



The United Nations Research Institute for Social Development (UNRISD) is an autonomous agency engaging in multi-disciplinary research on the social dimensions of contemporary problems affecting development. Its work is guided by the conviction that, for effective development policies to be formulated, an understanding of the social and political context is crucial. The Institute attempts to provide governments, development agencies, grassroots organizations and scholars with a better understanding of how development policies and processes of economic, social and environmental change affect different social groups. Working through an extensive network of national research centres, UNRISD aims to promote original research and strengthen research capacity in developing countries.

Current research programmes include: Civil Society and Social Movements; Democracy, Governance and Human Rights; Identities, Conflict and Cohesion; Social Policy and Development; and Technology and Society.

A list of the Institute's free and priced publications can be obtained by contacting the Reference Centre, United Nations Research Institute for Social Development, Palais des Nations, 1211 Geneva 10, Switzerland; Tel (41 22) 917 3020; Fax (41 22) 917 0650; Telex 41.29.62 UNO CH; e-mail: [info@unrisd.org](mailto:info@unrisd.org); World Wide Web Site: <http://www.unrisd.org>

---

Copyright © United Nations Research Institute for Social Development. Short extracts from this publication may be reproduced unaltered without authorization on condition that the source is indicated. For rights of reproduction or translation, contact UNRISD.

The designations employed in UNRISD publications, which are in conformity with United Nations practice, and the presentation of material therein do not imply the expression of any opinion whatsoever on the part of UNRISD concerning the legal status of any country, territory, city or area of its authorities, or concerning the delimitation of its frontiers or boundaries.

The responsibility for opinions expressed in signed articles, studies and other contributions rests solely with their authors, and publication does not constitute an endorsement by UNRISD of the opinions expressed in them.

---

---

**Leaving the Rice Fields, But Not the Countryside:  
Gender, Livelihood Diversification and Pro-Poor  
Growth in Rural Viet Nam**

Naila Kabeer  
Tran Thi Van Anh

Occasional Paper 13, September 2000

---

## Contents

List of Annex Tables	v
List of Boxes	vi
Acknowledgements	vii
Summary	viii
Abbreviations and Acronyms	x
1. Economic Reform, Achievements and Challenges in Viet Nam	1
2. Livelihoods, Poverty and Prosperity: Insights from the Secondary Literature	2
3. Gender, Livelihoods and the Structures of Constraint: Towards an Analytical Framework	4
4. Livelihood Strategies in Rural Viet Nam: A Review of the Literature	7
5. Gender and Livelihoods in Rural Viet Nam: A Review of the Literature	10
6. Gender, Livelihoods and Diversification: A Preliminary Analysis of the Study Villages	13
7. Gender, Livelihoods and Income: Insights from Multivariate Analysis	22
8. Gender, Livelihoods and Welfare: Insights from Multivariate Analysis	27
9. Gender, Livelihoods, Income and Well-being: Interpreting the Results	30
10. Determinants of Livelihood Diversification: Insights from Multivariate Analysis	35
11. Methodological, Empirical and Policy Implications of the Study	37
Bibliography	41

---

## List of Annex Tables

Table	
1	Selected characteristics of the Red River and Mekong River deltas, 1992-93
2	Poverty and inequality in the Red River and Mekong deltas (VLSS 1993)
3	Distribution of livelihoods in the Red River and Mekong deltas
4	Household characteristics in the study villages
5	Mean number of earners, activities and percentages of households with more than three activities in the study villages
6	Gender dimensions of livelihood strategies
7	Types of activities reported by households and by gender of manager
8	Types of activities reported by households in study villages
9	Gender disaggregated management of activities by village
10.1	Pearson correlation coefficients between total, farm and off-farm income (all villages)
10.2	Pearson correlation coefficients between total, farm and off-farm income (Mi Loi)
10.3	Pearson correlation coefficients between total, farm and off-farm income (Mi Trung)
10.4	Pearson correlation coefficients between total, farm and off-farm income (Hoang Gia)
10.5	Pearson correlation coefficients between total, farm and off-farm income (Phu Loc)
10.6	Income gini coefficients for study villages
11	Determinants of per capita income (OLS regression coefficients)
12	Per capita income by gender of activity and earner
13	Per capita income by gender management of activity
14	Per capita by gender and livelihood diversification
15	Economic characteristics of female-maintained and other households (mean values)
16.1	Food security, gender and livelihood diversification
16.2	Ability to save, gender and livelihood diversification
16.3	Durability of housing, gender and livelihood diversification
16.4	Likelihood of meat consumption, gender and livelihood diversification
16.5	Consumer assets, gender and livelihood diversification
17.1	Determinants of female involvements in off-farm activities
17.2	Determinants of male involvement in off-farm activities
18	Means and standard deviations of variables used in regression analysis

---

## List of Boxes

### Box

- 1 Examples of economic activities in Mi Loi
- 2 Examples of economic activities in Mi Trung
- 3 Examples of economic activities in Phu Loc
- 4 Examples of economic activities in Hoang Gia
- 5 Diversification livelihoods and positive interdependencies
- 6 Gender division of responsibilities within the household
- 7 Gender-specificity in household consumption
- 8 Gender differences in entrepreneurial activities and investment strategies

---

## Acknowledgements

The research for this study was carried out as part of the UNRISD/UNDP project on Technical Co-operation and Women's Lives. The research was based at the Centre for Women and Family Studies in Hanoi. Along with the authors, the research team also consisted of Dr. Do Thi Binh, Dr. Le Ngoc Van, Dr. Ngo Thi Tuan Dung and Dr. Ha Thi Phuong Tien. Additional research was conducted by Le Ngoc Lan and Hoang Thi Lich. The authors thank Shahra Razavi and an anonymous referee for their comments on earlier drafts, and Ruchira Bhattamishra for research assistance.

---

## Summary

In the late 1980s, Viet Nam initiated a programme of “economic renovation”, *doi moi*, to promote the transition from a centrally planned to a market-based economy. The key goals of the policy package were economic growth and social development, while the key means included decollectivization of agriculture, price liberalization, devaluation to achieve more realistic exchange rates, reduction of public sector employment and a concomitant promotion of private sector enterprise. The reforms were remarkably successful. Annual GDP growth rates rose, while poverty declined. Exports performed strongly, increasing at more than 30 per cent per annum after 1988. However, challenges remain. Rates of per capita growth are still low, as Viet Nam has a high ratio of labour relative to other factors of production, including physical capital, infrastructure, land and natural resources. The expansion of employment opportunities poses a major challenge for state policy. There is also concern that sections of the population have not benefited from the transition to the market economy, and that the pre-reform pattern of low rates of economic growth combined with “shared” poverty is being replaced by higher rates of growth but greater inequalities in income and opportunities.

Poverty has remained a rural phenomenon in Viet Nam, and there is considerable underemployment in the countryside. With the lifting of restrictions on population mobility, flows of migration have been rising, from rural to urban areas and from the northern mountainous areas to the south. Rural employment and poverty reduction have consequently received particular attention in policy discussions. The objective is to encourage the rural population to “leave the rice fields but not the countryside”. The increase of small farm productivity, the diversification of rural livelihoods and income sources, backed by improvements in rural roads and infrastructure, are seen to hold the key to achieving this objective.

This paper is concerned with the interrelated issues of poverty, prosperity and diversification of rural livelihoods, which are considered central to the achievement of rural development. It explores these issues from a gender perspective. Gender-specific information could help to establish whether policies to promote economic growth and poverty reduction in the countryside might be more effective if gender were taken more explicitly into account. The authors begin with a general discussion of the concepts of household livelihoods and livelihood diversification, and then focus on gender aspects. The primary data on rural households in north and south Viet Nam are then used for a detailed empirical analysis of household livelihoods in the study areas.

The analysis of livelihood strategies at the household level provides insights into the distribution of poverty and prosperity. There were certain north-south differences, in that households were generally better off in income terms in the south than in the north. The size of landholdings, access to credit and ownership of productive assets were all important determinants of household per capita income. The diversity of activities was a more critical determinant of per capita income than the number of economically active members per household.



---

The gender-disaggregated analysis suggested that it was diversification into off-farm activities, rather than diversity per se, which explained higher levels of household income. It also suggested that, despite women's longer hours of work in domestic and childcare activities, marginal returns to their off-farm activities were very similar to those of men. Women's ability to diversify out of farming was more strongly associated with household well-being than that of men. The gender division of roles and responsibilities, and the kinds of preferences and priorities that it might have given rise to, might explain this differentiated impact on well-being. The analysis also suggested that determinants of the ability to diversify varied somewhat by gender. And the disaggregated analysis confirmed that the gender division of labour was not rigidly enforced in Viet Nam, but varied by geographical location and household circumstances.

While policy makers in Viet Nam do not have to be persuaded of the importance of livelihood diversification in their efforts to promote growth and reduce poverty, the authors' findings provide a number of rationales as to why their efforts would be improved by more explicit attention to gender. The first rationale relates to rural growth and rests on the fact that women's ability to diversify out of farming is as important as that of men in generating rural income. The second rationale relates to household well-being. The study suggests that women's ability to diversify into off-farm activities has stronger and more consistent implications for the well-being of rural households. The third rationale links to poverty reduction. Households in which women are confined to farming (particularly to the farming of subsistence crops) and households in which women have only been able to diversify into waged employment are systematically poorer than the rest. In addition, female-maintained households tended to be poorer than the rest. The fourth rationale links to equity considerations. Rural women are able to achieve positive economic and well-being achievements only through extremely long hours of work and very little rest or leisure compared to men. Interventions to ease women's work burdens would clearly have equity as well as productivity effects.

---

## Abbreviations and Acronyms

GDP	gross domestic product
HYV	high-yielding varieties
OLS	ordinary least squares
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
VAC	vuon, ao, chuong (garden, fishpond, livestock)
VLSS	Vietnam Living Standards Survey

# 1. Economic Reform, Achievements and Challenges in Viet Nam<sup>1</sup>

Economic developments in Viet Nam since the late 1980s have been described as “one of the more dramatic turnarounds in economic history” (Dollar and Litvack, 1998:5). After decades of war and the political turmoil associated with reunification in the mid-1970s, Viet Nam managed to return to pre-unification levels of foodgrain production by early 1982. However, production stagnated, particularly in the agricultural sector, where growth in output barely kept pace with population growth.

In the late 1980s, the country initiated a programme of economic renovation, known locally as *doi moi*, to promote the transition from a centrally planned to a market-based economy. The key goals of the policy package were economic growth and social development, while the key means included the decollectivization of agriculture, price liberalization, devaluation to achieve more realistic exchange rates, reduction of public sector employment and a concomitant promotion of private sector enterprise. The reforms were remarkably successful. Annual growth rates in GDP rose from around 2.3 per cent in 1986 to 8 per cent by 1989, while poverty declined from over 70 per cent in the mid-1980s to 55 per cent in 1993 (Dollar and Litvack, 1998). Exports performed strongly, increasing at more than 30 per cent per annum after 1988.

However, challenges remain. As low rates of *per capita* growth indicate, Viet Nam has a high ratio of labour relative to other factors of production, including physical capital, infrastructure, land and natural resources (Dollar and Litvack, 1998). While population growth has begun to decline in recent decades, high rates in the past mean that there will continue to be an expansion in the labour force for some time to come. The expansion of employment opportunities poses a major challenge for state policy. There is also concern that sections of the population have not benefited from the transition to the market economy, and that the pre-reform pattern of low rates of economic growth combined with “shared” poverty is being replaced by higher rates of growth but greater inequalities in income and opportunities.

The rural sector occupies a central place on the policy agenda in terms of both growth and poverty reduction. On one hand, agriculture has performed particularly well during the transition (United Nations, 1995). From near famine in the late 1970s and import of rice through much of the 1980s, Viet Nam had become the third largest rice exporter in the world by 1989. Its exports averaged 2 million tonnes per year at the time of the study. At the same time, however, poverty has remained a rural phenomenon. The rural sector accounts for 80 per cent of the country’s population, but 90 per cent of its poor. Rural poverty was around 57 per cent in 1993, compared with 27 per cent in urban areas (World Bank, 1995).

There is considerable underemployment in the countryside. With the lifting of restrictions on population mobility, flows of migration have been rising, from rural to urban areas and from the northern mountainous areas to the

south. One estimate suggests that almost half a million workers are seeking employment in the urban areas: about half from the natural increase in the urban labour force and the rest from rural-urban migration. Urban congestion, and associated problems of drugs, prostitution and other “social evils”, are a major concern for policy makers (Allen et al., 1996).

