Wachstumsraten sowie höhere Armutsreduzierung. Allerdings waren diese Haushalte in der ersten Periode mit zum Teil wesentlich niedrigeren Einkommen und somit höheren Armutsraten konfrontiert. Insgesamt zeigte sich jedoch deutlich der positive Einfluss von Beschäftigungen außerhalb der selbstständigen landwirtschaftlichen Produktion selbst für Haushalte in entlegenen Gebieten, in denen sich Beschäftigungsmöglichkeiten in der Regel auf benachbarte Farmen reduzieren.

Daher wurde im Folgenden die Entwicklung nicht landwirtschaftlicher Betriebe betrachtet. Diese stellen die Basis für Wachstum und Beschäftigungsmöglichkeiten der Bevölkerung dar und sind somit zentraler Bestandteil einer Armutsreduzierungsstrategie. Bei der Analyse der Engpassfaktoren dieser Unternehmen wurde aufgrund der Situation Vietnams als Transformationsland speziell auf Institutionen eingegangen, da diese einen zentralen Bestandteil des Veränderungsprozesses bilden. Diese Faktoren zeigten einen deutlichen Einfluss sowohl auf die Beschäftigtenanzahl als auch auf den Gewinn der Betriebe. Es zeigte sich, dass sich trotz der großen Gemeinsamkeiten der drei Provinzen das Umfeld und besonders die Qualitäten der Provinzregierungen deutlich unterscheiden. Mit Ausnahme eines Mangels an qualifiziertem Personal, das in allen Provinzen eine große Rolle spielt, sind auch die Bedürfnisse sehr unterschiedlich. Die anderen Faktoren, die nur für jeweils einen der Standorte ein Rolle spielen, sind Mängel an der Infrastruktur, der Verlässlichkeit lokaler gesetzlicher Regelungen sowie an der Anerkennung privater Unternehmertums.

Zusammenfassend ist die Verbesserung der lokalen Strukturen und Bedingungen für Unternehmen und ein nachhaltiges Wachstum der Wirtschaft von enormer Bedeutung im Abbau von regionalen Disparitäten und Armut in ländlichen Gebieten. Allerdings zeigte sich auch, dass eine "one strategy fits all"-Lösung nicht existiert und immer die regionalen Bedingungen und Strukturen berücksichtigt

werden müssen, um Investitionen auch in weniger entwickelten Regionen attraktiv zu machen.

Schlagworte: Ländliches Vietnam, Armut, Zusammensetzung von Haushaltseinkommen

Table of Contents

List of Symbols and Abbreviations

Symbol/Abbreviation	Description / Definition
$	United States Dollar
%	per cent
#	Number (count)
ADB	Asian Development Bank
AFD	Agence Francaise de Developement
Coef.	Coefficient
def.	Definition
DFG	Deutsche Forschungsgemeinschaft (German Research Foundation)
DFG FOR	DFG Forschergruppe (DFG research Unit)
DFID	United Kingdom Department for International Development
eds.	Editors
ed.	Editor
e.g.	For example
FAO	Food and Agricultural Organization
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GIC	Growth incidence Curve

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Symbol/Abbreviation	Description / Definition
GPP	Gross Provincial Product
GSO	General Statistics Office of Vietnam
ha	Hectare
HDI	Human development index
HH	Household
ICO	International Coffee Organization
ICP	International Comparison Program
i.e.	That is
IFPRI	International Food Policy Research Institute
IZA	Institute for the Study of Labor
MDG	Millennium development goals
MSE	Mean squared Error
min	Minutes
N	Number of observations
n.a.	Not available
NBER	National Bureau of Economic Research
OECD	Organization For Economic Cooperation And Development
pc	Per capita
PCI	Provincial Competitiveness Index
PDE	Private domestic enterprises
PPG	Pro-poor growth
PPP	Purchasing power parity
Prob.	Probability
RNFE	Rural non-farm economy
RSE	Robust standard error
Sign.	Significance
SE	Standard error
SEA	South-East Asia
SOE	State-owned enterprises

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Symbol/Abbreviation	Description / Definition
thsd.	Thousand
TT Hue	Thua Thien Hue
UNDP	United Nations Development Program
VHLSS	Vietnam household living standard survey
VIF	Variance inflation factor
VNCI	Vietnam Competitiveness Initiative
VCCI	Vietnam Chamber of Commerce and Industry

List of Figures

List of Tables

Chapter 1

Introduction

1.1 Background

With growing public attention paid to the problems of increasing inequality and slow progress toward reaching the Millennium Development Goals (MDG), especially in Africa, [United Nations, 2006] but also in Asia, the question emerges: will the poor ever be able to catch up in the process of global growth? Although the South-East Asian (SEA) region has already more than accomplished the goal of reducing the proportion of people living on less than \$1[1] per day, the same success concerning the proportion of people suffering from hunger has not yet been achieved [United Nations, 2006]. More generally, the Asia-Pacific region is still home to about two thirds of the world's poor, emphasizing the task that still remains [United Nations, 2007].

Economic theory predicts convergence, and actually the inequality across countries did decline in the 1970–2000 period. Yet, worldwide within country inequality rose [Sala-i-Martin, 2006] especially in developing countries [Schätzl, 2003; Shankar and Shah, 2001; Venables, 2003; World Bank, 2003]. The extreme rural/urban differences are one influential cause for this problem as the majority of poor people life in rural areas of developing countries. This emphasizes the importance of designing successful strategies for the development and strengthening of these regions [United Nations, 2005a]. The share of poor people living and/or working in rural areas is estimated at 75% [United Nations, 2005a]. The situation in the Asia and Pacific region is slightly more equal between rural and urban areas with only 70% of the poor population living in rural areas. However, taking the case of Vietnam, where this share was estimated to be 92.3% for 2002 [United Nations, 2007], the picture changes, and for Vietnam the importance of the urban/rural divide becomes even clearer. Therefore, effective strategies to overcome extreme poverty all over the world need to consider the particular characteristics of rural areas to adequately meet the needs of the rural poor.

Besides the already higher poverty incidences and severity in rural areas, environmental shocks will affect mono structured regions, like the mostly agricultural

[1] \$1 was about 16.500 Dong during the time of the survey [Association of German Banks, 2008, 11.01.2008]. \$1 PPP converts to 4713 Dong [ICP, 2008]. (These conversion rates are applied throughout the thesis.)

dominated rural areas in Vietnam, even more and will therefore further increase the disparities [Duncan and Pollard, 2002].

One prominent and widely discussed path out of poverty is income diversification of rural farmers into the *rural non-farm economy* (RNFE) via wage- or self-employment. The connection between the poverty status of households and their participation in the RNFE has been the subject of multiple theoretical and empirical studies over the last decade, and these mainly concluded that participation in the non-farm economy contributes to poverty reduction in developing countries. Furthermore, the promotion of wage-employment in remote and low income areas is a successful strategy in overcoming income inequalities within a country [Collier, 2007; Schupp, 2002]. In developing countries in particular, agricultural production is constantly endangered by adverse environmental conditions such as droughts, crop pests and animal illnesses. Additionally, high reliance on subsistence as well as few (often only one) marketed products makes these households especially vulnerable as they are therefore heavily dependent on a price that fluctuates widely and often on short notice [Dercon, 1996; Dercon and Krishnan, 1996; Reardon, 1997].

That is why the rural non-farm economy and its spatial dimension has been identified as a priority for future research aiming at reducing thevulnerability of those households [Haggblade et al., 2007b] especially there are relatively few studies disaggregating rural non-farm activities using household data [Reardon et al., 2007]. Generally, off- and non-farm employments are considered to result in higher and especially more stable income as compared to farming, due to less exposure to environmental conditions [Dercon, 2002].

Nevertheless, in order to overcome the extensive differences within developing countries, the agricultural sector is often focused on as it is the main basis for rural income generation. However, as elaborated above, the rural non-farm economy plays a key role in rural development. As smallholder farms dominate agricultural production, the demographic pressure will soon reduce farm sizes to an extent that will further undermine the possibility of survival from smallholder farming. Here, the non-farm economy has to enrich the rural economy and provide additional income sources for the population. Promoting the already dynamic rural non-farm economy, especially outside the major cities, and linking those to the markets will

not only benefit the non-farm sector but will also improve the competitiveness of agricultural markets and additionally support the poor [World Bank, 2007b].

Even though the jobs created by a newly developing rural industrialization will not be "wonderful" at first, they will improve the living conditions of the rural poor. Once enough jobs are available, the benefits will spill over to the families of the workers and their communities, and the rural economy will start to grow [Collier, 2007]. Not only researchers, but also the poor, know that self- and wage employment opportunities are the most promising path out of poverty [Narayan et al., 2000]. However, one should not lose sight of agricultural development as it is still constitutes the basic livelihood of many poor people and furthermore ensures the food supply of most developing countries [World Bank, 2007b].

In Vietnam the RNFE slowly gained ground [Minot et al., 2006] and poverty reduction was mostly successful, giving Vietnam an "enviable position among the developing countries" [Minot et al., 2006, p.1]. During the period 1992–1998 Vietnam reduced poverty rates by 4% a year which is about double than the average 2% Asian average, leading to Vietnam already achieving the Millennium Development Goal of halving income poverty.

Nevertheless, there remain several issues to be resolved [van de Walle and Cratty, 2004]. The main problem in Vietnam is still the increasing disparities between the successful and growing Delta regions (Mekong Delta and Red River Delta) and rural areas - in particular the Upland regions. These regions are characterized by poor infrastructure, high reliance on the agricultural sector and a large share of ethnic minorities [Minot et al., 2006]. Especially in Middle Vietnam and along the 3,444 km coast line [CIA, 2009], households are very vulnerable to environmental risks that mainly affect agricultural production. These regions are prone to typhoons, storm surges, flash floods, drought and saline water intrusion for the coastal areas, and flash floods and landslides for the mountainous areas in central Vietnam [Chaudhry and Ruysschaert, 2007].

1.2 Objectives of this study

The overall objective of this study is to investigate the influence of non- and off-farm employment participation of the rural population in some of the least developed

regions in Vietnam on poverty, growth and inequality. Furthermore, the possibilities of growth for the rural companies that offer such wage employments will be explored. The specific objectives are:

1. Quantify the extent of non- and off-farm reliance in rural areas in one of the least developed regions in Vietnam, i.e. Middle Vietnam.

2. Identify the characteristics that determine the welfare status of rural households in Vietnam with special focus on their income portfolios.

3. Identify the extent of short-term fluctuations in the income portfolios of households in rural areas of Vietnam.

4. Investigate the differences in the pro-poor growth performance, not only across provinces, but extend previous research by taking the income portfolios of households into account as a further parameter.

5. Thereby shed light on the difference in the extent to which farming, off-farm employment and a mixture of these two income sources benefits the poor.

6. Examine the extent of differences in the institutional settings, i.e. infrastructure, governmental quality and transaction costs, among three remote provinces in Vietnam.

7. Explore the effects of these possible differences on the economic performance and employment generation of the companies operating in those provinces.

1.3 Composition of the thesis

The thesis is organized into five chapters. This first chapter gave an overview of the research problem and the scope of the thesis, as well as the objectives that will be pursued. Furthermore, the remaining part of this chapter will give a brief overview of the data used for the different topics and introduce the research unit in which the thesis was embedded.

The second chapter will analyze the importance of the rural non-farm economy in three rural provinces of Vietnam and thereby target objectives one and two. The chapter will give an overview of the literature in this field of research and a

detailed presentation of the poverty trends and the current situation. Furthermore, the data used and the underlying conceptual framework will be introduced in detail before the analysis and findings are presented.

Chapter three will start with the concept of pro-poor growth. Using this concept and several decomposition of poverty and inequality techniques, the chapter will focus on objectives three to five. The data used for this chapter will also introduced and previous work will be described in depth. Building on chapter one, the chapter will be supplemented here by using panel data to gain more insight of the short term intertemporal dynamics of poverty and inequality dynamics, again focusing on the households' income composition. The chapter will end by summarizing the findings.

Chapter four will then switch the focus from a direct household perspective towards the rural companies. Their performance and their prospects and limitations for growth are analyzed, focusing on institutional issues. As in previous chapters, the literature in the field is described, the objectives are given and the data used are presented. Additionally, the trends in the Vietnamese economy and its current issues are provided, together with a detailed presentation of the concept of institutional economics, with a special focus on transition economies before the analysis of the situation in the research area. The analysis will then focus on objectives six and seven prior to a short summary.

The fifth and final chapter then presents a summary and conclusions from the study, lays out the overall policy implications and ends with recommendations for further research needs identified in this study.

1.4 Background of the study and data used

This study has been part of the DFG Research Unit FOR 756 "Impact of shocks on the vulnerability to poverty: consequences for development of emerging Southeast Asian economies". The research group comprises two base projects and three special projects. The research unit aims at theoretically and empirically advancing the concept as well as the methodology for measuring vulnerability to poverty.

Base project one is working towards the development of conceptually sound and empirically tractable measures of vulnerability, taking into account the endogeneity

of household structures as well as intra-household dynamics. Base project two worked on the organization of the household survey presented in the preceding section and will generate panel data from about 5,000 households in Vietnam and Thailand, and facilitates the integration of the three special projects. The whole research area can be seen in figure 1.1.

The three special projects focus on agriculture, financial institutions and economic geography. The agricultural project is mainly working on the intra-sectoral issues of farm production and marketing of agricultural production. The second project investigates vulnerability-related issues of saving, credit and investment from intertemporal and interpersonal perspectives. The third project, in which this study was carried out, focuses on inter regional and inter sectoral issues such as migration and off-farm employment. The special projects work in close collaboration with each other and with the two base projects.

Although detailed information on the data used will be presented in the respective chapters, a brief overview is given here for easier orientation. Based on the different nature and requirements of the three chapters of this study, the data used in each chapter are different, although there are several common characteristics.

First, the Vietnam data from the DFG FOR 756 household survey of about 5,000 rural households in Middle Vietnam and North Eastern Thailand is used. This survey includes about 2,500 households in Vietnam, whose data is used in the second chapter. Second, data from the Vietnam household living standards survey 2002 and 2004 are used for several background analysis on Vietnam as well as for the panel analysis that is required for chapter three on pro-poor growth. Third, data from an own survey, conducted in the research provinces of the DFG FOR 756 household survey, is used. This covers about 130 large and medium-large companies.

Figure 1.1: DFG FOR 756 research area.

Source: Hardeweg, B. Leibniz Universität Hannover; Updated version of `http://www.vulnerability-asia.uni-hannover.de/projects.html`.

Chapter 2

Poverty and the Rural Non-farm Economy in Vietnam[1]

[1]An adapted version of this chapter is submitted to the Review of Income and Wealth as: Mausch, K. and Revilla Diez, J. (2009), Does diversification into off-farm activities elevate the welfare status of rural households in Vietnam?

2.1 Introduction

Although it is not explicitly mentioned in the United Nations Millennium Development goals, off-farm wage and self-employment is increasingly recognized as a core component of poverty and inequality reduction, especially for the rural population. The connection between the poverty status of households and their participation in the RNFE has been the subject of multiple theoretical and empirical studies over the last decade [Barrett et al., 2001; Collier, 2007; Davis et al., 2007; Gaiha and Imai, 2007; Gaiha et al., 2007; Gallup, 2004; Haggblade et al., 2007a; Lanjouw and Lanjouw, 2001; Otsuka and Yamano, 2006; Schupp, 2002; Stampini and Davis, 2008; van de Walle and Cratty, 2004; World Bank, 2007b]. The underlying questions were either 1) whether income diversification into non-farm activities leads to poverty reduction or, if that was already the underlying assumption, 2) which factors affect the households' decision or potential to participate in the RNFE.

With income diversification being the norm for most households [Barrett et al., 2001] and the RNFE already accounting for 35–50% of rural incomes, it can be nothing other than a central topic in rural poverty analysis [Haggblade et al., 2007a]. Although agriculture still plays a major role in rural income generation activities, the question is how the RNFE, as a complementary engine of rural growth, can best be facilitated [Davis et al., 2007]. "The fastest and surest way of reducing income inequality is to promote employment in low income regions."[Schupp, 2002, p.1713] This is especially relevant in a densely populated country like Vietnam, where land parcels are small, fragmented small-scale farm productivity is limited and non-farm incomes are of crucial importance [Otsuka and Yamano, 2006; van de Walle and Cratty, 2004].

Agricultural labor, although providing easily accessible jobs and some degree of risk diversification to the rural population, has four major disadvantages compared to the RNFE. Firstly, agricultural employment is often seasonal and thus leaves the workers unemployed for long periods. This unemployment could be absorbed by the RNFE, which encompasses less seasonality [Gaiha and Imai, 2007]. Secondly, agricultural work is, according to the International Labour Organization (ILO), one of the most dangerous of all occupations. Workers face safety and environmental hazards and are rarely covered by general labor regulations. Thirdly,

the returns on education are lower than those on jobs in the non-farm economy [World Bank, 2007b]. This implies that the increased educational achievements in developing countries can better be converted into poverty reduction via non-farm employment. Finally, non-farm employment relaxes farmers' credit constraints that often constitute entry barriers to new technologies and markets for poor rural farmers [Stampini and Davis, 2008].

Another important role of the RNFE is the reduction of rural-urban differences. The non-farm economy has grown considerably faster in urban areas and has thus fostered migration towards the overcrowded urban centers of countries or regions. This could be balanced by a stronger rural non-farm economy [Gallup, 2004; Lanjouw and Lanjouw, 2001; van de Walle and Cratty, 2004].

Besides the importance of the RNFE, pro-poor policy design depends on the knowledge of the factors that influence households' poverty status. Recent research found several common factors that directly affect the income levels of households. The first and most commonly found factor was that higher education is generally associated with a lower likelihood of being poor [Gaiha et al., 2007; Otsuka and Yamano, 2006; van de Walle and Gunewardena, 2001; World Bank, 2007b]. More highly educated workers are able to find lucrative non-farm jobs while poorly or uneducated workers depend on agricultural wage employment, which is typically lower paid [Otsuka and Yamano, 2006]. This finding is qualified, as the returns on education also depend on locational factors, such as the fact that non-farm jobs are not available in some areas [van de Walle and Gunewardena, 2001]. Furthermore, bearing the costs of education obviously poses a bigger challenge to poor households. In addition to the direct costs, such as school fees and travel expenses, which are high for poor households anyway, the opportunity costs of labor time not devoted to the family farms also have to be taken into account [World Bank, 2007b].

Another observation, especially in Vietnam, is that ethnic minorities are economically disadvantaged [Gaiha et al., 2007; van de Walle and Gunewardena, 2001]. This is partly based on the fact that these groups live in remote mountainous areas that offer fewer income generation possibilities, but even comparing minority households to majority households in the same region results in the same findings. This is despite governmental programs specifically tackling poverty in "ethnic mi-

nority areas". These programs, which are supposed to address the special needs of minorities, often result in the support being given to majority households living in predominantly minority regions, thus not reaching the target group [van de Walle and Gunewardena, 2001].

Several other factors are discussed but are not generally tested due to different focuses and different data sets being used. One further factor is the amount of land owned by the household, which directly affects the production possibilities and thus their income. The dependency burden is found to have a negative impact, as people who do not earn their own income lower the per capita income of the household [Gaiha and Imai, 2007; Gaiha et al., 2007]. Finally, households that derive their income only from farming, which are most common in rural areas, are generally the poorest households [Barrett et al., 2001; van de Walle and Cratty, 2004].

Despite the fact that non-farm employment and income diversification seem to increase mean incomes, there are concerns that these factors may actually increase inequality, as it is mainly the relatively well-off households that are able to participate [Bonschab and Klump, 2007; Canagarajah et al., 2001; Lanjouw and Lanjouw, 2001; Otsuka and Yamano, 2006; van de Walle and Gunewardena, 2001]. While Otsuka and Yamano [2006] found that increased non-farm income generation possibilities do lower the gap between the favored and unfavored groups (i.e. ethnic minorities or people from remote areas), Lanjouw and Lanjouw [2001] found that despite the unfavored group being increasingly able to participate in non-farm activities, they generally find lower paid employment, which in fact increases income inequality. This is why inequality has to be investigated in its many national settings, as the effects can vary [Canagarajah et al., 2001]. In the case of Vietnam, inequality was extended even after the land reform, as authorities tended to give privileges to the richer households. These households were then supposed to be able to invest to a larger extent and create jobs, but the practice merely left the poorer households landless as before [van de Walle and Gunewardena, 2001]. Furthermore, the Gini coefficient rose by 20% for urban areas and 33% for rural areas from 1998 to 2002 [Bonschab and Klump, 2007].

In this study the non-farm sector is defined more widely, as wage employment, even in agriculture, will most likely reduce risks for the household. Also agricultural shocks like crop pests will, most of the time, not affect all households to the same

extent and thus the off-farm income source will still be available. Therefore, the following analysis will focus on off-farm employment and the term diversification refers to either diversification of income sources or diversification of sectors, and the term rural non-farm economy will be used more widely in a rural off-farm economy sense. Therefore, off-farm employment includes all activities that are outside self-employed farming and livestock keeping. Furthermore, the term farming will always refer to self-employed farming and excludes wage labor in the agricultural sector.

As elaborated earlier, the objective of this chapter is to identify the characteristics that determine the welfare status of rural households in Vietnam. Special attention is given to the influence of off-farm incomes. In contrast to previous research, this study focuses only on remote rural areas in order to address the real characteristics of the target population, and does not include urban or boom areas. In most research on RNFE, the samples are based on observations for entire countries, and try to establish general patterns and do not address the special group that lags behind in development. All in all, the connection between poverty and the participation in non-farm and off-farm activities is tried to establish based on a broad sample in a specific region, especially addressing those who lag behind, i.e. the rural poor.

2.2 Poverty in Vietnam

Vietnam, like most Asian economies, made impressive progress in achieving the MDG [United Nations, 2005b]. Furthermore, the Human Development Index[2] (HDI) outlines Vietnam's successes in development. With a HDI value of 0.733, Vietnam is currently ranked 105th of the 177 countries included in the report and is categorized in the group showing medium human development. Nevertheless, comparing this value to those for the rest of South-East Asia, Vietnam remains, alongside Laos (0.601) and Cambodia (0.589), one of the lowest performing countries in this region [Watkins, 2007].

[2]The index is a measure that combines several indicators on human development to an index ranging between zero and one, where one is the best score.

Table 2.1: Poverty indicators Vietnam.

Indicator	Unit	1993	1998	2002	2004	2005
Poverty[a]	%	58.1	37.4	28.9	24.1	12.9
Urban	%	25.1	9.2	6.6	10.8	*n.a.*
Rural	%	66.4	45.5	35.6	27.5	*n.a.*
Ethnic minorities	%	86.4	75.2	69.3	*n.a.*	*n.a.*
Food poverty	%	24.9	15.0	9.9	7.8	10.9
Living with less than $1/day	%	39.9	16.4	13.6	10.6	2.2
Gini coefficient		0.34	0.35	0.37	0.37	*n.a.*

Notes: a: Here the national poverty line is referred to.
Source: Own presentation based on United Nations [2005b, p.3].

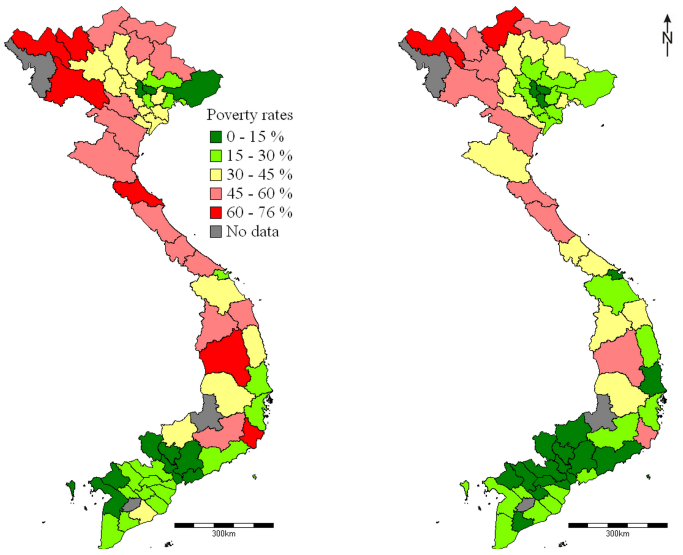
Table 2.1 shows that the fight against extreme poverty was very successful in the past decade with the incidence of poverty[3] reduced to 12.9%, food poverty reduced to less than 50% of the level in 1993 and the share of people living with less than $1 PPP per day reduced to 2%. Nonetheless, recent research has produced some doubts as to whether this trend will continue, with fears that it might slow down or even reverse [Gaiha et al., 2007]. This is also reflected in the declining pro-poor growth figures, which fell from 5.7% for the 1993-1998 period to only 2.2% for the 1998-2002 period [Bonschab and Klump, 2007].

Furthermore, some groups were not able to benefit from the recent boom. Dividing out the poverty rate and the poverty gap[4] into the rural and urban populations and the ethnic minorities, one can see that the rural population is lagging behind with the latest poverty rate (headcount ratio[5]) figure of 27.5%, while ethnic minorities had as much as 69.3% of the population living in poverty in 2002. Additionally, after a decade of constant decline, the food poverty rate rose again from 2004 to 2005 and the Gini coefficient rose continuously from 0.34 in 1993 to

[3]The national poverty line was set at 200,000 Dong ($1.29 PPP per day / $0.40 [ICP, 2008]) for rural areas. Due to recent inflation, these thresholds were adjusted to 300,000 Dong ($2.09 PPP per day) for rural areas.[Vietnam News, 2008]

[4]"Poverty gap is the mean shortfall from the poverty line (counting the non-poor as having zero shortfall), expressed as a percentage of the poverty line. This measure reflects the depth of poverty as well as its incidence."[World Bank, 2007b, p.348]

[5]The absolute number of poor divided by the total population size. Here, the terms headcount ratio and poverty rate are used analog.



(a) 2002 (N=3132). (b) 2004 (N=3132).

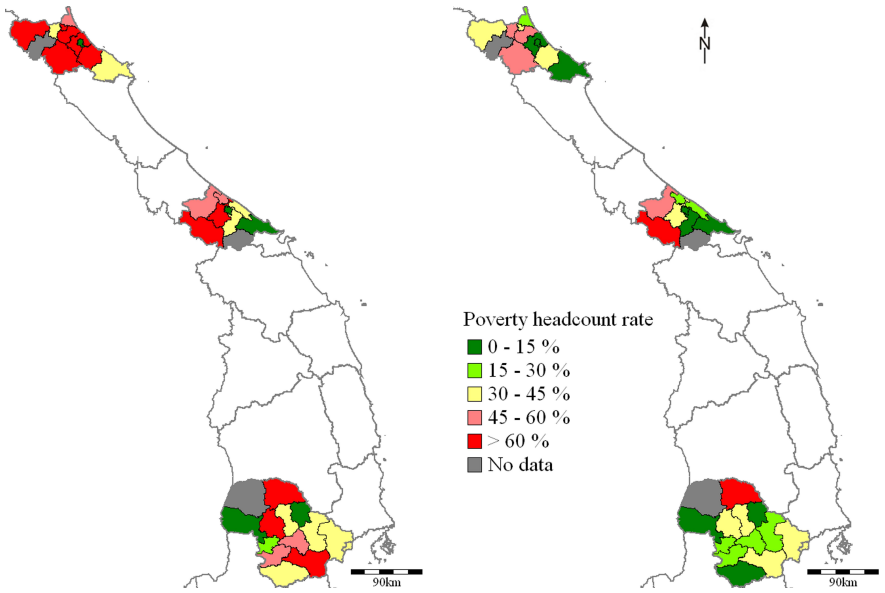
Figure 2.1: Poverty rates rural Vietnam.

Source: Own calculations based on: GSO [2002; 2004]. Map using ADePT Maps 2.0 [2009].

0.37 in 2005 suggesting a "pro-rich" / "anti-poor" growth rather than pro-poor growth.

Vietnam does also not constitute an exception when it comes to regional disparities. As shown in table 2.1 as well as in figure 2.1, the regional distribution of income in Vietnam is mainly concentrated in the boom regions of Hanoi and Ho Chi Minh City, which is also reflected in the rural-urban disparity. Therefore, poverty headcount ratios are also very different across the provinces, with the lowest ratios generally found in just those boom regions and the highest rates are in the Northern and Central highlands. The large poverty reduction can also be seen from figure 2.1 where poverty rates are far lower for figure 2.1b compared to figure 2.1a. Generally, despite impressive poverty reduction achievements, the ethnic and spatial poverty trends persist, leaving ethnic minorities and remote households behind the overall positive trend [Gaiha et al., 2007].

As one example, figure 2.2 shows disaggregated district level poverty differences for the research provinces of DFG FOR 756. Besides the poverty reduction that also took place in these provinces, the huge differences even within these smaller



(a) 2002 (N=3132). (b) 2004 (N=3132).

Figure 2.2: Headcount rates by district 2002 and 2004.

Source: Own calculations based on: GSO [2002; 2004];
Map generated using ADePT Maps 2.0 [2009].

regional units is visible. All provinces have poverty rates ranging from below 15% for some districts to more than 60% for other districts. This is not only based on the already elaborated disparities between mountainous and coastal areas but apparently also on other factors that go beyond the basic geographical facts. These might have to do with, for example, off-farm wage employment opportunities, which will be analyzed in the following.

2.3 Household survey design and data

Our research group's (DFG FOR 756) research area are three provinces in North-Eastern Thailand, i.e. Nakhon Phanom, Ubon Ratchathani and Buri Ram, as well as three provinces in Middle Vietnam, i.e. Ha Tinh, Thua Thien Hue (TT Hue) and Dak Lak. This study refers to the Vietnamese provinces only. The provinces were selected as representing some of the poorest within each country.

Besides their common characteristic of having only one major city (the provincial capital) and no other medium or large cities, as well as only a small industrial sector, the three provinces in Vietnam have quite considerable differences concerning their basic geographic and economic characteristics.

First, Ha Tinh Province is located in the North-Central region of Vietnam. Ha Tinh's economy is dominated by agricultural production. In 2006, agriculture/fishery and forestry accounted for 43% of the provincial gross domestic product (GDP). With only 39 thousand inhabitants, the provincial capital of Ha Tinh (Ha Tinh City) is a rather small center in the province [The Ha Tinh Statistical Office, 2007]. The per capita industrial and agricultural outputs are far less than the country's average production [GSO, 2008c]. The provincial poverty headcounts are estimated at 44.5% for the whole province and at 47.4% for rural Ha Tinh [Minot et al., 2003]. Ha Tinh province has been faced with major outflows of migrants for decades. Between 1994 and 1999 Ha Tinh faced a population loss of 4.1%. As most of the migrants are highly educated young people, this brain drain[6] acts to reduce the welfare of the province and reduce economic growth in the long run [Bahrenkamp, 2005].

Second, TT Hue is located in central Vietnam, bordering the third biggest city of Vietnam, Da Nang. Its economy is more diversified compared to Ha Tinh. Agriculture/fishery and forestry accounts for only 20% of the provincial GDP (GPP) while industry/construction and service account for 36% and 44% respectively. Of the three provinces, TT Hue is the only one with a considerably higher output per capita from industrial production compared to agricultural production (table 2.2). With 331 thousand inhabitants, or 30% of the total population, the provincial capital of Hue province (Hue City) is the economic center and the main destination for tourists visiting Hue. More than 400 thousand international and more than one million Vietnamese tourists stayed at least one night in Hue city in 2006 [The Thua Thien Hue Statistical Office, 2007]. The industrial output is more than twice as high as in the other two provinces but still lags far behind Vietnam's average production [GSO, 2008c]. The poverty headcount is estimated at 47.2% for the

[6]Brain drain refers to the situation in which the highly educated people from a country/region migrate to another and the home country/region only bares the cost of their education but can not profit from them due to migration [Wong and Yip, 1999].

whole province, with the rural poverty headcount being as high as 57.9% [Minot et al., 2003].