Rural employment and poverty reduction have consequently received particular attention in policy discussions (see the Political Report of the VIII Congress of the Vietnam Communist Party, 3/1996). The objective is to encourage the rural population to “leave the rice fields but not the countryside”. The increase of small farm productivity, the diversification of rural livelihoods and income sources, backed by improvements in rural roads and infrastructure, are seen to hold the key to achieving this objective. These priorities also inform World Bank assistance to the country: “Rural development, broadly conceived, is going to be critical for growth, raising living standards and reducing poverty. Reducing poverty in rural Vietnam will require both higher incomes from agricultural production, as well as diversification of incomes from non-farm activities” (World Bank, 1995:iv).

This paper is concerned with the interrelated issues of poverty, prosperity and diversification of rural livelihoods, which are considered central to the achievement of rural development. However, it will explore these issues from a specifically gender perspective. Although there are a number of studies on household livelihoods in Viet Nam, gender has been largely overlooked. Yet such information could help to establish whether current policies to promote economic growth and poverty reduction in the countryside might be more effective if gender were taken more explicitly into account.

In this paper, we use primary data on rural households in Viet Nam to explore whether a gender-disaggregated analysis offers insights that would not be discernible from a household-level analysis, what these insights might add to our understanding of the processes of economic growth and poverty reduction in rural areas in north and south Viet Nam, and their implications for the design of more effective policies to address these goals. The paper is structured as follows. Section 2 offers a general discussion of the concepts of household livelihoods and livelihood diversification, and section 3 focuses on the gender aspects of this literature in order to develop a framework for organizing the analysis in the paper. Sections 4 and 5 summarize findings from secondary literature on gender and livelihoods in the Vietnamese context. Section 6 uses the primary data to sketch out a broad picture of household livelihoods in the study areas. Sections 7, 8, 9 and 10 provide a more detailed empirical analysis, and section 11 synthesizes the findings and draws out their policy implications.

## **2. Livelihoods, Poverty and Prosperity: Insights from the Secondary Literature**

There has been growing attention to the concept of “livelihoods” in the rural development literature in recognition of the fact that households, particularly poor households, in low income countries rarely specialize in a single income-earning activity, such as farming or waged labour, nor is the earning of income the sole purpose of their efforts (Chambers, 1983; Chambers and

Conway, 1992; Ellis, 1998). Instead, they seek to meet their basic needs (survival), minimize risk (security) and generate a sufficient surplus to invest in their future (accumulation) through a variety of activities and using a variety of tangible and intangible resources. “Livelihood strategies” are the various ways households mobilize the resources at their disposal to meet their needs. These include subsistence production, self-employment, waged labour, mutual exchange and so on, while the resources they seek to mobilize can be material (equipment, finance and credit, seeds, fertilizer), human (labour power, skills, education) or social (the claims, entitlements and opportunities that arise through social networks and collective action). For the purpose of the discussion that follows, we need to make a distinction between *diversity* and *diversification* in relation to livelihoods. “Diversity” will be used to refer to the various productive activities reported by households, while “diversification” will refer to the expansion into off-farm activities and away from a reliance on farming as the sole or primary means of livelihood.

The concept of livelihood strategies is a useful one for forging the necessary connections between macro-contexts and micro-circumstances (Ellis, 1998). Macroeconomic policies influence the aggregate structure of incentives within which resources get allocated between the different sectors of an economy: urban and rural; agriculture, industry and services; the traded and non-traded sectors. This in turn shapes the micro-context in which households devise their livelihood strategies, and hence the factors determining which households benefit, and which lose, given the prevailing macroeconomic environment.

The literature on rural livelihoods suggests that the factors driving diversification vary broadly between necessity (meeting basic needs or coping with crisis) and choice (responding to opportunities for accumulation). Consequently, the relationship between livelihood diversification, poverty and prosperity is likely to vary according to particular patterns of factor endowment and distribution, access to local and national markets, agro-climatic uncertainty, nature of financial and credit institutions, density of social networks and, of course, overall policy environment, all of which differentiate local contexts and hence differentiate the role of diversification in the household’s livelihood strategies (see, for instance, Piesse and Thirtle, 1998; Reardon et al., 1998; Hussein and Nelson, 1998; Haggblade et al., 1989; Lanjouw and Lanjouw, 1995).

Some studies have found a linear, negative relationship between off-farm income and total household income or landholdings, suggesting that poorer households were forced to seek off-farm employment because of landlessness, or because returns to farming were too low. This relationship is likely to characterize rural areas where there are highly unequal landholdings and an excess supply of unskilled labour. In such situations, access by the poor to off-farm activities will have the effect of reducing income inequality.

Other studies document a positive relationship between farm and off-farm income. These studies tend to be carried out in impoverished and high-risk agricultural regions, where diversification provides better-off farmers with a form of insurance during poor crop years. In such contexts, it reflects the capacity to take advantage of profitable off-farm opportunities, a capacity

which appeared to reflect the pre-existing asset base of the household (Piesse and Thirtle, 1998). Here, diversification is likely to exacerbate inequality.

In yet other cases, diversification may be undertaken by both poorer and wealthier households, but entail very different sets of activities and occur in response to very different motivations. At the lower end of the economic spectrum, households diversify because of the low returns to their activity in any single occupation and the rapid setting in of diminishing returns. At the higher end, households are able to use their existing resource base to invest in new economic opportunities as a route to greater accumulation. The effects on inequality cannot be predicted *a priori* in such contexts.

### 3. Gender, Livelihoods and the Structures of Constraint: Towards an Analytical Framework

Gender has not featured systematically in the general literature on household livelihoods, but where it does, the emphasis has been on the constraints that women face—cultural norms, childcare and household responsibilities; unequal access to education, land and capital—and hence on the low returns to their labour. Consequently, this literature tends to treat women largely as a disadvantaged group, and their participation in household livelihoods as a matter of “coping” or “survival” strategies (see, for instance, discussion in Hussein and Nelson, 1998). However, to be useful for policy purposes, we need to distinguish between *different kinds* of constraints on women’s ability to engage in livelihood strategies, their implications for women’s roles in meeting household needs and the extent to which they represent policy failure, cultural norms or the preferences expressed by individuals or household heads.

The typology of “regional patriarchies” developed in Kabeer (1994) offers one possible framework for doing this, by mapping gender relations in different regions along two dimensions. The first relates to women’s mobility in the public domain and distinguishes between contexts where there are strong cultural prohibitions on such mobility, often associated with the practice of *pardah* (female seclusion), and contexts where the public-private divide along gender lines is much weaker. The second dimension relates to the internal organization of the household and distinguishes between contexts where households are organized along corporate lines, often around the conjugal unit, and contexts where they are integrated into wider lineage networks and the conjugal relationship is less cohesive. Such distinctions have a bearing on the management of resources within the household and the extent to which they are pooled or managed separately. Despite some cross-regional variation, Asian households tend to be organized along corporate lines centred around cohesive conjugal ties (Cain, 1984), but vary considerably in terms of the public-private divide. Section 5 will discuss in greater detail how Viet Nam fits into this regional typology.

The constraints that women face, their ability to contribute to the household economy and the influence they exercise within it vary according to these aspects of regional patriarchies. For the purposes of our analysis, and in order to consider some of these variations, we can usefully distinguish between *gender-specific*, *gender-intensified* and *imposed gender* constraints (Kabeer and Subrahmanian, 1996). One example of a gender-specific

constraint that appears to operate in some form in most contexts relates to the division of domestic labour, assigning women, particularly married women, primary responsibility for childcare and domestic work. This constitutes what Palmer (1991) refers to as the “reproductive tax” on women’s labour time, and has the effect of restricting the time they have available for other activities. However, there are wide variations in the kinds of productive activities in which women can engage, according to the relevance or otherwise of a second set of gender-specific constraints, which relate to their mobility in the public domain.

In areas where female seclusion is practised, women tend to be restricted to primarily domestic and reproductive roles, and their ability to contribute to the household’s livelihood strategies is severely curtailed. Clearly, where these restrictions do not apply, women can engage in a much wider range of productive activities and are likely to make a larger contribution to the household economy. Thus, while both forms of gender-specific constraint are ascribed by community norms, and both serve to limit the range of economic opportunities available to women relative to men, women’s options are likely to be greater, but their workloads heavier, in regions where they engage in productive activities along with their reproductive responsibilities.

Gender-intensified disadvantages reflect the asymmetrical distribution of resources between women and men within the household. Such asymmetries sometimes reflect the ascribed norms of the community—for instance, customary laws governing inheritance or access to common property resources. They also result from decisions made at the household level. However, these decisions often reflect responses to these ascribed forms of disadvantage rather than expressions of individual discrimination. As a result, regions where women are denied economic opportunities often tend to be characterized by gender-biased investments in health and well-being. Conversely, where women have a socially sanctioned role in production, they are not only more likely to have some influence in the allocation of household resources, but the rationale for gender biases within such households is weaker.

Finally, there are forms of disadvantage which reflect biases, preconceptions and misinformation on the part of those with the power to allocate resources. These make up what we have called imposed forms of gender disadvantage. Employers frequently discriminate against women, confining them to lower-paid jobs than men or paying them less in the same jobs. The state may also contribute to female disadvantage through discriminatory legislation, or failure to legislate against discrimination. In addition, biases in the public provision of such resources as credit, health, education and so on can serve to exacerbate the effects of intra-household asymmetries.

This distinction between categories of constraint can be useful for drawing out the policy implications of empirical studies on gender and household livelihoods by helping to distinguish between constraints which are amenable, and those which are less so, to policy intervention. In addition, it can also help to anticipate the likely outcomes of different policy interventions within a particular context, or similar policy interventions in different contexts. For instance, where female seclusion is widely practised, a primary constraint on women’s role in household livelihood strategies will

be the need to find activities that can be carried out within the home. Attempts to enhance women's livelihood opportunities by providing them with access to credit may increase the scale of their activities, but not necessarily the range (see Kabeer, 1998 for a discussion of the Bangladesh context). Credit programmes for women in such contexts are thus often accompanied by social mobilization strategies that seek to encourage participation in more public forms of activity.

Where *purdah* constraints do not apply, access to credit could well open up new livelihood opportunities, as well as expanding the scale of existing ones. However, other constraints that demand different policy responses may come to the foreground. In a review of the African literature, for instance, Kabeer and Whitehead (1999) found that distance from markets was an influential factor in explaining gender differences in livelihood strategies. Female-headed households in isolated rural areas had less diversified livelihoods than male-headed households, suggesting greater mobility on the part of men. Similarly, the likelihood of women engaging in entrepreneurial activities in urban areas was much more closely related to proximity to market centres than was the case with men. The constraint here related to inflexibilities in women's time use as a result of their childcare and domestic responsibilities, and hence in their ability to participate in more distant labour or commodity markets. In such contexts, women are likely benefit *relatively* more than men from infrastructural investments and improved communications that bring markets closer to home.

Such analysis suggests a number of different ways gender might be relevant to relationships between household livelihoods, poverty reduction and economic growth. First and most directly, gender mediates the extent and value of individual contributions to the household economy and may thus have implications for the distribution of poverty and prosperity in the countryside. Indeed, in regions where there are strong cultural restrictions on women's capacity to engage in productive activities, female employment may be a marker of poverty, since only poorer women will be willing to violate cultural norms. While the extent to which female headship is associated with poverty varies by context, there appears to be a fairly consistent correlation between poverty and the extent to which households are maintained by female earnings (Buvinic and Gupta, 1993; Chant, 1997). This correlation reflects the operation, often simultaneously and interactively, of the different kinds of gender disadvantage noted above and their adverse implications for households where women are the sole or primary breadwinners.

Second, gender has been found to mediate the relationship between household livelihoods and welfare outcomes. There is evidence to suggest that men and women allocate resources under their control differently. In general, women are more likely than men to prioritize basic needs and collective welfare, particularly in relation to children (see contributions in Bruce and Dwyer, 1988 and Haddad et al., 1997). In certain contexts, women may also be more risk-averse than men and place a higher value on security-related goals. The reasons for this apparent gender difference in values and preferences remain a matter of debate. However, whether they represent socially ascribed differences in roles and responsibilities within the household, women's greater strategic interest in maintaining household solidarity, or systematic gender differences in preferences, these findings



suggest that achievement of certain policy goals, such as the survival, well-being and security of the population, may depend on the gender of earning members within the household as well as on its overall level of income.

Finally, as we have already noted, the nature of regional patriarchies also helps to explain gender inequality within the household. There is empirical evidence of an association between women's confinement to the domestic domain and reproductive work, and the existence of marked gender inequalities in basic well-being: life expectancy, health and nutrition. While the same kind of inequality does not appear to prevail in regions where women have socially sanctioned roles in production, the problem here appears to be one of heavier work burdens and longer working days. Attempts to address issues of poverty and deprivation purely on the basis of household-based measures of income/expenditure are likely to miss out on these intra-household gender inequalities in welfare and basic needs.

The literature on gender and rural livelihoods therefore throws up a number of hypotheses that will be investigated in this paper. First of all, it raises the important question about whether livelihood diversification is a response to opportunity, and hence associated with greater prosperity and growth, or to economic need, and hence a manifestation of poverty. Second, it suggests that a gender-disaggregated analysis of household livelihoods will provide insights into relationships between household strategies, poverty and opportunity, which are likely to be missed in more aggregated forms of analysis. Third, it draws attention to some of the different ways in which gender might be relevant to such a relationship, including gender differences in extent and value of economic activity, household headship and poverty, the impact of the gender composition of earnings for household welfare, and the relationship between livelihood strategies and women's own welfare. Finally, it suggests that understanding if, when and how gender is relevant to the analysis of household livelihood strategies is a critical dimension of the microeconomic analysis that informs the design of macroeconomic policies for economic growth and poverty reduction.

#### **4. Livelihood Strategies in Rural Viet Nam: A Review of the Literature**

The analysis in this paper draws on data on rural livelihoods from two regions in Viet Nam: the Mekong delta in the south and the Red River delta in the north. Both regions have large concentrations of the rural population in Viet Nam. They also account for the country's largest concentrations of poor households: 22.4 per cent and 21.6 per cent respectively. In addition, there are reasons for building in a north-south comparison. The economy and social structure varies considerably between different regions of Viet Nam, with implications for livelihood strategies and their relationship to poverty and opportunity. However, the differences between the north and south are particularly important in the context of this study.

Several decades of political conflict between the two regions have given them very different social and economic trajectories (see tables 1, 2 and 3). Collectivization of agriculture, for instance, was introduced in the north in the 1950s. In the south, it was only attempted after re-unification and never fully implemented, so that landholding patterns continue to resemble the pre-

1975 situation (World Bank, 1995). Since *doi moi*, there has been a process of decollectivization across the country. The land law passed in 1987 allocated user rights for agricultural land to individual households on a long-term basis, while a land tenure law passed in 1993 gave farmers the right to transfer, rent and inherit use rights to agricultural land. Land contracts were extended to 20 years for cultivation of annual crops and 50 years for perennial crops.

Landholding patterns continue to differ between the north and south of the country. Land is far more equally distributed in the north. Combined with higher levels of population density, this has resulted in smaller farm sizes: 903 square metres per capita compared to 1,872 square metres in the south. Landholding disparities are much larger in the south. The farm area of the poorest fifth of the households in the Mekong delta in the south is a third more than the area of the richest fifth of farms in the Red River delta, but only a third as much as the top fifth in the Mekong delta (UNDP, 1996). About 10 per cent of farmers in the south have sold their land. While land is obviously an important determinant of access to livelihoods in a largely agrarian economy like that of Viet Nam, greater landlessness does not automatically imply greater poverty in the south because of the greater availability of off-farm income earning opportunities, including waged labour, and higher real wages (table 2).

In addition, certain categories of households, such as female-maintained households and households with high dependency ratios, have proved particularly vulnerable to land loss (Beresford, 1995). To some extent, this reflects the bias built in to the land distribution process. While land was allocated on the basis of family size, a working adult (defined as a woman aged 16–55 and a man aged 16–60) received twice as much as a child or an elderly person. Families with disproportionate numbers of older members, particularly older female members, or very young members were thus allocated smaller, and hence less viable, holdings. In addition, land use titles tend to be automatically issued in the name of the household head, usually the husband (UNDP, 1998).

Since the size of landholdings is a major determinant of the scope for productive use of family labour on the farm, it is not surprising that the small size of most farms in Viet Nam rarely generates enough work to keep members fully occupied year-round. Most rural households depend on a variety of “side-line” activities to supplement their earnings from farming, but the average share of household labour engaged in off-farm employment varies considerably. Around 65 per cent of the rural population was engaged in farming, 15 per cent participated in non-farm self-employment, often combining it with farming, and around 18 per cent was involved in waged employment (Vijverberg, 1998). Farming was more prevalent in the north, while waged employment was generally more widespread in the south. In view of the distribution of land and landlessness in the two deltas, this pattern is not surprising.

As far as levels and distribution of poverty are concerned, northern regions tend, on average, to be poorer than those in the south. However, even regions with high overall living standards can contain very poor families or groups. As Allen et al. (1996) suggest, in some contexts poverty takes the form of “poor communities”, while in others it takes the form of “poor households”.

Growth rates in the northern uplands, for instance, were just 8 per cent in 1993–94, and 66 per cent of the population was below the poverty line. But the gini co-efficient here was .26, suggesting a relatively egalitarian distribution. In the southeast of the country, the growth rate was 16 per cent, with 34 per cent of the population below the poverty line and a gini co-efficient of .38.

Given our interest in the links between the diversification of household livelihoods and the distribution of poverty and prosperity, it is worth summarizing what the secondary evidence tells us. Evidence from the Vietnam Living Standards Survey (VLSS)<sup>2</sup> suggests that households that do not rely on farming alone are generally better off than those that do—but, as discussed below, there are regional exceptions to this relationship. Poverty was found to be highest among households who rely solely on farming (65 per cent), followed by those who farm and earn wages and then by those who rely solely on wages (nearly 60 per cent of both). Those who rely on self-employment had the lowest rates of poverty (29 per cent). While 75 per cent of households reported farming as a source of livelihood, 60 per cent of those in the bottom income quintile reported it as their only source of livelihood compared to just 28 per cent of those in the top quintile, where farming was usually combined with wage earning and with off-farm enterprise (cited in UNDP, 1998:table 3.2).

The suggestion that off-farm diversification is a response to opportunity rather than a manifestation of poverty is also confirmed by other studies. Fetzer's study (1995) of the newly self-employed suggests that they tended to be entrepreneurs responding to new opportunities, rather than disadvantaged workers unable to find other forms of employment. Reardon et al. (1999) cite another study which found that the top income quintile had only twice the non-farm income share of the bottom quintile (82 per cent against 41 per cent), but nine times the level of non-farm income of the bottom quintile. In other words, while poorer households spent a considerable amount of time in off-farm employment, the returns to their labour remained low. This suggests substantial barriers to entry (such as skills, purchase of capital equipment, finance for working capital, transportation costs, etc.) into high-return activities (Ellis, 1998).

However, as we noted, there are certain regional variations to this overall picture. In the north, the poorest households were primarily involved in farming while the wealthiest were those with mainly off-farm incomes. Given smaller farm sizes and roughly equal access to land, it appears that household prosperity in the north is determined by ability to mobilize non-land resources (savings, skills, labour, etc.). In the south, however, where farm sizes are much larger but there is also a great deal of landlessness, the poorest households are those who have to rely largely on off-farm income while the wealthiest are those who prosper through farming alone. Poorer households in the Mekong delta tend to be landless or land-poor, and to devote more than 40 per cent of their labour to off farm activities, mainly waged labour, while the large size of landholdings of those with land allow the wealthiest households to specialize in agriculture (Dollar et al., 1998; World Bank, 1995).

---

<sup>2</sup> All citations of findings from the Vietnam Living Standards Survey refer to the one carried out in 1993.

In general, waged labour is among the more poorly paid off-farm occupations. Estimates from the VLSS found that for an hour of family labour, the average non-farm family enterprise yielded between 2,000 and 2,600 dong compared to returns of around 1,300 dong for an hour in waged labour (cited in Vijverberg, 1998:138). Yet real wages tend to be higher in the south, and participation in waged labour is thus likely to carry different income implications in our study locations. Despite these various caveats, findings from the available data are in line with Wiens's conclusion that in most of Viet Nam, off-farm activities are more likely to function as a path to wealth accumulation than simply as a vent for surplus labour: "the inability to fully use their most abundant resource seems to be a clear handicap of the poor" (1998:69).

## 5. Gender and Livelihoods in Rural Viet Nam: A Review of the Literature

A critical reading of the literature on gender relations in Viet Nam suggests a certain amount of tension between the "normative" and the "actual". There is a tendency in some studies to ascribe various aspects of gender differentials to the Confucian influence on Vietnamese culture. However, these references tend to treat culture itself as a black box and to assume that Confucian ideals prevail in everyday practice—without necessarily investigating everyday practice. The gap between norm and practice is evident, for instance, if we compare Huou's account (1991) of the "idealized" Confucian family in Viet Nam with Chi's empirically informed notes on the family in a Viet village (Chi, 1991).

While it is the case that centuries of colonization by China meant that Confucianism inevitably permeated the pre-existing indigenous culture, the resulting admixture does not permit a simple reading off of gender relations from Confucian norms and beliefs. The complexity of interpreting how gender relations operate, particularly for the "outside" social scientist, has been noted. As Friener and Mancini, for instance, comment, "The role of women in traditional Vietnamese society was determined by a fascinatingly complex mixture of Confucian ethics, indigenous customs bearing traces of matriarchy, and contradictory legal codes, further complicated by the varying degrees to which different social classes were penetrated by each of these elements" (1996:32). Hitchcox (1991) also cautions against assuming that intra-household decision making takes simple, gender-determined lines, suggesting that structures of gender relations need to be further empirically investigated in Viet Nam.

We would suggest that, despite the importance of Confucian influences in Viet Nam's history, it is not an adequate framework for the analysis of gender relations there. In terms of the typology of "regional patriarchies" discussed earlier, several aspects of its gender norms and practices suggest that Viet Nam fits more easily into the "weaker patriarchies" and more gender-egalitarian cultural traditions characterizing Southeast Asia, than into the stronger patriarchal culture of China and the rest of East Asia. In pre-revolutionary China, for instance, the Confucian tradition strongly incorporated the idea of a public-private divide along gender lines—so that men worked "outside" and women "inside" (*nan zhu wai, nu zhu nei*) and

studies from the early 1930s testified that 80 per cent of farm work in rural China was done by male labour—family as well as hired—rather than by female.

By contrast, in pre-colonial Viet Nam there is evidence that, despite the strong influence of Confucianism among the ruling elite, most rural women worked in the fields on a daily basis and were largely responsible for trade (Chi, 1991). As in other parts of Asia, Vietnamese households are organized along corporate lines. However, unlike South Asia, for instance, budgets were pooled under women's management in rural Viet Nam (Houtart and Lemercinier, 1984). Along with managing household finances, Vietnamese women also took part in direct production such as transplanting rice and, importantly, in marketing the produce. A husband could not dispose of harvested rice without his wife's consent. Despite the practice of patrilocal-patrilineal marriage and some evidence of son-preference, women were not regarded as "helpers to men" but as their equals (Chi, 1991).

Vietnamese women's predominant role in household finance, and in marketing, are both characteristics of the Southeast Asian cultural belt. Indeed, in her pathbreaking work on the geographical patterning of gender relations, and of the associated distribution of economic opportunities for women, Boserup (1970) remarked on the incidence of female trading as a significant marker of regional differentiation. Using data from the 1960s labour surveys, she noted that while South Asia and the Middle East—areas of "strong patriarchy" and restricted female mobility—had very low percentages of women in trading (under 10 per cent of the total labour force in this occupation), percentages were very high in Southeast Asia and Latin America. In Southeast Asia (including Viet Nam), women accounted for around half the trading labour force in the 1960s.

That women continue to play a significant economic role is confirmed by recent evidence (Dollar et al., 1998; Desai, 1995; Fong, 1994). According to the 1993 VLSS, 90 per cent of both adult women and men had participated in the income-generating economy in the preceding year (cited in Desai, 1995). As concerns the spread of activities, 73 per cent of the female labour force worked in agriculture and forestry in 1989 compared to 71 per cent of the male labour force (Fong, 1994). Rural women made up around 60 per cent of the agricultural labour force and were the key source of labour in rice production, the major crop in the agricultural sector (Tiem, 1995).

By and large, women were more likely than men to be self-employed in both farm and off-farm activities; this was particularly true of married women with young children. Men were generally more likely than women to be in waged employment: 21 per cent of rural men compared to 12 per cent of rural women. Women specialized in catering of different kinds, food and beverage manufacturing, wholesale and retail trade, and garment and leather enterprises. Men predominated (80 per cent) in storage and transport services, mining and fishing. As far as returns to labour were concerned, women earned around 62 per cent of men's wages in the agricultural sector, and 72 per cent overall. Differential wages were partly attributed to differences in experience and schooling, but as elsewhere, it may also have reflected the assignment of women to lower value-added tasks and activities. It is worth noting that women's wages were less elastic with respect to differences in schooling (at over nine years of schooling) than men's (Desai,

1995). Vijverberg (1998) found returns to women's self-employed activities were lower than those of men, even if differences in education, productive assets, age, region and age of enterprise were controlled for.