Table 2.2: Output by sector and province.

	Output per capita in 1994 prices ($)	
	Agriculture	Industry
Ha Tinh	76	80
TT Hue	42	253
Dak Lak	199	90
Vietnam	106	868

Sources: Based on GSO [2008c].

Third, Dak Lak province is located in the central highlands of Vietnam. The provincial capital Boun Ma Thout with 321 thousand inhabitants is the only economic center in the province. The province derives most of its income from coffee plantations and processing, and is Vietnam's major coffee producer. Vietnam accounts for about 15% of the world's coffee production and 50% of the worldwide robusta exports [ICO, 2008a]. This is also reflected in the dominance (>50%) of agriculture in the GPP composition [The Dak Lak Statistical Office, 2007] and the above average agricultural production [GSO, 2008c]. Based on its coffee production, Dak Lak province, although landlocked (which is often seen as a disadvantage for economic development) achieved major poverty reduction. The poverty headcount was reduced to 39.5% [Minot et al., 2003]. As the coffee prices have increased greatly over the last few years, the poverty headcount is most likely even lower by now. After almost a decade of low coffee prices, recent years have been characterized by a constant and strong increase in coffee prices, even for the low price variety robusta that is mainly planted in Vietnam. Since 2004 coffee prices have almost tripled [ICO, 2008b]. Nonetheless, as this drastic price fluctuation shows, the coffee industry and thus the households linked to this industry are prone to changes in the world market that can be huge in relatively short time periods (see Appendix A.1, page 136).

Within the locations presented above, a three stage sampling procedure was carried out. Due to the high heterogeneity in terms of population density and agro-ecological conditions, provinces were subdivided into three zones: coastal area

(blue), mountain area (green) and rice plain area (yellow) (see Figure 2.3). Dak Lak was divided into mountain and rice plain area only as it has no coast. In

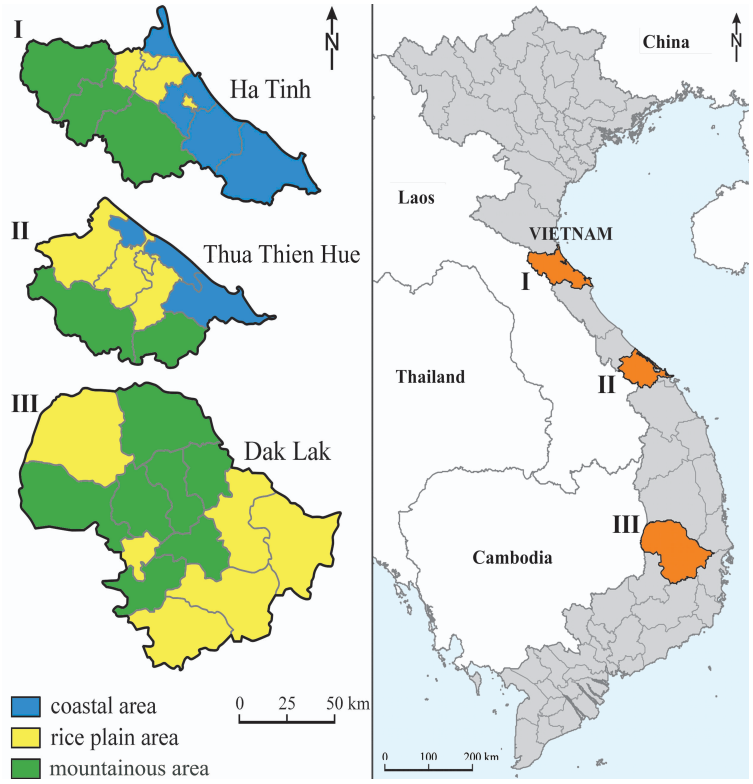


Figure 2.3: Sample stratification.

Source: Own presentation based on Hardeweg et al. [2007].

the first step, sub-districts were sampled randomly with a probability derived from the size differentials with respect to the predefined zones. In the second stage, surveyed villages were chosen randomly again based on the sizes of two villages within the sub-district. Finally, the households were sampled from an equal probability sampling procedure with implicit stratification by household size. Based on this sampling procedure, an oversampling of small strata with low population density (i.e. mountainous area) could not be avoided [Hardeweg et al., 2007]. Therefore, in the analysis later, this fact is accounted for by incorporating a weighting based on the sampling probabilities of each household.[7] All in all, our sample covers the

[7]For details on the weights see [Hardeweg et al., 2007].

people in need living in the least favorable areas and is designed especially for the analysis of poverty-related topics.[8]

2.4 Conceptual framework

The underlying concept for this chapter is the sustainable livelihood framework developed by Ellis [1998]. His approach combines several earlier approaches to poverty analysis. The framework is based on the consideration of livelihood diversification as a possible instrument to reduce vulnerability to poverty of rural households. He defines livelihood diversification as:

> "[...] the process by which rural families construct a diverse portfolio of activities and social support capabilities in their struggle for survival and in order to improve their standards of living."

He concludes that: "Diverse rural livelihoods are less vulnerable than undiversified ones" [Ellis, 2000] as the negative implications are outweighed by the positive impacts. Figure 2.4 indicates the different livelihoods of households and their interactions. The central parts of the households' livelihoods are their assets. Besides financial assets, these include cash earnings from farm production (crop, livestock and aquaculture sales), non-farm self-employment, wages, rent, remittances and other kinds of cash income. They also include in-kind payments, such as home-consumed farm produce or in-kind transfers from other households, as well as social capital like kin, family or village. Finally, natural resources such as air and water form the most basic part of the asset portfolio.

Besides its assets, a household's livelihood consists of the social and public services, such as education, health facilities or infrastructure that the household can access or profit from. The institutional setting greatly influences the livelihoods of rural households. Institutions determine not only property rights but also the enforcement mechanisms of contracts and the ease of doing business or the security of employment. Additionally, institutions also cover social norms, culture and other intangible assets that determine the behavior of people/households [Ellis, 1998].

[8] The questionnaire used can be downloaded from `http://www.vulnerability-asia.uni-hannover.de/downloadspublic.html`.

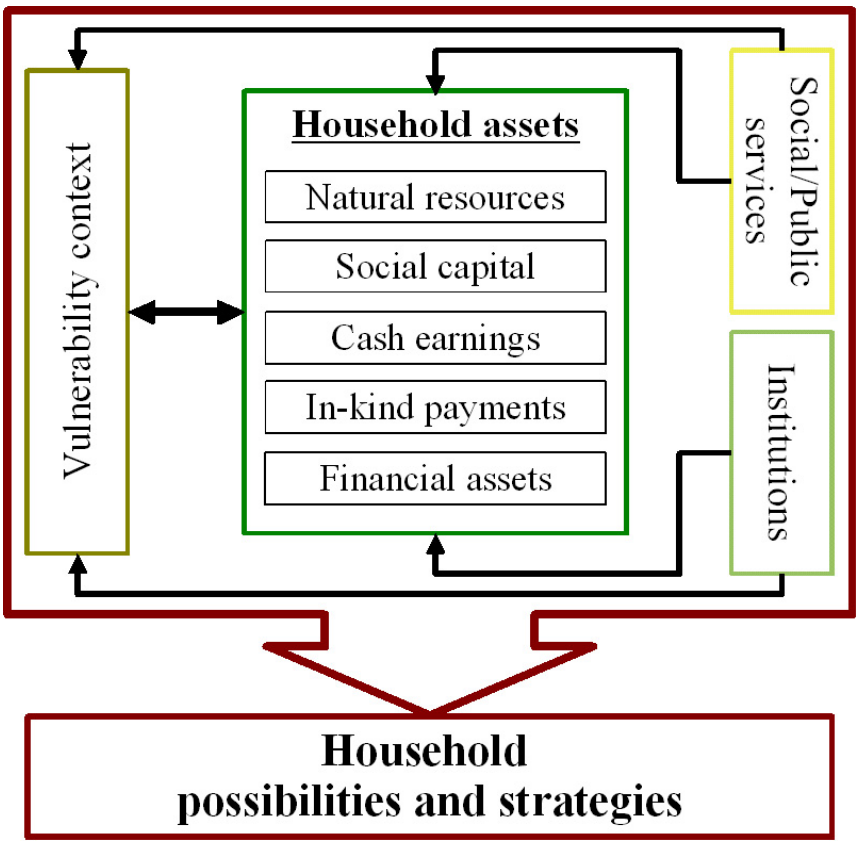


Figure 2.4: The sustainable livelihood framework

Source: Adapted from [Möllers and Buchenrieder, 2005, p.22]; according to [Ellis, 1998, p.4].

All these livelihoods are prone to external shocks and stresses that may lead to decreases or increases in the levels of these livelihoods. On the one hand, the main interest of research into vulnerability to poverty is the ability of households to absorb negative shocks so that, even faced with adverse conditions, their livelihoods are still guaranteed. On the other hand, positive shocks are of interest as well. Faced with the question of how to get people out of poverty, positive shocks caused by political decisions (for example redistribution policies, infrastructure investments, ...) may assist in shifting the livelihoods of the rural poor above the poverty line and providing them with the opportunities to stay out of poverty.

Thus, the dynamic measure of vulnerability to poverty is closely linked to the livelihood framework and to the static measures of poverty research. Estimates of vulnerability try to evaluate the change in welfare over time by taking into account

the fluctuations over time, the likelihood of these fluctuations to occur, as well as the resilience of households [Gaiha et al., 2007]. A vulnerability measure, in contrast to the multiple ex post measures of poverty (for example income poverty, food poverty, ...), evaluates the ex ante risk of staying poor or becoming poor [Chaudhuri et al., 2001]. The concept of vulnerability is not explicitly included in this study as vulnerability is dynamic and thus usually requires a panel data set. Nevertheless, vulnerability considerations underlie most parts of the analysis. Using theoretical models of intertemporal household behavior would allow for vulnerability analysis from cross-sectional data, but it includes multiple theoretical assumptions, meaning that a panel data set should be the ideal basis for the analysis of vulnerability as it draws upon the real behavior of households [Chaudhuri et al., 2001]. Because the panel data is not yet available at this point and the panel data of the VHLSS do not provide enough detail to be suitable for the analysis, this chapter focuses on poverty-related questions.

The concept of vulnerability implies that diversified livelihoods should serve as vulnerability-reducing factors, as most shocks will not affect different types of income or different sectors to the same extent, enabling households to maintain a certain level of income and consumption. One way to diversify livelihoods constitutes taking up employment in the RNFE in addition to working on the family farm. A well functioning RNFE thus provides households with the preconditions necessary to secure their livelihoods [Stampini and Davis, 2008]. Nevertheless, farming is usually not completely abandoned as it also serves as a safety net in case another income source, such as non-farm employment, fails. Furthermore, subsistence agriculture is a traditional occupation and will still be pursued by the household members who do not work.

The diversification into different farming activities is not taken into account for this study as most farming activities are prone to similar shocks in environmental conditions (such as floods or droughts). Although the influence of the world market might differ based on the type of crop or livestock, the main shocks still result from environmental conditions and thus affect most farm activities to the same extent.

2.5 Poverty in the research provinces

2.5.1 General characteristics of the households

In order to gain some insight into the household structure as a basis for the analysis of the poverty implications, the household characteristics are shown in table 2.3. As the sampled households represent those that lag behind in the development process (i.e. rural households in the least developed provinces), the shares of poor households are higher for our sample compared to Vietnam in general.[9] With 26%, Dak Lak has the lowest share of poor households of the three provinces, which is still considerably higher than the figure for the whole country (12.9%). The share for the other provinces is even higher with 36% and 45% being considered poor in case of TT Hue and Ha Tinh respectively. The education of the household heads varies,

Table 2.3: Household characteristics by province.[a]

	Unit	Ha Tinh	TT Hue	Dak Lak
Poor households[b]	%	45	36	26
Education HH head	years	8.4	6.8	7.2
HH Head age	years	51	48	44
Ethnic minority HH's	%	0	24	38
House	m^2 pc	18	16	17
Land size	hectare pc	0.14	0.20	0.27
Kids (<16) and elderly (>70)	%	40	43	41
Distance to provincial capital	min	99	69	80
Households with access to electricity	%	97	94	90

Note: a: All values are means (N=2195).
b: Here the national poverty line of 300,000 Dong for rural areas is applied.
Source: Own calculations based on DFG FOR 756 [2008].

with the most educated household heads living in Ha Tinh and the least educated in TT Hue. Considering the provincial characteristics, this is a surprising result, as one would expect that the more off-farm opportunities households have, the more

[9]The income calculation follows the concept of Johnson et al.. Incomes were derived from the different sections of the household questionnaire. All income figures mentioned are net incomes with the expenditure for each respective income source already deducted. Income can therefore be negative in some cases. Furthermore, non-monetary benefits are taken at their market value and included in the income aggregate.

people would invest in education in order to meet the requirements for getting those more highly paid jobs. Here, the opposite theoretical effect of opportunity costs of education (referring to the fact that people miss the opportunity of earning money whilst attending school) seems to be dominant. One possible explanation for this observation is that formal education is not the major determinant for getting an off-farm job in these provinces, which is common in agriculture, but especially so in Vietnam where people also rely more on other factors such as kinship or similar relationships.

As mentioned above, Dak Lak province's main income source is agriculture. Therefore, the land area per capita is considerably greater for this province. Besides some cashew nut and corn production, the absolutely dominant cash crop in Dak Lak is coffee. In Ha Tinh, the dominant cash crop is rice, although sweet potato and peanuts also have a significant share. The picture in TT Hue is slightly different. Although rice is also the major cash crop there, glue tree and fruit production, the second and third most common crops, are almost as common as rice.

Table 2.4 shows that households in the three provinces are fundamentally different. Looking at the total income figures, as well as the composition of these incomes, it turns out that there are basic differences even among these least developed provinces in Vietnam. The most obvious are the mean incomes per capita of the

Table 2.4: Household income composition by province.[a]

Indicator	Unit	Ha Tinh	TT Hue	Dak Lak
Income per month	$per capita	27	30	41
Farm income	%	16	12	21
Off-farm income (agrar sector)	%	21	33	46
Off-farm income (other sector)	%	13	19	9
Number of non-farm businesses per HH		0.2	0.6	0.2

Notes: a: All values are means (N=2195).
Source: Own calculations based on DFG FOR 756 [2008].

household members. Households in the Ha Tinh and TT Hue provinces earn only 66% and 73% respectively of the total income of households in Dak Lak. In addition

to farm income, many households have already diversified their income to include sources other than farming. The share of the total household income generated by farming activities ranges from 12% for Hue province to 21% for Dak Lak province. This means that about 80% of the total household income comes from other sources, including off-farm employment, non-farm self-employment, land renting or several types of transfers, such as remittances or public transfers. In Dak Lak, most of the off-farm income is generated by wage employment on other farms, while in Hue it is mostly non-agriculture income via self-employment or wage employment in other sectors.

The same trends in terms of income sources are visible from the household typology given in table 2.5. The household types refer to farm income only, on the one hand, and off-farm wage employment as well as non-farm self-employment on the other hand. A 'farm' household thus does not participate in any of the latter activities, while a 'non-farm' household refers to one that does not have any crop, livestock or aquaculture production. The two types of 'mixture' households refer to those that derive income from both farm and off-/non-farm activities. This group is divided into one group for which the farm income exceeds the non-farm income (mixture-farm) and vice versa for the mix-non-farm households. The households referred to as 'others' are those that have none of those income sources and rely on transfer payments or renting activities. According to these types, the households in

Table 2.5: Household types by province (N=2136).

Province	Household income source categories				
	Farm	Mixture		Non-farm	Others
		farm	non-farm		
Ha Tinh	53%	30%	13%	2%	2%
TT Hue	30%	44%	13%	11%	2%
Dak Lak	27%	42%	26%	5%	0%
Whole sample	36%	39%	17%	6%	2%

Source: Own calculations based on DFG FOR 756 [2008].

Ha Tinh rely to a much higher extent on pure farming as compared to the other two provinces. The highest share of diversified households (i.e. mixture households) is surprisingly found in Dak Lak, the province that also has the highest share of farm income. This is due to the fact that coffee production in Dak Lak is not only

organized via smallholder farming, but also takes places on numerous large estate farms, which offer the possibilities of off-farm employment for the households. This is also indicated by the fact that the biggest share of off-farm employment in Dak Lak is in the agricultural sector. The diversification in Dak Lak, therefore, does not necessarily reduce the vulnerability of the households, as their off-farm incomes may partly be subject to similar shocks as their farming activity. In all three provinces most of the mixture households generate higher incomes from their farming activities as compared to their off-farm activities.

Table 2.6: Income differences by sector.

Sector	Income per month ($)	N
Agriculture	62	794
Service	77	397
Industry	82	328
Construction/mining	68	324
Public sector	74	286
Others	65	1

Source: Own calculations based on DFG FOR 756 [2008].

Table 2.6 indicates differences in wages as well as number of people employed across the different sectors of off-farm employment in the research locations. Most jobs are again in the agricultural sector but are paid less than all other options. The highest wage can be earned in industry. The service sector offers the most jobs outside the agricultural sector. We therefore need to take a closer look at the income composition of the households along the income groups. Table 2.7 gives the detailed composition of the households along six income groups based on fractions of the national poverty line.

The group that lives with less than a fourth of the poverty line income has 0.6 fewer income sources than the rest of the groups, which have a rather similar number of sources.

When it comes to wage employment, most of the poor households earn a substantial share of their income on other farms. This share increases up to the group that earns incomes up to twice the poverty line and then quickly declines with further increases in household income. The other most important area of wage

Table 2.7: Income composition[a] of households along income classes (N=2137).

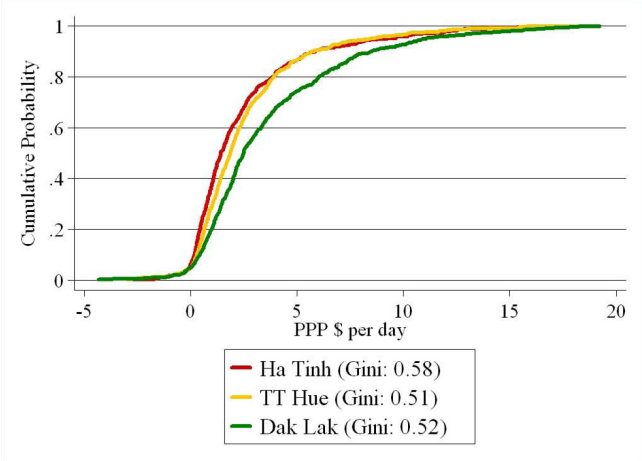
		Income groups (fractions of national poverty line)					
Indicator	Unit	< 0.25	$0.25 - 0.5$	$0.5 - 1$	$1 - 2$	$2 - 5$	$5 <$
Income sources[b]	#	2.6	2.8	3.1	3.3	3.4	3.3
Farming[c]	%	−55	20	27	30	30	37
Off farm employment in:							
industry	%	1	2	3	2	3	1
construction	%	5	9	13	10	7	2
service	%	1	4	3	4	4	2
public sector	%	2	4	2	3	6	9
agriculture	%	18	29	43	45	34	17
Non-farm business	# pc	0.02	0.01	0.03	0.07	0.12	0.14
Remittances	%	4	4	4	6	8	9
Public transfers	%	6	5	4	3	3	1

Notes: a: The income shares do not add up to 100% due to the possibility of negative incomes from some sources. Furthermore, sources like income from house and homestead that is included in the household income is left our here as it does not involve cash flows.
b: The maximal number of sources is 6.
c: Includes cropping, livestock and hunting.
Source: Own calculations based on DFG FOR 756 [2008].

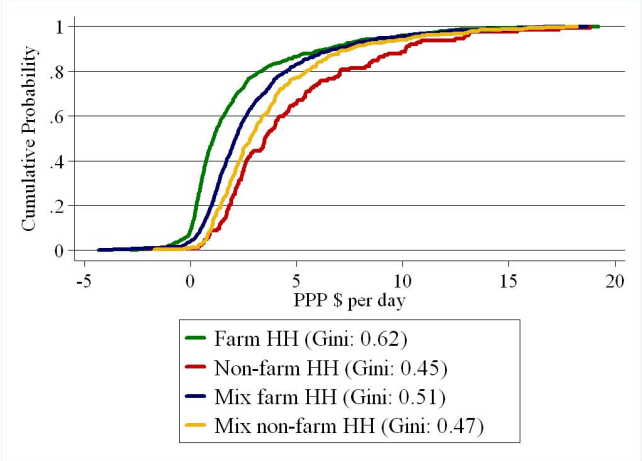
employment is the construction sector. Its role is less important in higher income groups, where the public sector accounts for a greater proportion of income - up to 8% of the total for the highest income group. Therefore, besides relying on their own agricultural production, poor households diversify into wage employment. As they mainly work in the agricultural sector, their alternative source of income may be affected by similar external shocks and prone to similar adverse conditions, meaning that a diversification strategy that takes place in the same sector is less likely to be successful in reducing vulnerability. Nevertheless, many of the agricultural shocks will not affect all households to the same extent and therefore leave several jobs in the sector unaffected.

The households at the upper end of the income distribution do, in contrast to the poorer households, run some non-farm businesses but also rely to a substantial extent on farm incomes.

Taking the differences in income from different sectors and the rising inequality indicated by the Gini coefficient in table 2.1 into account, it is worth investigating the inequality within the household groups as well as within the provinces.



(a) Provinces.



(b) Household types.

Figure 2.5: Income distribution of households by household type.

Note: Only households that earn less than $20 PPP per day are included (18 Mix households, 7 Farm households, 3 Non-farm households; 34 Ha Tinh, 14 TT Hue and 28 Dak Lak households were excluded due to higher incomes) N=2083.
Source: Own calculations based on DFG FOR 756 [2008].

Figure 2.5 shows the cumulative income distribution for the four major household income groups (farm, non-farm and the two mixture types). It shows that the poverty status of the households is closely linked to the characteristics of their income portfolios. Within the group of farm households, the income is most unequally distributed. Considering the Gini coefficient of 0.37 reported by United Nations [2005b] for Vietnam, the distribution in the provinces is much less even

than for Vietnam in general. Therefore, the inequality, as the sample does not cover urban areas, is not simply based on rural-urban differences, as implied by table 2.1, but also occurs, seemingly to an even greater extent, within rural areas.

Although it seems to be the income maximizing and inequality minimizing choice to generate income from off-farm activities at least in addition to farming, the most frequent occupation of rural households in these regions remains farming (table 2.5). As the share of farm income rises constantly with the income classes but also generates negative incomes among the poorest households, it seems to be a major factor that drives the observed inequality. One explanation for this could be economies of scale. Generally, a minimum land area is required for profitable farming. This fact suggests that farming might be a factor that makes poor households poor and rich households rich. It is also reflected in the high Gini coefficient in the group of farm households.

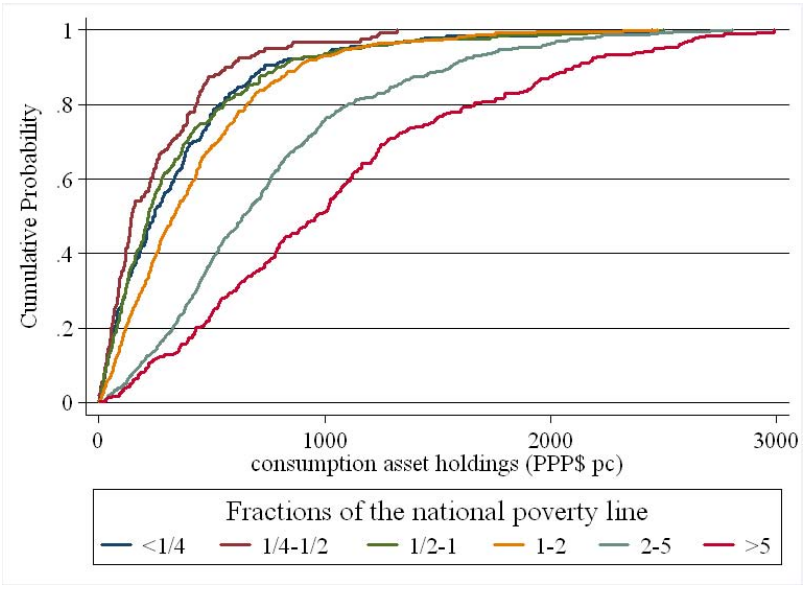


Figure 2.6: Consumption asset holdings by income group.

Note: Only households that hold less than $30,000 PPP were included for clearer display (47 were excluded due to higher asset holdings.) N=2137.
Source: Own calculations based on DFG FOR 756 [2008].

Taking into account the consumption asset endowment (figure 2.6) of the households, one can see that the lowest income group has a higher value of productive assets, as well as an equal level of consumption assets, compared to the next level.

This leads to the assumption that a high number of the households that are currently in the poorest group are in higher groups in other years but had slipped to the bottom end of the income hierarchy due to adverse conditions in the year of the survey.

Based on this observation, the asset endowment is used as wealth indicator in addition to the current income, as it is likely to reflect the medium-term wealth status of the households. Short-term income fluctuations affect the consumption asset endowment only marginally, as these assets are not easy to convert into cash and will thus stay rather constant even in years of financial setbacks.

2.5.2 Determinants of being income poor in the research area

As explained in the previous section, poor households seem to rely to a greater extent on agricultural income, which itself seems to be affected more often by adverse conditions leading to financial instability, poverty and inequality. In order to verify this conclusion from the descriptive data presentation, the determinants of a households' income is analyzed and additionally the determinants of their asset endowments as a medium-term wealth indicator are analyzed.

To serve this purpose, two regressions are utilized (table 2.8), with the independent variable being first, the natural logarithm of the households' income and second, the natural logarithm of their asset endowment.[10] As Figure 2.6 implied that the value of consumption assets is less affected by shocks and other setbacks than the current income, it is used as an additional (medium-term) welfare measure. The following set of explanatory variables will be used, based on the sustainable livelihood framework (recalling Figure 2.4, page 21), the results from the literature and the analysis in the previous section.

First of all, the influence of the household income typology is covered using three dummy variables, namely non-farm HH, mix-farm HH and mix-non-farm HH, with farm HH being the reference case. These variables indicate the composition of the cash earnings of each household. As increased non-farm income opportunities are found to increase household incomes, the income typology is used to indicate the welfare impact of participation in the non-farm economy.

[10]The natural logarithm is used as the distribution of both variables is right skewed.

The second group represents the resources and the financial assets of the household using the land holdings per household member as well as their credit volume. Furthermore, the number of insurances is included to cover for possible payments received for balancing shocks or other insured events. The value of its production assets was excluded as it is correlated with farming that requires more assets as compared to the other activities. Additionally, the number of shocks experienced by a household in 2006, and the number of insurances it holds, are included to account for external influences that caused an exceptionally low income or compensated for it respectively. These variables are a rough indicator for the vulnerability context of the households.

Furthermore, some basic household characteristics such as education, dependency structure and the age of the household head are included, plus a dummy indicating whether the household belongs to one of the multiple ethnic minorities. The variable nucleus-wider ratio gives the share of a household members that the household head does still count as household members but who live outside the household for more than 180 days per year. These are likely to give some insight into the opportunities and constraints of the household in terms of income generation.

Education (measured as mean years of schooling) is included, as being less educated reduces the income opportunities of households. More highly paid jobs in the non-farm economy usually require higher education to meet the demands of employers and the greater challenges of those jobs.

The dependency structure (measured as the percentage of dependent members, i.e. defined as household members older than 70 or younger than 16, living in the household) should increase the likelihood of being poor. The more dependent members a household has to take care of, the more likely it is to be poor.

To interpret the nucleus-wider ratio, one has to take the characteristics of the wider members into account. Among the sampled households, the two most frequent reasons for not staying with the household are job opportunity (55%) and schooling/studying (32%). Therefore, the nucleus-wider ratio can have two effects. On the one hand, in the case of job migration (temporarily or permanently), the household is more likely to receive remittances and is therefore less likely to be poor. On the other hand, in the case of schooling or studying, the household has

to support these migrants and thus has more people who do not contribute to the household income, making poverty more likely.

Finally, the different characteristics of the provincial structures are captured by the three dummies indicating the location of the households. Furthermore, the travel distance to the nearest town is included to account for market access and other agglomeration advantages.

The travel distance to the nearest town is included as a proxy for labor and product market access, which should enhance welfare. People from households that face less travel costs in reaching the bigger labor and produce markets in the cities are more likely to generate higher incomes. Furthermore, rural farmers who are able to contact the traders/customers more easily and with a shorter time lag, have better chances of finding those who pay better or who purchase produce even in times of low demand on the market. These households are also able to access new customers who have special needs such as flexible and/or spontaneous supply (for example, hotels). This gives the households more options in terms of market channels and thus enables them to diversify within the agricultural sector, making them less vulnerable to short term price fluctuations than households that market all their produce to one trader, for example in their home village.

Table 2.8: Determinants of household income and consumption asset holdings.

		Income				Consumption assets			
Variable	Unit	Coef.	Sign.	RSE	ey/ex.	Coef.	Sign.	RSE	ey/ex.
Credits	$pc	0.0002	*	0.0001	0.0077	0.0003	***	0.0001	0.0087
Land	ha pc	0.2227	***	0.0829	0.0109	0.3517	***	0.0851	0.0120
Insurances	#	0.0416	***	0.0149	0.0113	0.1171	***	0.0133	0.0222
Shocks 2006	#	-0.0112	***	0.0348	-0.0161	-0.1671	***	0.0339	-0.0171
Household head age	years	0.0008		0.0020	0.0095	0.0032		0.0020	0.0254
Ethnic minority	dummy	-0.5416	***	0.0707	-0.0258	-0.7533	***	0.0722	-0.0242
Mean schooling	years	0.0513	***	0.0074	0.1000	0.0790	***	0.0071	0.1079
Dependency	%	-0.4567	***	0.1051	-0.0449	-0.7426	***	0.1065	-0.0506
Nucleus/wider size	%	-1.0208	***	0.1793	-0.2255	-1.2935	***	0.1727	-0.1989
Non-farm HH	dummy	0.6983	***	0.0967	0.0106	0.2039	***	0.1146	0.0021
Mix farm HH	dummy	0.4555	***	0.0660	0.0455	-0.0609		0.0575	-0.0042
Mix non farm HH	dummy	0.6217	***	0.0656	0.0291	0.0714		0.0612	0.0023
Travel distance	min	-0.0008		0.0005	-0.0162	-0.0015	***	0.0005	-0.0214
Hue	dummy	0.2483	***	0.0688	0.0186	-0.0037		0.0688	-0.0002
Dak Lak	dummy	0.7015	***	0.0655	0.0610	0.5008	***	0.0607	0.0299
Ha Tinh	dummy	dropped				dropped			
Constant		4.2241	***	0.2313		6.5387		0.2132	
Dep. Var.			ln(income per day ($pc))				ln(consumption assets ($pc))		
		N	=1717			N	=1838		
		F(15,1701)	=46			F(15,1822)	=61		
		Prob > F	=0			Prob > F	=0		
		R^2	=0.2812			R^2	=0.3742		
		Roots MSE	=0.9688			Roots MSE	=0.9678		
		max. VIF	=2.02			max. VIF	=1.97		

Notes: a: Significance at the 99% level =***, 95% level =** and 90% level =*.
b: 160 households had to be excluded due to negative or missing incomes.
c: For a detailed description and descriptive statistics of the variables included, see Appendix A.2 and A.3, page 137 and page 138.
Source: Own calculations based on DFG FOR 756 [2008].