The available statistical data thus confirm the absence of the kind of rigidities in the gender division of labour in agriculture that are found in societies observing a strict demarcation of public and private spheres along gender lines, although women in the southeast and the Mekong delta were generally found to be less likely to work outside the home than those in the north (Desai, 1995). A survey of rice farming households in the Red River delta found that there was no single agricultural task that only men performed (cited by Tiem, 1995). Women on their own were largely responsible for sowing, transplanting and weeding; both men and women were active in soil preparation and in harvesting. Animal husbandry was women's responsibility in around 50 per cent of the households and a joint activity in 33 per cent. Homestead gardening was done solely by women in 30 per cent of households and jointly in 43 per cent. Women were also found to be the overwhelming majority in the production of a variety of crafts.

Given women's very active role in production, their contribution to household livelihoods and the absence of cultural restrictions on their mobility in the public sphere, it is not surprising that there is little evidence of the kind of marked gender inequalities in life expectancy and nutritional standards that characterize regions of strong patriarchy. However, there are marked inequalities in work burdens, reflecting their dual responsibilities in economic production and in the domestic sphere. According to the VLSS, men worked longer hours outside the home, but by just 150 hours a year (cited in Desai, 1995). Overall, however, once account was taken of women's work within the home, women worked longer hours and had less leisure time than men, except in the over-60 age group. Studies by the Centre for Family and Women's Studies and the National Economics University estimated that rural women worked around 11 hours a day and 302–339 days a year, while men worked 7 hours a day and 222–275 days a year (cited in Tiem, 1995).

The "reproductive tax" on women's time may account for the lower returns to women's enterprises noted by Vijverberg (1998) above. It may also explain why, despite their longer working day, there was considerable underemployment among women in the countryside: 30 per cent in the country as a whole and 50 per cent in the Red River delta (Tiem, 1995). The problem for Vietnamese women has been summarized as one of "overwork but underemployment" (Fong, 1994). Unlike men who can easily migrate in the slack season to search for work as carpenters, builders, cyclo drivers, traders and so on, women were "tied to the village bamboo groves" because of their responsibilities on the farm and in the home.

To sum up, therefore, our review of the secondary literature supports the view that an understanding of household livelihood strategies, and households' success or lack of success in diversifying out of farming, will throw considerable light on the distribution of poverty and prosperity in Viet Nam. And given the high rates of female economic activity documented in this literature, it also supports the hypothesis that an analysis of women's roles in household livelihood strategies is likely to provide critical insights into our understanding of these issues. Women's ability to contribute to the

household economy is constrained, but by no means negated, by their familial and childcare responsibilities. For Vietnamese women, caring for the family entails an economic component and, as our research also confirms, sole, or even primary, male-breadwinner households are the exception rather than the rule. Consequently, the role that women are able to play in terms of improving household standards of living may be a crucial differentiating factor between households that are poor and those that are not.

## **6. Gender, Livelihoods and Diversification: A Preliminary Analysis of the Study Villages**

The primary research on which this study is based was carried out in four villages: two located in Cam Vu commune, Hai Hung province, in the Red River delta region in north Viet Nam, and two in Mi Luong commune, An Giang province, in the Mekong delta in the south. As we noted earlier, the choice of study locations was partly dictated by the need to allow for north-south differences. Northern regions are, on average, poorer than those in the south. However, as Dollar and Glewwe (1998) point out, the differences between the Mekong and Red River deltas are particularly interesting (see tables 1, 2 and 3).

The Mekong delta is regarded as the breadbasket of Viet Nam. It has a large amount of agricultural land per capita (double the average in other regions) and with one fifth of the country's population, it produces nearly half its rice crop and all its exported surpluses. However, rural poverty in the Mekong delta is not much lower than in the Red River delta: 51 per cent compared to 59 per cent in 1993. As Dollar and Glewwe point out, the two regions have different advantages and disadvantages which explain this similarity of poverty outcomes. Education levels in the Mekong delta are among the lowest in the country. Electrification is also low (26 per cent of households), as is share of irrigated land for year-round cultivation. Transport structure is weak, leaving much of the region relatively isolated. Thus its exceptional land endowment is offset by weak social and infrastructural disadvantage. By contrast, the Red River delta has much higher density of population than the Mekong delta (around 1,000 persons per square kilometre compared to 400) and much poorer per capita land endowments. However, education levels are higher, virtually all of the land is irrigated and 75 per cent of households have electricity.

Estimates of inequality between the two regions vary. The 1993 VLSS data suggest very similar income distributions, with gini coefficients of .33 and .31 for north and south respectively (see table 2). However, data from a number of other surveys carried out by the Viet Nam Agricultural Science Institute between 1989 and 1992 (cited in Allen et al., 1996) suggest that the richest villages in the country tend to be found in the Mekong delta with relatively high levels of differentiation (ranging between .16 and .24). High standards of living co-existed with extreme poverty. The Red River delta, on the other hand, had medium levels of income and higher levels of equality.

Along with the north-south comparison, the survey design also built in a comparison of livelihood strategies in villages with good access to wider markets, as proxied by their road links, and those without. Phu Loc in the

north was selected as an example of a village with good access to markets. The main road in Phu Loc is a major highway, capable of accommodating large vehicles and trucks. Buses to the south of the country stop in the village three times a week. Hoang Gia, the other village in the north, is less well connected. It has access to a small road that accommodates only cars. The southern villages are both located in Mi Luong commune, which is situated along the main provincial highway and crossed by the Tien River (a tributary of the Mekong River), creating favourable water and road communications for the commune in general. Mi Loi is separated from the rest of the commune by the Tien River. During the rainy season, the village tends to get cut off from the main road and from the rest of the commune because of the flooding of the Tien River. Mi Trung, on the other hand, is close to the main market for the commune and also has good all-weather road links.

Data were collected from a number of sources. Along with a survey of the secondary literature, data sources included:

- a quantitative survey of 600 households, around 150 from each of the four villages, two from Cam Vu commune, and two from Mi Luong commune. In each household, the questionnaire was administered to a key male or female household member.
- qualitative information collected from key informants at the start of the survey, and subsequently through interviews with about 10 respondents per village from households covered by the survey.

In the rest of this section, we use descriptive statistics from the household survey, supplemented with qualitative information, in order to obtain a preliminary picture of the study villages. Table 4 provides some information on basic household characteristics by village. We note that the national pattern of land distribution is reproduced in our study villages. Landlessness was far more widespread in the southern villages: 66 per cent of households in Mi Loi reported landlessness and 26 per cent in Mi Trung. By contrast, there was almost no landlessness in the two northern villages: none at all in Hoang Gia and 5 per cent in Phu Loc. Farm sizes were on average larger in the south than in the north, with the largest farms in Mi Trung: 6,075 square metres on average. In the north, where farmland was more equally distributed, farm sizes ranged between an average of 1,747 in Hoang Gia and 1,398 in Phu Loc.

Household sizes were generally smaller in the north. Table 4 also shows that, despite having poorer road links and presumably poorer access to markets beyond the immediate village precincts, Mi Loi had higher levels of household as well as per capita income than Mi Trung. Poor road links did not appear to constitute a disadvantage in this part of the Mekong delta. They may have done so for Hoang Gia in the north, which was the poorest village in the sample in terms of both household and per capita income.

Table 5 provides some basic information on household livelihoods. Given that household size was larger in the south, it is not surprising that they also had more economically active persons per household. However, they had fewer activities per household. Diversity of livelihoods thus appears to be more widespread in the north. Within each region, and contrary to our



expectations, households in villages with poorer road links were characterized by greater diversity of livelihoods. 87 per cent of households in Hoang Gia in the north had three or more activities, compared to 60 per cent in Phu Loc; 33 per cent of households in Mi Loi had three or more activities compared to only 22 per cent in Mi Trung.

It is evident, therefore, that at this general level of analysis, diversity of livelihoods was not consistently related to poverty or prosperity among the surveyed households. In the south, Mi Loi with the poorer road connections had both greater diversity of livelihoods as well as higher household and per capita income than Mi Trung. In the north, Hoang Gia, the village with the poorer road connections, had greater diversity of livelihoods but lower income levels than Phu Loc. However, it is possible that one reason why poor road communications may not have affected households in the south to the same extent that they did in the north relates to the relative importance of river communications: 70 per cent of freight traffic occurs on inland waterways in the south compared to 40 per cent in the north (World Bank, 1995). River and canal transport were particularly important in the Mekong delta, and this importance showed up in river fishing and boat trade activities reported by households in Mi Loi and Mi Trung. This was not, however, factored into our choice of villages.

Table 6 disaggregates number of earners and number of activities by gender. While the disaggregation of activities was carried out on the basis of the key decision-maker reported for each activity, rather than the person who provided most labour for it, it should be noted that, in general, activities reportedly managed by men tended to be dominated by male labour, while activities managed by women tended to be intensive in female labour. The main exception to this was animal husbandry. While this was generally associated with female labour and female management, there were a number of households in which men were reported as managing this activity but women contributed most of the labour.

As with the national data, the table records very similar rates of labour force activity by women and men in all four study villages, with somewhat larger gender differentials reported in Mi Trung, where there were more male than female earners, and in Hoang Gia where there were more female than male earners. Although this is not reported in the table, it should be noted that only 7 per cent of households reported no male earners at all (that is, were entirely female-maintained) while 8 per cent of households reported no female earners (entirely male-maintained).

Differentials in number of economic activities managed by men and women were more marked, although the nature of the differentials varied by region. In the south, men tended to report a greater diversity of activities than women, while in the north, it was women who reported more activities. Households in the south reported few activities per household and diversity was largely a male phenomenon. Migration out of the village in search of work was also largely a male phenomenon. It was highest in the poorest village of Hoang Gia, where an astonishing 60 per cent of households reported at least one male working away from the village. Thus despite women's critical role in household livelihood strategies, our data suggest that their movements tended to be more curtailed than those of men. Where

local opportunities were scarce, men were more readily able to migrate elsewhere in search of better paid employment.

Table 7 summarizes the different livelihood activities by gender. Farm-based activities were clearly the most widespread. They were divided into three categories. Rice, cultivation of which was reported by 72 per cent of households in the study sample, constitutes the staple food in Viet Nam. The cultivation of “subsidiary” crops—low-grade staples, such as tubers and maize, often used to supplement the diet when there was a shortfall of rice—was reported by 49 per cent of households. “Other crops”, which included various relatively new cash crops, such as sugar cane, were reported by just 3 per cent of households. Important examples of off-farm activities included:

- animal husbandry, raising small and large livestock and poultry, reported by 55 per cent of households;
- hired labour, reported by 42 per cent;
- handicrafts and small commodity production, reported by 30 per cent;
- trade and services, reported by 24 per cent.

Less frequently reported were “gardening” (the cultivation of fruits and vegetables) and “other activities” (a miscellaneous category).

The table also records the key decision-making role by gender in these activities. It supports the earlier finding that the majority of activities are not characterized by strong gender differentiation: *no activities appeared to be either exclusively or predominantly male or female*. The greatest degree of gender differentiation is to be found in waged labour: only 6 per cent of households reported this as a female activity, while 35 per cent of households reported it as a male activity. Gender differentiation is far weaker in other activities. For instance:

- women managed rice cultivation in 46 per cent of households while men managed it in 25 per cent;
- women managed subsidiary crop production in 30 per cent of households while men managed it in 18 per cent;
- animal husbandry was described as male-managed by 31 per cent of households and as female-managed by 23 per cent;
- handicrafts were female-managed in 19 per cent of households and male-managed in 12 per cent;
- trade and services were reported as female-managed activities by 14 per cent of households and as male-managed by 11 per cent.

Table 8 provides a breakdown of these activities by village. By separating out farming from non-farming activities, it also provides information on the extent of diversification in the study villages. Given the statistics on land distribution, it is not surprising that farm-based activities were more widespread in the north: 100 per cent of households in Hoang Gia and 96 per cent in Phu Loc reported rice farming as one of their activities, compared with 19 per cent of households in Mi Loi and 67 per cent in My Trung. A clear regional difference was also evident in husbandry: it was reported as a source of livelihood by 94 per cent of households in both Phu Loc and Hoang Gia, but by 23 per cent in Mi Loi and by only 8 per cent in Mi Trung. It is worth noting that the percentage of households reporting subsidiary

crops, or “hunger” foods, is extremely high in Hoang Gia. It is reported by 96 per cent of households there, compared to 43 per cent in Mi Trung and less in the other villages.

Thus, one reason for greater diversity of activities in the north is the prevalence of rice farming as well as animal husbandry as components of the livelihood strategies of the overwhelming majority of households. Livelihood strategies in the south, on the other hand, varied between those households who specialized in farming and others who undertook waged labour and off-farm activities. Waged labour, while a key activity in all four villages, was more frequently reported by the village with the poorer road links in each region: 47 per cent of households in Mi Loi, compared to 33 per cent in Mi Trung in the south, and by 67 per cent of households in Hoang Gia compared to only 18 per cent in Phu Loc in the north. However, resort to waged labour probably reflected high levels of landlessness in Mi Loi and poverty in Hoang Gia rather than access to markets *per se*.

Table 9 brings together the information from tables 7 and 8, reporting on livelihood activities by gender for each village. In the north, where rice cultivation is reported by the overwhelming majority of households, it was also an overwhelmingly female-managed activity, practised by over 80 per cent of households in both Phu Loc and Hoang Gia. In the southern villages, where it is less important, it is a largely male-managed activity. Subsidiary crop production is also largely female-managed in the northern villages and largely male-managed in the south. Waged labour, however, as we noted earlier, is a male dominated activity in every village and only in Mi Loi, with the highest incidence of landlessness, does it feature at all as a female activity.

It would appear on the basis of this preliminary analysis that road access was not the only, or even necessarily the key, factor explaining diversity of livelihoods, as had been assumed at the start of the study. Nor was the relationship between diversity of livelihoods, poverty and prosperity uniform across the villages. First of all, there was a regional dimension: diversity was much higher in the two northern villages than in the south, because of the greater likelihood of all households to undertake both rice farming and animal husbandry. Within each region, diversity was greater in the village with poorer road links, but not similar in other ways. In Mi Loi, diversity may have reflected greater landlessness but it did not lead to lower levels of income compared to Mi Trung. In Hoang Gia, where there was no landlessness, diversity is likely to have been a response to poor returns to farming (farm sizes were larger than Phu Loc) and some landlessness, but it was also associated with very low levels of income, compared to Phu Loc as well as the other villages. Clearly, diversity of livelihoods had very different meanings in terms of both cause and effect in the two regions.

One way of exploring these meanings is by exploring the relationship between farm and off-farm income in the overall income of households. Farm income refers to income from the cultivation of rice, subsidiary crops and “other crops” while off-farm income refers to income from all other sources. Tables 10.1 through to 10.5 report on the correlation coefficients between total income, farm income and non-farm income for the individual villages and for the pooled sample, and table 10.6 reports on the income gini-coefficients for each category. Overall, for the pooled sample, both farm

and off-farm income were positively and significantly correlated with total income, with farm income playing a larger role. In addition, the negative correlation between farm and off-farm incomes suggests that diversification into off-farm activities helped to partly offset low (or no) returns from farming.

The results at the village level suggest that farm income was the key factor explaining prosperity in both the southern villages, while off-farm income was important in both the northern villages. This is consistent with the regional differences reported in national data cited earlier. Income inequality, as measured by the Gini coefficient, had no consistent regional pattern. Instead, it was higher in the two villages with good market access (Mi Trung and Phu Loc). Of the two villages with poorer market access, it was markedly lower in Hoang Gia in the north. Poverty in Hoang Gia was thus an example of the “poor community” phenomenon, while in the wealthier villages it was a characteristic of individual households.

We can combine these statistical findings with the information provided by key informants in each village to develop a qualitative picture of their economies. The following boxes on each village contain examples of livelihood activities mentioned in the qualitative interviews. Mi Loi (in the south), as we saw, had the highest levels of landlessness of the study villages. It was a newly established village, its land formed mainly by the alluvial deposits of the Tien River. Most people who had settled there had little prior experience in farming, and many had sold the land they received through the decollectivization process. Farming families were clearly the most prosperous in the village. Diversification into off-farm activities was largely undertaken by the landless. Some of the migrants had brought skills other than farming with them. This is reflected in the high levels of participation in handicraft and petty commodity production (carpentry, brick making, basket weaving, carpet weaving at home) reported by both women and men, followed by trade and various services such as hairdressing and motorbike maintenance (table 9).

The poorest households, on the other hand, diversified into waged labour, both on- and off-farm. While men dominated in waged labour, Mi Loi had the highest number of women in waged labour of the four villages. Men often migrated in search of work on a seasonal or temporary basis, while women worked as hired labour for landowners in neighbouring villages. Mean per capita incomes may have been high in Mi Loi, but there was also considerable income inequality, reflecting the unequal distribution of land and dearth of local opportunities.

**Box 1: Examples of economic activities in Mi Loi**

- Crop production and gardening: fruits and vegetables; rice; maize; sugarcane; beans; bamboo.
- Trade and services: small counter selling dry fish and breakfast foods; selling popcorn; hairdressing; junk dealing; trading by boat; motorbike repair; trading in fish and vegetables; itinerant trading in plastic sandals; fishing.
- Waged labour: sub-contracted carpentry; agricultural waged labour; casual off-farm waged labour.
- Husbandry: pigs; poultry.
- Handicrafts and home-based production: weaving bamboo baskets.
- Other: *tontine* (informal credit and savings groups); pig castration.

Mi Trung (also in the south) had lower levels of landlessness than Mi Loi, and larger farm sizes. Those with sufficient land to generate a surplus invested it in new seed varieties and technology, and many farmers were now growing three rice crops per year compared to one previously. Among the better-off households, farming constituted the key, and often only, occupation. However, not all land in Mi Trung was suited to rice cultivation. On more hilly land, farmers grew subsidiary crops, such as beans, maize, sugar cane, cucumbers and other vegetables.

Agriculture was clearly the main source of prosperity in Mi Trung, but good road and river connections gave its population access to a wider and better-remunerated range of off-farm activities than in Mi Loi. Consequently, off-farm income was also positively correlated with overall income, although not to the same degree as agriculture. In addition, waged labour was an important occupation among poorer households, on both daily and seasonal basis. Both farm and waged work were primarily undertaken by men; women tended to be less economically active in Mi Trung.

**Box 2: Examples of economic activities in Mi Trung**

- Crops: rice; maize; cucumber; sweet potato; beans; sugar-cane.
- Gardening: ginger; mango; papaya; bananas; vegetables.
- Trade and services: trading in rice; rice processing; tailoring; trading by boat; furniture trade; fishing; teaching; engineering; car transport; carpentry.
- Husbandry: chickens; ducks; pigs.
- Agricultural waged labour.

There was very little landlessness in either of the two northern villages of Hoang Gia and Phu Loc, and most households reported rice farming as one of their activities. Consequently, diversification took place along with, rather than instead of, farming. There were, however, important differences between the two villages, both in terms of returns to rice farming and in access to profitable off-farm opportunities. Phu Loc was the more affluent of the two villages, where most households were able to grow two rice crops per year as well as one subsidiary crop (maize, sweet potatoes, beans, various vegetables). Agricultural yields were generally reported to be high, partly because of the abundance of livestock manure applied to the rice fields and partly because higher levels of household income allowed for the

purchase of fertilizer and high-yielding variety (HYV) seeds. There was also evidence of agricultural experimentation in Phu Loc, with farmers growing cucumbers and cabbage, kohlrabi, tomatoes, water dropwort and squash. This was felt by villagers to reflect their ease of access to wider markets and new ideas.

**Box 3: Examples of economic activities in Phu Loc**

- Crops and gardening: rice; maize; litchis; bananas; lemons; ornamental trees; water dropwort; cabbage; kohlrabi; tomatoes; squash; cucumbers.
- Animal husbandry: pigs; fishpond; chickens
- Handicrafts and home-based production: food production (dry and wet rice noodles; rice cakes; steamed rice pancakes; dry pancakes); alcohol production; yeast production; sale of homemade pork dishes.
- Trade and services: trade in clothing; trade in miscellaneous goods for daily use; huckstering in rice and fruit.
- Other: teaching; slaughterhouse; rent-in land for farming; member of production team; transportation.

Table 10.5 shows that while returns to farming were high in Phu Loc, returns were also high in off-farm activities. There was a wide distribution of occupational skills among its inhabitants. In Phu Loc, 38 per cent of households engaged in trade compared to only 9 per cent in Hoang Gia, while 53 per cent engaged in handicrafts in Phu Loc compared to only 15 per cent in Hoang Gia. Informants in Phu Loc reported a long tradition of small-scale entrepreneurship in the village; and a number of previously important activities (high-quality alcohol, dry and wet rice noodles and vermicelli, wood carving) had been restored in response to market opportunities while some new ones (vehicle maintenance, tailoring, hairdressing, small restaurants, jewellery shops) had been introduced.

The trade and service category also included transportation, and this was an important aspect of diversification in Phu Loc. Some of the richer households now operated regular bus services between the village and other parts of the country, while most local farmers had expanded their trading from the village to a much wider market. Husking constituted an important activity because of the importance of rice in the village economy combined with good road communications. Rice was sold in more industrial northern provinces like Quang Ninh.

Hoang Gia (also in the north) was the poorest village in the sample, but it had no landlessness and the most equal income distribution. Poverty was a community, rather than a household, phenomenon. Both farm and off-farm income were important in explaining variations in household income, and to roughly the same extent. Much of the land in the village was low-lying, and the village was frequently ravaged by floods and typhoons. While most households had some land and engaged in farming, many could grow only one rice crop a year and yields were reported to be far lower than in Phu Loc. The rationale for diversity of household livelihoods in Hoang Gia was thus poverty rather than opportunity. Their poor access to wider markets and lack of occupational skills explain lower returns to household diversification strategies than in Phu Loc. Many households in Hoang Gia engaged in subsidiary crop production: 96 per cent compared to only 25 per cent of

households in Phu Loc. Waged labour was the main off-farm activity. As elsewhere, it was largely undertaken by men who often migrated outside the village in search of work. Waged labour was reported by 67 per cent of households, and 63 per cent reported it as a male activity. Male waged labour was usually in construction, carpentry or digging fields, often outside the village. While animal husbandry was reported by over 90 per cent of households in both northern villages, it was more frequently managed by men in Hoang Gia (in 77 per cent of households). In Phu Loc, where men had other options, it was largely managed by women.

Women in Hoang Gia were primarily responsible for farming—rice and subsidiary crops were reported as female-managed activities by over 80 per cent of households. They sought to supplement this activity with animal husbandry and handicrafts, including making conical hats. There was also some female waged labour in various agricultural activities (weeding, planting, sowing) as well as in non-agricultural activities, such as rice milling and brick making.

**Box 4: Examples of economic activities in Hoang Gia**

- Crops and gardening: maize; rice; sweet potatoes; beans; vegetables; cucumbers.
- Animal husbandry: pigs; chickens; fishpond.
- Trade and services: small shop; rice processing; bricklaying; carpentry; petty trade (chickens; rice; fruits; vegetables).
- Handicrafts and home-based production: making conical hats; weaving; sale of pork dishes.
- Waged labour: agricultural and non-agricultural.
- Other: insecticide supplier of agricultural co-operative.

Prior to economic reform, there was a collective workshop in the village where women could weave carpets for export to Eastern Europe and the Soviet Union. When these markets collapsed, the industry disappeared. A number of subcontracting arrangements had been made by village entrepreneurs with provincial export companies based in Hanoi and Haiphong. The work was irregular and poorly paid, and work opportunities for women remained limited within the village. As we noted earlier, Hoang Gia reported the highest percentages of both men and women working away from the village.

To sum up, this preliminary analysis confirms that access to farming remained an important component of income levels in the four study locations, but that diversification out of farming had become increasingly significant. The findings highlight the importance of land distribution, and associated inequalities in access to farming income, in determining the significance of off-farm income in the overall income of households. It was clear that off-farm diversification occurred in response to both necessity and opportunity. High levels of landlessness explained diversity into off-farm livelihoods in Mi Loi (in the south), but returns to off-farm activities were probably low since the richest households in Mi Loi were those whose main income came from farming, presumably households with large landholdings. Low returns to farming in Hoang Gia (in the north) explained diversification into off-farm activities, but because the distribution of land was fairly equal,

and all households engaged in rice farming, income distribution was relatively equal and there were no marked differences between households that diversified out of farming and those that remained in farming.

In the villages of Mi Trung (in the south) and Phu Loc (in the north), on the other hand, good links to wider markets opened up profitable opportunities in off-farm activities. However, while off-farm opportunities were a significant component of overall income for better-off households in both villages, the relative importance of farming income varied. Farming income was an important source of variation in overall incomes among households in Mi Trung, which had greater inequalities in land distribution. In Phu Loc, where land distribution was far more equal, prosperity was largely determined by access to remunerative off-farm activities.

## **7. Gender, Livelihoods and Income: Insights from Multivariate Analysis**

It will be clear from the preceding discussion that the distribution of poverty and prosperity in the study villages depends on individual and household characteristics as well as geographical location. It is also clear that gender has a role to play. In this section, we use OLS regression analysis to explore the significance of gender as a factor in the diversification of household livelihoods, while controlling for other factors that might have an influence. We conduct the analysis by stages to explore the kinds of insights that emerge when we move from a “gender-aggregated” to a “gender-disaggregated” analysis of household livelihood strategies. This will allow us to assess the “value-added” of a gender-disaggregated approach in terms of our understanding of household livelihood strategies. The variables used will be defined in the course of the analysis; their means and standard deviations are contained in table 18.