The factors that affect both the incomes and the consumption assets holdings will now be elaborated. First of all, the amount of credits has a significant positive effect on both incomes and consumption asset holdings. Especially in case of consumption assets, the credit sum indicates that many households finance their consumption and consumption assets by taking credits.[11] An examination of the financing of motorbikes enables interpretation of the influence of these credits on income, as a motorbike enables a household to access markets and find lucrative jobs in a wider area than is generally accessible via public transport. This tendency is supported by the slightly negative correlation between credit and travel distance.

The second highly significant and positive variable is land size. Higher land holdings enable a household to either produce on a bigger area or to rent out parts of their land and therefore generate higher incomes and finance more consumption assets. For the land area in particular it might be argued that it is endogenous in an income regression, as income would enable a household to buy additional land and again generate more income. In the special case of Vietnam this is less likely as the land market is still not completely free, and although households can obtain legal status for their land it is never owned but only leased to a household for a certain number of years. Furthermore, based on resolution ten in 1998, that introduced the privatization of land, land rights were given to individuals in a "remarkably egalitarian way" [Ravallion and van de Walle, D., 2004]. Nevertheless, authorities tended to give more land to well connected households [van de Walle and Cratty, 2004]. Therefore, land size is less likely to be endogenous but might serve as a proxy for government connections. In any case, having more land enables households to generate more income and to acquire more assets.

The dummies indicating the household income structure all positively and significantly affect household income. The effect for non-farm households is greater than for mix non-farm households, which is itself greater than that of mix-farm households. This might indicate that, in fact, agriculture is the activity that lowers the income of the mix households, while non-farm activities lift their income above the poverty line. This would support the common argument of agriculture being

[11] This observation is also supported by informal interviews with local expats as well as Vietnamese working closely with international agencies. Taking the density of motorbikes and their prices against the average incomes, one can assume that most of them are financed by credits. The mean income is less than 1% of the price of a motorbike.

a safety net for rural households. One important purpose of agricultural production for mainly non-farm households is to ensure that even in the case of job loss, the households still have the means to survive from their own production of food. The effect on consumption assets is only significant and positive for the non-farm households, and is insignificant for the other two dummies.

The variables for the number of shocks and the number of insurances are especially important in Vietnam and in the research provinces as flooding and taifuns are very common in this part of Vietnam. Both variables show the expected significant influence in both regressions, with shocks affecting the income and assets negatively and insurances positively.[12] The more shocks a household experienced in 2006, the lower the income it was able to generate. Shocks included here are of various kinds, including natural disasters, deaths of household members or robberies. The effects transmit through various channels depending on the type of shock. Natural disasters mainly affect agricultural income as they are mostly floods or droughts that destroy the means of agricultural production. Furthermore, shocks also affect the wage-earning possibilities of the households. In times of production stops due to flooding, the non-permanent workers do not receive any compensation for their lost income opportunity as they are employed on a daily basis. But even the permanent staff usually have to cope with major cuts in their earnings, as in times of a production stop (based on natural disasters, demand decrease, ...) they only earn a fraction of their normal income.[13] In the case of robbery, the effect depends on the item that is lost. If it involves purely consumption assets or saved money, the shock should not have any impact on income but on the asset endowment. In the case of assets that are crucial for employment or production, the effect could be dramatic. If a car or motorbike is stolen, the household might lose the means of marketing their produce or reaching their place of work and thus have to cope with major income losses due to this shock in addition to the asset loss itself. As expected the number of insurances works in the opposite direction as it will cover for just those losses described above. Theoretically, the coefficient should be zero as insurances generally cover only the amount lost, but here it turns

[12]From the correlation matrix it can be seen that shocks did happen more often in TT Hue and Ha Tinh and insurances are more common in TT Hue. Although the correlation coefficients are slightly above 0.2, the model does not show any significant changes when adding or deleting one of the variables and therefore the correlation does not play an important role.

[13]Based on personal communication with company managers and government officials.

out to be even positive as the value of each asset is discounted and therefore the asset value will be higher once the household buys a new one.

The education measure (mean years of schooling of all adult household members) positively affects asset value as well as income, which indicates that education pays off even in rural areas where jobs that require high education are usually scarce, leading to low returns to education in the absence of migration.

The dependency measure influences incomes and therefore the asset holdings, agreeing with general perceptions. The higher the proportion of dependent members, the poorer a household becomes.

The result shows that income increases with the share of household members who do not live in the household permanently but have migrated or at least migrate for more than 180 days a year. This indicates that the effect of receiving money from absent household members is greater than the effect of sending money to absent members, which is mostly done in the first phase of migration when the household member who does migrate is still searching for a job or attending school/university [Stark and Bloom, 1985]. This relationship indicates that job migration of some household members might be a path out of poverty for rural households, and that only the less successful members stay behind. Another possible interpretation is that only the relatively better off households are able to facilitate the migration of household members. This would mean that the effect of sending money is great, at least in the first period of migration. Nevertheless, a successful strategy to reach an income level above the poverty line should not be based on remittances, but should enable households to earn enough money on their own. Based on this analysis, it is not possible to decide which effect actually results from migration[14]. If the household depends only on the nucleus members to generate income, it is more likely to be poor. The nucleus-wider ratio shows a similar effect on the consumption assets holdings as it does on the likelihood of being poor. Therefore, the reasoning becomes analog. The more people have the opportunity to migrate successfully (earning more money than it would be possible by staying) the more likely the household is to increase its welfare level. This share can furthermore be interpreted as network assets. The more people a

[14]The effect of migration on the households left behind is the subject of further research. For details for the case of Thailand, see: Lübben [2009].

household counts as household members, although they do not actually stay within the household, the more opportunities the household will have to generate income, to diversify, to migrate or to borrow money.

The coefficient of belonging to one of the multiple ethnic minorities of Vietnam is, in accordance with the findings of other studies, negative in both cases. Therefore, ethnic minority households are more likely to be income poor as compared to the majority (Kinh - the majority ethnic group in Vietnam) households. Furthermore, according to general observations in many studies, belonging to an ethnic minority reduces the (medium term) welfare status of households. In Vietnam especially, ethnic minorities face severe problems as they mostly live in remote areas where income opportunities are limited. But as the third group of variables accounts for location (remoteness), this is not the only reason for these households to face more difficulties in generating income than Kinh households. Thus, this group has further disadvantages, analogue to the findings of van de Walle and Gunewardena [2001] Gaiha et al. [2007].

The measure indicating the distance to town (as minutes to reach) is only significant in the asset regression. Most likely it is not significant in the income regression as these towns are very small and therefore the labor and product market is too small to significantly affect the income opportunities of the households. Therefore, the variable is more likely to indicate the availability of several consumption assets and an economic structure that is based on retail rather than production.

The three measures accounting for the provinces in which the households live result in Dak Lak having a statistically significant influence on consumption asset holdings and the income of households, with Hue significant only in the income regression. The result that households in the Ha Tinh and Hue provinces are more likely to be poor is also supported by Minot et al. [2003]. The strong coffee industry in Dak Lak enables households to generate higher incomes than those in other provinces. Even if households are not directly linked to coffee production, processing or trading, many more households profit from this industry due to spillover effects. The effect is particularly large due to the recent explosion of coffee prices on the world market.[15]

[15]For further details, see section 2.3, page 18 and Appendix A.1, page 136.

2.6 Summary

Based on analysis of the income structure of the sampled households, the reliance on off- and non-farm income sources is different for different income classes and locations. On the one hand, households with higher total incomes also derive higher shares of income from farming activities but also have more non-farm self-employment that most of the time generate even more income than their farming. On the other hand, especially for the middle income classes, the share of income generated from wage employments increases by more than 50%.

The differences in the income distributions across the four main household income types is obviously in favor of higher shares of off-farm incomes. The households that do not participate in self-employed farming are generally better off as compared to the other types. The higher the farm share becomes (from mix non-farm to mix farm to farm) the lower the incomes tend to be. Similar results emerge for the inequality within the groups. The Gini coefficient is also highest for the farm households and lowest for the non-farm households.

These trends of higher welfare for non-farm households also emerge from the analysis of the determinants of household incomes. With farm households as the reference case, all other types earn significantly higher incomes. Furthermore, the provincial differences are also supported, with Ha Tinh being the poorest province with the lowest household incomes and asset holdings. The seemingly most prosperous province was TT Hue, based on its diverse industry and service sector, while Dak Lak's economy is dominated by agriculture and therefore seemingly less developed. However, the coffee industry that is Dak Lak's dominant sector was able to provide households with higher incomes compared to TT Hue households. Nevertheless, this is dependent of the high (and volatile) coffee price. Once the coffee price drops again, the picture will most likely change dramatically.

All in all, households rely on wage-employment as an additional source of income to a large extent, even in remote areas where jobs are mainly in the agricultural sector with comparably low salaries. Furthermore, after controlling for the commonly found determinants of income, the income portfolio still plays a major role. Even Dak Lak is able to overcome its seemingly adverse starting condition of

high shares of ethnic minorities, based on more off-farm opportunities due to the large coffee industry.

Chapter 3

Rural-Rural differences in Vietnamese Pro-poor growth - Does the income composition of households make a difference?

3.1 Introduction

3.1.1 The concepts of measuring pro-poor growth

The idea of pro-poor growth has been introduced as a concept to measure the achievements in poverty reduction efforts outlined by the millennium development goals, and attribute changes in poverty to a country's overall growth. The definitions vary slightly but generally include the common criterion of a "disproportionate growth of the incomes of the poor" [Klasen, 2004, p.64] or less restrictive "changes in the distribution [of income] were poverty reducing" [Ravallion and Chen, 2003, p.94]. The differences lie in the details of the definitions and especially the application, depending on the goals that are pursued. Generally, two different methods of analysis can be differentiated. On the one hand, those authors who are just interested in answering the question if there was any pro-poor growth and on the other hand those who want to quantify the rate of pro-poor growth. Furthermore, some definitions are narrower in their recognition of pro-poor growth while other use wider measures. The widest definition considered here requires the growth rates of the poor to be above zero (def I). A less restrictive definition demands that the growth in incomes of the poor is greater than the mean growth (def II). The narrowest and therefore most restrictive definition requires that the absolute increase in incomes of the poor exceeds the absolute increase in average incomes (def III) [Grosse et al., 2008].

Based on these differences, several measures of pro-poor growth have been suggested. McCulloch and Baulch [1999], as well as Kakwani and Pernia [2000], focus on the question of whether pro-poor growth was achieved, but do not include a measure of the extent. Their measure just compares the income/wealth distribution in the past, today and the distribution that would result from distribution neutral growth.[1] If the distribution-neutral scenario would result in higher inequality measures, the growth realized is defined as "pro-poor".

The definition suggested by White and Anderson [2001] is based on three steps. First, the share of growth realized by the poor must be greater than their current share of income. Second, their share of growth must be greater than their share of

[1] Distribution neutral growth would be the case in which the whole population would realize equal growth (the average growth).

the population. And third, their share of the current growth needs to be greater than "some international norm". The White and Anderson [2001] type of measure essentially requires a closing of the absolute income gap. The condition for this kind of pro-poor growth is:

$$\frac{Y_t^P}{N^P} - \frac{Y_t}{N} > \frac{Y_{t-1}^P}{N^P} - \frac{Y_{t-1}}{N}.$$

With P referring to the group of poor households, N giving the population size, Y indicating the cumulative income and t being the second observation period. As this definition only holds in very few cases [Grosse et al., 2008] it will not be considered here.

The pro-poor growth measure proposed by Klasen [1994] builds on the income distribution over the income percentiles. It weights the growth rate of each income group by a declining function of its rank in the income distribution, e.g. its share of population, and thus composes an aggregated growth rate that accounts for inequality. Although it is a good indicator, the shortcoming of this measure is determination of the difficult and subjective decision of the right declining function with which these growth rates are weighted [Cord et al., 2003].

Kraay [2006] combines these two approaches and "decomposes the average growth rate of incomes of the poor into growth in average incomes and the average growth rate of the poor relative to growth in average incomes"[Kraay, 2006, p.205]. This leads to a measure of pro-poor growth that indicates how much more the incomes of the poor rose as compared to the non-poor. This is mainly important for cross-country studies if the countries realize very different mean growth rates and are thus difficult to compare in terms of their pro-poor growth successes. As this chapter only investigates one country, and the mean growth rate is the same for all households, this does not help the analysis and is therefore not implemented.

The pro-poor growth measures applied in this study are the growth incidence curve based percentile growth rate of the poor [Ravallion and Chen, 2003] and its adjustment based on considerations of Grosse et al. [2008]. The poverty measures used by Ravallion and Chen [2003] are distribution-sensitive measures like the Watts index, headcount index or squared poverty gap. The rate of pro-poor growth is then defined as the weighted (depending on the poverty measure used) mean growth rate realized by the people below the given poverty line. This measure has

the disadvantage that every growth that is realized will result in positive pro-poor growth unless the incomes of the poor decline [Cord et al., 2003]. This means that even countries in which the incomes of the rich increase at higher rates than the poor will have a positive pro-poor growth rate. Thus I deduct the mean growth rates of the whole population from that of the poor (the Ravallion and Chen [2003] pro-poor growth rate) leading to a narrower type of pro-poor growth.

Here a combination of measures as in Grosse et al. [2008] is utilized as each individual measure has disadvantages that could be outweighed by a simultaneous consideration of several. Therefore, the measure developed by Ravallion and Chen [2003] is used here to investigate pro-poor growth in its widest definition (def I). Furthermore, the Ravallion and Chen [2003] measure will be adjusted by deducting the growth rate of the rich from the pro-poor growth rate in order to generate a measure that includes the reduction of the inequality and thus gives the rate of "catching up" (def II).

3.1.2 Previous empirical work on pro-poor growth

Several studies assessing the pro-poor growth performance of different nations have been conducted in the past [among others: AFD et al., 2005; Bonschab and Klump, 2007; Byerlee et al., 2005; Cord et al., 2003; Grosse et al., 2008; Hanmer and Booth, 2001; Klasen, 2004, 2007; Klump, 2005, 2007; Klump and Bonschab, 2004; Kraay, 2006; White and Anderson, 2001]. Most of these studies focused on both the question of whether pro-poor growth was realized, and what determines the success in pro-poor growth.

Some papers aim at a conceptual improvement of pro-poor growth in general while supplementing their work with empirical applications [Cord et al., 2003; Hanmer and Booth, 2001]. Cord et al. [2003] emphasizes the importance of a decomposition of pro-poor growth, as not every growth process involves poverty reduction. A combination of growth and inequality as separate aims would be his policy of choice. Hanmer and Booth [2001] argume for policy that explicitly targets regions and sectors in which the poor are found. Thus a focus on rural areas and their industry, as well as the agricultural sector in general, shows the highest elasticity of poverty and should therefore be adopted.

The rest of the papers listed above apply existing measures to different numbers of countries and focus on the determinants of pro-poor growth. Klasen [2007] builds on his past work on several countries and briefly introduces the areas that should be central policy topics in poverty reduction and pro-poor growth. These are: productivity of the food crop sector, reduction of regional inequalities, improved asset base for the poor, reduce gender inequality, integration of disadvantaged groups and political commitment. Kraay [2006] and AFD et al. [2005] build on cross country studies. While Kraay [2006] suggests the use of country-level studies as these will best serve policy based on his partly inconclusive cross country analysis, AFD et al. [2005] found common factors that should be applicable to all poor countries. They focus on the key role of agriculture in targeting poverty but also point out that access to infrastructure for sectoral shift in rural areas should be the future focus of pro-poor policy. Byerlee et al. [2005] have a more narrow focus on rural areas and conclude that in the case of Asia priority should be given to diversification. This includes the promotion of high value agricultural production but also non-farm activities. Policy focus should be on less favored areas rather than growth centers. The work in the area of pro-poor growth by Bonschab and Klump [2007] and Klump [2005, 2007] focuses on the impressive poverty reduction of Vietnam and quantifies and decomposes the realized pro-poor growth at a regional level. They suggest a shift away from the growth centers, i.e. Ho Chi Minh City, Hanoi and Da Nang, towards rural areas in order to reach higher pro-poor growth rates. Nevertheless, they also emphasize that this strategy will come at the cost of overall growth, as investments will be less cost efficient in these regions. The core of such a strategy would be decentralization, which has to be accompanied by local capacity building.

Finally, the contribution by Grosse et al. [2008] suggests the use of the growth incidence curve also for non-income indicators like education or vaccinations, as the Millennium Development Goals also focus on these dimension and they should not be underrepresented. In the case of Bolivia they found that despite pro-poor growth rates in income being positive, the growth rates for some non-income indicators were actually negative and therefore, the whole picture should be taken into account rather than only looking at income.

All these studies focus on the achievements of pro-poor growth and to some extent on the determinants of pro-poor growth, but only a few [e.g. Bonschab and Klump, 2007; Klump, 2007] include a regional dimension in their analysis although that is recommended by several studies [AFD et al., 2005; Byerlee et al., 2005]. The regional factor is found to be of huge importance for Vietnam due to the focused growth spots in its economy while the rest of the country is lacking behind. Furthermore, most of these studies implicitly state that pro-poor policies should target the agricultural sector in rural areas [e.g. Klasen, 2007]. As efficient as it may seem now, in the long run agricultural intensification will not be able to take place to a sufficient extent in the densely populated countries of Asia and especially in Vietnam [Bonschab and Klump, 2007; Davis et al., 2007; Otsuka and Yamano, 2006; van de Walle and Cratty, 2004]. Therefore, the approach favored by Collier [2007] might better suit the special circumstances in Vietnam. He argues for the creation of jobs for the rural population. Though these jobs will be "[...] far from wonderful, but they are an improvement on the drudgery and boredom of a small farm [...]" [Collier, 2007, p.83]. Similar arguments can be found in AFD et al. [2005] where the key role of agriculture is focused, but it is also stressed that in the longer run a sectoral shift is necessary, especially in rural areas. Based on these findings, one can assume that households that have already (at least partially) turned from agricultural production to more beneficial non-farm jobs should be better off in terms of income and lower poverty rates. Furthermore, based on the findings in the previous chapter, the income composition is also an important feature that differs even within rural areas and should be included in this analysis. Therefore, the broadening of the non-farm opportunities and the strengthening of rural industries will be crucial for poverty reduction in the long run.

Analogous to points made in the previous chapter, the definition of non-farm is wider, as wage employment, even in agriculture, will reduce risks for the household as agricultural shocks like crop pests will not affect all households and thus the income source will still be available. Therefore, in the following the term rural non-farm employment/rural non-farm economy includes all activities that are not self-employed farming/livestock keeping/aquaculture.

3.2 Objectives and data used

Building on the findings in Bonschab and Klump [2007] as well as Klump [2007] related to medium- and long-term pro-poor growth in Vietnam, the short term fluctuations will be analyzed. Especially in the context of the recent debate around vulnerability to poverty, the short term setbacks are a major factor that contributes to transitory poverty. Besides this, I will focus on rural areas, as these are the regions in which most of the world's poor live. The objective here is to investigate the differences in the pro-poor growth performance not only across provinces (as focused on by Bonschab and Klump), but extend this analysis by taking the income portfolio of households into account as a further possible grouping parameter. Thereby, I will enrich and supplement the extensive work of Bonschab and Klump [2007]; Klump [2007], and the short term fluctuations of pro-poor growth will be analyzed with a narrower focus on the households and their income portfolio. I will shed light on the difference in the pro-poorness of farming, off-farm employment and a mixture of these two. This will generate insights into the determinants of these differences on a household level and lead to better policy targeting of poverty reduction programs.

The data used in the analysis are the Vietnam household living standard survey (VHLSS) 2002 and 2004 compiled by the GSO. Based on a sample of about 30,000 households in 2002 and 9,200 households in 2004, the rotating sample design leads to an available panel of 3,991 households in total and 3,132 in rural areas covering 61 of the 63 Vietnamese provinces.[2] Analogously to McCaig [2009] the panel construction was adjusted to account for several matching errors occurring when using the original household identifier.[3]

3.3 Pro-poor growth in Vietnam 1993–2002

The following overview will be based on the work of [Klump, 2007] and [Bonschab and Klump, 2007] as the most comprehensive analysis of pro-poor growth in Vietnam. Vietnam's early growth has been mainly based on agricultural intensification

[2] Details on the sample design and data processing can be obtained from Tung and Phong [n.a.].

[3] I want to thank Brian McCaig, School of Economics and Research School of Social Sciences, Australian National University, for sharing the information required for correcting these errors.

and expansion. Besides leading to environmental problems like pollution and erosion, this path can not serve as growth strategy in the long run as fertile land becomes more and more scarce, especially in the densely populated growth poles around Ho Chi Minh City and Hanoi. Beginning in 1997 with the introduction of three 'focal economic areas' the government focused on economic modernization. Besides the obvious candidates of Hanoi and Ho Chi Minh City, the greater Da Nang area was the third focal area addressed in an effort to establish a growth pole in central Vietnam. Export-oriented industries and services were promoted and basic infrastructure was installed to generate an international competitive environment for companies. This policy obviously led to an increase in the already existing regional disparities [Bonschab and Klump, 2007]. Nevertheless, the policy of focused economic (growth) stimulation has been very successful in terms of restructuring and expanding the Vietnamese economy[4] [Revilla Diez, 1995]. In the aftermath of this implementation, the contribution of labor to overall growth started to grow, indicating increasing importance of the skilled workforce. Even in the Asian economic crisis in the early 1990s, while the total factor productivity dropped sharply, the growth contribution of labor still exceeded capital. For the 1998–2002 period the contribution of labor was as high as 80% while capital contributed only 20% to overall growth [Klump, 2007]. This is partly based on the very low capital mobility across province borders that still existed [Bonschab and Klump, 2007].

Besides the actual growth rate, it is important to know how the growth is distributed within the population, especially in a society like Vietnam in which poverty was at very high levels in the early 1990s. The core components used to calculate the rate of pro-poor growth are: (i) the growth incidence curve (GIC), which gives the growth rates by income percentile, (ii) the mean of growth rates, which is the mean over the percentile growth rates as well as (iii) the growth rate in mean which is total sample mean in growth rates. The rate of pro-poor growth[5] between 1993 and 2002 was 4.1%. As this is below the average growth rate of 5.5%, poverty was indeed lowered but at the same time inequality rose as the incomes of the poor grew at lesser rates than those of the non-poor. The GIC

[4]Further details on the development of the Vietnamese economy from the doi moi until today will be elaborated in detail in the following chapter.

[5]Calculations according to Ravallion and Chen [2003].

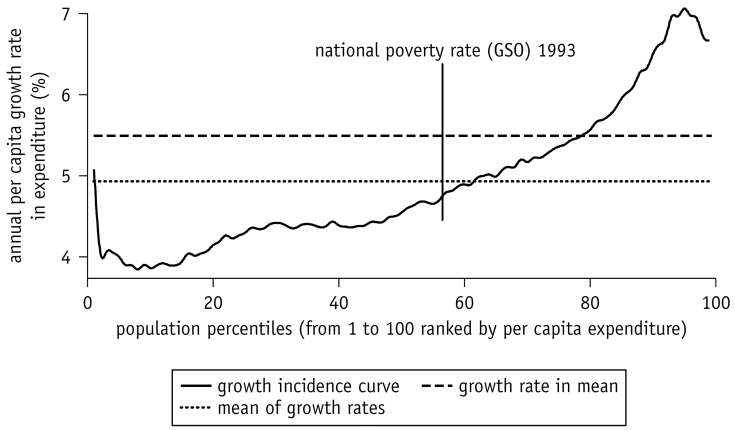


Figure 3.1: Vietnam's Growth Incidence Curve, 1993–2002.

Source: [Bonschab and Klump, 2004].

(figure 3.1) shows an upwards slope, indicating that def II pro-poor growth was not realized as higher income percentiles grew at higher rates than lower income percentiles. A slowdown in the pro-poorness of the realized growth can also be seen from the rates in the two sub-periods of 1993–1998 and 1998–2002. Between 1993 and 1998 the rate was 5.7% and for 1998–2002 the rate dropped to 2.2% [Bonschab and Klump, 2007]. While much of the realized pro-poor growth in the first sub-period was based on employment of unskilled workers in the agricultural sector, the reduction in the rate was mainly due to the shortage of arable land and therefore rural industrialization had to start in order to maintain the pro-poorness of growth [Bonschab and Klump, 2007].

The huge successes in overall pro-poor growth were spatially biased (table 3.1) analogously to the poverty reduction successes (table 2.1, page 14). While for the 1993-1998 period the rate of pro-poor growth was higher in urban areas (8.9% vs. 5.3%) the rate fell even more than in rural areas for the period from 1998 to 2002 (1.6% vs. 2.2%). However, the inequality rose more for rural areas in the second period, indicating an even higher growth rate for the non-poor population [Bonschab and Klump, 2007]. The very low rate of pro-poor growth in urban areas for the second period does not necessarily mean that pro-poor policies are better in rural areas but that the very low levels in urban areas are more difficult to reduce than the high rates in rural areas [Bonschab and Klump, 2007] giving one of the

Table 3.1: Rates of pro-poor growth 1993–2002 by subregions.

Region	1993–1998	1998–2002	1993–2002
National	5.7	2.2	4.1
Urban	8.9	1.6	5.9
Rural	5.3	2.2	3.9
Northwest	4.5	−1.64	*n.a.*
Northeast	4.5	4.42	*n.a.*
Red River Delta	8.1	1.39	*n.a.*
North Central Coast	6.2	0.47	*n.a.*
South Central Coast	4.9	4.6	*n.a.*
Central Highlands	4.6	5.0	*n.a.*
Mekong River Delta	4.4	2.6	*n.a.*

Note: n.a.= not available
Source: Bonschab and Klump [2004]

most important reasons for focusing on rural areas here. The expenditure-based Gini coefficients for rural and urban areas have been rather stable for many years, suggesting that the rising inequality is mainly based on rural urban differences in overall growth rather than within these areas. This is intensified by a migration pattern in which the economically more active population migrates proportionately more from rural to urban areas [Klump, 2007]. The pro-poor growth rates in the central highlands grew for the second period, unlike for the rest of Vietnam, and was mainly based on the successful introduction of coffee production in 1995 [Klump, 2007].

The important aspect of improved property rights in the Vietnamese policy during this period contributed strongly to the pro-poorness of growth. This policy improved predictability of businesses and boosted longer-term investments, e.g. in multi-year industrial and fruit crops, and therefore enabled income diversification [Bonschab and Klump, 2007]. Based on the generation of new income opportunities and therefore the reduction of rural urban migration, the private sector has a great potential for contributing to the catching up process within the country [Klump, 2007]. Due to the already huge differences in the economic structure, policies that promote less developed regions will be increasingly difficult to justify as investments in these regions will be less efficient. Nevertheless, policies that channel investments

to these areas will have a much larger pro-poor effect as these are the regions in which most of the poor life [Bonschab and Klump, 2007].

The group that is still suffering from the highest poverty rates is the multiple ethnic minorities. Although special funds have been allocated in support of these groups, these funds are often not well targeted, as minority groups work on fundamentally different income generation models compared to the Kinh majority. Thus, the funds often reach Kinh families that live in the same areas where these groups are found [Klump, 2007].

The achievements in pro-poor growth are mainly based on high aggregate growth rates (although spatially biased) and favorable initial conditions with a widespread primary education and mostly equal distribution of farmland. But these conditions can not be taken for granted in order to achieve further growth as the regional inequalities also in these factors also grow. The slow progress in the privatization of state owned enterprises, and the associated delay in the lay-offs of surplus workers may cause social problems in the future. Additionally, a slowdown of the spectacular growth in the agricultural sector can be expected as most arable (available) land is already under production. Further growth can only be based on intensification, which has already caused several environmental problems and will thus not be feasible for future growth [Bonschab and Klump, 2007].

All in all, pro-poor growth did, in the less restrictive definition of poverty-reducing growth, take place in Vietnam during the 1993–2002 period. In the early 1990s Vietnam took advantage of its natural resources and flexible workforce and achieved impressive (pro-poor) growth. Nevertheless, ethnic minorities and the rural population in general, have not yet been included in this and therefore inequality is still rising, especially in rural/urban comparison. Thus, even though the growth process was pro-poor in the sense that poverty was declining and incomes of the poor were growing, the incomes of the rich grew even more. Furthermore, the realized pro-poor growth rates were declining, which was mainly due to the low poverty rates in urban areas where it becomes increasingly difficult to reduce these [Bonschab and Klump, 2007; Klump, 2007].

3.4 Pro-poor growth in rural Vietnam 2002–2004

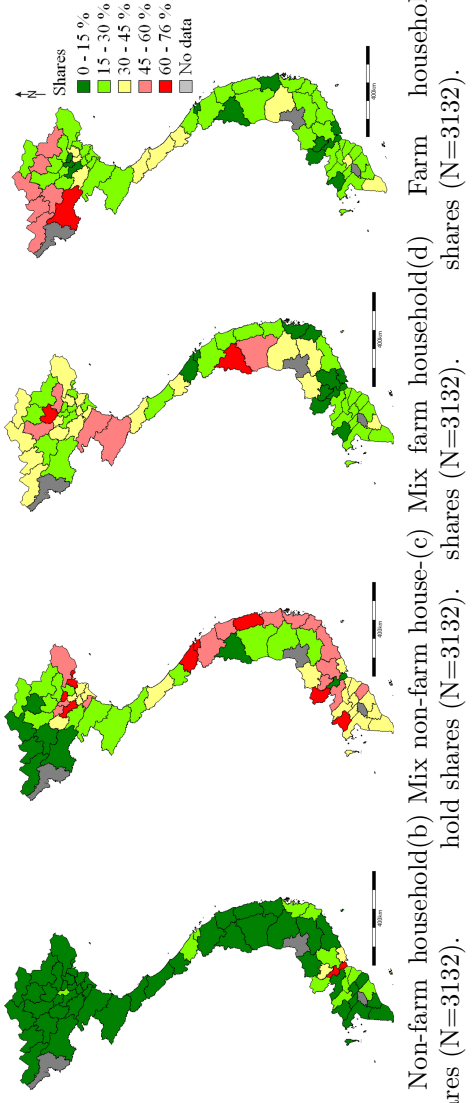
3.4.1 Short term poverty dynamics and household income portfolio

To shed more light into the dynamics and the determinants of successful pro-poor strategies found in the regional analysis, the following section will decompose the pro-poor growth into the following five household income[6] types. First, a 'farm' household thus does not participate in any of the latter activities. Second, a 'non-farm' household refers to a household that does not have any crop, livestock or aquaculture production. Third and fourth, two types of mixed income households refer to those that derive income from both farm and off-/non-farm activities. These two mixed groups are divided into one group including households with farm income exceeding the non-farm income ('mix farm households') and vice versa for the 'mix non-farm households'. Fifth, the households referred to as 'others' are those that have none of those income sources and rely on transfer payments or renting activities. Furthermore, the sample is reduced specifically to rural areas as Klump [2005] already found that the poverty in urban areas is on very low levels and therefore pro-poor growth requires quite different measures and will be very different from rural areas where people are much more in need for poverty reduction.