The dependent variable at this stage of the analysis is household per capita income. Household livelihoods are represented by two explanatory variables: the total number of economically active members and the total number of economic activities. In addition, we experimented with a number of other variables that were likely to play a role in determining per capita income. Of these, variables relating to the head of household or key respondent—gender of household head, age of respondent—did not prove to be significant in this or subsequent analyses<sup>3</sup> nor did they improve the fit of the regressions. They have consequently been dropped from the analysis. The education of the key male or female respondent was, however, significant for some but not all the equations, and has been retained. The other explanatory variables in the analysis were:

---

<sup>3</sup> This is likely to reflect inconsistency in defining household head on the part of households, and in selection of respondents by the research team. As reports on the Vietnam LSMS also suggest, there is sometimes a tendency on the part of household members to designate as head of household whoever is most senior. Characteristics of this member may not be the most relevant for determining per capita income. The research team tended to select a key household member, male or female, as respondent; again, “key” member may have been defined by different criteria by different households.



- credit: the total amount of credit borrowed from all sources in the past year;
- assets: household ownership of productive assets (ploughs/harrows, buffaloes/cows, trucks/vans, motor-bikes, carts, sewing machines, noodle-making machines);
- land: total amount of land owned in square metres;
- household size: total number of household members.
- In addition, we included dummy variables for Mi Loi, Mi Trung and Phu Loc to capture village-level differences in infrastructure, access to markets and various other factors at community rather than household level.

Table 11 shows the results of this first stage of the analysis. While all the signs of the explanatory variables are what we expected, not all are statistically significant. In terms of the economic characteristics of the households, the table suggests that the important variables were land ownership, access to credit (suggesting that a significant proportion of borrowing was for productive purposes) and number of productive assets. The negative effect of household size on per capita income suggests that larger households tend to be poorer. In terms of the livelihood variables, we found that the total number of economically active members in the household did not have any significant effect on per capita income levels. However, livelihood diversity—the number of activities per household—did lead to a significant increase.

In the next stage of the analysis, we estimated the same equation but disaggregated the livelihood variables by gender, using the number of male and female earners and the number of male-managed and female-managed activities as explanatory variables. The results are reported in table 12 and extracted below. While the introduction of gender-disaggregated livelihood variables changes the *size* of the regression coefficients, it does not change their signs and statistical significance; thus most of the earlier findings remain valid. The effects of household livelihood strategies on a gender-disaggregated basis reinforce the earlier finding that the *number of earners* in the household did not make a significant difference to per capita income, regardless of their gender. However, they also reinforce the significant impact of *diversity of activities* on per capita income. This holds for both male and female activities. In fact, an additional female-managed activity is associated with a larger increment in per capita income than an additional male-managed activity.

**Extract from table 12: Changes in per capita income associated with gender of earner and gender-management of activity**

Number of economically active males	64
Number of economically active females	10
Number of male-managed activities	121**
Number of female-managed activities	152**

\*\* 5 per cent level of significance    \*10 per cent level of significance

Given the importance of livelihood diversity for households' income levels, we turn next to the income increments associated with male and female management of the different activities which made up household livelihood strategies. There were nine such categories: cultivation of rice; subsidiary

food crops; “other crops”; handicrafts and petty commodity production (including crafts, home-based alcohol production, cooked snacks, embroidery and weaving); garden cultivation (fruit, flowers etc.); animal husbandry (fishing, livestock and poultry); waged labour; service and trading; and “other” activities. The results are reported in table 13 (see extract below). The coefficients in the first column represent increments in per capita household income associated with female management in each category of activity, while the coefficients in the second column relate to increments associated with male management. Household size, access to credit, number of assets, size of holdings, education of key female and male, and village location are also included as explanatory variables.

**Extract from table 13: Changes in per capita income associated with different activities by gender of manager**

	Female	Male
Rice	+35	-152
Subsidiary	-276**	-134
Other crops	-84	-118
Animal husbandry	+183*	-184*
Trade and services	+284**	+676**
Handicrafts	+224**	+275**
Gardening	+442*	+324*
Waged labour	-94	+183**
Other	+145	+473**

\*\* 5 per cent level of significance    \*10 per cent level of significance

Household size retains its negative effect on per capita income, while access to credit, size of landholding and number of productive assets owned are all associated with positive increments in per capita income. As far as the effects of male and female management of different activities are concerned, certain patterns are common to both, as the extract from table 13 shows. For both women and men, changes in per capita income associated with the three “farming” activities are negative but largely insignificant. Only the coefficient for the female management of subsidiary crops is negative and significant.

The coefficients for the various off-farm activities are similar for men and women in some activities, but diverge in others. Women’s involvement in animal husbandry, trade and services, handicrafts and gardening are all associated with positive increments in household income; returns from gardening and trade are highest. Only waged labour and “other” occupations have no statistical significance. As far as men are concerned, access to all off-farm activities, with the exception of animal husbandry, is associated with positive and significant increments in per capita income. Returns are highest in trade and services and in the “other” category, which included salaried forms of employment. In general, diversification into trade and services, together with “other” forms of employment was particularly lucrative for men, while diversification into trade and services along with gardening was particularly lucrative for women.

The gender-differentiated impacts of some of these activities on household income is worth further comment. The finding that male involvement in animal husbandry, unlike female involvement, is associated with lower levels of per capita income, supports the point made earlier that men are most likely to take on animal husbandry in response to a dearth of other

more profitable uses of their time. This tends to occur most frequently in Hoang Gia. The second gender-differentiated effect relates to waged labour. Returns to male waged labour are positive and statistically significant, but returns to female waged labour add little to household per capita income. The third gender-differentiated effect relates to “other activities”, a residual category that includes salaried employment. Women’s involvement in “other activities” had little impact on household per capita income, probably because so few women were to be found in this category (see table 6). On the other hand, men who were able to access other forms of employment enjoyed higher returns to their labour than in any other activity, apart from trade and services.

On the basis of these findings, we reclassified the various activities undertaken by rural households into three categories: farm-based activities, off-farm activities and waged labour. Per capita income was re-estimated using gender-disaggregated versions of these categories and the results are reported in table 14. As before, access to credit, ownership of productive assets and size of landholding are all associated with positive increments in per capita income, while each additional household member leads to a reduction in levels of per capita income. Increments in per capita income by category of livelihood activity and by gender are summarized below.

Given what we now know about the effects of participation in these various activities, these results are predictable, but they bring out a number of key points.

**Extract from table 14: Changes in per capita income associated with different activities by gender of manager**

Farm-based activities managed by women	-253**
Farm-based activities managed by men	-232**
Off-farm activities managed by women	+356**
Off-farm activities managed by men	+375**
Female waged labour	+103
Male waged labour	+217**

\*\* 5 per cent level of significance

While the aggregated analysis told us that diversity of livelihoods was an important determinant of per capita income, the same analysis disaggregated by activity and by gender provides us with a more nuanced understanding of what this finding means. It tells us that it is diversification into off-farm activities, rather than diversity of livelihoods per se, which is the critical determinant. This positive diversification effect holds for both male and female household members. In the light of our earlier discussion about the constraints on women’s ability to engage in economic activities, given their domestic responsibilities and long working hours, the somewhat lower returns to their labour contributions are not surprising. Indeed, given these constraints, it is surprising that the size of the returns to female labour in off-farm labour are as high as they are.

A number of other findings are worth further comment. The negative relationship between household size and per capita income has been a consistent finding of the analysis. This could reflect diminishing returns to labour, given fixed resource endowments. It may also have been the effect of

larger households drawing on less productive members in their livelihood strategies. A re-estimation (not reported) of the final equation with the ratio of children to adults as an explanatory variable found that it was negatively related to per capita income but that the effect of household size remained negative and statistically significant, if somewhat reduced. Household size was obviously a combination of demographic and scale effects, which we have not captured through the other variables. The child to adult ratio did not prove to be significant in the rest of the analysis and has consequently been dropped.

The other finding worth comment is the effect of the gender of household head. We noted earlier that it did not prove to be a significant factor in explaining per capita income levels, and noted the mixture of normative and economic criteria which often lay behind the designation of household headship. However, we have also noted that the female maintenance of households has been found to be more consistently associated with household disadvantage than female headship. In our sample, 7 per cent of households were reliant *entirely* on female earnings. Table 15 compares the mean values of some of the indicators of poverty thrown up by our analysis in female-maintained and other households, i.e., households with at least one male earner.

It suggests that the former category were indeed poorer.<sup>4</sup> Mean per capita income was much lower in female-maintained households: 1,209 dong compared to 1,336 in other households. Their poverty was partly a product of their inability to diversify. As the table shows, they reported an average of .54 activities compared with 1.29 for other households. They also reported higher levels of female waged labour than other households. These patterns in turn are likely to have reflected underlying inequalities which constrained their ability to diversify, and the kinds of activities they could diversify into. Thus, as table 15 also shows, the mean size of landholdings was also much smaller (776 square metres compared to 2,224), as were number of productive assets (2.4 compared to 2.9) and total amount of credit borrowed in the past year (373,000 dong compared to 630,000). The education level of the key female member was also lower in female-maintained households.

The results of a simple step-wise regression (not reported) examining the effects of a dummy variable for female-maintained households on per capita income along with access to credit, female education, assets and size of landholding, found that the coefficient for the female-maintained household dummy remained negative and significant until the land holding variable

---

<sup>4</sup> The same exercise carried out in relation to female-headed households and other households confirmed that female-headship was not consistently related to poverty. Indeed, mean levels of per capita income were *higher* in female-headed households (1,456 dong compared to 1,293). This finding echoes that reported for the VLSS by Desai (1995), who found that while female-headed households constituted 23 per cent of the total VLSS sample, they were not only *not* poorer than male-headed households, but were also less likely to be among the poorer section of the population. Mean landholdings were also larger for female-headed households than for male (2,231 square metres compared to 2,097). It is likely that in our survey, as in the VLSS, a senior man or woman was designated household head but was not necessarily the main earner or decision maker.

was introduced. This suggested that disadvantaged access to land was a primary factor in explaining the poverty of female-maintained households.

To summarize this section, our findings suggest a number of correlates of poverty in rural Viet Nam. First of all, they stress the importance of material resources. Not surprisingly, land-poor and landless households were consistently poorer than other households. Lack of productive assets and of access to credit were also associated with greater poverty. Second, they stress the importance, not of diversity of livelihoods per se, but of capacity to diversify into off-farm activities as a critical factor differentiating poorer from better-off households. Third, they emphasize the particular importance of female diversification in differentiating poorer from better-off households in that women's confinement to farming appeared far more critical than men's in explaining household poverty. In addition, however, the findings also point to the association between gender and poverty in certain activities. Women involved in the production of subsidiary crops and waged labour, and men involved in animal husbandry, were all likely to come from poorer households. Furthermore, these activities tended to occur most frequently in contexts where there were few opportunities locally and poor links to wider markets.

From the policy perspective, therefore, our findings reaffirm a point made earlier in the paper: while efforts to expand off-farm livelihood opportunities in the countryside would considerably enhance returns to household labour in general, the benefits would be disproportionately greater for women than for men. This was also a view expressed by some of our respondents, particularly those in Hoang Gia. According to Tran Van Dinh, a 60-year-old man from Hoang Gia:

Women have played a more important role in the period of transition from a monocultural economic situation to a diversified family economy. Many newly developed activities are suitable for them like services, rice milling, trade and so on. Especially nowadays, in this commune, a large number of men move outside the village in search of jobs. Consequently the development of new occupations should be aimed at attracting underemployed women. Right now in this village, there are only two kinds of such jobs—wool carpet weaving and making conical hats. These can only attract young women like my daughters. Although even though the daily wage is too low, about 3,000–5,000 dong, many women are accepting these jobs because they are unable to find other income-generating activities outside the village. Because of my old age I cannot go far from home in search of work, but I would never agree to do work with low-paid wages like this. Men who work in construction sites, carpentry or transportation earn 15,000–20,000 dong daily.

## **8. Gender, Livelihoods and Welfare: Insights from Multivariate Analysis**

The findings in the previous section provide one set of arguments for greater gender-sensitivity in policies intended to promote the diversification of rural livelihoods in Viet Nam. They point to women's significant contribution to household per capita income as an important factor in explaining variations

in poverty and prosperity at the household level and, by extension, in the rural sector as a whole. In this section, we explore other rationales for gender-sensitive rural development policies, focusing this time on the determinants of household well-being.

We have used a series of dummy variables, based on local perspectives of well-being, to represent its different dimensions. Participatory research in rural Viet Nam suggests that insecurity of various kinds was a major source of concern to households in rural areas. A key dimension of this was food security. While in some rural households, a “food deficit” period referred to “real hunger”, other households described themselves as having a food deficit if they were forced to eat subsidiary crops, such as cassava or maize, normally regarded as “animal foods” (ActionAid, 1994). Our measure of household food security, based on information from key informants in the study villages, is based on that suggested by ActionAid (cited in Allen et al., 1996): whether or not the household experienced a shortage of food for three or more months of the year, including whether or not they had to resort to subsidiary crops.