Based on the results that poverty and pro-poor growth are spatially biased in Vietnam, the poverty incidence and the distribution of the households types across the 61 covered Vietnamese provinces are given in Figure 3.2. The poverty headcount ratios by province subdivided by the four major household types are depicted in figure 3.2e–3.2h. Furthermore, the share of the household types across the provinces is indicated in figure 3.2a–3.2d.

As indicated by the total shares of the household types in the sample, the non-farm households have very low shares of mostly below 15% in all provinces with some exceptions in the Mekong delta. Furthermore, the farm households are extremely dominant in the North-Western mountain region which is the poorest region in Vietnam.

[6] All incomes converted to PPP Dollar (based on ICP [2008]) in 2000 prices. Furthermore all incomes are adjusted according to regional income comparison factors given in GSO [2002; 2004].

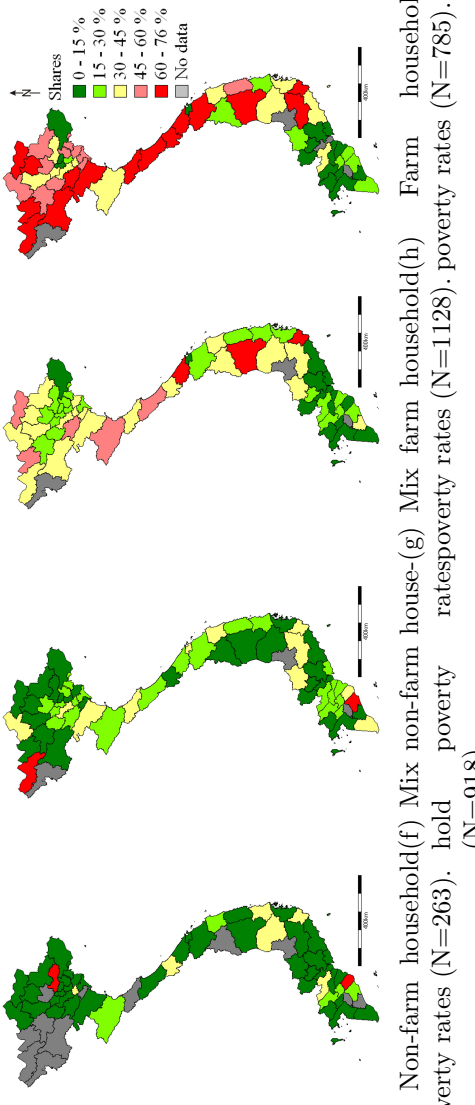


(a) Non-farm household shares (N=3132).

(b) Mix non-farm household shares (N=3132).

(c) Mix farm household shares (N=3132).

(d) Farm household shares (N=3132).



(e) Non-farm household poverty rates (N=263).

(f) Mix non-farm household poverty rates (N=918).

(g) Mix farm household poverty rates (N=1128).

(h) Farm household poverty rates (N=785).

Figure 3.2: Household type shares by province 2002 and poverty rates by household type and province 2002.

Source: Own calculations based on GSO [2002; 2004]; Map generated using ADePT Maps 2.0 [2009].

An interesting distribution of the two mix types is prevalent in the central provinces where the mix non-farm households are the major group for the coastal provinces while the mix-farm households are especially dominant in the mountainous provinces along the Cambodian boarder in the South and Laotian boarder in the North Central region.

Concerning poverty rates, most provinces poverty is most widespread in the group of farm households while it is lowest for the non-farm household group. The non-farm household group is the smallest with only 263 households being in this group, which leads to some provinces in the North-Western and Central highlands having no households at all in this group. Among the two mix types, those that rely more on farm income are more often poor. On the one hand, poverty headcount ratios with increasing importance of non-farm income for the households. On the other hand, a majority ($\sim$62%) of households still rely on farm income (farm households and mix farm households) as their most important income source.

Based on the wide differences in poverty rates across the household types, the question is whether households in the groups that are faced with higher poverty will change their income portfolio towards a more promising combination, even in the short run. This will allow a first assessment of the households' decision-making, as well as further insight into the dynamics to which a households' income is subject. Assessing the types over the two survey years, it is clear that many households do substantially or gradually change their income portfolios, leading to different categorizations during the two years. These 'switchtypes' as well as the non switching types and their shares are given in figure 3.3. The left hand numbers give the share of the respective group that did change their portfolio to the extent that they are re-categorized to another group, while the right hand numbers give the shares of the group in 2004 that has been in the same group in 2002.

While overall the shares of the groups remained rather stable across the years (with only small gains for the mix farm households and losses for the non-farm households) it is obvious that between 2002 and 2004 there were major shifts with up to 58% (Others) of the households within one group changing to other groups. Among the major four types, the group of farm households is subject to the highest fluctuations with 46% of the households shifting from pure farming to other income structures. The most stable group on the other hand is the non-farm households

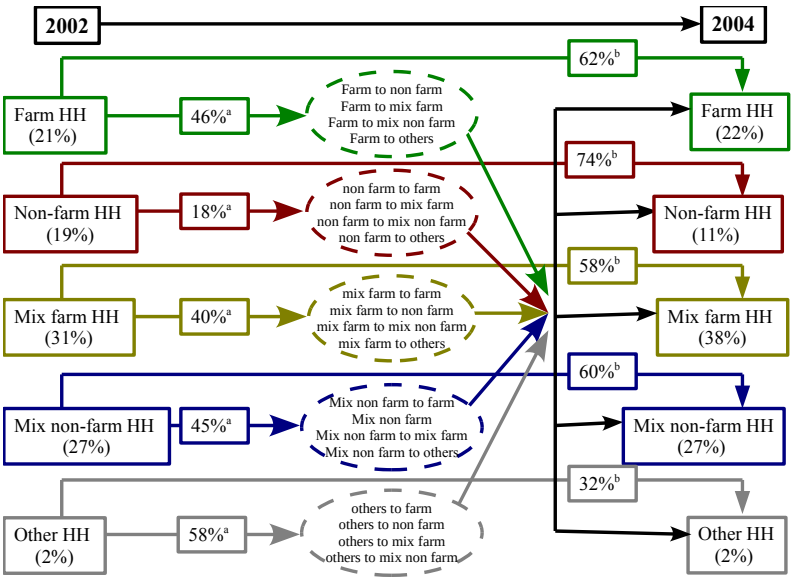


Figure 3.3: Income composition changes.

Notes: a: Share of group in 2002; b: Share of 2004 group.
Source: Own calculations based on GSO [2002; 2004].

with only 18% changing to other income sources and 74% of the 2004 group were in the same group in 2002. This might be based on the fact that one needs farm land in order to pursue any farm activity, but only 73 (2%) out of 3,132 (11% within the non-farm households group) households have no land available at all. Therefore, almost all households would have the option to do at least some farming and therefore, to account for these major shifts among the groups, the following analysis will be based on the nine major (N>2% of sample = 62 households)[7] switchtypes rather than the original household categories. Due to the partly very small group sizes some groups had to be excluded as results will not be reliable or meaningful.

Assuming rational behavior of the households, the switchtypes should perform better in terms of growth and poverty reduction as otherwise they would have been better off if they remained in their current portfolio. The opposite outcome would occur in cases where the switching takes place due to outside influences that force households to change. These could be shocks like job loss that makes some

[7]Appendix A.4, page 139 gives group sizes as well as the poverty headcount ratios for the two periods.

income sources unavailable or at least reduces them. In the case of agricultural households, those circumstances could also emerge from changes in the market that force households out of production. Those could be e.g. production or product standards[8] that are introduced and that some farmers might not be able to comply with. Based on the effects of the changes one can gain at least some evidence on which scenario is more likely.

Furthermore, two basic directions of change are imaginable. First, households could diversify their income into different sectors (here farm and non-farm sources) or, if they already have multiple income sources, they could specialize in one of these. Both scenarios might lead to increased income with the first scenario being associated with outside pressure due to e.g. shocks while the second would be more likely driven by household decisions. Unfortunately, there is only one relevant (in terms of its size) group for the diversification case, i.e. the farm to mix farm households. Therefore, this line of argument can not be followed here.

Table 3.2 gives some poverty/inequality indicators decomposed into the introduced nine household types. Remarkably, there is no group that faced an increase in poverty during this period due to the very high overall poverty reduction. Although the distribution became slightly more unequal, indicated by the increase of 0.01 points in the Gini coefficient, this increase does not constitute a major change in income distribution. Generally, the poverty headcount ratio was significantly higher for the group of households that did switch groups between 2002 and 2004, both in the initial year 2002 as well as for the second period of 2004.[9] This indicates a rational decision on changing income portfolio based on insufficient income from the current sources.

The highest poverty headcount ratio and poverty gap is found in the group of 2002 farm households that switched to mix farm households by 2004. This group also realized the highest reduction in these indicators with the headcount ratio dropping from 57% to about 28% and the poverty gap reduced from 17% to 7%. The smallest reduction in poverty took place in the group of non-farm households that did not change their income portfolios, but this group had a very low poverty level and poverty gap before, making large reductions unlikely as the

[8] One example is the emerging 4C standard in coffee production.

[9] T-test results for poverty headcount ratios switched vs. non switched households in Appendix A.5, page 140.

Table 3.2: Poverty by household types.

Change household types	Head-count ratio 2002	Change in head-count ratio[a]	Normalized poverty gap[b]		Gini coef-fi-cient 2002	Change in Gini[a]	N
			2002	2004			
Total	35%	-17%	10%	4%	0.36	0.01	3132
Switched	38%	-23%	11%	4%	0.36	0.02	1317
Non-switched	33%	-19%	9%	3%	0.36	0.02	1815
Farm HH	44%	-18%	14%	8%	0.39	0.00	426
Mix farm	39%	-22%	11%	5%	0.31	0.03	685
Mix non-farm	22%	-14%	5%	2%	0.36	-0.04	499
Non-farm	12%	-4%	2%	1%	0.34	0.06	182
Farm to mix farm	57%	-29%	17%	7%	0.34	0.03	270
Mix non-farm to mix farm	29%	-16%	8%	4%	0.31	0.06	222
Mix farm to farm	46%	-19%	13%	7%	0.39	0.00	183
Mix farm to mix non-farm	37%	-27%	10%	3%	0.33	-0.02	227
Mix non-farm to non-farm	30%	-15%	8%	3%	0.35	0.05	128

Note: a: Changes between years 2002 and 2004.
b: Poverty gap given as share of national poverty line.
Source: Own calculations based on GSO [2002; 2004].

poorest households are mostly those that are most difficult to lift out of poverty. Generally, the difference between switched types and non-switched types was larger in 2002 in all indicators but became significantly smaller for 2004. This indicates some catching up effect for the switched types. Nevertheless, the Gini coefficients remain similar in both periods.

The group that performs best of all groups, in terms of reduction of poverty and inequality, is the group of mix non-farm households that already had the second lowest poverty headcount ratio in the first period and which came down to be the lowest for the second period. Furthermore, the poverty gap went down by 3% and the Gini coefficient by 0.04 points, which was the highest reduction. Almost similar movements took place in the group of mix farm households that extended their non-farm engagement and are now considered mix non-farm households. The poverty headcount went down from the above average rate of 37% to only 10%,

which is exactly the average for the second period. The poverty gap that was 10% dropped to 3% and the Gini went down, which happened for only two groups.

The switched households encountered higher poverty incidence in both periods, but also realized higher poverty reductions in the poverty headcount ratio as well as poverty gap. Therefore, based on these indicators, the switching income composition seems to pay off for the households and the new combination does better reflect their potential to generate income. Now, the question is whether the observed poverty changes are based on the shift of population from one group to another or the poverty reduction occurred within the groups.

Table 3.3 provides a decomposition of the poverty changes along the household income types and deducting the population shift effects emerging from household changing their income portfolio. The decomposition proposed by Ravallion and Datt [1996] decomposes the national growth by the contributions of the primary, secondary and tertiary sector contributions to GDP. Here the income of the household groups is used instead, which might imply some distortions as the sectors are not completely separated due to the two mix household types. Due to the

Table 3.3: Household type (2002) Poverty Decomposition[a].

Household type	Absolute change	Percentage change
Change in poverty (HC)	−17.77	100.00
Total Intra-sectoral effect	−17.62	99.14
Population-shift effect	−0.54	3.01
Interaction effect	0.38	−2.16
Intra-sectoral effects:		
Farm HH	−5.22	29.39
Non-farm HH	−0.30	1.68
Mix farm HH	−7.45	41.90
Mix non-farm HH	−4.51	25.37
Other HH	−0.14	0.80

Note: a: Decomposition according to Ravallion and Huppi [1991].
Source: Own calculations based on GSO [2002; 2004].

mix types this decomposition cannot be interpreted with respect to any sectoral growth impact as the sectors are not completely separated due to the mix types.

Nevertheless, this approach offers more insight into the differences of the four income compositions as compared to assigning the most important sector to each household.

The high share attributed to the "intra-sectoral" effects shows that most of the poverty reduction observed in the data is attributed to increases in incomes within the household groups and not by population shifts across these groups.[10] The highest contribution (41.9%) to overall poverty reduction is attributed to the poverty reduction within the mix-farm household group. This is not only based on the very high poverty reduction itself but also on the group size. The group of mix farm households accounts for almost 40% of the households in both periods and therefore has a major impact in this decomposition. The same holds for the other groups that were all able to reduce poverty to different extents. The groups of non-farm and other households had only small reductions and are also small in number and therefore have a combined impact of less than 3% although constituting 10% and 13% of all households in 2002 and 2004 respectively. Thus these groups have been reducing poverty disproportionately less while in the group of farm households and mix farm households the poverty reduction has been disproportionately large.

Based on the differences in poverty changes, the switching households perform better than the non-switching households. But the poverty measures were higher in 2002 and are still higher in 2004 although some catching up does take place.

3.4.2 Short term pro-poor growth performance across household types

Based on the poverty decomposition across the household types we now turn to the analysis of income growth from 2002 to 2004, generating further insight into the short-term intertemporal dynamics within the groups. First of all, the growth-redistribution decompositions allow insight into distinguishing between the growth component of poverty reduction and the effect of mere redistribution. Besides the question of whether the poverty reduction can be attributed to population shifts between the groups, another possible explanation for the reduction would be redistributions within the groups. Especially in the context of pro-poor growth

[10] Major shifts across the groups have been shown above but these have been almost equal for all groups leaving the group sizes almost constant.

this question is important, as if growth is not the most important driver of poverty reduction it would not matter how much growth one can achieve because it would not directly benefit the poor but only via redistribution policies. Table 3.4 gives

Table 3.4: Growth redistribution decomposition by household type.[a]

Household type	Change in poverty rate	Growth component	Redistribution component	N
Total	−17.92	−10.95	−6.97	3132
Switched	−22.60	−16.54	−6.07	1317
Non-switched	−19.42	−12.89	−6.53	1815
Farm HH	−15.77	−8.24	−7.53	426
Mix farm	−21.59	−15.65	−5.94	685
Mix non-farm	−14.51	−4.32	−10.19	499
Non-farm	−5.80	−4.96	−0.84	182
Mix farm to farm	−18.98	−10.86	−8.13	183
Farm to mix farm	−28.10	−20.33	−7.78	270
Mix farm to mix non-farm	−28.99	−16.66	−12.33	227
Mix non-farm to non-farm	−15.73	−13.62	−2.11	128
Mix non-farm to mix farm	−14.48	−13.62	−0.86	222

Note: a: Decomposition according to Datt and Ravallion [1992].
Source: Own calculations based on GSO [2002; 2004] using ADePT 4.0 Poverty [2009].

the results for the decomposition of growth and redistribution components of the realized poverty reduction. For all households the growth component does exceed the redistribution component. Roughly 11% of the total poverty reduction of about 18% can be attributed to growth in mean incomes. The additional 7% of poverty reduction can be ascribed to redistribution of incomes from households above the poverty line to households below the poverty line, enabling them to increase their income to a level above the poverty line. Subdividing the effect to the switched and non-switched households, the same picture holds as for the other indicators, with the switched types realizing higher poverty reduction than the non-switched types.

Again, splitting the whole sample into subsamples of the major change household types enables further examination of the differences across the household types

with respect to growth and redistribution components of the different poverty reduction performances. Within the group of households that did not change their income portfolios, all groups except the mix non-farm household's poverty reduction is mainly attributed to growth rather than redistribution. Within the group of mix non-farm households the poverty reduction of 15% is mainly attributed to redistribution rather than mean income growth. This is consistent with the observed reduction in the Gini coefficient, which already suggested a reduction in inequality but from which a growth effect can not be concluded in the way it can be from this decomposition. The opposite trend in terms of growth vs. redistribution components holds true for the mix non-farm to mix farm as well as non-farm households, the Gini coefficient rose in these groups and the observed poverty reduction is almost entirely attributed to growth rather than redistribution. Recalling the findings of [Klump and Bonschab, 2004], who found the redistribution component to be positive for Vietnam, here the same effects take place, with redistribution and growth component working in the same direction. Additionally, the growth component still dominates the redistribution effect, leading to poverty reduction over all groups.

Three groups, i.e. farm, mix farm to farm and mix farm to mix non-farm households, have rather similar growth and redistribution components. The Gini coefficients for these groups have been stable (except thatfor the mix farm to mix non-farm households within this group the Gini coefficient did decline slightly). For the rest of the groups, the growth component is considerably higher than the redistribution component but a significant share of redistribution in favor of the poor did happen within these groups although the Gini coefficient rose. Again, the switched households performed much better, which gives additional support to the assumption that households do switch due to rational assessment of increased income opportunities.

A sizable share of households (42%) changed their income portfolio, which might well be connected to their insufficient income as the poverty rate among those households is significantly more often considered as poor. But the poverty reduction among the households that did switch was higher (23%) as compared to those who did not change (17%). Finally, the mean growth components/redistribution component ratio is 2.8 times higher for the switch type households than the non-

switching households, which suggests a successful strategy by the switching households. Furthermore, the switch of the income portfolio also led to considerably higher growth within the group of switch households (11.5% vs 8.7%).[11] All in all, the growth component is the most important across all groups except the mix non-farm households. This indicates that a growth-based poverty reduction strategy would be more efficient than a redistribution policy. Therefore, a more detailed analysis of the growth that did happen is useful in facilitating adequate policy targeting poverty reduction and in investigating whether the realized growth was pro-poor or if the poverty reduction is based on mere growth in mean incomes over the whole population.

Turning to the pro-poor growth realized across the groups, the growth incidence curve, the mean percentile growth rate of the poor and growth rate in mean [Ravallion and Chen, 2003] is utilized in figure 3.4. The GIC for rural Vietnam in total, as well as three selected household types, are illustrated in figure 3.5[12].

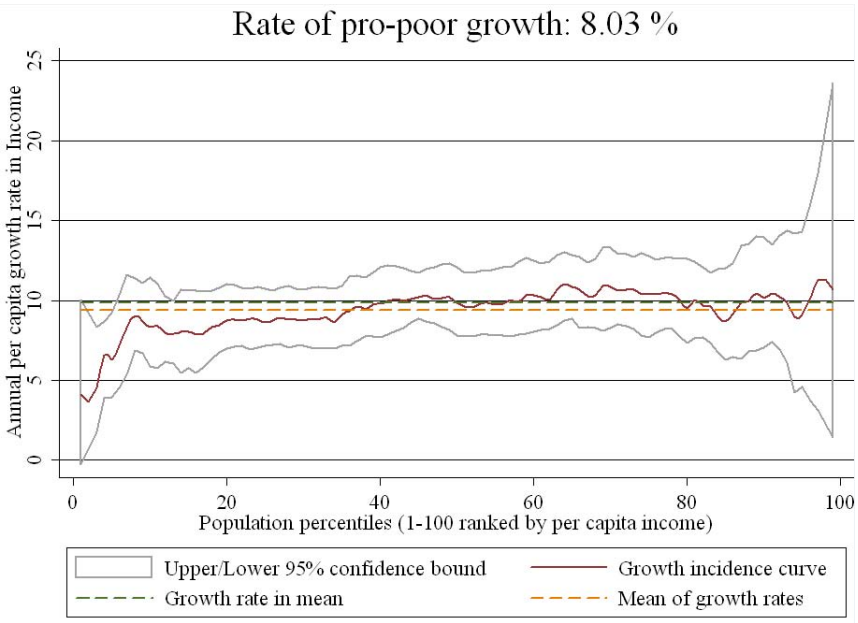


Figure 3.4: Growth incidence curve for rural Vietnam.

Source: Own calculations based on GSO [2002; 2004].

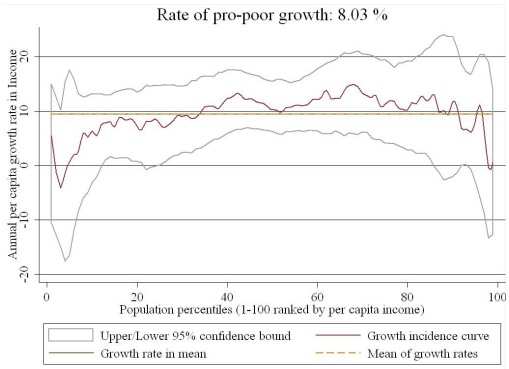
[11] Figures given are based on own calculation from GSO [2002; 2004].

[12] All other curves are given in figure A.6 page 141.

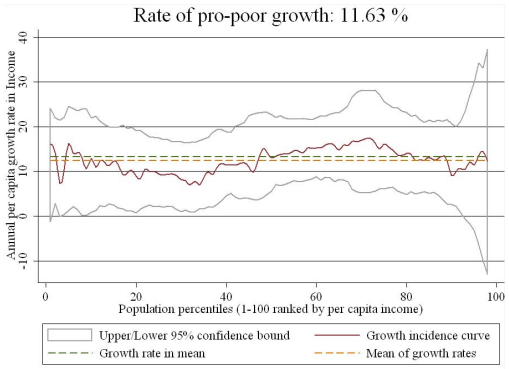
As elaborated earlier, there are several definitions for pro-poor growth that are more or less strict. The wide definition requires only the growth rates of the poor to be above zero (def I). A less restrictive definitions demands the growth in incomes of the poor be greater than the mean growth (def II). Finally, the most narrow definition requires the absolute increase in incomes of the poor to exceed the absolute increase in average incomes (def III) [Grosse et al., 2008].

Taking first the GIC for all rural households in the sample, visual inspection leads to some basic insight into the implications of the different definitions. First of all, although there are some fluctuations, a general upward trend is visible from the graph, which implies that the growth rate of the bottom income percentiles was lower than that of the top income percentiles. Furthermore, the curve runs below the growth rate in mean curve up to approximately the 40^{th} percentile but is above zero throughout all percentiles. This again suggests that the poorest 40 percentiles realized a growth rate below average. With respect to the definitions above, these two observations lead to only the widest definition of pro-poor growth being fulfilled. The second definition suggests that pro-poor growth has not been realized. It is obvious that the rates of pro-poor growth vary by more than 10% across the household types, with the non-farm households group performing worst (0.53%) and the mix farm to farm households group performing best (11.63%).

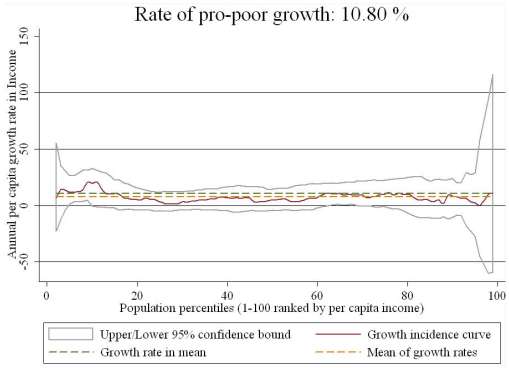
Differentiating the GIC by the household types, the several differences emerge. For figure 3.5a, the trend of the bottom 30 to 40 percentiles having a growth rate below the mean growth rate still holds, but in contrast to the whole population, almost all of the upper 10 percentiles also realize a lower growth. Nevertheless, the rate of pro-poor growth is exactly the same for this group. For the other three subgroups there are no clear trends and it is not easy to judge based on the graphs. A downward slope is, if in any, detectable in figure 3.5c for the mix non-farm to non-farm households. These households used to generate some additional income from agriculture but dropped this income source by 2004 and now focus on non-farm income as their only income source. This group seems to have realized narrower pro-poor growth even in terms of the second definition of the poor, achieving above average growth rates. A final assessment is not possible as only the lowest 15 percentiles realized above average growth while from 15^{th} to 60^{th} percentile the growth rates are below average.



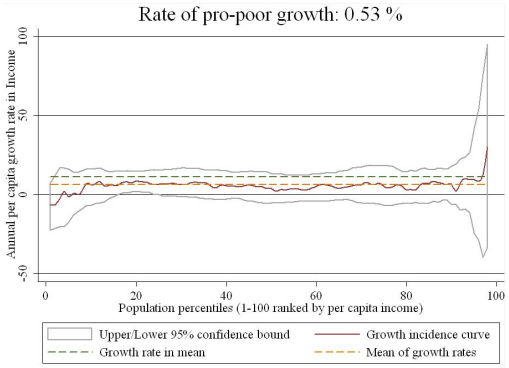
(a) Mix farm to mix non-farm households rural Vietnam (N=227).



(b) Mix farm to farm households rural Vietnam (N=183).



(c) Mix non-farm to non-farm households rural Vietnam (N=128).



(d) Non-farm households rural Vietnam (N=182).

Figure 3.5: Growth incidence curves.

Source: Own calculations based on GSO [2002; 2004].
Note: For the other groups, see Appendix A.6, page 141.

What can be accurately compared are the rates of pro-poor growth that differ across the groups, with the non-farm households realizing the lowest rate of all groups (0.53%), while the mix farm to farm and mix non-farm to non-farm households realize almost similar above average rates of more than 10%. For easier comparison, table 3.5 gives several pro-poor growth related measures. These are the mean of growth rates, the rate of pro-poor growth according to Ravallion and Chen [2003] and finally the Ravallion and Chen [2003] rate of Pro-poor growth adjusted according to definition II by deducting the mean of growth rates from the pro-poor growth rate.

Table 3.5: Household typology changes and pro-poor growth rates.

Change household types	Mean of growth rates	Rate of PPG[a]	Rate of PPG - mean of growth rates
Total	9.4%	8.0%	−1.4%
Switched	10.3%	9.5%	−0.9%
Non-switched	8.7%	6.9%	−1.9%
Farm HH	8.3%	6.6%	−1.7%
Mix farm	9.7%	7.6%	−2.2%
Mix non-farm	9.0%	7.4%	−1.6%
Non-farm	6.2%	0.5%	−5.7%
Farm to mix farm	11.8%	9.6%	−2.3%
Mix non-farm to mix farm	9.0%	5.9%	−3.1%
Mix farm to farm	12.4%	11.6%	−0.8%
Mix farm to mix non-farm	9.4%	8.0%	−1.4%
Mix non-farm to non-farm	7.5%	10.8%	3.3%

Notes: a: Rate of PPG according to Ravallion and Chen [2003].
Source: Own calculations based on GSO [2002; 2004].

First of all, as a basis for one of the measures of pro-poor growth, the mean growth rates do differ across the household types, from 6.2% to the highest growth rate of 12.4%. The households that changed their income portfolio realized slightly higher growth rate than the households that remained in the same group. Although poverty reduction was greater, poverty headcount was and remains higher (recalling table 3.2: 39 vs 33% for 2002 and 19 vs. 17% for 2004). The group realizing the lowest mean percentile growth rate is the group of non-farm households, while the mix farm to farm households realized the highest growth of 12.4%. Almost all subgroups among the switched household types realized higher growth rates than all other subgroups in the category of non-switched types. This indicates that the income composition switches have been very successful for households and do pay off in terms of higher income gains.

Now turning to the direct measures of pro-poor growth, the Ravallion and Chen [2003] type measure used for def (I) is positive for all household types and thus pro-poor growth has been realized across all types although to very different extents. It ranges from as low as 0.5% mean growth of the poor for the group of non-farm

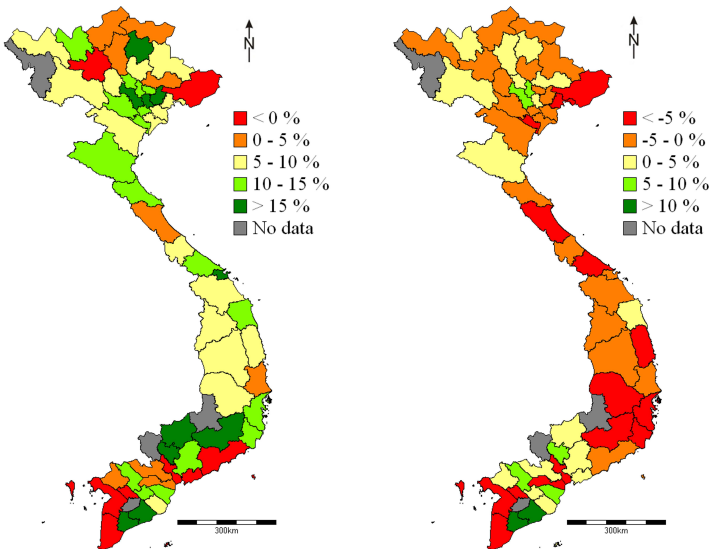
households to 11.8% mean growth of the poor for mix farm to farm households. Similarly to the mean of growth rates, the switched households did realize higher pro-poor growth rates than the non-switched households. Except for the group of mix non-farm to mix farm households, all groups that changed their income portfolios realized higher pro-poor growth rates than all non-switched types.

Based on the def (I) type pro-poor growth measure and the mean of growth rates, the def (II) type pro-poor growth measure is calculated by deducting the mean of growth rates from the rate of pro-poor growth. This results in an overall negative pro-poor growth measure for all types except the mix non-farm to non-farm households that realized a 3.3% higher pro-poor growth rate as compared to the mean of growth rates. Therefore, according to this definition pro-poor growth can only be found in that group. Overall, the switched households again performed better than non-switched households in terms of def (II) pro-poor growth although both groups had negative rates. Due to the very low def (I) pro-poor growth, the non-farm households perform worst in def (II) pro-poor growth with an 5.7% lower pro-poor growth rate compared to the mean of growth rates. Nevertheless, one has to take into account that this group especially already has very low poverty levels and comparably high income levels.

Besides the differences that exist among the groups, the regional differences found by [Klump, 2007] and [Bonschab and Klump, 2007] still persist. Figure 3.6 gives the pro-poor growth rates across the Vietnamese provinces based on the two different definitions.

Clearly, the highest pro-poor growth rates can be found around the growth poles, especially in the Mekong delta around Ho Chi Minh City but also around the Red River delta in the Hanoi region. Nevertheless, some places in less prosperous regions of Vietnam do also perform above average in terms of pro-poor growth, such as Da Nang province in Middle Vietnam and Bac Kan province in the North Eastern region.

What can also be seen from figure 3.6b is that most regions face a negative pro-poor growth rate according to def II, meaning that growth was actually anti-poor and the gap between the poor and the non-poor was widening from 2002 to 2004. Even some places close to Ho Chi Minh City realized pro-poor growth rates ranging from -10% to -15%.



(a) Def I: Annual rates of pro-poor growth by province (N=3132).

(b) Def II: Difference annual pro-poor growth rate and mean of annual growth rate (N=3132).

Figure 3.6: PPG (2002–2004) for definitions I and II across provinces.

Source: Own calculations based on GSO [2002; 2004]; Map generated using ADePT Maps 2.0 [2009].

3.5 Summary

Besides the differences in poverty rates across provinces, the income composition of households has a major impact on poverty prevalence. Furthermore, the income portfolio is less static than one would usually expect, even in a developing country like Vietnam. Even seemingly specialized households that only derive income from either farming or non-farm activities do (to a major extend) integrate other sources based either on opportunities or of necessity and therefore switch to different sectors. The steadiest group was the non-farm group with more than 80% remaining in that group. The most volatile group (apart from the other households) was found to be the farm households. Assuming these households are also more often hit by shocks, especially flooding or droughts, this suggests some degree of necessity was involved in the decision to change. For the group of non-farm households, shocks such as job loss might also be involved but these are (even though casual labor is still very common) less common than flooding. Vietnam was hit by several

typhoons in the last few years and farmers frequently lost their harvests from these occurrences.

Besides showing mixed results in term of poverty and poverty reduction, the switched household types generally perform better than the non-switched types but also had higher poverty rates in 2002. All above average poor groups realized higher poverty reduction than those with lower poverty levels. This supports the argument by [Klump, 2005] that especially with low poverty rates, it becomes more and more difficult to lift these least favored groups out of poverty.

Furthermore, recalling the findings of [Klump and Bonschab, 2004], who found the redistribution component to be positive for Vietnam, here the same effects take place, with the redistribution and growth components working in the same direction. Additionally, the growth component still dominates the redistribution effect, leading to poverty reduction over all groups.

Similar results are shown in growth and pro-poor growth. Besides the mixed results across the groups, most of the switched households did perform better. The seemingly very poor performance of the non-farm households is mainly based on the very low level of poverty before, and the remaining households seem to face especially adverse conditions. Nonetheless, one should not take those groups out of focus, for although the poverty incidences are low, it seems that those affected are trapped in a low income low growth scenario out of which they might not be able to escape by themselves. Although mostly showing a similar pattern, the growth incidence curves differ across the household types. Lower growth rates in lower income percentiles persist across almost all types, with only for the mix non-farm to non-farm households showing some kind of downward slope or at least an equally fluctuating pattern over all percentiles.

Chapter 4

Governmental Quality and the Performance of Medium and Large Companies in Rural Vietnam

4.1 Introduction

In the traditional view, development was associated with pure growth of the *Gross National Product* (GNP) and people's incomes, but the more recent view also includes social aspects like personal freedom in efforts to enhance development [Sen, 1999]. Freedom is not only important for the happiness of people but also supports the development of companies. These freedoms are one aspect of institutional economics theory. Institutions play a central role in understanding the differences in the economic performance of countries and therefore for the performance of the companies that operate in a country [North, 1990]. Institutional economics has its origin in North [1990], who defined institutions as: "Institutions are the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interactions. In consequence they structure incentives in human exchange, whether political, social, or economic. Institutional change shapes the way societies evolve through time and hence is the key to understanding historical change." [North, 1990, p.3] "(...); they are the underlying determinant of the long-run performance of economies." [North, 1990, p.110]

Considering institutions as a key factor explaining economic success across economies became commonly accepted [Gagliardi, 2008] and thus the Millennium Declaration of the United Nations General Assembly states that institutional reforms promoting good governance are one central condition for the goal of poverty eradication [United Nations, 2000]. In rural areas particularly, governance is a central problem with poor people having no voice in politics as the rich tend to dominate rural institutions. This gives them the possibility of conserving their traditional power. As a result law enforcement is problematic; the trust of the poor in the governmental and legal institutions is lacking [United Nations, 2007]. Among other measures, pro-poor policies should strengthen rural informational systems and develop rural institutional capacities. Both of these aims focus on the improvement of institutional settings. This is based on the two basic effects of institutional quality. First of all, a good institutional environment induces investments and increases income growth. Furthermore, high quality institutions distribute income more equally by restricting the ability of the rich to engage in successful rent seeking [Gradstein, 2007].

Following the definition of Acemoglu et al. [2004], good institutions are characterized by a cluster of conditions. A key part is the enforcement of property rights in order to provide incentive to individuals to take part in economic activities. Furthermore, a certain degree of equality of opportunity is necessary to facilitate an efficient allocation of investments and investors.

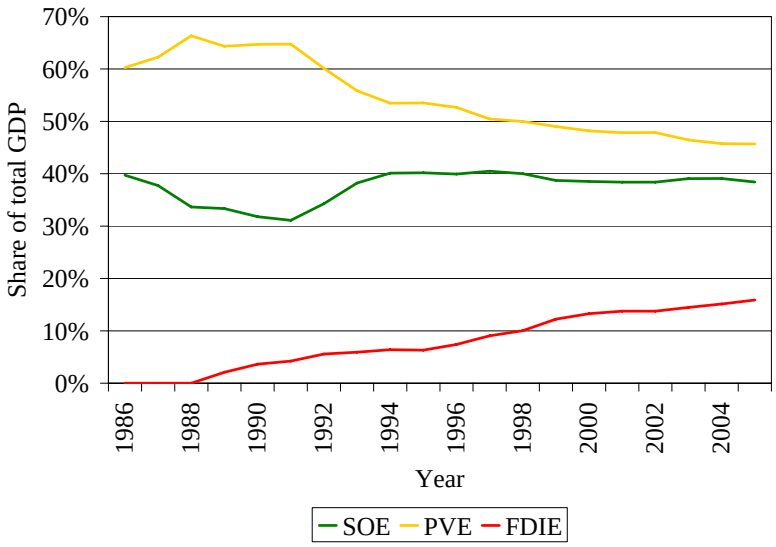
4.2 Vietnam's economy

Vietnam witnessed a strong and steady economic growth of around 8% per year over the last decade. For the first nine months of 2007 Vietnam was able to continue with this positive trend despite only a 3% growth rate in agriculture. This fact emphasises that the major driving force in the Vietnamese success in recent years can be attributed to the performance of the industry, manufacturing and service sector, which again accomplished growth rates of 10.2%, 12.5% and 8.5% respectively [World Bank, 2007a].

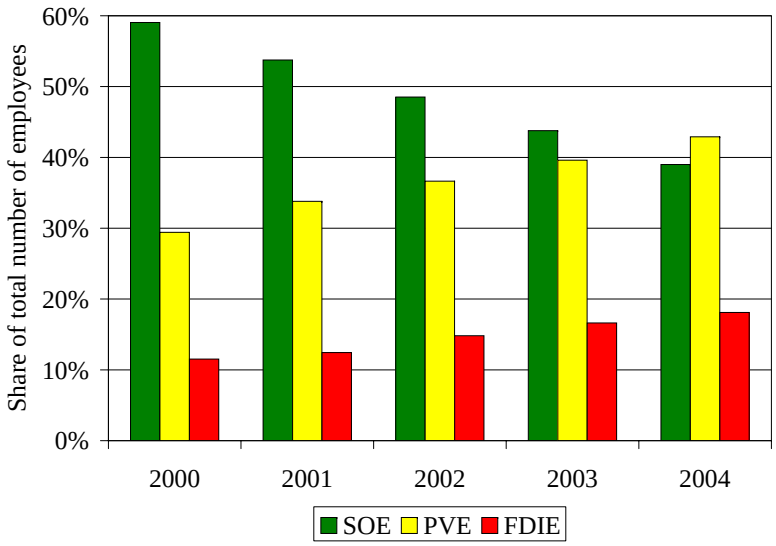
Vietnam's business environment in general has undergone tremendous changes in the past two decades. Starting from the doi moi[1] reform in 1986 the socialist party began opening up to a more market-oriented economy. The doi moi reform process that emerged from the 6^{th} convention of the communist party of Vietnam (1986) aimed at improving the productivity of *state-owned enterprises* (SOE), loosening the discrimination against private enterprises and opening up the economy to foreign trade [Revilla Diez, 1995]. Furthermore, a democratization of the country and an political opening towards the rest of the world was agreed upon [Nam Xuan et al., 2001]. In 1992 the constitution first recognized individual ownership and the private sector as legal parts of the economy [Wescott, 2003]. In the decade after doi moi Vietnam witnessed the highest economic growth rate out of the 40 poorest countries in the world. Between 1992 and 1998 real income rose by 39%. Furthermore, the decision of the United States to lift the embargo in 1993 fostered the *foreign direct investment* (FDI) inflow [Fforde, 2001]. In additon, the private sector gained importance in recent years and today it accounts for a relative large share of the GDP [Rand and Tarp, 2007].

[1] Doi moi is Vietnamese for regeneration.

The opening of the Vietnamese economy can also be seen in the composition of the GDP. Figure 4.1a shows that, starting in 1988, the share of the GDP generated



(a) GDP by ownership.



(b) Employment by ownership.

Figure 4.1: GDP and employment structure by ownership.

Source: Own presentation based on GSO [2008c] data.

from FDI enterprises (FDIE) rose as it was then possible to invest directly in Vietnam. This trend was accompanied by an almost equal decline in the investment

from *private domestic enterprises* (PDE). Meanwhile, the share of the state sector remained approximately constant over the past decades.

The same trend can be seen in the employment structure (figure 4.1b). As FDI companies grew in terms of their share of the GDP these companies also started to employ a considerable share of the Vietnamese workforce and thus became more important, not only for the Vietnamese economy, but also in the political decision making.

Alongside the change towards an open and world market integrated economy, the share of the agricultural output as a proportion of the total output declined from 43% in 1980 to 24.6% in 2002 while the share of the service sector rose from 33.7% to 39.5% and the industry sector rose from 23.3% to 35.9% in the same period [United Nations, 2007]. The Vietnamese economy thus faced several structural changes in the decades since the opening process. Besides integration with the world market it also faced a structural change within its domestic production, which shifted from domination by agriculture to a modern industry- and service-oriented economy.

Figure 4.1 and figure 4.2 show that the turning point for the Vietnamese economy can be pinpointed to the period between 1988 and 1990, when the share of the agricultural sector to the total GDP declined, while the share of the service sector rose and foreign direct investments started to flow into the economy. Thus, a structural change in the Vietnamese economy happened shortly after the doi moi process was introduced, which therefore can be denoted a successful implementation of the political decision.

This process provided the ground for the strengthening of the RNFE that plays a central role in poverty reduction. Thus, its development has to be considered in policy plans targeting the improvement of the living conditions for the rural poor. In 2004 the RNFE accounted for over 30% of rural employment [ADB, 2005]. The constraints that these firms face are different from the ones located in the country's centers like Ho Chi Minh City, Hanoi or Da Nang. Obvious constraints that rural enterprises face are mainly the lack of various infrastructures like electricity, transportation and telecommunication, but they also include institutional constraints such as political/regulatory uncertainty, corruption or access to secure land rights that hinder their performance [ADB, 2005]. The fact that land prices in urban ar-

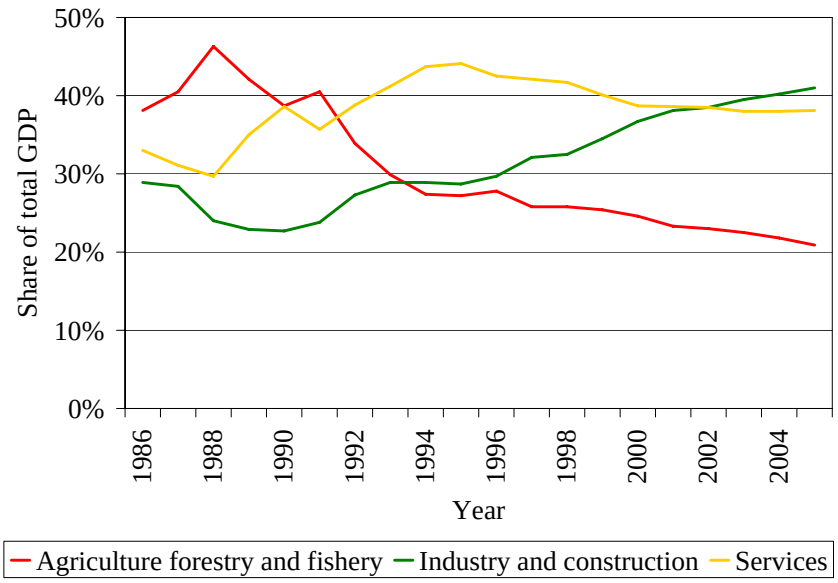


Figure 4.2: Structure of GDP as share of total.

Source: Own presentation based on GSO [2008c] data.

eas are about 500 times higher than in rural areas [ADB, 2005] might increase the incentives for companies to invest in rural areas. The challenge that came along with the opening up was to adjust the business conditions to the new circumstances in order to provide fruitful ground for the newly established businesses and to be able to maintain the positive trend. Besides the competition for the Vietnamese companies from world markets, there is also a strong international competition for FDI. In order to be able to benefit in the long run, Vietnam needs to provide a legal system that enables investors to accurately predict the terms of doing business and that ensures them that they will benefit from investing in Vietnam.

4.3 Institutional economics and transition economies

4.3.1 Political economy approach

An attempt to formalize the concept of institutional economics and the multiple and complex linkages between political and economic institutions on the one hand and the economic performance and distribution of resources of a country/region it

includes on the other hand is given in Acemoglu et al. [2004]. Figure 4.3 provides an overview concerning these linkages.

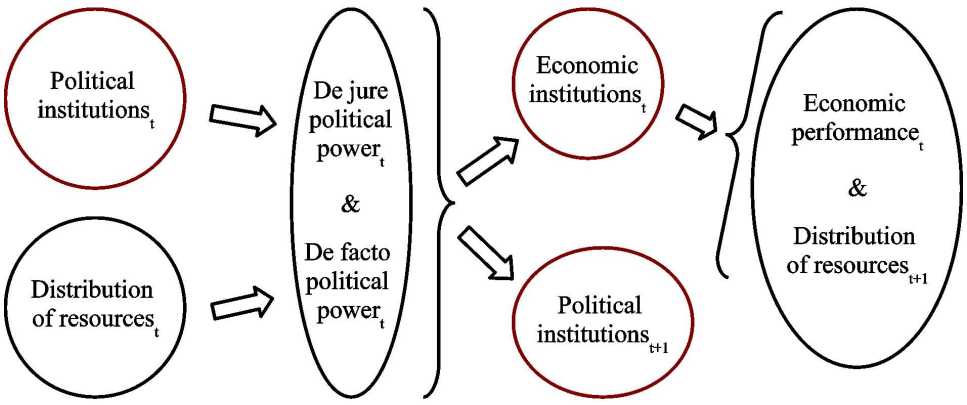


Figure 4.3: A framework of institutions.

Source: According to Acemoglu et al. [2004, p.6].

The prevailing (period t) political institutions and the current distribution of resources determine the de jure and respectively the de facto political power in the same period t. These two sources of political power determine the economic institutions in t as well as the next period's (t+1) political institutions as the groups with de facto political power try to gain de jure political power and thus broaden their influence on the economic institutions that finally determine the economic performance of a country in t and more importantly the distribution of resources in t+1 which directly affect the de facto political power in t+1. Therefore, the economic performance and the distribution of resources is directly and essentially affected by economic institutions, which are themselves determined by political institutions and the distribution of resources [Acemoglu et al., 2004].

According to Acemoglu et al. [2004], political and economic institutions are assumed to influence the economic performance of countries according to six basic arguments. First, as institutions influence the investments and the organization of production in a country, they are the major source of cross-country differences in economic growth and prosperity. Second, they are endogenous as they emerge from a collective choice of the society. Third, there are conflicting interests over the distribution of resources and therefore indirectly over the set of economic institutions. Fourth, political power, which is endogenous in a society, can be distinguished into

two components: de jure and de facto political power. While de jure political power is based on the political institutions in the society, de facto political power of a certain group depends on their ability to cooperate, and their economic resources, which enable them to use/misuse political institutions and to use force against other groups. Therefore the two state variables are defined as: political institutions and the distributions of resources.

4.3.2 Transaction cost based considerations

The most applied approach in the analysis of institutions is transaction cost economics that originate in Coase [1937]. In the original transaction cost economics framework, firms have been viewed as governing structures with their main purpose being to organize the production and exchange process. Coase set a focus on the role of exchange costs in the related interface. "Firm-level decisions, especially those regarding internal production and contracting out (...), business decisions in terms of choice of activities under vertical and horizontal integration of business activities (...) have been assessed in terms of incidence of their relative transaction costs in addition to traditional direct costs."[Rao, 2003, p.7]

Table 4.1 gives an overview of the different types of transaction costs and their origin within the economic system. In the context of provincial differences in the performance and the development possibilities of rural non-farm companies, all three categories of transaction costs, i.e. market-based, administrative/managerial and political transaction costs, are important as they all determine the actions of the entrepreneurs. As transaction costs are difficult to measure directly, they have to be included using different proxies like the number of contracting partners, which will lower the transaction cost at a lower the number, or connection to the internet and telephone network as this will lower the time spent to get in contact with current and future contracting partners. Furthermore, the length of the relationship with one market partner reduces the transaction costs, as generally the longer two partners work with each other the higher is the level of trust, resulting in a lowering of the monitoring effort and therefore the transaction costs. The same argument holds for reputation, which can be signaled by holding certificates. If a company holds a specific certificate it signals that this company operates accord-

Table 4.1: Transaction costs classification.

Category[a]	Costs items [a]	Possible indicators
Market-based	- Information	- Connection to the internet and Telephone network
	- Bargaining/negotiation over transactions	- Number of contact partners and length of the relationship
	- Contracting	- Ways to find new business partners
	- Monitoring and enforcement of agreements	- Number of contact defaults
Administrative and/or managerial	- Setting up or establishment of organizational features	- Business attitude of the local authorities
	- Operating an organizational entity	- Local business environment and infrastructure
	- Information gathering and processing	- Staff replacement rates
	- Alternative modes of resource development	
Political	- Specified due to system characteristics	- Ease of doing business
	- Set of costs of broader institutional configurations within which other institutions and organizations exist	- Bribe level and tax procedures

Source: a: according to Rao [2003].

ing to the rules specified by the issuing authority and therefore any new market partner can rely on this signal and does not need to assess it himself.

Furthermore, internal administrative processes influence transaction costs. These costs occur due to decision-making and hierarchical structures. The longer the hierarchy, the higher the transaction costs. If workers are more integrated in the processes, transaction costs might be lower compared to a more patriarchal structured company. A proxy for this kind of transaction cost is the share of professional staff as their main task is to monitor operations and organize the production and exchange processes.

For the political factors the general ease of doing business can be measured by the reliability of regulations, as it is time consuming to adjust to new circumstances; the business attitude of the authorities is important, as it is easier and faster to deal with officials who try to help.

Besides lowering the transaction costs of a company, some of these factors also involve risks. For example, the low transaction costs of only producing for one single market partner also involves the risk of losing this partner and have no market left.

4.3.3 The special case of institutions in a transition economy

Taking a look at the special case of transition economies, it becomes clear that institutions play an even more vital role in a successful transition process. A communist regime provides a framework with zero probability of being held up. Mostly one large state-owned company per sector manages the whole sectoral system. After privatization the system was split into many small enterprises that make decisions autonomously. Thus, the transition, if not accompanied by an adequate change in the institutional setting, might be trapped in several hold-ups [Cungo et al., 2008].

Any transition process inherits constraints. First of all, there is the uncertainty of outcome. In some parts, the goal of a transition is controversial as there is no general understanding of many parts of a market-economy. For example, the role of the government, which is possibly the most debated within the theory of market-economies, leads directly to a debate on the transition and its goal. And even if there is a clear goal for transition, no theory yet exists on how to get there. Furthermore, the transition process is usually directed by some few individuals who will decide, due to the enormous uncertainty they face, quite differently even if they were theoretically in the same situation. Despite this general uncertainty, a transition process is a very complex path and it includes multiple steps and complementary reforms that are supposed to lead to the goal. This also leads to the last and possibly most important constraint of a transition process. As every transition involves winners and losers, the political constraint is crucial. The politicians who start the process and are now in power will try to remain empowered even after transition. Thus they will mostly act out of self-interest

and not necessarily choose the best option from a society's point of view [Roland, 2000].

New institutions should not aim to outrival existing institutions but provide alternatives and thus the necessary flexibility. The goal should not be a rigid system of enforcement of all contracts but leave open the option of risk sharing and excusable default [Fafchamps, 2004]. Policies that facilitate trade are not exclusively contract law and court improvements. Another strand of institutions are of private/personal nature. Private screening and monitoring facilities like trade unions and business associations serve as a complement to the legal system and thus broaden the opportunities of the companies involved [Fafchamps, 2004].

Nevertheless, a certain degree of enforcement is necessary. Cungo et al. [2008] proved in the case of Hungary that especially in the transition period, contract enforcement problems existed. For example, inadequate institutional settings caused many problems of delays in payments or deliveries. This is due to the fact that the legal system that used to provide total security was then highly ineffective and thus doing business became very insecure. Their survey showed that payment delays are important or at least fairly important for 60% of Hungarian farm enterprises. Similar problems have been found in the transition process of countries like the Czech Republic and Slovenia where Gorton et al. [2000] found that payment delays were the single most important barrier to growth. Furthermore, Gow and Swinnen [2001] showed in the case of Slovakia that payment problems were very important for several agricultural sectors. According to a survey conducted by Dries et al. [2009], about 35% of the Bulgarian dairy farms experienced payment delays of at least 60 days.

Another problem emerging from transition are increasing information costs as the former centrally distributed goods and centrally planned prices are now variable and determined by market conditions that need to be analyzed [Krug, 1991]. The importance of networks for, for example, information- or risk- sharing is generally agreed upon. Fafchamps [2004] provides a unique framework for analyzing how networks influence the economic behavior of firms under non-convex transaction costs. Non-convex transaction costs refer to a situation in which economic transactions recur over time between the same individuals or firms. This creates a situation in which individuals tend to choose partners for their transaction with

whom they have already traded. Thus trade patterns will persist along the same network structure over longer time periods. This leads directly to the observation that especially in former centrally planned economies, where the former elites have a comparative advantage concerning information gathering, networks are even more important than in more developed market economies. They used to have most of the relevant market information and thus have a comparative advantage in information gathering after privatization [Krug, 1991]. Therefore, the former elite is able to conserve their influence on the society even after the privatization process. Thus Leipold [1991] proposed an extensive disempowerment of the former elite to overcome this obstacle to a successful transformation.

Generally, most of the issues arising from institutional economics literature are transformed into laws in most of the countries in the world, as they are in Vietnam. Vietnam has a land law that regulates the access to land, corruption is illegal and contracts are binding. Nevertheless, the implementation of these regulations and laws is the crucial part of the process according to institutional literature. If corruption is illegal but the law is either not monitored at all or people are not punished for breaking the law, corruption still exists and the law has no impact on the actual situation. The same holds for Vietnam where an anti-corruption law is in place but corruption levels are still high. According to Transparency International [2008], Vietnam still ranks 121^{st} out of 180 countries surveyed for the perception of corruption. Thus, having an anti-corruption law does not lead to low levels of corruption unless it is enforced. The same holds for access to land rights. Even with land being officially obtainable, private companies still face major problems in getting access to land as most of the available land is allocated to state-owned enterprises [ADB, 2005].

As shown above, all factors introduced in the transaction cost theory are even more important in the transition process, as in the first years after a political change transaction costs are likely to increase and need to be lowered in order to supplement growth. Therefore, the transaction cost based definition of institutions is the main focus of the analysis.

4.3.4 Empirical applications of the institutional economics concepts

As the livelihoods of rural poor depend crucially on labor incomes, functioning of the rural labor markets is a key concern of rural poverty reduction efforts [Otsuka and Yamano, 2006]. As shown above, one crucial precondition for the functioning of the economy, especially in rural areas, is an adequate institutional setting within which the companies act. One prominent example of empirical and theoretical research in the field of institutional economics is Acemoglu et al. [2004]. Institutions are one important reason for the different economic performances across countries. According to their findings, this is based on institutions that were, in the case of developing countries, mostly formed during the colonial era. As institutions tend to persist over long periods and are hard to change due to different political and social circumstances, these colonial institutions still determine the fate of many developing countries. They conclude that the incentive to invest for people with good investment opportunities in a country is based on the precondition of enforceable property rights and equality before law for "a broad cross-section of the society".

The problem in policy-oriented empirical work is to measure the variety of institutions and to generate policy-relevant proxies that are on the one hand able to measure the institutional differences and on the other hand are detailed enough to be relevant for policy interventions.

The security of land rights, as one part of the institutional setting in countries, is crucial in stimulating investment and innovation and is one proxy that can be directly influenced by policy makers via the design of land laws that are enforceable. The effect of secure land rights is not only based on the direct investment effect, but also on indirect factors as land can serve as collateral for credits needed for investment [Grimm and Klasen, 2007].

The challenge of improving the access of the rural poor to welfare enhancing non-farm activities is not only reached via the improvement of physical infrastructure that lowers the relative distance to centers of economic activities, but should also include the improvement of institutional settings to lower the entry costs for those groups. These entry costs can be knowledge barriers that could be reduced by improvements in the education system but may also include difficulties in migration or setting up a business [Barrett et al., 2001]. Furthermore, does the access to institutional capacity (including information, markets, commu-

nications and transport) lower the costs of acquiring information such as on where wage work is available or on the demand for goods/services, physical infrastructure lower transport and transaction costs? [van de Walle and Cratty, 2004]. Another proxy for institutional quality is the corruption prevalence that hinders people or companies from investing in a certain region or to grow in that region. Corruption generally causes higher uncertainty in the business and makes it more difficult to operate in an environment in which decision are not only based on laws and regulations but also on additional and unpredictable payments for governmental services. Stalker [2008] has shown that control of corruption and high scores for the human development index are closely correlated. This leads to the conclusion that better control of corruption leads to improvements in the human development index and via higher education levels to pro-poor growth. Another indicator of the broad set of institutional proxies is the freedom of capital movement. In case of Vietnam, the mobility of capital is still extremely low, which makes it even more difficult for regions that lack behind in their economic development to catch up with the booming centers [Bonschab and Klump, 2007].

Another interesting example is the topic of decentralization aiming at increased participation of the local population and improved accountability of local authorities. Wescott [2003] analyzed this issue in the case of Vietnam and found that the newly introduced decentralization policy is unfortunately moving only slowly due to the remaining political networks that hinder effective implementation of the law. Therefore, the party elites still dominate the businesses, and private investments are not growing at the expected pace [Wescott, 2003]. This example shows as well as the appropriate laws, it is important that the correct institutional settings exist to enable their implementation, and how this has strong implications for economic growth and entrepreneurship within the country or location.

Especially when operating in imperfect markets, transaction costs are a major factor to be considered by companies. Some examples that illustrate the dimension that transaction costs can reach are given in Benham and Benham [2001]. In the first example the "real" costs of getting a landline telephone in Egypt (1996) are approximated by the difference in apartment rents for similar apartments with and without an installed telephone. With the official price given at $295 and the "urgent response" price at $885, the actual difference in rents ranged between

$1,180 and $1,770. This approximates the additional costs by the willingness to pay for the already installed service. Another example is the difference in waiting time to get a ship cleared that is already in the port. Comparing Singapore with only 15 minutes to Tanzania where it takes between 7 and 14 days, the transaction costs vary tremendously. This implies that transaction costs ought to be included in the analysis of the Vietnamese non-farm economy as they might be a major factor that drives the differences between provinces and the success of resident industries.

One prominent attempt to compare institutional settings across different countries of the world is the "Doing Business Index" of the World Bank. It combines several indicators on the business environment for 181 countries in 2008, which are aggregated to the Index. Table 4.2 gives details about the performance of Vietnam between 2005 and 2007 as compared to other South Asian countries.

Table 4.2: Ease of doing business ranks of selected South Asian economies.

	Ease of doing business world ranks		
Economy	2005	2006	2007
Singapore	2	1	1
Hong Kong, China	6	5	4
Thailand	19	18	15
Malaysia	25	25	24
Taiwan, China	43	47	50
Mongolia	41	45	52
China	108	93	83
Vietnam	98	104	91
Indonesia	131	135	123
Philippines	121	126	133
Cambodia	142	143	145
Lao PDR	164	159	164
Timor-Leste	174	174	168

Source: Own presentation based on World Bank [2008a].

Although Vietnam improved its position in the Doing Business Index [World Bank, 2008b] from 104^{th} rank in 2007 to the 91^{st} in the 2008 Version of the same index it remains a difficult country to do business in. This poor performance is mainly based on institutional weaknesses like the low enforcement levels of contracts, the time consuming procedure of tax payments, the weak protection of

investors and problems in worker employment. This is also stressed in the analysis of Vietnam's strengths and weaknesses, where Vietnam's major weaknesses are found in the institutional area, with transparency accountability and social protection below the South Asian average [ADB, 2005].

Although institutional economics mainly focuses on cross-country differences, recent research showed that, even in mainly centrally planned economies like Vietnam, institutions also differ within countries [Malesky and Ray, 2007].

The *Provincial Competitiveness Index* (PCI) assessed the differences in the private sector performance among the 64 provinces of Vietnam. The PCI consists of ten sub-indices that value the entry costs, land access and security of tenure, transparency and access to information, time costs of regulatory compliance, informal charges, state-sector bias, pro-activity of provincial leadership, private sector development services, labor training and legal institutions. The scores are based on the best practices found in the survey and is set as 100 for the best performer while all other provinces are ranked accordingly [Malesky, 2007a].[2] For the PCI, the worst performing areas are concentrated in the northern uplands on the border with China and Laos, the South-central Highlands around the province of Dak Lak and on the border with Cambodia. The best performance is found mainly in the Mekong River Delta around Ho Chi Minh City. Some others in the northern uplands, as well as around TT Hue provinces, also show above average scores.

The PCI is not used in this work due to different reasons. Many of the indicators used, e.g. entry costs and access to land, are mainly relevant for establishing new businesses and less important to large companies already operating in a province. Furthermore, the design of the mail out survey has some weaknesses, especially when faced with response rates of less than 15%. This rate is generally high considering the design, but nevertheless might produce a severe bias of the results. The different measures included in the sub-indices also pose some problem. These indicators are aggregated using weights of the different factors, which may lead to very different results when changing the weights. Finally, the PCI gained huge public attention, which is presumably just what the authors intended, as the aim was to guide the improvement of governmental quality in Vietnam. Nevertheless, this attention also comes with the problem that all provincial governments have to

[2] Appendix A.11, page 154 shows the PCI performance of all provinces in Vietnam.

improve their position in a rather short time and cannot change a lot in single year that is between the survey waves. This may well lead to some attempts to influence the result of the PCI without actually having changed anything. Particularly against the background of the differences in the performance of some regions from 2005 to 2007, this might have been the case. Some provinces, e.g. in the area around Hanoi, had scores at the bottom end out of all provinces included and by now they have improved their scores remarkably and are rated among the best in Vietnam after only two years.

4.4 Objectives and data used

4.4.1 Objectives of this chapter

Arguably, much of the institutional settings in terms of regulations and laws are set on a national level and thus are similar to all companies within a country, but nevertheless, a crucial part of this setting is determined by the local authorities in each province and district. The officials who finally apply and enforce the regulations are often the ones who make a difference, as they are who interpret the laws and apply them either stringently or more loosely. Another advantage of analyzing the institutional setting or the governmental quality within a country, and not on a cross country basis, is that a micro level study will cover institutions better as parameter heterogeneity, unobserved heterogeneity and endogeneity do not need to be controlled for, which can cause problems in a cross-country comparison [Grimm and Klasen, 2007].