The second key preoccupation of rural households in Viet Nam revealed by participatory research was “unforeseen crisis”, often related to the ill-health of a member. For those with little or no cash savings, borrowing at high rates of interest or sale of assets are the main options available. Both strategies undermine the household’s ability to recover from crisis. The ability to save therefore is a second important dimension of household well-being. We proxied this with a dummy variable that measured whether or not the household had been able to save in the previous year.

Attempts to differentiate between different socioeconomic categories of households in rural Viet Nam point to the quality of housing as a widely cited criteria. It featured, for instance, in earlier research by Kabeer et al. (1994) in rural Quang Ninh province, where differences revolved around whether a house was made of mud and bamboo walls, rather than brick, and had thatched roof rather than tiles. The ActionAid research also identified quality of housing as an important dimension of how villagers distinguished between “rich” and “poor”: the “leading rich” lived in “good and well-furnished houses”, while at the other end of the spectrum the “vulnerable poor” lived in “run-down houses”. In this study, our proxy for housing quality is whether or not housing was durable: i.e., brick walls and tiled roofs.

Our fourth proxy for household well-being related to diversity of diet. Reports on the different items that had featured in respondents’ diets in the past week revealed, not surprisingly, that poorer households were those who reported diets confined to rice or subsidiary food crops, supplemented with vegetables; better-off households reported much greater diversity of diet, also consuming fish, eggs and meat more frequently, along with rice and vegetables. The frequency of meat consumption featured in the qualitative interviews as a marker of prosperity, with households that had consumed meat at least once in the past week also more likely to have consumed other items. We therefore use the likelihood of meat consumption in the past week not simply as an indicator of frequency of meat consumption but as a proxy for diversity of household diet.

Finally, we turn to the ownership of consumer goods as a measure of the extent to which households have a disposable income after meeting basic needs. Increased prosperity in Viet Nam has clearly expanded the range of consumer items available in the countryside, and many households are now converting their wealth into a variety of consumer assets (ActionAid, 1994). The household possession of consumer assets was therefore indicative of its disposable income after basic needs had been met. We proxied this by a dummy variable that measured whether or not a household owned at least one of three most commonly aspired-to consumer assets in our sample: valuable furniture (68 per cent of households owned at least one piece of valuable furniture); radio/cassette player (owned by 39 per cent of households); and television (owned by 41 per cent of households).

Tables 16.1 to 16.5 report on the effects of gender and livelihood strategies on the household's ability to achieve these different measures of well-being. Livelihood-related variables consisted of male and female involvement in the three key occupational categories identified earlier: farming, off-farm activities and waged labour. Controls were once again introduced for village location, education of key male or female, landholding, assets, credit, household size and per capita household income. Because of our reliance on dichotomous variables as our dependent variables, the analysis in this section relies on logistic regression techniques. The coefficients produced by this technique can be interpreted very simply as follows: the sign tells us how likely it was that the measure of well-being in question would take a value of 1, suggesting the likelihood of greater well-being, while its level of significance tells us how much confidence to attach to this result.

As far as the locational variables were concerned, households in Mi Loi (in the south) were not as consistently better off in terms of household well-being as they had been when the focus was on income-related variables. Although we might have expected the size of landholding to increase the likelihood of household food security, in fact, the effects of household economic status appear to be largely captured by its per capita income levels and productive assets. Neither landholding nor access to credit made a significant difference. As for the likelihood of having saved in the past year, per capita income was the only economic variable which had a significant positive impact. Per capita income, however, did not make a great deal of difference to whether or not the household had durable housing or not. Instead, the two "wealth" variables—land holding and productive capital—increased the likelihood of investments in housing quality. Diversity of household diet was positively related to per capita income and to ownership of productive assets. Finally, ownership of consumer assets was related to the wealth variables: size of landholding and number of productive assets.

Thus our findings suggest the plausible result that current uses of income (rice consumption in the past year, diversity of diet in the past week and savings in the past year) were largely influenced by current income flows (per capita income) while household investments (quality of housing and consumer assets) were more closely related to household wealth (landholdings and productive assets). In this context, the negative effects of household size on per capita income noted in the previous section appear to exercise a downward influence only on current consumption—food security, diversity of diet and likelihood of saving. It was associated with greater durability of housing structures and had no significant association with

ownership of consumer assets. Access to credit had very little influence on any of the well-being variables, underlining again the point made earlier that it appeared to be largely borrowed for productive purposes and was likely to influence well-being via income or productive assets.

The education of key males and females featured more frequently in these equations than they did as determinants of per capita income. While the nature of male livelihoods had little effect on household food security independently of its contribution to per capita income, the education of the key male in the household did increase the likelihood of food security. It also increased the likelihood of household ownership of consumer assets. The education of a key female in the household increased diversity of household diet.

**Summary of findings from table 16.1–16.5: Gender, livelihood diversification and household well-being**

	<b>Female waged labour</b>	<b>Male waged labour</b>	<b>Female farming</b>	<b>Male farming</b>	<b>Female off-farm activities</b>	<b>Male off-farm activities</b>
Food security					Positive *	
Ability to save	Negative*				Positive**	Positive**
Quality of housing	Negative*	Negative*	Positive*		Positive**	Positive*
Meat consumed	Negative*				Positive**	Positive**
Consumer assets					Positive*	Positive*

\*\* 5 per cent level of significance \*10 per cent level of significance

Turning now to the effects of livelihood diversification, reproduced above, we find that women’s involvement in off-farm activities was the most consistent predictor of household well-being. It increased the likelihood of food security, ability to save, durability of housing, diversity of diets and ownership of consumer assets. Female involvement in waged labour, however, appears as a correlate of poverty, significantly reducing the likelihood of household saving, quality of housing and diversity of diet. Male involvement in off-farm activity contributed to most indicators of household well-being, with the exception of food security. Male waged labour reduced the likelihood of durable housing but was not otherwise significant.

## 9. Gender, Livelihoods, Income and Well-being: Interpreting the Results

Summing up these various results, it is clear that the ability of household members, whether male or female, to diversify out of farming is a key factor in determining the levels of household income and well-being. However, households where women were only able to diversify into waged labour tended to be poorer on average and to report significantly lower levels of well-being. Since per capita income has been controlled for in our estimates of well-being, the effects of livelihood diversification cannot be attributed to the associated increments in income. Instead, they appear to be capturing



certain non-income mechanisms through which diversification impacts on well-being. The qualitative interviews, as well as some of the wider secondary literature, offer some pointers as to what these might be.

Our per capita income variable captures only that share of household production sold in the market. Consequently, a first and obvious route by which diversification might impact on household well-being, independently of increments in income, is by expanding possibilities for own use or own consumption. Thus we would expect households engaged in gardening or fishing or animal husbandry to have greater diversity of diet, and households engaged in brickmaking to have more durable housing. In addition, even if the activity in question did not feed directly into the well-being measures used in our analysis, they could still have had an expenditure-saving function that would not have been fully captured by the income variable. For instance, if diversification allowed households to produce their own bamboo furniture or make their own clothes, they would have higher disposable income to invest in savings, for instance, or make other purchases than households with apparently similar levels of income who did not engage in these forms of self-provisioning.

Closely related to this mechanism are the widely noted effects of diversification in reducing fluctuations in the flow of household income and placing it on a more secure basis for engaging in longer-term savings, investment and accumulation strategies. The use of diversification as a strategy for minimizing risk was a recurring theme in many of the qualitative interviews. Respondents described how they relied on activities which gave low but regular returns to offset fluctuations in other less predictable forms of livelihoods. It allowed them not only to sell their crops and produce when prices were favourable, but also to purchase them at such times. Off-farm diversification may also have given them access to a wider range of markets in which to buy their produce and other goods.

Diversification also gave rise to other positive interdependencies between different household activities. Particularly in the northern villages, households reported a “production cycle” that entailed preserving rice for making alcohol, using the leftovers of alcohol production for raising pigs and using pig manure as fertilizer. The VAC (*vuon, ao, chuong* or garden, fishpond, livestock) system, which recycles energy and by-products between the home garden, the fishpond and livestock, is premised on these interdependencies. It has been widely promoted in the north for over a decade as an approach to diversification. It has been successfully adopted by many middle-income farmers as a means of diversifying from rice/corn cultivation into fish and livestock. Successful examples have yielded between three and five times more value of output per square metre than would have been the case if land had been devoted to rice alone (UNDP, 1998:34).

However, along with the positive effect on household welfare of off-farm diversification, its *gendered* effects also need explanation. By attempting to differentiate between the effects of male and female roles in household livelihood strategies, while controlling for household income, assets and landholdings, we are effectively asking whether gender mediates the welfare impact of the contributions of individual members, independently of its implications for household income. Our results suggest that it does. They

point to the positive effects of both men's and women's off-farm activities for four out of five of our well-being measures—the statistical significance being more pronounced in the impact of women's off-farm activities on well-being measures. The results also document the additional positive impact of women's off-farm activities on household food security. These effects occur despite the fact that women are able to contribute marginally less to household per capita income than men from their off-farm activities.

**Box 5: Diversification of livelihoods and positive interdependencies**

Tran Van Dinh, a 60-year-old man from Hoang Gia, described how diversification of livelihoods contributed to securing his family's welfare. Household members earned income from rice and maize cultivation, pig raising, handicrafts (making conical hats) and running a small shop. He believed that only farming could provide a stable income; it was the foundation of the household economy. Pig raising did not afford a stable income because the price of pigs fluctuated inversely with the price of rice, but it did allow the household to save some money on the side. His daughters had taken up handicraft activity as a further supplement to the family income, and to use up underemployed time. They also worked as hired labour when funds were low. Such savings tided the family over times of crisis caused by crop failure as a result of floods, typhoons or animal diseases. "Nowadays in the rural areas, many things have to be paid for (electricity, communal funds, social occasions) and if we don't have an additional source of income, we would have to sell our rice and our food security would be seriously threatened", he said.

Nguyen Van Minh, a 37-year-old man from Phu Loc, pointed to one way in which women's participation in off-farm activities contributed to their ability to save. His wife had initiated the organization of a *tontine* (informal savings group) with other women traders in the village, without their husbands' knowledge. Her objective was to create a fund for emergencies. Since her savings were submerged in the group fund, it was difficult for either her or her husband to spend on everyday needs.

Hoang Thi Lien, a 32-year-old woman from Phu Loc, described rice and subsidiary crop production, pig raising and liquor distillation as the main sources of her household's income. Rice yields were not very high (150 kilograms per *sao* or 360 square metres) so they earned very little from it. Nor was the profit from liquor distillation of long-grain rice particularly high. However, the distillation residue had been of great help in her pig raising, which did provide her family with a major source of income. She bred sows, and two litters each year were sold when they had become hogs and hence fetched more money. She was able to lend out her earnings from the sale of pigs to local rice traders at 3 per cent a month, which gave her family enough for their regular monthly needs. Her husband sold liquor at a nearby market.

One important means by which the positive gender effect of diversification is likely to occur is via the gender division of labour and the *kinds* of off-farm activities in which women are likely to engage. Cultivation of fruits and vegetables and raising pigs and poultry, activities commonly associated with women, also lend themselves to own consumption within the household in a way that waged labour or handicrafts do not. As far as trading and home-based production are concerned, women may have been more likely to specialize in products that were fungible between own consumption and sale, such as snacks, noodles or alcohol. As we noted earlier, some of these feed directly into well-being indicators, while others affect them via their expenditure saving function.

A second possible mechanism behind the greater positive effect of female diversification on household well-being may have been that women were devoting a somewhat greater share of the returns to their labour to the collective well-being and security needs of the household. This could have reflected the gender division of roles and responsibilities within the household. We noted earlier the existence of “regional patriarchies”, distinguished by differences in the gender division of labour and responsibilities and the internal organization of the household. We also cited evidence that Viet Nam is characterized by a different income-management system to both the separate income streams characterizing households in many parts of sub-Saharan Africa, and to the pooling of income under male management and control characterizing much of South Asia. In Viet Nam, as in other parts of Southeast Asia, income is also pooled, but under female management. According to our data, 98 per cent of households pooled their incomes. Husbands managed the pooled income in only 11 per cent of cases; wives were the primary managers in 62 per cent of cases, and there was joint management in 22 per cent of cases.<sup>5</sup>

Women thus had some influence in how household resources were allocated. Furthermore, there was also evidence of some gender division of responsibilities which might help to explain the differences in allocational priorities. According to the household survey, 93 per cent of households said that women paid for everyday expenditures, 62 per cent that women took charge of educational expenditures, 56 per cent that women paid for health treatment and 51 per cent that women were the main savers. Only 15 per cent said that saving was done by both men and women. However, 47 per cent of households said men made the payments for social occasions and festivals. As far as business and production matters were concerned, 21 per cent of households said men made the necessary payments, 25 per cent said that women did, and 19 per cent said it was a joint expenditure.