The objective of this chapter is to investigate the differences in the institutional settings, i.e. infrastructure, governmental quality and transaction costs, of three remote provinces in Vietnam. Furthermore, the possible differences will be analyzed in terms of their effects on economic performance and employment generation of the companies operating in these provinces. Additionally, it is investigated whether a rather rough six point Likert scale measuring the perception (of company owners and managers) of the institutional setting are able to explain the difference in the performance of companies in different locations.

4.4.2 Survey design and data

In addition to the DFG FOR 756 [2008] household survey, a company survey was conducted in the same provinces[3]. Figure 4.4 gives an overview of the research location for the company survey. The survey aimed at generating a sample of companies that have a considerable effect on the employment opportunities of the rural population in the research provinces and that constitute (or have the potential to be) the major driving forces of provincial development. The sample frame was therefore set to non-farm companies that employ more than 50 workers and that operate as legal entities in the research province. This led to a sample

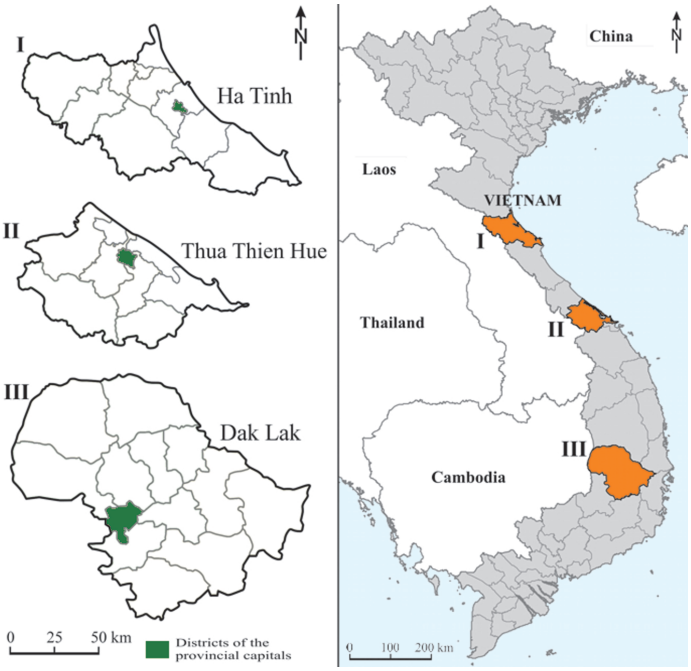


Figure 4.4: Research area - company survey.

Source: Own presentation based on Hardeweg et al. [2007].

of 128 companies of which 36 are located in Ha Tinh, 46 in TT Hue and 46 in Dak Lak. Based on the nature of the questionnaire[4] that includes a number of questions requiring assessments of the business environment and insight into the

[3]Presented in section 2.3, page 16.

[4]The questionnaire used is included as Appendix A.7, page 142.

basis of business decision making, the interview partners were managers or owners of the companies[5].

Medium- and especially large-scale companies require well developed infrastructure and mostly depend on agglomerations [Schätzl, 2003]. Therefore, most of the companies that were sampled are operating from the provincial capitals. These companies employ a large share of the total population working in the non-farm sector of the provinces and they not only employ people from the capitals but also attract workers from rural areas. Table 4.3 gives an overview of the share of the provincial workforce that is covered by the company survey, the household survey and the combination of both of these.[6] Depending on the source used, the share

Table 4.3: Representativeness of the sampled companies.

Province	Number of employees in non-farm enterprises[a]	employees in enterprises [b]	employees in sampled companies (N=128)	employees in household survey (N=2195)	Share of employees covered
Ha Tinh	54,413	22,215	8,553	730	17 - 42%
TT Hue	67,533	40,188	16,712	899	26 - 44%
Dak Lak	47,428	56,553	8,889	1,000	17 - 21%

Sources: a: Based on GSO [2008a]; *b*: Based on GSO [2008b].

covered by the two surveys combined is at least 17% of the total workforce for the cases of Ha Tinh and Dak Lak and 26% for the case of TT Hue. Even more impressive is the share if the data on employees in enterprises is used, which leads to a share of 21% in Dak Lak and 42 and 44% for Ha Tinh and TT Hue. As these secondary data sources do not provide their sample frame or a definition of the enterprises they interviewed it is not possible to judge which source would be more accurate to compare this sample with. So this rather rough estimate of the covered

[5]52% of the interview partners were the owner of the company, 42% were leading and top managers of the company and the rest were head of several management fields like marketing, trade or personnel departments.

[6]The share of workers in non-farm companies that the household survey covered was rather low and furthermore this survey does not provide information about the company they work in. Therefore, these are not considered in the analysis later on.

population of workers is the best estimate available. But the covered shares (even when taking the conservative figures of 17 and 26%) are high enough to be able to generate valid results that do represent the sector and types of company focused on.

4.5 The effect of the institutional factors on the performance of the rural non-farm economy

4.5.1 Description of the surveyed companies

The companies covered here are mainly located in the provincial capitals and several nearby industrial zones. As elaborated above, this is not based on the sample design but on the fact that large companies rely on agglomeration advantages as well as the infrastructure that is provided in and around the capitals, but not at all or at least not to the same extent, in more remote locations in rural areas. factors Several differences exist in the sectoral distribution of the companies across the

Table 4.4: Sectoral distribution of companies by province (N=128).

Sector	Ha Tinh	TT Hue	Dak Lak
Food Processing	14%	13%	17%
Garment/Textiles	0%	15%	2%
Construction	6%	0%	20%
Hotel	6%	11%	2%
Wood Processing	17%	4%	11%
Electronics	0%	4%	2%
Constitution material production	8%	20%	0%
Trade	14%	7%	7%
Service	11%	7%	15%
Multiple	14%	7%	15%
Others	10%	12%	9%

Source: Own survey data collected within DFG FOR 756 [2008].

provinces (table 4.4). First of all, TT Hue has a more "developed" structure with more hotels based on tourism, a feature that is not found to the same extent in the other two provinces, and a textile sector that is virtually absent in the other

provinces. Furthermore, more suppliers for construction companies are located in TT Hue, is partly based on the tourism industry but also on other businesses that require good infrastructure for their operation, e.g. the garment/textile sector that mostly produces for export. The trade and service sector is relatively more important in Ha Tinh with only few companies involved in production. Besides this sector there is also a high share of wood processing that is based on the availability of forest wood extraction in this province. Finally, Dak Lak has a heavy dependence on the construction and food processing sectors. The construction sector is mainly dependent on public finance, as most of this construction is in infrastructure building that is financed purely by the provincial government. The production and processing of coffee is the major economic factor in Dak Lak province, using almost 40% of the total agricultural land for coffee production [GSO, 2008c].

The same diverse picture also holds for the internal structure and characteristics of the companies in the three provinces. Table 4.5 shows that the profits of companies in Ha Tinh are just 15-20% of the profits realized in Dak Lak and TT Hue. However, the turnover/cost ratio is only slightly higher for Hue companies than those in Ha Tinh. Nevertheless, companies in Ha Tinh employ - due to their

Table 4.5: Surveyed companies description by province (N=128).

Variable	Unit	Ha Tinh	TT Hue	Dak Lak	Total
Profit 06	'000 $	113	776	552	506
Turnover/Cost	Ratio	1.12	1.17	1.72	1.35
Employees '06	#	277	410	237	310
Employment growth '04-'06	%	45	21	18	27
Share professionals	%	7	7	11	9
Share engineers	%	10	13	11	11
Share workers	%	63	67	44	58
Share Casuals	%	20	13	34	22
Employees income	$per month	77	87	79	81
Large (>200 employees)	%	36	52	48	46
Party member	%	14	16	59	32
Industrial zone	%	14	27	9	17

Note: All values given are means; N=128.
Source: Own survey data collected within DFG FOR 756 [2008].

lower productivity - a larger workforce than those in Dak Lak, which is also the reason for the bigger difference in profits compared to sales.

The workforce is not only different in size but also in its structure. In Dak Lak the use of casual labor is more common, with every third worker being employed on a day-to-day basis. The companies in Dak Lak also employ a higher share of professionals and engineers, which indicates a more sophisticated production and marketing system compared to the other two provinces. The incomes earned in the companies reflect the same trends as the poverty figures, with Ha Tinh's workers earning the lowest salaries and companies in TT Hue paying the highest wages. A distinct difference is the share of company owners who are members of the communist party of Vietnam. In Dak Lak more than half of the companies are owned by members, while in Ha Tinh, which is generally considered a stronghold of the Vietnamese communist party[7], only 14% of the companies have this link to the political system. This fact is likely to be based on the resettlement policy that started after the reunification and continued up to the 1990s. During this time the communist party tried to reverse the rural-urban migration, which was considered to be a problem for the fast growing centers of Hanoi and Ho Chi Minh City. New economic zones were established and people received financial assistance if they decided to migrate to these areas. This policy aimed at not only at lowering the population pressure in the boom regions mainly in the Red River delta but also at "colonizing" the central highlands with its high share of ethnic minorities [Wescott, 2003]. Furthermore, after reunification the settlement of farmers in the strategically important areas along the Chinese and Cambodian borders was based on security reasons [Revilla Diez, 1995]. This system likely favored party members to receive the assistance and to reach the goal of colonizing and securing these areas and thus constitute the major group of migrants. Between 1994 and 1999 a net population growth from migration was as high as 7.2% from migration only, while Ha Tinh and TT Hue faced a net population loss of 4.1% and 1.8% from migration respectively [Anh et al., 2003]. Similar migration trends and reasoning could be observed after the reunification in 1976.

[7]According to personal communication with various experts in Vietnam.

4.5.2 The provincial business environments

To gain insight into the business environment of the three provinces, the companies were asked to give their perceptions of the importance and rating of the local conditions considering three major groups of factors, i.e. general business environment, local infrastructure and governmental quality. The assessment was based on a scale ranging from one to six, with six being the best score. This scale was later on normalized to a scale from zero to one with one being the highest score. Furthermore, companies were asked to indicate up to three of the factors that constitute barriers to expanding their operations. Based on the scores it is possible to assess which constraints these companies face and in which areas political intervention might help to overcome the bottlenecks and improve the performance of the companies that operate in these areas. Furthermore, it may also point out the factors that need to be considered in order to attract more companies to these rural provinces.

Firstly, the general business factors are indicated in table 4.6. These factors include indicators that are well established as major influences on companies' behavior. The table is sorted according to the mean stated importance of each factor, which leads to skilled labor being the top priority of these companies in this group of factors. However, that factor also turns out to be a major expansion barrier with almost 50% of the companies stating the lack of availability of skilled labor as one of their barriers for expanding their businesses. Nevertheless, the rating of the

Table 4.6: Rating and importance of general business factors (N=128).

	Importance[a]	Rating[a]	Barrier[b]
Skilled labor	0.91	0.58	62
Available credit	0.86	0.72	13
Affordable inputs	0.85	0.35	16
Proximity to supply	0.81	0.47	22
Affordable land	0.74	0.50	8
Proximity to customers	0.72	0.72	17
Affordable labor	0.66	0.56	1

Notes: a: All values are means ($\in [0, 1]$ with 1 being the best score).
b: Number of companies stating factor as major expansion barrier.
Source: Own survey data collected within DFG FOR 756 [2008].

conditions is better than some others. The availability of affordable inputs, which is the third most important factor for these companies, shows the lowest score for the rating of local conditions. The availability of credit, which is the second most important factor, has the highest rating. In contrast to skilled labor, these factor are not perceived as an expansion barrier to the same extent. The availability of affordable labor, which is generally reckoned as a major comparative advantage of operating in Vietnam as compared to other South-East Asian countries [German Industry and Commerce Vietnam, 2007], is not stated as very important, as it is available all over Vietnam. For the availability of credit the picture is rather different. Although the importance was stated as very high, and the rating of the conditions was fairly good, more than 10% of the interviewed companies considered this factor as one of their barriers to expansion.

Secondly, the perception of the infrastructure endowment of the provinces is summarized in table 4.7. The most important is, unsurprisingly, the quality of roads, which is crucial for any flow of inputs and products and thus for almost all business transactions. Again, this factor is also rated rather low, and stated as

Table 4.7: Rating and importance of infrastructure factors (N=128).

	Importance[a]	Rating[a]	Barrier[b]
Good roads	0.89	0.48	24
Training quality	0.88	0.38	11
Mobile network	0.87	0.76	1
Internet	0.83	0.65	1
Industrial zones	0.79	0.37	10
School quality	0.75	0.62	1
Proximity to airport	0.63	0.60	1
Recruitment agencies	0.58	0.35	1

Notes: a: All values are means ($\in [0, 1]$ with 1 being the best score).
b: Number of companies stating factor as major expansion barrier.
Source: Own survey data collected within DFG FOR 756 [2008].

the most important barrier to expansion within this group, indicating poor road quality in most of the locations. The following two factors, i.e. training quality and mobile network, are rated almost equally with road quality on importance. Despite the equal importance, the ratings are considerably different. While the mobile network is generally perceived as good and only in one case as a barrier

to expansion, training quality was rated very low and was stated as an expansion barrier by almost 10% of the interviewed companies. For the rest of the factors, the existence of industrial zones and the availability of recruitment agencies show some interesting results. The factor of industrial zones shows a similar pattern as that of training quality, with a rather high importance and a low rating. It is nominated as an expansion barrier by several companies, while the availability of recruitment agencies is not considered to be very important. This is also reflected in the fact there was only one nomination as an expansion barrier even though having a low rating.

Finally, several governmental quality indicators are considered. Table 4.8 shows a summary of the indicators included. The most important factors in this category turned out to be the pro-private business attitude of local government officials and the reliability of local regulations. While the pro-private business attitude, which is

Table 4.8: Rating and importance of governmental quality indicators (N=128).

	Importance[a]	Rating[a]	Barrier[b]
Pro-private business attitude	0.90	0.70	10
Reliability of regulations	0.90	0.57	35
Secure land rights	0.87	0.54	8
Financial gov. support	0.86	0.55	13
Voice	0.83	0.74	0
Non-financial gov. support	0.82	0.52	8
Bribe level		0.64	3

Notes: a: All values are means ($\in [0, 1]$ with 1 being the best score).
b: Number of companies stating factor as major expansion barrier.
Source: Own survey data collected within DFG FOR 756 [2008].

crucial for a transition economy like Vietnam, is rated rather highly, the reliability of the regulations is rated low and is also the second most often stated barrier to expansion for local enterprises within all three groups of indicators. One surprising result is that, in contrast to the other two groups, there are no indicators that are considered as not very important. Furthermore, the lowest ratings are still better than those found in, e.g. the general business factors. Nevertheless, 45% of the interviewed companies stated at least one of the indicators in this group as one of their three most important expansion barriers. Additionally, the two factors of

pro-private business attitude and reliability of governmental regulations scored the highest importance values over all factors included.

Decomposing the expansion barriers by the provinces in which the companies operate in, it turns out that companies face very different problems depending on their location. Figure 4.5 gives the number of companies in each province that stated one of the factors within the groups introduced in table 4.6–4.8 as one of their three major expansion barriers. In each province the group of factors that is most often stated are, unsurprisingly, the general business factors. These are the factors that need to be fulfilled to a sufficient extent for companies to be able to operate in an at least satisfactory manner.

The other two groups are more diverse. First, the infrastructure endowment that is also important for operating a business is not a big problem in Dak Lak and TT Hue, but is stated as a problem in almost 50% of the cases in Ha Tinh. However, in all provinces the infrastructure factors are the least often stated indicators.

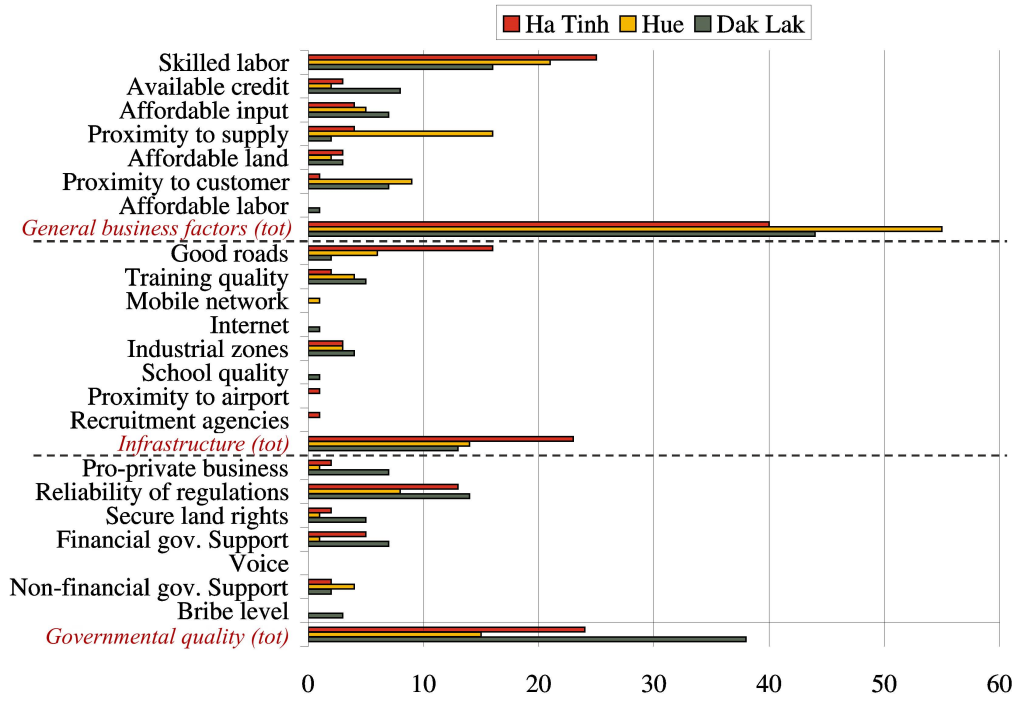


Figure 4.5: Major expansion barriers of companies by province.

Source: Own survey data collected within DFG FOR 756 [2008].

Second, the governmental quality was least often mentioned as a problem by TT Hue companies, where it is only slightly more than the infrastructure but both are at a low level. In Ha Tinh it is also very similar to the share of companies stating infrastructure problems but on much higher level of almost 50%. Finally, in Dak Lak the infrastructure was no problem but governmental quality poses a barrier to almost 60% of the companies.

Turning to the individual factors, over all provinces the most frequently stated barrier is skilled labor. Nevertheless, this factor is not analyzed in detail here as the main focus is on governmental quality and its interaction with the performance of companies.[8] For Ha Tinh it is obvious that the expansion barriers are similar in all companies. Only skilled labor, road quality and the reliability of regulations are major problems faced by the companies,which suggests that the problems are mainly based on location and less on other factors. In Dak Lak and TT Hue the barriers are more diverse, although there are also common barriers like skilled labor and reliability of regulations for both provinces and proximity of supplies for TT Hue. In Dak Lak a number of factors, i.e. affordable inputs, customer proximity, credit availability, pro-private business attitude and financial support were mentioned by several companies. In TT Hue the further factors are customer proximity and the road quality for some of the companies. This leads to the assumption that companies in TT Hue and Dak Lak face different problems, depending not only on the location like in Ha Tinh but most likely also on other factors such as the sector they operate in.

4.5.3 The perception of the business environment and the performance of the companies

Based on the details given in table 4.6–table 4.8, three indices were generated based on equation (4.1).

The indices were developed in order to get a more aggregated picture of the constraints faced by the companies. They aggregate the factor groups introduced before into three indices, i.e. the general business environment index, the infrastructure index and the governmental quality index. Each index combines the stated

[8]For details on the educational system and its shortcomings see Dang [forthecoming].

$$X_i = \sum_{p=1}^{P} \left[\frac{\sum_{n=1}^{N} R_n * I_n}{N} \right] * \left[\frac{1}{P} \right] \tag{4.1}$$

Variables:	
X_i	Index value for the three Indices (i)
R_n	Rating of each factor (n) included
I_n	Importance of each factor (n) included
N	Number of factors (n) included in Index
P	Number of interviewed companies in province

importance of the factors included with the provincial mean rating of the same factor. As the importance and the ratings are normalized to $[0, 1]$, all parts of the sum also range between zero and one, with one being the best score for both the importance and the rating and therefore also for the combination of both. In order to normalize the total indices to a range between zero and one and make them comparable to each other, the sum is divided by the number of factors included. The whole index therefore also ranges from zero (the worst possible score) to one (the best possible score). Of course, it is necessary to take into account that for a score of one, both the importance perceptions and the ratings of all factors included need to be one. This situation is rather unlikely but nevertheless the index facilitates a comparison of the three provinces. The index weights the rating of each factor by the stated importance of each factor in order to generate an index value that is able to value the impact of the indices on the operations of the companies. If not weighted by the importance, the index might lead to high values although the good conditions are in areas that do not matter for the operations of the companies. The way it is generated now gives more weight to factors that are of great importance to the companies and thus leads to values that reflect the real perception of the people who do business in the province. Finally, the mean of the index is taken over the province in which the company is located to be able to evaluate the provincial settings.

Similarly to the expansion barrier perception, there are some differences apparent in the index scores. Table 4.9 shows the differences in the index scores across the three provinces. First, the general business environment is rated best in Dak

Table 4.9: Provincial differences in the Index scores.

	Ha Tinh		TT Hue		Dak Lak	
			Business environment			
Ha Tinh	–		−0.02		−0.04	*
TT Hue	0.02		–		−0.06	***
Dak Lak	0.04	*	0.06	***	–	
			Infrastructure			
Ha Tinh	–		−0.17	***	−0.15	***
TT Hue	0.17	***	–		0.02	*
Dak Lak	0.15	***	−0.02	*	–	
			Governmental quality			
Ha Tinh	–		−0.10	***	0.01	
TT Hue	0.10	***	–		0.11	***
Dak Lak	−0.01		−0.11	***	–	

Notes: T-test mean comparison significance levels at the 99% level =***, 95% level =** and 90% level =*.
Source: Own survey data collected within DFG FOR 756 [2008].

Lak province. The score for TT Hue is, although not significantly, higher than Ha Tinh province. Generally, the differences are lower than is the case with the other indices. The biggest differences are found in the infrastructure index with the highest value being 0.17 points higher than the lowest value. In this index all provinces perform significantly differently from each other, with TT Hue reaching the highest value and Ha Tinh the lowest. Finally, the governmental quality index is perceived as significantly better in TT Hue as compared to both of the other provinces, which do not differ significantly from each other. Nevertheless, the mean score for Dak Lak province is the lowest of all provinces, but due to the lower standard deviation for Ha Tinh, the difference is not significant.

4.5.4 Effects of the business environment perceptions

Using the generated indices, the effects of these perceptions of the ease of doing business are analyzed utilizing two regressions. First, the effect on the profits of the companies in 2006 (table 4.10) and second, the relation to the size of their workforce in 2006 (table 4.11) is investigated. The regression analysis is performed in four steps including different sets of variables in order to check the robustness of

the influences of the explanatory variables. The first set of variables accounts for some basic influences on the profit of a company and is included in all regressions. These variables are two dummy variables indicating if the company is large in terms of its workforce and if the company exports its produce. Furthermore, losses due to natural disasters and the severity of these losses is accounted for by the shock profit ratio, and the share of replaced permanent workers is included to control for stability and therefore predictability of the business and the reliability of the workforce. Finally, three dummies are included indicating the sector in which the company operates, namely the industry sector, service sector and the food sector. The food sector was separated from the industry sector as it constitutes a large share (30–53%) of the whole industry sector. This sector received special assistance based on the industrial policy goals in the early 1990s [Communist Party of Vietnam, 1991] which might have some implications for today's operations and especially today's size. Furthermore, food production is of special importance to policy makers as the availability and price of food is crucial, especially in developing countries.

Table 4.10: Regression results for profit of companies.

Variable	Unit	ey/ex (SE)	Sign.	ey/ex (SE)	Sign.	ey/ex (SE)	Sign.	ey/ex (SE)	Sign.
Large	dummy	0.438	***	0.539	***	0.472	***	0.534	***
		(0.162)		(0.132)		(0.177)		(0.136)	
Exporting	dummy	0.064		0.372	**	0.089		0.340	**
		(0.174)		(0.174)		(0.183)		(0.162)	
Shock/profit	ratio	-0.123	***	-0.170	***	-0.116	*	-0.130	***
		(0.042)		(0.051)		(0.063)		(0.048)	
Perm. empl. repl.	%	-0.141		0.197		-0.104		0.196	
		(0.131)		(0.137)		(0.144)		(0.150)	
Recent priv.	dummy	-0.162		0.138		-0.276	*	0.082	
		(0.151)		(0.172)		(0.148)		(0.177)	
Food	dummy	0.120		0.110		0.130		0.133	
		(0.152)		(0.117)		(0.181)		(0.115)	
Industry	dummy	-0.076		0.192		-0.055		0.133	
		(0.177)		(0.263)		(0.178)		(0.257)	
Service	dummy	-0.112		-0.010		-0.109		0.012	
		(0.109)		(0.100)		(0.155)		(0.101)	
Association member	dummy			0.201				0.232	
				(0.295)				(0.289)	
Party member	dummy			-0.145				-0.116	
				(0.150)				(0.137)	
Long term selling	dummy			0.232				0.250	
				(0.403)				(0.390)	
Customer 80%	#			0.543	**			0.572	***
				(0.213)				(0.214)	
Contract defaults	#			-0.240	*			-0.157	
				(0.136)				(0.154)	
Bribe level	[0,1]			0.128				0.363	
				(0.326)				(0.363)	
Governmental quality	[0,1]					1.933		3.431	
						(3.982)		(2.768)	

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Table 4.10: ... continued

Variable	Unit	ey/ex (SE)	Sign.	ey/ex (SE)	Sign.	ey/ex (SE)	Sign.	ey/ex (SE)	Sign.
Infrastructure	[0,1]					1.741		1.536	
						(1.228)		(1.210)	
Business environment	[0,1]					dropped		dropped	
		N=	119	N=	90	N=	111	N=	90
		F(8,110)=	1.49	F(14,75)=	1.86	F(10,100)=	1.26	F(16,73)=	1.77
		Prob>F=	0.1698	Prob>F=	0.0457	Prob>F=	0.2624	Prob>F=	0.0525
		R^2=	0.1323	R^2=	0.3277	R^2=	0.1790	R^2=	0.3648
		max. VIF=	1.68	max. VIF=	1.74	max. VIF=	1.65	max. VIF=	2.4

Notes: a: Significance at the 99% level =***, 95% level =** and 90% level =*.
b: For a detailed description and descriptive statistics of the variables included, see Appendices A.8, A.9 and A.10, pp. page 153.
Source: Own calculations based on own survey conducted within DFG FOR 756 [2008].

The share of state capital might have been an influential factor in a transition economy like Vietnam, and might have helped as several companies have recently been privatized. As some companies were not willing to share this information and others could not calculate the actual share, this variable could not be included. Therefore, a dummy variable is included indicating if the company was "recently" privatized. Here, recently is defined as less than four years ago, based on the mean number of years the former state owned companies have been private.

Looking at these variables, the dummy for large companies turns out to always have a significant positive effect and the shock/profit ratio always has a significant negative effect on the profits generated. These effects are not surprising as most of the time bigger companies generate higher profits and the shock losses directly reduce the profits. The other variables are not significant, but as for the export and food sector dummies, the signs of the coefficients do not change between the settings andthe direction of the influence can be assumed to be positive in the case of exporting companies and for companies producing food. The coefficients for the replacement rate, the dummy variable for recently privatized companies and the other two sector dummies are not significant and nor do they show a clear direction. Thus there are no clear implications for the profits generated by the companies.

The second set of variables accounts for several indicators in the institutional setting, i.e. transaction cost relevant variables, within which the companies act. The indicators used are three dummy variables indicating whether the company is a member of a business association, a member of the communist party and if it has a long-term relationship with its major customer. Furthermore, the rating of the local bribe level is included to account for corruption. These factors have a direct impact on the transaction costs a company faces. The long term relationship accounts for trust and the necessary time for negations, and the ease of finding new business partners is approximated by the membership dummies. Furthermore, the membership variables also account for influence on political decisions and on other actors within a company's sector of operations. Finally, the number of customers who make up 80% of the total sales and the number of contract defaults, either by buyers or customers of the company, are included. The number of customers has two implications. On the one hand, the more customers a company has the higher

the transaction costs of dealing with multiple customers. On the other hand, the risk involved in having only a few customers is higher as the loss of one customer has a far bigger impact on the sales than it would have in case of many customers.

Within this set, the number of customer has a significant positive effect on the profits in both regressions. Therefore, the reliability and predictability of a broad customer basis seems to outweigh the higher transaction costs imposed by dealing with more customers. Insignificant but positive effects emerge from belonging to an association, the long term relations with the major customer and from a higher bribe level. For the first two variables the sign shows the expected result, while for the bribe level the sign is the opposite of the expected negative effect. Thus in this setting, higher bribe levels lead to greater profits. The explanation for this seemingly contradictory influence might be the anti-corruption policy. On the one hand, the companies that follow the law and do not pay bribes are performing less well and state a low bribe level as in their perspective it is low. On the other hand, the companies that do pay bribes know of the real prevalence of corruption and they benefit from not following the anti-corruption laws and are able to influence the local authorities. Insignificant but negative influences are the number of contract defaults and belonging to the communist party. While the first variable interpretation is rather straightforward and shows the expected sign, party membership shows the opposite sign to that expected. Generally, one would assume that belonging to the ruling party leads to better access to governmental contracts and influence on legislation, which should enable companies to generate higher profits. For this case of Vietnamese companies, the effect is negative which is, in the Vietnamese setting, less surprising as the company owners who do belong to the party are less market-oriented and rely on their connection to the government and their contracts, which are reliable but less beneficial in terms of profits.

Finally, the three generated indices are included first alone with the first set of general characteristics and finally with all other variables. Out of the three indices included in the last two regressions, none shows a significant influence. The Index on the general business environment was dropped in both regressions as the means are very similar across the provinces and using the three indices creates some colinearity. The governmental quality and the infrastructure evaluation, although being not significant, show positive coefficients in both regressions and are therefore

likely to affect the profits positively, although the influence cannot be accurately quantified as both of them are not significant and thus the likelihood of error is too high.

The second set of regressions (table 4.11) evaluates the impact of the same variables, except the dummy for large companies, on the size of the companies' workforces. The reasoning is that in more secured and reliable conditions, with high governmental quality and low transaction costs, the companies will perform better not only in terms of their profits but will also employ more workers as the insecurity involved in doing business is lower.

The general factors included in all regressions show two almost universal significant variables. First, exporting companies employ more workers than non-exporting companies as they have a broader customer base and are able to sell to other countries in cases of low demand in some markets. Companies with higher fluctuation rates have a smaller workforce as their operations are less reliable and their focus can not lie entirely on their operations but they have to deal with the problem of finding new skilled reliable workers. Furthermore, the recent private dummy has a positive coefficient throughout, and the food sector dummy has a negative coefficient in all four regressions. The first effect is most likely based on the fact that former state owned companies still have a high share of long term contracted[9] workers who cannot be laid off even if the company does not need as many workers, and therefore have larger workforces compared to similar private companies. The second factor suggests that food production involves less labor as compared to the rest of the companies. This sector, which includes companies like large-scale breweries and coffee processors, operates more mechanization and is therefore less labor-demanding. However, after controlling for the other factors the effect of all three sector dummies becomes insignificant. The other variables included are not significant in most of the regressions and nor do they show a constant sign.

[9] According to some interview partners, high numbers of the workers that used to be employed in state-owned companies have life-time contracts that need to be fulfilled even after privatization.

Table 4.11: Regression results for number of employees in 2006.

Variable	Unit	ey/ex. (SE)	Sign.	ey/ex. (SE)	Sign.	ey/ex. (SE)	Sign.	ey/ex. (SE)	Sign.
Exporting	dummy	0.523	***	0.418	***	0.511	***	0.411	***
		(0.110)		(0.119)		(0.112)		(0.118)	
Shock/profit	ratio	-0.008		-0.003		-0.008		0.014	
		(0.032)		(0.029)		(0.037)		(0.032)	
Perm. empl. repl.	%	-0.172	***	-0.115		-0.150	**	-0.129	*
		(0.057)		(0.076)		(0.061)		(0.077)	
Recent priv.	dummy	0.162	*	0.071		0.156		0.052	
		(0.096)		(0.102)		(0.103)		(0.106)	
Food	dummy	-0.150	**	-0.091		-0.156	**	-0.090	
		(0.070)		(0.073)		(0.070)		(0.071)	
Industry	dummy	-0.084		0.005		-0.099		0.010	
		(0.111)		(0.116)		(0.112)		(0.127)	
Service	dummy	-0.001		0.034		0.002		0.035	
		(0.046)		(0.055)		(0.047)		(0.053)	
Association member	dummy			0.079				0.125	
				(0.152)				(0.151)	
Party member	dummy			-0.005				-0.023	
				(0.083)				(0.077)	
Long term selling	dummy			0.242				0.253	
				(0.226)				(0.224)	
Customer 80%	#			-0.081				-0.077	
				(0.078)				(0.076)	
Contract defaults	#			-0.193	**			-0.157	
				(0.094)				(0.099)	
Bribe level	[0,1]			-0.313	*			-0.265	*
				(0.162)				(0.160)	
Governmental quality	[0,1]					1.117		-0.362	
						(1.289)		(1.444)	

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Table 4.11: ... continued

Variable	Unit	ey/ex. (SE)	Sign.	ey/ex. (SE)	Sign.	ey/ex. (SE)	Sign.	ey/ex. (SE)	Sign.
Infrastructure	[0,1]					0.066		0.948	*
						(0.825)		(0.531)	
Business environment	[0,1]					dropped		dropped	
		N=	118	N=	90	N=	111	N=	90
		F(7,110)=	4.86	F(13,76)=	2.95	F(9,101)=	3.67	F(15,74)=	2.68
		Prob>F=	0.0001	Prob>F=	0.0016	Prob>F=	0.0005	Prob>F=	0.0026
		R^2=	0.2490	R^2=	0.3075	R^2=	0.2480	R^2=	0.3182
		max. VIF=	1.41	max. VIF=	1.60	max. VIF=	1.61	max. VIF=	2.39

Notes: a: Significance at the 99% level =***, 95% level =** and 90% level =*.
b: For a detailed description and descriptive statistics of the variables included, see Appendices A.8, A.9 and A.10, pp. page 153.
Source: Own calculations based on own survey conducted within DFG FOR 756 [2008].

The second group of variables includes the same institutional indicators as before. In this context, the coefficient for the bribe level is significantly negative, influencing the size of the workforce. Larger companies report lower bribe levels, which might be based on their size as they have a greater influence and are more important for the provincial economy. This might replace bribe payments as their pure size could sufficiently influence the decision makers.

Even though not showing significant coefficients, all other variables in this group have a consistent sign in all four regressions. Positive influences emerge from belonging to an association and from long-term relations with the major customer. These effects fit in with the transaction cost argument, as belonging to an association makes it easier to access new market partners and increases the influence of its members on the political decision-making. Long-term relations with the major customer increase the reliability and predictability of the business and enables the company to plan long-term and therefore employ a larger permanent workforce. Negative effects are associated with party membership, more customers that make up 80% of the total sales and a high incidence of contract defaults. Again, these effects are generally explained in the transaction cost theory. The more customers a company has the higher will be the fluctuation of these customers, as it is more likely that the relations will not be on a regular basis and are therefore less reliable. The same argument of lower predictability also holds for contract defaults. If a company is faced more often with defaults by buyers or by suppliers, the business is more unstable and therefore short-term adjustments need to be made and a lower permanent workforce is employed.

The next step is the inclusion of the index scores for the provinces.[10] The infrastructure index shows a significant positive effect in one of the regression and an insignificant positive effect in the other one. Large companies seem to choose locations with a better infrastructure endowment after controlling for the other relevant factors. Governmental quality shows neither a significant nor a clear direct association with the company workforce.

[10] Again, the index for the general business environment is dropped due to colinearity problems.

4.6 Summary

Generally, the proxies used to cover the institutional setting of the provinces do have some explanatory power. Higher numbers of customers have a positive influence on the profits of a company, and smaller companies perceive a higher bribe level than larger companies. The indices generated are only partly able to explain the differences in companies' performances. Nevertheless, this is most likely due to the rather small number of companies and provinces included, and might therefore be improved by including a larger sample of provinces and/or companies as even in these rather similar regions some explanatory power was established. This chapter was able to show that the self reported perception of the companies is able to cover the real situation, even though it was only operationalized by using a rather rough but consistent six point Likert scale for all indicators. Even after accounting for several "hard" factors on the transaction costs the companies face, the index of their perceptions shows some differences across the provinces. In contrast to the PCI, face-to-face interviews were utilized, ruling out the problem of a possible self-selection bias in the sample. Furthermore, information on who really answered the questions is available, ensuring that all respondents had the same understanding of the issues questioned. This approach made it possible to ensure comparable answers from the companies. The approach might not be applicable for country-wide studies as it requires, although using a simple scale, more manpower for the interviews, but it might be more reliable as unobserved factors are less likely to bias the resulting index.

The provincial differences emerging from the analysis can be partly attributed to historical factors that can not be reversed in the short run, e.g. the brain drain that Ha Tinh faces especially It also shows that, like the PCI, there are several important factors concerning governmental quality and the institutional setting that might assist even these unfavored provinces to generate growth and attract more companies. Although it was not possible to quantify the impact of possible improvements of the perception, a generally positive impact was established and the major constraints of availability of skilled labor and the reliability of regulations were shown. In particular, reliability is one factor that can be improved in a rather short period and generally improved information on regulations would most likely

assist in improving the managers' perceptions. The availability of skilled labor seems, on the first sight, to be a factor that needs to be addressed by improved schools and universities, but other factors that influence the availability were also obvious. In Ha Tinh especially, reduction of the brain drain is an important aim in making high skilled workers available to local companies. By creating a fruitful climate for investments and for doing business in general, this problem might be resolved simply by creating attractive jobs locally, instead of centrally in Hanoi and Ho Chi Minh City.

Furthermore, the differences between private companies and recently privatised companies that used to be state-owned emerged not only during the interviews but also came up in the analysis. Companies that were recently privatized appear to face quite different problems than those of other private companies. Besides having to deal with situations that lie in their history, e.g. long term contracts of workers that might not be needed any more, these companies are often run by their former managers and thus changes in operations take more time than would be the case of managers who are experienced in running private companies.

Chapter 5

Conclusions and Recommendations

5.1 Summary and conclusions

The overall objective of this study was to investigate poverty, growth and inequality in some of the least developed regions in Vietnam, and the influence of non- and off-farm employment participation of the rural population on those measures. Furthermore, the possibilities of growth for the rural companies that offer such wage employments has been explored.

The detailed objectives presented in chapter one have been pursued using data from (i) a household survey from three remote provinces in Vietnam covering rural households specifically, (ii) the VHLSS survey 2002 and 2004 for analysis of intertemporal dynamics within rural areas and (iii) a company survey in three remote provinces. The combination of these data allowed the addressing of the various objectives of the study.

Based on the literature review presented in chapter two, participation in the non-farm economy can be expected to have a positive influence. Nevertheless, the special case of rural areas has rarely been accounted for in previous studies, which is the reason for the detailed analysis of a sample specifically targeting rural areas in remote provinces of Vietnam.

First results from the descriptive analysis suggested that Dak Lak, although being the least favorable based on the high share of ethnic minorities and a higher share of mountainous areas, performs best of the three provinces in terms of poverty rates. The coffee industry obviously has a big impact on the provincial economy and benefits not only foreign companies or the rich locals but also the rural poor by providing wage employment opportunities. This again stresses the importance of a wage income source. The currently strong economy is able to overcome the two strong negative effects that are mentioned in the literature (proportion of ethnic minorities and mountainous areas). Nevertheless, Dak Lak is still a mono structured region relying almost purely on coffee production and related businesses. This makes it especially vulnerable to changes in coffee prices.

The subsequent grouping of households based on their income portfolio allowed for the exploration of the impact of the implications that emerge from the different portfolios with respect to poverty and inequality. Taking the income distribution curves as a first indicator of inequality, farm household incomes are much more un-

equally distributed than those of non-farm or mix household incomes. One possible explanation is that non-farm incomes are able to buffer the mainly environmental shocks that occurred in the survey regions (as they do regularly in Vietnam), because they are less affected by shocks such as flooding and droughts.

Combining short term poverty (income) analysis and the longer term poverty (consumption assets) analysis allowed the drawing of conclusions on the factors that derive short and long term household welfare (see Table 5.1). Adding dummies to the grouping of households led to a rating of the impact of portfolio on income and asset holdings.

Table 5.1: Drivers of household welfare.

	Income	Consumption Assets
Credit	+	+
Land	+	+
Education	+	+
Wider HH members	+	+
Non-farm HH	+	+
Dak Lak	+	+
Mix farm HH	+	
Mix non-farm HH	+	
Shocks 2006	-	-
Dependent members	-	-
Ethnic Minorities	-	-
Distance to next town		-

Source: Own calculations based on DFG FOR 756 [2008].

Most of the factors commonly found have also been documented in poverty-related research. Education, larger land holdings and living in a favorable (rich) region have a positive impact on income as well as on consumption assets. The same holds for the negative impact of belonging to an ethnic minority group, having dependent household members and experiencing shocks. An additional and obviously important feature influencing both measures is the number of wider household members. Having more wider household members leads to better outcomes in both income and consumption assets. Taking this variable as measure for friends and family networks stresses the importance of network access for product and labor market access and thus income generation. In the case where the wider

members are migrants to other provinces or to urban areas, these network accesses also lower the entry barriers for successful migration. These factors are very likely to have a big impact in both the long term and short term poverty status of a household.

The effects of education, dependency, location, land, shocks and ethnicity are generally agreed upon as influential variables on a household's income/welfare. Based on the provincial differences in the descriptive analysis it was also not surprising that Dak Lak households were shown to be better off than the others. Taking wider members and the distance to the next town as a measure for market access in terms of produce and labor markets the effect is also generally agreed upon.

The only variable that has a significant impact on asset holdings, but not on the income, is the distance to the provincial capital. The further away the household is located the lower are the consumption asset holdings, but the there is no significant influence on the income level. This could well be based on the availability of consumption assets in very remote areas, where many assets like cars might not be available or even useless due to bad road conditions.

Finally, the household types were included, and especially in the income analysis, the expected positive effect of off- and non-farm incomes has been supported. This suggests that higher engagement levels in activities apart from farming actually leads to higher incomes, even in remote regions where the main wage employment occupation is found on other farms and is generally considered low paid. Non-farm businesses are mainly small retail shops or restaurants and again are not considered as leading to high returns or major growth. But the positive effect transmits not only through the direct channel of a higher share of off-farm incomes but also through indirect channels such as wider household members or education that lead to a higher possibilities of diversification. The generally influential variables are: education, location, dependency, ethnicity, land, credit, shocks and having wider household members.

Based on the results of analysis of the poverty determinants, several policy options emerge that are likely to be successful in terms of poverty reduction. First of all, the generally recommended enhancement of higher education via the reduction of education costs is likely to improve the welfare of rural households. Rural house-

holds often rely on family labor and therefore face additional costs of education apart from just the school fees. One option could be to design a flexible school fee system that is based on the income of the parents and leaves poor households with lower fees. Expanded secondary and tertiary education would allow people to find higher paid wage employments and would most likely also lead to more non-farm businesses as people would have the knowledge that is required to successfully establish them. Furthermore, infrastructure investments like the extension of the mobile phone network are generally believed to enable remote regions to participate in positive trends and provide more options for the rural population to generate income.

In case of Vietnam it is especially important to address the special needs of ethnic minorities who are systematically disadvantaged. The existing programs targeting ethnic areas should be redesigned in order to effectively reach the target population. As indicated by previous studies [Klump, 2007; van de Walle and Gunewardena, 2001], the programs should not target "ethnic minority areas" but "ethnic minorities". Therefore, rules that assure that funds are allocated accordingly have to embedded.

The trends of higher welfare for non-farm households also emerge from the analysis of the determinants of household incomes. With farm households as the reference case, all other types earn significantly higher incomes. Furthermore, the provincial differences are also supported, with Ha Tinh being the poorest province with the lowest household incomes. The seemingly most prosperous province was TT Hue, based on its diverse industry and service sector, while Dak Lak's economy is dominated by agriculture and is therefore seemingly less developed. But the coffee industry that is the dominant sector in Dak Lak was able to provide households with higher incomes than those of TT Hue households. Nevertheless, as the whole province depends on a high (and volatile) coffe price, the picture will probably change dramatically once the coffee price drops.

Building on the findings of chapter two, chapter three extends the analysis by using the VHLSS 2002–2004 panel dataset. The concept of pro-poor growth enables the analysis of the intertemporal dynamics involved in household incomes and thereby generate a deeper insight into the impact of income portfolios on household welfare. Adding to the existing analysis of the regional differences in

poverty reduction and pro-poor growth across Vietnam, the introduced household types were used to further support poverty reduction policies in rural areas and add shortterm dynamics to the concept of pro-poor growth.

The enormous short-term dynamics involved in the income composition of households were pointed out. Even households that have seemingly specialized in either farming or off-farm activities may add other sources of income or completely reverse their portfolios. A total of 42% of the 3,132 households added or extend other incomes sources from 2002 to 2004. Despite these huge movements among the groups, the total sizes of the groups remained roughly constant over the two periods, and all groups had an inflow about equalling the outflow. Of the main groups, the steadiest was the non-farm household group, and the most volatile was the farm household group.

Building on these results and using the different switch-type household groups rather than the original five groups, pro-poor growth performance was assessed. The results in terms of pro-poor growth were mixed, though showing some similar patterns of mostly lower growth rates for lower income percentiles as compared to the top end of the income distribution. Mostly, the switched household types performed better in the intertemporal indicators of growth, poverty reduction and inequality reduction, but faced higher poverty rates in 2002 both and 2004 (see table 5.2). Generally, groups faced with higher poverty rates in 2002 realized above-average poverty reduction, supporting the argument by [Klump, 2005] that already low poverty rates are harder to reduce than those that are very high.

Furthermore, the finding that most of the poverty reduction in Vietnam was based on growth rather than redistribution for the 1992–2002 period was also confirmed for the 2002–2004 period. Nevertheless, redistribution from the poor to the non-poor also happened, but was mostly much lower than the growth component of poverty reduction.

In terms of pro-poor growth, the worst performing group was the non-farm households, which seems unlikely as they not only generated higher incomes but were also faced with lower poverty rates in 2002. This is most likely also the reason for their low pro-poor growth rate as the poverty rates have been very, low and therefore the remaining poor are the least favored who struggle the most to climb out of poverty.

Table 5.2: Poverty and pro-poorness - summary.

Household types	Poverty rate below average in 2002	Poverty reduction above average	PPG-Definitions[a] I growth of the poor>0	II growth of poor > mean growth	Rate of PPG above average[b]
Total			+	-	
Switched	-	+	+	-	+
Non-switched	+	-	+	-	-
Farm HH	-	+	+	-	-
Mix farm	-	+	+	-	-
Mix non farm	+	-	+	-	-
Non farm	+	-	+	-	-
Farm to mix farm	-	+	+	-	+
Mix non farm to mix farm	+	-	+	-	-
Mix farm to farm	-	+	+	-	+
Mix farm to mix non farm	-	+	+	-	0
Mix non farm to non farm	+	-	+	+	+

Note: a: Categories based on Grosse et al. [2008].
b: Here the Ravallion and Chen [2003] rate of PPG is referred to.
Source: Own calculations based on GSO [2002; 2004] using.

The growth incidence curves, that are the basis for the Ravallion and Chen [2003] type pro-poor growth rate, show similar upward slope patterns for most of the household types. The main difference is the scale of pro-poor growth in general, ranging from 0.53% to 11.63% of pro-poor growth.

Based on the above average pro-poor growth (and poverty reduction) rate of switched households and the below average pro-poor growth (and poverty reduction) rate of the non-switched households, a catching up effect can be concluded. This would, if lasting, reduce inequalities between these groups and will assist the group that suffers higher poverty incidence. Therefore, flexibility of rural households should be encouraged and enabled through the promotion of the non-farm economy so that the households are able to choose their income sources based on profitability rather than availability. Additionally, supporting households in finding

'their' portfolio and encouraging change where necessary might be beneficial. This support could include assistance in calculation of current income flows, from which they might realize that their farming/aquaculture/livestock/self-employment setup (for example) is not profitable in its current state. In this context, information for rural households concerning opportunities and possibilities of markets, either for employment or for self-employment, might aalso optimize their current portfolios. This will reduce entry barriers to new opportunities and will also improve current setups.

Neither specialization nor diversification seems to have clear poverty or pro-poor growth impacts. Although the effect of diversification is based only on one group that used to do farming only and took up a non-farm income source for the second period, the effects are not clear even for this group as similar poverty and growth patterns are found for the opposite group of mix farm to farm households. Therefore, a judgment on these effects is not possible from the data at hand.

All in all, due to the positive performance of the switching households in terms of poverty reduction and pro-poor growth, the recommendation of generating non-farm jobs in order to promote development and to serve the needs of the poor [Collier, 2007] also holds for rural Vietnam. However, even within the seemingly favored group of non-farm households that apparently have managed the transition from farming to "modern" economic activities, some groups did remain poor; a certain extent of occupational choice will enable many households to improve their income portfolios and climb out of poverty.

Based on off- and non-farm incomes as one way out of poverty, the question of how to improve the performance of the RNFE and how to channel investments not only into boom regions but also into rural areas remains the central. Improvement of the business environment, especially in rural areas, will be the key component of reducing inequality within the country and further reducing income and food poverty. Therefore, chapter three first explored the recent performance of the Vietnamese economy from the decision of the doi moi reform process until recently. The process of opening to the world market led to an increased inflow of foreign direct investments that boosted economic growth in Vietnam. But this happened mainly in the economic centers of Hanoi and Ho Chi Minh City, leaving rural and remote regions behind. Additionally, the government began privatizing most of the

state owned companies and started to recognize private enterprises, which led to an increase of the share of workforce employed in these private enterprises. Besides legal changes, the sectoral structure shifted along with the ownership structure away from an agriculture-dominated GDP towards a modern economy with higher shares of industry and service sectors. Nevertheless, these achievements were less successful in rural areas that are still dominated by agricultural production, and privatization has not yet happened to the same extent.

Therefore, the question was pursued of how the rural economy can be best promoted in order to provide the rural population with the possibilities of choosing occupations according to their characteristics and capabilities. The performance of medium- and large-scale companies in the DFG FOR 756 research provinces was investigated as these companies have, based on their size, the potential to lead the growth and transition of these provinces. Special attention was paid to institutional factors that are of core importance in a transition economy. The proxies used to cover the institutional setting did show some explanatory power. Furthermore, the indices generated on infrastructure endowment and governmental quality showed some influence on the companies' performance in terms of profit and employment. In contrast to the earlier attempt at covering the Vietnamese business environment on a provincial level (PCI) by Malesky [2006, 2007b, 2008], the approach taken by this study did not inherit the problems of selection bias or the incentive to influence the result by the local administration.

The differences found in the analysis of the provincial differences are partly based on historical circumstances and developments. One example is the brain drain that is especially severe in Ha Tinh and that leads to companies facing a severe shortage of skilled labor that hinders them from expanding and professionalizing their businesses. Company performance was then analyzed using three indices of the provincial business environment (table 5.3). Further factors such as the proximity to supply can mostly not be changed as these are more often natural materials like forest wood or raw material for concrete production that can not be provided. Nevertheless, several factors did emerge that are more or less easily changeable by the local government. Some factors included in the governmental quality index that pose expansion barriers to the companies could be tackled without major efforts, e.g. the reliability of regulations. Providing easy ac-

Table 5.3: Company performance - summary.

	Company profit	Company Employees
Large	+	(not included)
Exporting	(+)	+
Shock/profit	-	
Perm. empl. repl.		(-)
Recent priv.		(+)
Food	(+)	(-)
Industry		
Service		
Association member	(+)	(+)
Party member	(-)	(-)
Long term selling	(+)	(+)
Customer 80%	+	(-)
Contract defaults	(-)	(-)
Bribe level	(+)	-
Governmental quality	(+)	
Infrastructure	(+)	(+)

Note: Signs in brackets show constant signs but are not always significant. Signs with no brackets are significant in all settings.
Source: Calculations based on own survey conducted within DFG FOR 756 [2008].

cessible and binding information on regulations and processes concerning business registration and regulations would most likely change the perception and provide businessmen with trust in the regulations and maybe encourage them to expand their operations. Likewise, by creating a fruitful climate for investments and for doing business in general, the problem of brain drain might be resolved just by providing attractive jobs locally instead of centrally in Hanoi and Ho Chi Minh City. For Ha Tinh especially, a reduction in brain drain is an important issue in making highly skilled workers available to local companies.

Another major constraint that emerged mainly for the case of Dak Lak was the lack of pro-private business attitude. This might be based on the special circumstances in Dak Lak and the social environment due to the high share of ethnic minorities, as well as its location along the Cambodian border. Additionally, recently privatized companies were found to have several difficulties in managing to make the transition from state ownership. Besides having to deal with the

problems that lie in their history, e.g. long term contracts of workers who might now be not needed, these companies are often run by their former managers, who often did not acquire their positions based on their skills but on their connection to the government. Thus, changes in operations take more time than would be the case of managers who are experienced in running private companies. It might be worthwhile to support privatized companies in the changes that need to be made in order to be able to compete in an open market economy and to be able to successfully manage the transition from state ownership.

In order to be able to attract more large companies to operate in these rather remote provinces of Middle Vietnam, the provincial authorities should not focus only on large green field infrastructure investments. Although these show some success in some regions, many deserted areas declared industrial zones can be seen, especially along the coastline in TT Hue. Tackling the administrative and law enforcement problems that exist and that are at least perceived differently in different locations is more important. Reduction of the bribe level, as targeted by anti-corruption laws, is one step towards improvements of the business environment. However, other areas such as law enforcement are not yet focused on, which makes anti-corruption efforts partly inefficient. The number of contract defaults, as one example of law enforcement problems, shows a negative influence on the profits of companies and forces them to employ less workers as they need to operate as flexibly as possible to be able to buffer those incidences. When asked for their reactions to those contract breaches (which "defaults" essentially are) most of the companies tried to solve the problem by direct contact. Even if this does not work and the financial damage is serious, almost no one would take legal action as courts are perceived as inefficient, slow and not a solution to the problem.

Besides these soft factors involved in doing business, core components for enabling business also need to be kept in sight. The inadequate infrastructure (especially roads) in Ha Tinh urgently needs to be upgraded in order lower the costs of getting raw materials to the companies and products to the customers. Using the current roads almost rules out international trade for remote companies as it simply takes too long and is too costly. The problem of road quality is less urgent for the other two provinces as these have access to airports that provide the required connection to markets. Improving road quality can be expected to serve all

sorts of rural businesses in the farm and non-farm sectors. Even tourism, which is a big factor in Vietnam, could be fostered in the not yet connected but attractive region around Ha Tinh, with its beautiful beaches that are left out of the main tourist routes due to non-existing infrastructure. With no other sector yet having the opportunity to arise, this might be a way to tackle both poverty and brain drain by providing more opportunities for local households and could provide the incentives for further entrepreneurship in the sector.

As the RNFE can be expected to foster rural growth, their needs for reliable business environment, infrastructure (mainly roads), skilled labor, and for some areas better recognition of the private sector, should be targeted. Therefore, providing market access in rural areas is the key component in the development of a vibrant RNFE in remote areas, so tackling poverty and supporting the agricultural sector will remain important in rural areas. Furthermore, a "one strategy fits all" on how to achieve increased investments and growth in remote provinces can not be given due to the different needs and conditions. Strategies need to account for regional differences in order to meet the needs of the companies.

5.2 Further research

Some fields have been identified that have not yet been covered in the literature and went beyond the scope of this study. In particular, a panel of the rich DFG FOR 756 [2008] data set will enable deep insights into issues of rural development and household strategies that have not yet been explored.

Such a panel would enable an assessment of household income dynamics, answering the question of diversification, specialization or constant adjustment to external conditions like environmental or price shocks. To gain further insight, several period to period inspections are required to detect patterns of specialization and diversification, e.g. from farm to mix farm to mix non farm to non-farm as a possible development path. Furthermore, the year-to-year panel, including detailed information about droughts, flooding and other shocks would enable a judgment on the necessity-driven switching of income sources based on external influences like shocks.

Adding risk perception and migration patterns to the more easily observable income changes would allow for an understanding of households' decision making that is usually only covered by sociological qualitative interviews, and thereby extend the economic understanding of households. The case of Dak Lak especially, with its good poverty reduction performance but its dependency on volatile coffee prices, would be an obvious example. A closer investigation of the relevance of migrants in accessing non-local labor and product markets could be explored and add further dimensions to poverty and vulnerability analysis.

More importantly, a panel would allow for the consideration of vulnerability measures and extend the poverty-based approach taken in this study, which would lead to a better assessment of the contributions of the RNFE; not only to poverty reduction but also to the provision of sustainable livelihoods for the rural population. To link the several vulnerability measures available to the household types (i.e. non-farm, farm and mix households) as well as their reactions to shocks, would provide a more detailed assessment of regional differences and the extent of resilience against risks. A direct link from the households in the sample to the companies sampled would allow for a more comprehensive analysis of the risks involved in the different income generating activities.

Aiming at a broader understanding of developments in the rural economy, an extension of the company survey would be necessary. This should include a second visit to the sampled companies in order to investigate the impact of the world economic crisis on their businesses and their reaction to it. Additionally, extending the sample to other types of companies would enable construction of a comprehensive picture of the rural economy. On the one hand, large-scale agricultural producers should be included as they may play an important role in more remote areas outside the provincial capitals. On the other hand, data from small-scale businesses would enable an assessment of the growth potential already available and measures that could assist them in growing. Furthermore, the suggested sample would allow for an assessment of the role of large companies as potential leaders in rural development, the different impacts of the world economic crisis and different reactions to the changes. Additionally, a detailed consideration of recently privatized companies and their needs in the transition process would allow for policy guidance

in order to provide special assistance to those companies in order to successfully complete a transformation even in less favorable areas.

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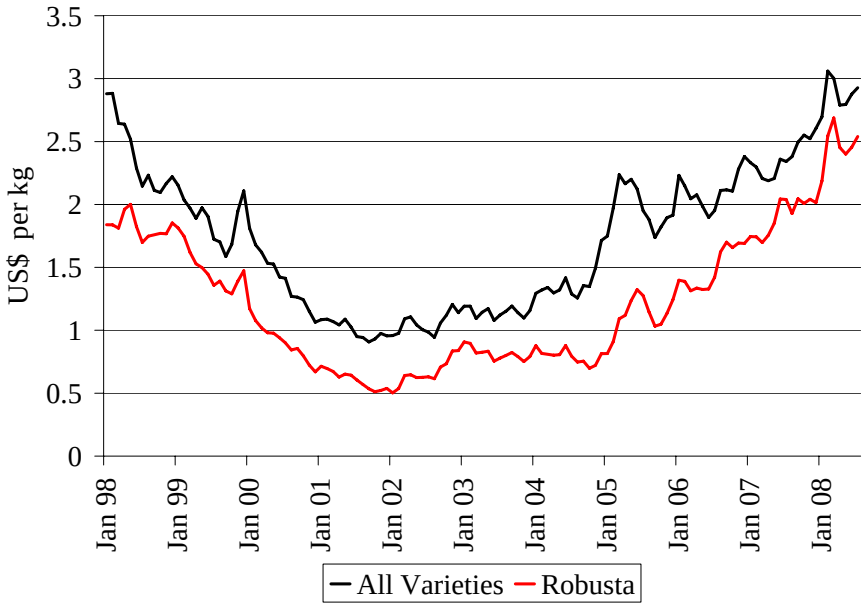
Appendices

A.1 World market coffee price monthly averages.



Source: Own presentation based on ICO [2008b] data.

A.2 Regression variable description

Variable	Unit	Mean	Std.dev.	Min	Max
Income regression; N=1717					
ln(income)		4.13	1.14	−1.52	7.72
Credits	$pc	148	270	0	4040
Travel distance	min	82	57	1	320
Household head age	years	47	13	17	91
Land	ha pc	0.20	0.39	0.00	7.57
Insurances	#	1.13	1.74	0.00	10.00
Shocks 2006	#	0.59	0.70	0.00	5.00
Mean schooling	years	8.05	3.65	0.00	36.00
Dependency					
Nucleus/ wider size					
Ethnic Minority	dummy	0.20	0.40	0.00	1.00
Non-farm HH	dummy	0.06	0.24	0.00	1.00
Mix non farm HH	dummy	0.41	0.49	0.00	1.00
Mix farm HH	dummy	0.19	0.40	0.00	1.00
Hue	dummy	0.33	0.47	0.00	1.00
Dak Lak	dummy	0.31	0.46	0.00	1.00
Ha Tinh	dummy	0.36	0.48	0.00	1.00
Consumption assets regression; N=1838					
ln(consumption assets)		5.91	1.22	0.68	9.70
Credits	$pc	150	267	0	4040
Travel distance	min	83	57	1	320
Household head age	years	47	13	17	91
Land	ha pc	0.20	0.38	0.00	7.57
Insurances	#	1.12	1.73	0.00	10.00
Shocks 2006	#	0.60	0.70	0.00	5.00
Mean schooling	years	8.07	3.59	0.00	36.00
Dependency					
Nucleus/ wider size					
Ethnic Minority	dummy	0.19	0.39	0.00	1.00
Non-farm HH	dummy	0.06	0.24	0.00	1.00
Mix non farm HH	dummy	0.41	0.49	0.00	1.00
Mix farm HH	dummy	0.19	0.39	0.00	1.00
Ha Tinh	dummy	0.35	0.48	0.00	1.00
Hue	dummy	0.30	0.46	0.00	1.00
Dak Lak	dummy	0.35	0.48	0.00	1.00

Source: Own calculations based on DFG FOR 756 [2008].

A.3 Regression variable correlations

	Credit	Travel distance	Household head age	Land	Insurances	Shocks 2006	Mean schooling	Dependency	Nucleus/ wider size	Ethnic Minority	Non-farm HH	Mix non farm HH	Mix farm HH	Ha Tinh	Hue	Dak Lak
Credit	1.00															
Travel distance	−0.02	1.00														
Household head age	−0.02	−0.02	1.00													
Land	0.07	0.11	−0.05	1.00												
Insurances	0.03	−0.18	−0.01	0.02	1.00											
Shocks 2006	−0.02	0.03	−0.05	0.02	0.00	1.00										
Mean schooling	0.11	−0.03	0.01	0.03	0.15	−0.14	1.00									
Dependency	−0.13	0.01	−0.15	−0.07	0.06	0.04	−0.14	1.00								
Nucleus/ wider size	−0.14	0.01	−0.23	−0.06	−0.08	0.04	−0.06	0.28	1.00							
Ethnic Minority	−0.09	0.18	−0.19	0.09	−0.15	0.16	−0.18	0.04	0.22	1.00						
Non-farm HH	0.13	−0.15	−0.06	−0.06	0.12	−0.08	0.13	0.01	0.04	−0.11	1.00					
Mix non farm HH	−0.03	−0.10	−0.12	−0.09	0.06	0.07	0.04	−0.03	0.13	0.05	−0.21	1.00				
Mix farm HH	−0.01	−0.04	−0.07	0.04	0.07	0.01	0.00	0.01	0.00	0.02	−0.12	−0.40	1.00			
Ha Tinh	0.00	0.18	0.20	−0.11	−0.17	−0.25	0.16	−0.03	−0.17	−0.35	−0.12	−0.15	−0.08	1.00		
Hue	−0.08	−0.15	−0.03	0.00	0.31	0.23	−0.12	0.04	0.03	0.08	0.16	0.11	−0.06	−0.48	1.00	
Dak Lak	0.08	−0.04	−0.16	0.11	−0.13	0.02	−0.04	−0.01	0.13	0.27	−0.03	0.05	0.14	−0.54	−0.49	1.00

Source: Own calculations based on DFG FOR 756 [2008].

A.4 Household typology changes and poverty rates.

Change household types	Poverty rate 2002	2004	Change 2002-2004	N
Farm	44%	29%	−15%	426
Farm to non-farm	18%	27%	9%	11
Farm to mix farm	57%	29%	−27%	270
Farm to mix non farm	58%	19%	−39%	57
Farm to other	43%	33%	−10%	21
Non farm to farm	75%	25%	−50%	4
Non farm	12%	5%	−7%	182
Non farm to mix farm	20%	10%	−10%	10
Non farm to mix non farm	14%	5%	−9%	56
Non farm to other	9%	0%	−9%	11
Mix farm to farm	46%	27%	−19%	183
Mix farm to non farm	29%	17%	−13%	24
Mix farm	39%	19%	−19%	685
Mix farm to mix non farm	37%	11%	−26%	227
Mix farm to other	11%	11%	0%	9
Mix non farm to farm	20%	19%	−2%	59
Mix non farm to non farm	30%	14%	−16%	128
Mix non farm to mix farm	29%	15%	−14%	222
Mix non farm	22%	8%	−15%	499
Mix non farm to other	10%	20%	10%	10
Others to farm	22%	22%	0%	9
Others to non farm	50%	0%	−50%	2
Others to mix farm	0%	0%	0%	1
Others to mix non farm	33%	0%	−33%	3
Others	26%	22%	−4%	23
Total	35%	18%	−17%	3,132

Note: N=3132.
Source: Own calculations based on GSO [2002; 2004].

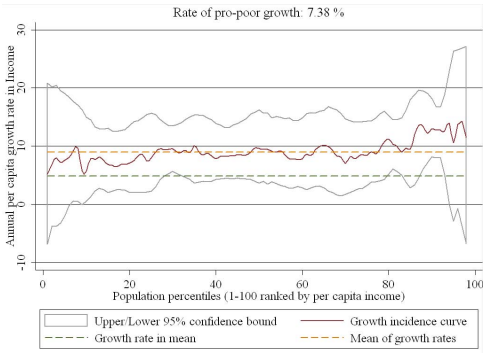
A.5 T-test poverty differences by switchtypes.

switched		non-switched	
2002	Freq.	2002	Freq.
non-poor	809	non-poor	1,225
poor	508	poor	590
Total	1,317	Total	1,815

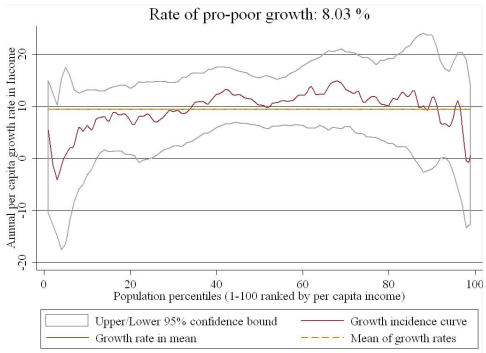
	2002	2004
switched	0.39	0.19
non-switched	0.33	0.17
Difference[a] in poverty rate[b]	-0.06***	-0.02**

Notes: a: Difference 'non-switched' - 'switched'
b: Significantly smaller than zero at the
99% level =***, 95% level =** and 90% level =*.
Source: Own calculations based on GSO [2002; 2004].

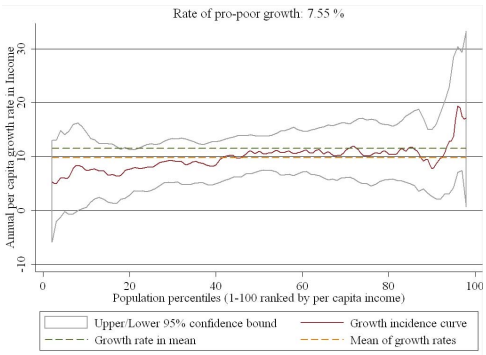
A.6 Further growth incidence curves.



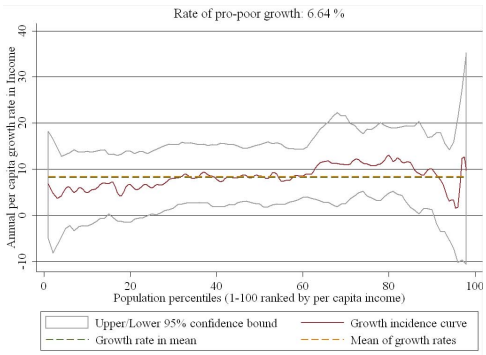
(a) Mix non farm households rural Vietnam (N=499).



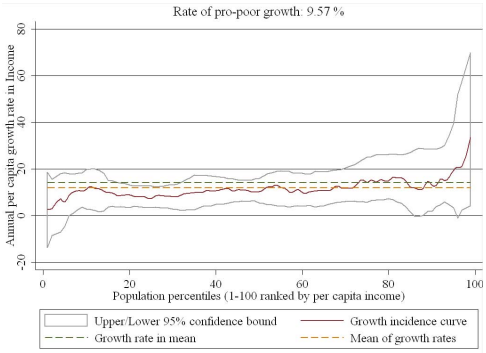
(b) Mix farm to mix non farm households rural Vietnam (N=227).



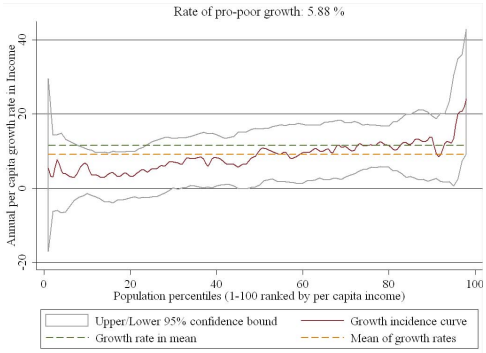
(c) Mix farm households rural Vietnam (N=685).



(d) Farm households rural Vietnam (N=426).



(e) Farm to mix farm households rural Vietnam (N=270).



(f) Mix non farm to mix farm households rural Vietnam (N=222).

Source: Own calculations based on GSO [2002; 2004].

A.7 The questionnaire used for the company survey

Company Survey 2007 Vietnam

Based on structural transformation and economic development, Vietnam accomplished impressive successes in poverty alleviation in the past decade. Crucial for these results are non-farm employment opportunities for the rural population. Therefore, CIEM implements this enterprise survey in the 3 provinces Ha Tinh, TT-Hue and DakLak to study the prospects and limitations that companies face in Central Vietnam concerning their labour force and the quality of the local labour market, their supplier and buyer linkages as well as overall political and economic environment in order to assess their current role and future potential for sustainable non-agricultural job creation.

Data is used ONLY for research purpose and will be kept strictly confidential

Please fill the first page ***before*** *the interview starts without asking the questions.*

Date of interview (dd/mm/yy)				
Name of Company/Establishment				
Province				
District				
City/Commune				
Address				
Is the location any special zone?	*please tick*	industrial zone		1
		High-Tech zone		3
		Export processing zone		4
		none		2
Distance to next city	Name:_____	km	hrs	
Distance to Province town		km	hrs	
Ethnic majority in your location				
religious majority				

Name of interviewer	
Name of Supervisor	
Time interview started	
Time interview ended	
Name of Data entry personnel	

(Please collect the business cards of the respondent and hand them to the German researchers)

I General characteristics of business

First of all we would like to know some general characteristics of your company.

1 In which year was this company/branch of the Company established?

2 Please describe in short form your establishment (e.g. rice mill, canning factory, hotel, shoe factory…)

3 How is your company registered?

1 sole proprietorship
2 Private Limited Company
3 Public Limited Company
4 Limited Partnership
5 Government- / State enterprise
*99 others:*_____

4 In which economic organisation is your company embedded?
(@interviewer: read out the code)

1 Single unit
2 Head office with domestic branches
3 Head office with international branches
4 Branch of domestic company
5 Branch of foreign company
*99 others:*_____

if above is 2 or 3: What is the city or country of major branch?

if above is 4 or 5: What is the city or country of head office.

4b Is the owner of the company member party member?
1=yes 2=no

5 Which share of your company is domestically owned? %
(@ interviewer: if 100% domestic owned skip the question below)

What is the nationality of the major foreign owner?

6 How do you perform your production?
(@ interviewer: read out the categories)

	(tick one)
non mechanised (hand tools)	
mechanised (human controlled machinery used)	
automated (electronic controlled machinery)	

7 Are you certified for any international standards? *1=yes 2=no*

if yes: Please name the most important 2.

8 Please asses your companies capacity concerning the following factors.
(@ interviewer: go point by point and fill in the code below)

process innovation	
capacity to generate capital	
marketing / distribution	
technological know-how	
management know-how	
product innovation	
others:_____	

1 excellent *3 moderate*
2 good *4 poor*
9 no answer

II Employment

Now we want to know some details about your employees.

9 How many employees did you have in the following categories and years (end of year)? Important for us are possible impacts of shocks (e.g. Asian crisis, bird flu, …)

	2006	2004	2001
Total (number)			
Permanently (%)	%	%	%
Seasonal/casual (%)	%	%	%
Family (number)			

(9 continued…)

	1998	1995
Total (number)		
Permanently (%)	%	%
Seasonal/casual (%)	%	%
Family (number)		

Would you give us an estimated number of employees fo 2008?

10 How many days in 2006 was an individual seasonal/casual worker engaged on average? Days

11 In which month(s) do you need seasonal/casual workers?

pleas tick the month(s)

J / F / M / A / M / J / J / A / S / O / N / D

12 In which month(s) is the availability of labour a problem?

pleas tick the month(s)

J / F / M / A / M / J / J / A / S / O / N / D

13 Estimate the share of female employees as % of total employees in your company in 2006. %

14 Please give the total wage payment (Mio. Dong) for these years.

2006	2004	2001	1998	1995

15 Please estimate the share of labour costs as share of the total costs in 2006. %

16 Which non-monetary benefits do your employees get? (please tick)

(@ interviewer: read out all categories BEFORE answering, multiple answers are possible)

child care	*accommodation*	*food*
transport	*health insurance*	*others:_____*

17 Now we want to know some general characteristics of your workforce at the end of 2006.

(@ interviewer: ask line by line. Ask in an open way and assign the answers to the code)

	Occupational group	Number	What is the average salary for these employees (Dong)		Typical Educational level **(Code A)**	Typical Regional origin **(Code B)**	Typical Ethnic group **(Code C)**	Number of replaced employees in 2006 (fluctuation rate)
permanent staff	Professionals (Managers, accountants, …)			per Month				
	Engineers/ technician			per Month				
	Production/ Service worker			per Month				
	seasonal/ casual workers			**per Day**				

Code A

1 university/college degree
2 Vocational degree
3 Upper secondary
4 Lower secondary
5 Primary
6 incomplete primary
7 none
99 others

Code B

1 same province
2 neighbouring province
3 non neighbouring province
4 bordering country of province
5 Hanoi
6 Saigon
7 countries
8 EU, USA, Canada, Japan, Australia and New Zealand
99 others

Code C

1 Kinh
2 Chinese
3 Khmer
99 others:_____

19 Now we would like to know more details about the requirements and skill level of new employees.
(@ interviewer: ask line by line. Ask in an open way and assign the answers to the code)

	occupational group	Does a formal labour contract exist. *1=yes 2=no*	What are the most important criteria for the selection of **new** employees? **Code A** most important	others	others	How do you assess the skill level of **new** employees? **(Code B)**	How do you recruit them? **(Code C)**	How do you assess the availability of **new** employees **(Code B)**	How do you assess the difficulties in firing? **(Code D)**
permanent staff	Professionals (Managers, accountants, ...)								
	Engineers/ technician								
	Production/ Service worker								
	seasonal/ casual workers								

Code A
1 Job experience
2 gender
3 age
4 family or friends reference
5 level formal education
6 technical/computer skills
7 foreign language skills
8 vocational training
9 party membership
10 ethnic/religious membership
99 others:_____

Code B
1 excellent
2 adequate
3 inadequate
4 highly inadequate
9 no answer

Code D
1 very high
2 high
3 moderate
4 low
9 no answer

Code C
1 Head-hunter
2 Job agent
3 Newspaper
4 governmental agencies
5 other employees' reference
6 family/friends reference
7 choose from applications
8 direct recruitment in villages
99 others:_____

20 Please give us some details about training (e.g. technical, computer, language training) that took place in your company in 2005 and 2006.

Did any training take place in 2006 or 2005 ?

1=yes 2=no ____

if no go to question 24

21 Since when (year) do you train your employees?

____

22 What type of training was prüvided?

	(tick all that apply)	No. of participants	Most important (tick one)
Technical	*1*		
Language	*2*		
Computer	*3*		
Hygiene	*4*		
Management/Marketing	*5*		
industrial practice	*6*		
others:_____	*99*		

23 Who provide the most important training?

	(tick one)
private agency	*1*
own staff members	*2*
trainers from Head-office	*3*
trainers from customer	*4*
public vocational training	*5*
others:_____	*99*

III Business environment / location factors

24 Which of the following patterns is most suitable to characterise the dynamics in the market of your company's most important product?

1	Continuous growth/decline	
2	Cyclical changes (regular changes over several years)	
3	Seasonal changes (regular changes within one year)	
4	Stochastic changes (irregular demand changes)	

if 1-3 go to question 26

25 If your market is charactzerised by stochastic changes, what is your strategic response to those changes?

(@ interviewer: read out all categories and tick yes or no.)

	short-term (1 year)		long-term (>1 year)	
	yes	no	yes	no
1 reduce production				
2 lay-off seasonal casual workers				
3 lay-off permanent workers				
4 find new customer				
5 develop new products				
6 nothing				
99 others				

26 If you encounter any problems (e.g. you got disputes with the authorities and you need help to solve the issues or you would like to upgrade your production and need consultation) whom would you ask?

		please rank the most important 2	
		1st	2nd
1	Firms in the same sector in Vietnam		
2	Firms in a different sector in Vietnam		
3	Foreign firms		
4	Banks and other financial institutions		
5	Governmental agencies		

27 Is your firm member of any business association?

1=yes 2=no

if yes: To how many does your company belong?

Give the total amount of membership fees *Dong/VD*

In your opinion, which one is the most important/best?

*if your company does **not** belong to any association, why not?*

(@ interviewer: read out all categories BEFORE answering)

*(please tick the most important **one**)*

1	there is no relevant in that line of business
2	there are no benefits from existing ones
3	fees are too high
4	company was excluded
5	have enough own contacts
99	others:_____

28 How important do you consider the following factors for your business and how do you asses them at your location?

(@interviewer: for the first 2 rows ask line by line. - After finishing this, ask the respondent the third question without reading out the categories again.)

			Importance for business *on a scale from 1 very important to 6 not very important*	Rating of local conditions *on a scale from 1 very good to 6 very poor (99 don't know)*	Which of the previous factors do you consider as the 3 major expansion barriers? (tick the most important 3)
1	in- and output	Availability of cheap labour	1 to 6	1 to 6	
2		Availability of skilled labour	1 to 6	1 to 6	
3		Availability of cheap inputs	1 to 6	1 to 6	
4		Proximity to supplier/raw materials	1 to 6	1 to 6	
5		Existence of cheap land	1 to 6	1 to 6	
6		Security of land rights	1 to 6	1 to 6	
7		Proximity to trader/customer	1 to 6	1 to 6	
8		Availability of credit	1 to 6	1 to 6	
9	infrastructure	Existence of good roads	1 to 6	1 to 6	
10		Existence of mobile phone network	1 to 6	1 to 6	
11		Available internet connection	1 to 6	1 to 6	
12		Proximity to airport	1 to 6	1 to 6	
13		Quality of school	1 to 6	1 to 6	
14		Quality of vocational/technical	1 to 6	1 to 6	
15		existence recruitment agencies	1 to 6	1 to 6	
16		Existence of industrial zones/ business concentration	1 to 6	1 to 6	
17	institutions	Pro-private business attitude of local administration	1 to 6	1 to 6	
18		Level of bribe payments		1 to 6	
19		Financial governmental support (incl. Tax reduction)	1 to 6	1 to 6	
20		Reliability of local regulatory environment	1 to 6	1 to 6	
21		Non-financial business support by gov. institutions	1 to 6	1 to 6	
22		Voice in local politics	1 to 6	1 to 6	
99		Others:_____	1 to 6	1 to 6	

29 What were costs related to natural disasters (e.g. flood, storm,...)

Mio Dong

30 Do you plan to relocate your company **or parts of it** in the next 5 years?

1=yes 2=no

IV Input/Finance

Now we want to know some details about your inputs and finances.

31 What is the value of the following types of input costs in 2006?

type of input/cost		Value in Mio. Dong
Raw materials/ Intermediate goods		
other costs	(e.g.: electricity, rental costs, transport, insurance, maintenance)	

32 Please estimate the share of your inputs (raw material + intermediate goods) that is purchased in your province/neighbouring provinces as well as from Laos/Cambodia?

your province and neighbouring provinces	%
Laos / Cambodia	%

33 Which are the most important criteria for supplier selection?
(@ interviewer: please read out all categories BEFORE answering)

	(tick the most important 2)
price	
terms of payment	
quality	
secure supply	
personal connection	
proximity	
no choice	
others:_____	

34 How often did you encounter the following problems in 2006 and how did you solve these problems?
(@ interviewer: ask line by line)

	Number (if 0, go to next line)	Type of supplier (please tick)	
		First-time supplier	*long-term supplier*
No delivery of supply			
Late delivery of supply			
Poor quality of supply			
Required quantity not available			
Price too high			

35 How did you solve these problems?
(@ interviewer: only ask the types of problems that were mentioned above; ask line by line and read out all categories BEFORE

	Short-term Solution **(Code A)** 1st	2nd	long-term Strategic **(Code B)**
No delivery of supply			
Late delivery of supply			
Poor quality of supply			
Required quantity not available			
Price too high			

Code A

1 *negotiation and compromise directly*
2 *mediation through local authorities*
3 *mediation through friends/relatives*
4 *call the court*
5 *nothing*
99 *other:_____*

Code B

1 *stop dealing with business partner*
2 *start screening business partner*
3 *join business cooperation*
4 *start using formal contracts*
5 *nothing*
99 *others:_____*

36 Which are the 2 main sources for financing major investments?
(@ interviewer: ask open and assign the answer to the categories)

	(tick the most important 2)
firm savings	
parent company loan	
parent company pays	
governmental bank	
private bank	
customer loan	
supplier loan	
family members	
friends	
others:_____	

37 How do you learn about new products and production technologies?
(@ interviewer: read out all categories and tick yes or no)

	yes	no
customer		
imitation of competitors		
cooperation		
new skilled employees		
local research facilities		
others:_____		

V Sales

Now we want to know some details about your customers and sales.

38 How much was the value of your **total sales** for the following years? (in Mio Dong)

2006	2004	2001	1998	1995

39 Do you produce for the export market? *1=yes 2=no*

if no, go to question 42

40 Since when (year) do you export?

41 Through which channel do you supply the export market?

(Please tick)

indirect	direct	
	being a subcontractor	
	selling to trading companies	

42 *if no export production:*

What are the 2 major reasons?

(@ interviewer: ask open and assign the answers to the categories))

(please tick the most important 2)

not part of strategy	
lack of potential market	
lack of knowledge	
high costs (e.g. licences, transport,...)	
high product standards required	
high risk involved	
lack of business partner	
tariff barriers of destination country	
others:_____	

43 Where do you sell your 2 main products (% of sales in 2006)?

Name of 2 major products	Same and neigh-bouring province	Other domestic provinces
1 _____	%	%
2 _____	%	%

(@interviewer: do not ask the 3 following columns if there is no export production)

	Bordering country of province	High income countries *(see list)*	Rest of the world	
.....	%	%	%	*= 100%*
.....	%	%	%	*= 100%*

High income countries: EU, Japan, Canada, Australia, USA, Korea, New Zealand

44 How many customers made up 80% of your sales in 2006?

45 For how long do you sell to your 2 major customers?

1st _____ *years*
2nd _____ *years*

46 Through which channel do you get in contact with new business partners?

(@ interviewer: read out all categories and tick yes or no)

		yes	no
1	personal contact		
2	e-mail		
3	reference		
4	trade fairs		
5	own homepage		
6	business associations		
7	governmental business boards		
99	others:_____		

Which of the above named channels is the most important one?

Number

47 What are the major (customer) decision determinants for buying **your** products?

(@ interviewer: read out all categories BEFORE answering)

(please tick the most important 2)

price	
quality	
personal relation	
reputation of company	
proximity to customer	
advertisement	
others:_____	

48 How often did you encounter the following problems in 2006 and how did you solve these problems?
(@ interviewer: ask line by line)

	Number (if 0, go to next line)	Type of supplier (please tick)	
		First-time customer	*long-term customer*
Late payment of customer			
No payment of customer			
Customer complains about quality			
Internal disputes of staff		X	X
Disputes with local authorities		X	X

Did you encounter severe financial/liquidity problems due to any of these problems?
1=yes 2=no ☐

49 How did you solve these problems?
(@ interviewer: ask line by line and read out all categories BEFORE answering)

	Short-term Solution (Code A) 1st	Short-term Solution (Code A) 2nd	long-term Strategic response (Code B)
Late payment of customer			
No payment of customer			
Customer complains about quality			
Internal disputes of staff			
Disputes with local authorities			

Code A

1 negotiation and compromise directly
2 mediation through local authorities
3 mediation through friends/relatives
4 call the court
5 nothing
99 others:_____

Code B

1 stop dealing with business partner
2 start screening business partner
3 join business cooperation
4 start making formal contracts
5 nothing
99 others:_____

VI Personal characteristics of respondent

50 Name of respondent ☐

51 *gender of respondent*
(@ interviewer: don't ask just fill in!)
1= male 2 = female ☐

52 When did you join the company in this location? ☐

53 What is your current work position in your company?
1 = owner 2= manager 99= others ☐

if 2 or 99 go to question 99

54 Indicate your nationality.
1 = Vietnamese 2 = foreign Asian 99= others ☐

55 Please give us information about your highest educational level. ☐

1 university/college degree
2 Vocational degree
3 Upper secondary
4 Lower secondary
5 Primary
6 incomplete primary
7 none
99 others

56 How many years in total did you work in a management position. (years) ☐

57 Did you ever work as a manager outside of the current province?
1=yes 2=no ☐

if yes, in which location? (code A) ☐

Code A
1 Hanoi
2 Ho Chi Minh City
3 Da Nang
99 others

99 *@ interviewer: Comments by interviewer that he feels might be relevant at the end of questionnaire*

_____
_____
_____

Thank you very much for your kind cooperation

A.8 Variables used in the regressions.

Variable	Type	Description
Large[a]	dummy	=1 if the company has more than the mean number of employees (320)
Exporting	dummy	=1 if the company exports its produce
Shock/profit	ratio	Financial loss due to shock event in 2006 divided by the profit of that particular year
Perm. empl. replaced	%	Share of permanent employees replaced in 2006
Recent private	dummy	=1 if company got recently (less than 4 years since privatization) privatized
Food sector	dummy	=1 if company operates in food sector
Industry sector	dummy	=1 if company operates in industry sector but not food sector
Service sector	dummy	=1 if company operates in service sector
Age	years	Number of years the company operated in 2006 since its establishment
Association member	dummy	=1 if the company or its owner is member of any kind of business association
Party member	dummy	=1 if the company owner is member of the communist party of Vietnam
Long term selling	dummy	=1 if the company sales more than 5 years to its major customer
Customer 80%	#	Number of customers that constitute 80% of the total sales
Contract defaults	#	Number of defaults either by buyers of the produce or by suppliers of materials
Bribe level	[0,1]	Rating of the local bribe level by interviewed companies
Governmental quality	[0,1]	Provincial mean of the generated index
Infrastructure	[0,1]	Provincial mean of the generated index
Business environment	[0,1]	Provincial mean of the generated index

Note: a: only included in one of the regressions.
Source: Calculations based on own survey conducted within DFG FOR 756 [2008].

A.9 Descriptive statistics for variables used in the regressions.

Variable	Unit	Obs.	Mean	Std.dev.	Min	Max
Employees 06	#	127	312	474	50	3200
Profit	'000$	128	524	1344	−523	9107
Large[a]	dummy	128	0.24	0.43	0.00	1.00
Exporting	dummy	119	0.37	0.48	0.00	1.00
Shock/profit	ratio	128	0.42	3.03	−0.20	33.90
Perm. empl. repl.	%	120	0.11	0.12	0.00	0.64
Recent private	dummy	128	0.34	0.48	0.00	1.00
Food	dummy	128	0.15	0.36	0.00	1.00
Industry	dummy	128	0.28	0.45	0.00	1.00
Service	dummy	128	0.26	0.44	0.00	1.00
Association member	dummy	128	0.79	0.41	0.00	1.00
Party member	dummy	108	0.31	0.47	0.00	1.00
Long term selling	dummy	128	0.77	0.42	0.00	1.00
Customer 80%	#	128	55	61	1	500
Contract defaults	#	122	44	61	0	300
Bribe level	[0,1]	123	0.36	0.22	0.00	1.00
Governmental quality	[0,1]	128	0.52	0.05	0.48	0.59
Infrastructure	[0,1]	128	0.41	0.07	0.29	0.47

Note: a: only included in one of the regressions.

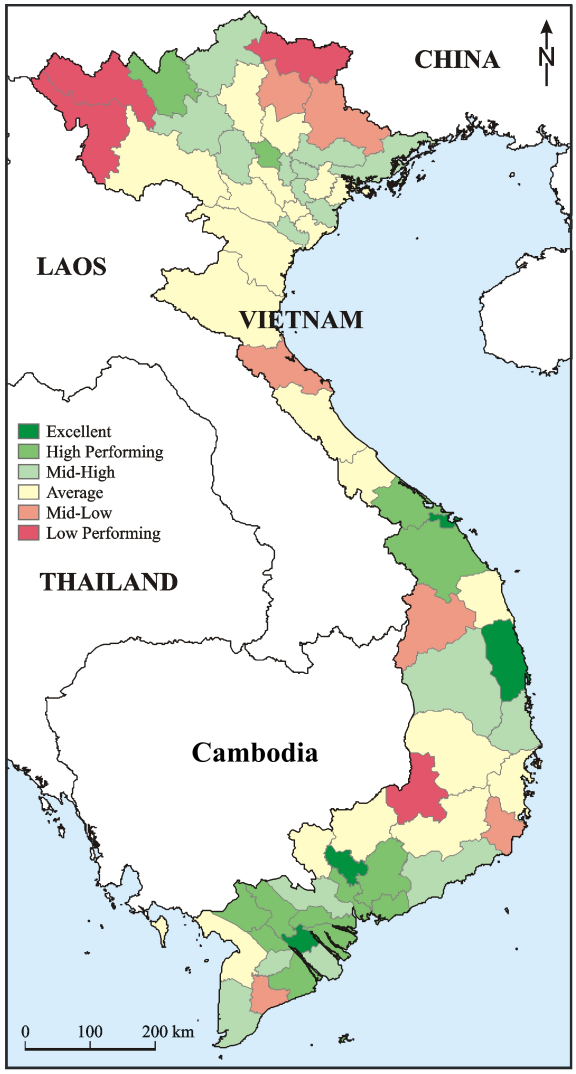
Source: Calculations based on own survey conducted within DFG FOR 756 [2008].

A.10 Regression variable correlations.

	Large	Exporting	Shock / profit	Perm. Empl. Repl.	Recent priv.	Food	Industry	Service	Asso. mem.	Party mem.	Long sell	Customer 80%	Contract def.	Bribe level	Infrastr.	Busi. env.	Gov. qual.
Large	1.00																
Exporting	0.44	1.00															
Shock / profit	0.27	0.26	1.00														
Perm. Empl. Repl.	−0.20	−0.06	0.03	1.00													
Recent priv.	0.07	0.13	0.18	−0.20	1.00												
Food	0.01	0.33	0.14	−0.09	−0.06	1.00											
Industry	0.11	0.06	−0.01	−0.06	0.08	−0.32	1.00										
Service	−0.02	−0.32	0.02	0.07	−0.04	−0.22	−0.35	1.00									
Association member	−0.02	0.12	0.02	−0.03	0.07	0.12	0.03	−0.12	1.00								
Party member	0.13	−0.04	0.06	0.05	0.12	0.04	−0.05	0.13	−0.04	1.00							
Long term selling	−0.02	−0.14	0.04	−0.01	0.02	0.05	−0.24	0.14	0.04	0.08	1.00						
Customer 80%	−0.16	−0.28	−0.06	−0.05	0.01	−0.11	−0.17	0.01	0.08	0.08	0.33	1.00					
Contract defaults	−0.24	−0.04	−0.12	0.23	0.07	−0.08	−0.06	0.01	0.06	−0.21	0.13	0.10	1.00				
Bribe level	−0.20	−0.10	0.03	0.23	−0.04	−0.03	−0.15	0.04	0.07	0.18	−0.11	0.10	0.06	1.00			
Infrastructure	0.10	0.01	−0.30	−0.08	0.10	−0.06	0.11	−0.04	−0.17	0.13	−0.09	−0.11	−0.27	−0.24	1.00		
Business environment	−0.04	−0.16	−0.09	0.17	−0.06	0.13	−0.40	0.26	−0.19	0.44	0.07	0.11	−0.11	0.27	0.08	1.00	
Governmental quality	0.09	0.15	−0.10	−0.19	0.11	−0.15	0.40	−0.25	0.07	−0.30	−0.12	−0.16	−0.06	−0.38	0.52	−0.81	1.00

Source: Calculations based on own survey conducted within DFG FOR 756 [2008].

A.11 PCI scores of Vietnam's provinces.



Source: Based on Malesky 2008, p.29.