Some respondents explained this division of responsibilities in terms of “custom”. This was the view of Vu Dinh Tham, a 49-year-old man from Hoang Gia: “My wife is the ‘cashier’ of the family because women are most suited to this. . . . It is a traditional custom in this area that the male should never hold the purse strings in the family; if this happens, the family is considered unusual and so is the man in question.” Others suggested that it reflected practical considerations. Men were considered more suited to making decisions about production and investment, because of their greater mobility and hence knowledge of the outside world, and women more responsible for daily welfare and consumption needs, because they were more attuned to the family’s needs.

Whatever the explanation, one reason why female diversification was more consistently associated with household well-being relates to the gender differences in priorities and responsibilities in the use of labour and expenditure of income. While men did contribute to family welfare (as the respondent cited in box 6 suggested), they were more likely to invest in business, in “larger and riskier projects” and, as the next section suggests, in

---

<sup>5</sup> In the north, the figure was 98 per cent while in the south it was 97 per cent. Fifty-nine per cent of wives in the north, and 65 per cent in the south, were reported as primary managers of the pooled income, while 28 per cent in the north reported joint management compared to 16 per cent in the south.

productive equipment. Women, on the other hand, had prior responsibility for meeting household needs, one that was so taken for granted, that they could decide to sell off surplus paddy to meet household needs without having to consult their husbands. Chi (1991) notes that among the Viet in north Viet Nam, “the husband and head of household has no absolute power over the use of harvested rice. Apart from daily domestic needs, the head of the family must have the consent of his wife when he wants to take a quantity of rice from the rice container. If, after long discussions, the wife does not agree with him, the husband must give up” (p. 74).

**Box 6: Gender division of responsibilities within the household**

Nguyen Van Mieu, a 37-year-old male from Hoang Gia, told us how he had used money saved up from two years as a migrant labourer, together with a loan, to purchase 4 *sao* (360 square metres) of pond to rear fish. His wife took care of agricultural production and farming. He said that in their family he made the “big” decisions, i.e., expenditure on fishpond, production equipment, furniture and general investments in production and business because of his wider knowledge of the world, partly acquired as a result of his three years in the army. His wife made decisions about the family’s daily needs and often sold off surplus paddy to meet them. Her decisions included meals, health care, clothing, festive occasions, children’s schooling and purchase of agricultural inputs .

Nguyen Thi Zung is a 33-year-old woman from Phu Loc. Her husband worked in the army and so lived away from home. She lived with her mother-in-law and two young children. She was a trained agronomist but had been unable to find a suitable job so she worked in rice cultivation, made yeast and alcohol for sale, and raised pigs. Her husband contributed 3 million dong from his monthly salary. It was used for special occasions, like ancestor worship, feasts and so on. Her income is spent on their daily needs. Although she consults her husband on large expenditures, like buying land or repairing the house, she makes the decision herself because he lives so far way. According to her, capital in the hands of women tends to get used on smaller projects like pig raising. Men tend to borrow larger amounts of money and invest in larger and riskier projects

Ngo Van Re, a 59-year-old man from Mi Trung, described himself and his son as the main breadwinners in the household, while his wife and daughters concentrated on domestic activities. However, his wife also worked on an irregular basis as a casual waged labourer, weeding and harvesting rice. When she needed money for household expenses, she would sell their paddy without feeling the need to consult him.

However, along with the gender division of responsibilities for household survival, well-being, security and investment, there were hints of one other mechanism at work, one which has also featured in studies from other parts of the world and was also in evidence in the recent consultations with the poor carried out by the World Bank in a number of countries, including Viet Nam (see Narayan, 2000:195). It related to men’s tendency to use some of their earnings to pay for certain (by-now familiar) forms of consumption: tobacco and alcohol, of which they were often the primary “beneficiaries”—a tendency which women appeared to accept, contesting it only when they felt it was excessive (box 7). Since these claims were largely met out of male incomes, it supports the likelihood that increments in women’s income were more likely than increments in men’s incomes to translate into collective household welfare.

**Box 7: Gender-specificity in household consumption**

According to Le Thi Sinh Hoa, a 55-year-old woman from Mi Trung: “I am the cashier of the family but both of us take responsibility for spending. For larger expenditures we discuss and decide together. . . . If we cannot reach agreement in our discussion, he is the person who has the final say. Why not, he is the family head, caring for the welfare of the family and the children . . . but if he hangs about and drinks too much, then I have to rein him in. All members of the family are equal to one another. Our money is used for everyone. But if we do give any extra privilege, it is liquor for my husband and treats for my grandchildren.”

Phan Thi Hien, a 45-year-old woman from Mi Trung, in her explanation of how financial responsibilities were divided up within the household, also referred to male-specific personal claims on the household budget: “as far as management of household finances is concerned, I think women do it better because they are more thrifty and know what is worth spending on and what is not . . . In my family, my mother manages the money, she allocates money for necessary spending. It is also all right if men manage finances except when they are great boozers . . .”

## **10. Determinants of Livelihood Diversification: Insights from Multivariate Analysis**

The ability of households to diversify into off-farm employment is clearly critical to the achievement of economic growth, poverty reduction and social development in rural areas in Viet Nam. Before we synthesize our findings and draw out their policy implications, it is worth investigating some of the determinants of households’ capacity to diversify into off-farm employment. Policy makers are particularly likely to be interested in those determinants which are amenable to intervention. As a final step in our analysis, therefore, we sought to provide a rough estimate of the effects of a number of policy-related variables on the likelihood of a household having a male or a female member in off-farm enterprise. Since the dependent variable was once again a dichotomous one (whether or not a household had a male or a female member involved in off-farm activities, aside from waged labour), we have once again used logistic regression analysis. Four dependent variables were selected: productive assets, access to credit, education of the key male or female member, and size of landholding. In addition, we controlled for geographical location of the household, given the clear regional pattern to the gendered dimensions of diversification. The results are reported in table 18.

The findings suggest that female off-farm employment occurred most frequently in Phu Loc. Households with larger landholdings were less likely to have women in off-farm enterprise, as might be expected, while education of the key female member had little effect. Less predictably, the number of productive assets owned by the household had a strong negative effect on the likelihood of female off-farm activity. In fact, the single most important policy-related determinant of such activity was credit: households that reported access to sizeable loans, regardless of source, were also those most likely to report at least one female member in off-farm employment.

The effects of assets and credit are reversed in explaining the likelihood of male involvement in off-farm enterprise. Access to credit by the household had little effect on livelihood diversification by men; instead, it was of greatest significance in households with productive assets. As with female members, the size of cultivated holding reduced the likelihood of male off-farm activity and, as before, the likelihood of male diversification was greater in the north. The education of the key male also had a positive effect on male participation in off-farm activities, suggesting that men participated in a much wider range of such activities than women, some of which were only open to entrants with some educational qualification. Male involvement in off-farm activity was most likely to occur in Hoang Gia.

The gender-differentiated impact of possession of productive assets and access to credit on likelihood of engagement in off-farm enterprise needs some explanation. It suggests that male enterprise is more equipment-intensive than female, while female enterprise appeared to be more finance-intensive. This makes sense when we recall the kinds of assets that have been included in this measure: ploughs, buffaloes, trucks, motor-bikes, carts and so on. These are all examples of assets more likely to be utilized by men than by women as the basis of their economic activities. Only possession of a sewing machine and of noodle-making equipment were specifically female.

Our qualitative data throw further light on the gender-differentiated effects of assets and credit on livelihood activity. It was not that men did not take loans, but they were more likely to invest them in land, ponds, transport equipment and so on, some of which are captured by our asset variable. The kinds of “assets” women were more likely to invest in have not been included in this variable—pig and poultry raising, for example. More generally, women involved in off-farm activities tended to be involved in more labour-intensive activities than did men, less reliant on working *equipment* and more on working *capital* (see box 8). For them, access to credit represented the ability to finance working capital, to make timely purchases of inputs and to postpone the untimely sale of outputs.

**Box 8: Gender differences in entrepreneurial activities and investment strategies**

Nguyen Van Thieu, a 36-year-old male from Hoang Gia, described his wife as an itinerant trader in fruits and vegetables. She bought produce from village homes and sold it in the provincial town 12 kilometres away. According to him: "In this family, my wife is a born trader . . . she is hard-working. She refuses to go 'huckstering' by bicycle, saying that huckstering on foot is easier; she can go from house to house, deep into hamlets and villages to sell things." She was also the main farmer in the family. He himself was responsible for fish cultivation in a pond that his family had bid for 18 months earlier. A year ago he had borrowed 1 million dong from relatives to invest in buying more fry. According to him, if men were making decisions about investment, they would opt for stable production activities such as fishponds, rice milling and husking machines, fertilizer trade; women tended to invest in small-scale activities and were more thrifty and cautious, saving every penny.

Nguyen Van Ne, a 63-year-old male from Mi Loi, had no rice land, nor had he ever worked in agriculture. He headed an extended family of three generations, made up of 11 members. They were extremely poor, living in a house with mud walls and a roof thatched with palm leaves. His two adult sons worked as carpenters, commuting daily to a workshop around 10 kilometres away. They did this for 10 months per year at 250,000 dong per month. His wife, younger daughter and two daughters-in-law worked in basket weaving for six months of the year, earning an average of 200,000 dong monthly between them. If they could get access to a loan he would invest it in carpentry equipment for his sons, so that they could subcontract work at home. He would also invest it in stocking up on bamboo for the basket-weaving done by the women in the house, so that they could sell directly in the market place. At present, they generally sold a few baskets at a time to an intermediary, who then sold them in distant markets.

## **11. Methodological, Empirical and Policy Implications of the Study**

We are now in a position to pull together the main threads of our analysis. First of all, it should be pointed out that our analysis of livelihood strategies at the household level provided important insights into the distribution of poverty and prosperity in the study villages, which remained pertinent at the more disaggregated level of analysis. It suggested that there were certain north-south differences in that households were generally better off in income terms in the south than in the north. However, this difference was less clear when the focus was on levels of well-being. It suggested that size of landholdings, access to credit and ownership of productive assets were all important determinants of household per capita income, regardless of level of analysis. Some of these variables also proved important for household well-being. It also suggested that the diversity of activities was a more critical determinant of per capita income than number of economically active members per household. Finally, it suggested that larger households tended to be poorer, an effect which is likely to have reflected diminishing returns to a resource base that was fixed in the short run, as well as higher dependency ratios.

A more disaggregated analysis helped to refine the effect of diversity of livelihoods on household per capita income and well-being, suggesting that

it was diversification into off-farm activities, rather than diversity per se, which explained higher levels of household income. It also suggested that, despite women's longer hours of work in domestic and childcare activities, marginal returns to their off-farm activities were very similar to those of men. Clearly, economic growth in the countryside reflects the economic contributions of women as much as those of men. In addition, women's ability to diversify out of farming was more strongly and consistently associated with household well-being than that of men, an effect which was independent of the effect of diversification on household income. We suggested that the gender division of roles and responsibilities, and the kinds of preferences and priorities which it might have given rise to, might explain this differentiated impact on well-being. The analysis also suggested that the determinants of ability to diversify varied somewhat by gender. While size of landholding reduced the likelihood of, and the need for, diversification on the part of both women and men, male diversification was more closely related to possession of productive assets and education levels while female diversification depended crucially on access to credit.

The disaggregated analysis also confirmed that the gender division of labour was not rigidly enforced in Viet Nam, but varied by geographical location and household circumstances, a finding that has been noted in a number of other studies. At the same time, it threw up a number of gender-related poverty indicators. It suggested that an association between gender and certain occupations was indicative of household poverty: male involvement in animal husbandry, and female involvement in the production of subsistence crops and waged labour. Not surprisingly, all three of these gender-specific, occupation-related poverty indicators were reported more frequently in Hoang Gia, the most isolated of the villages in our sample. Female waged labour households appeared to be consistently poorer by a number of criteria. They had somewhat lower levels of per capita income than others and significantly less diverse diets, poorer quality housing and lesser ability to save. In addition, we also noted that female-maintained households were generally poorer than the rest of the population: they had lower per capita incomes, smaller landholdings, fewer assets, lower levels of education, lesser access to credit and higher levels of waged labour.

While policy makers in Viet Nam do not have to be persuaded of the importance of livelihood diversification in their efforts to promote growth and reduce poverty, our findings provide a number of rationales as to why their efforts would be improved by more explicit attention to gender. The first rationale relates to rural growth and rests on the fact that women's ability to diversify out of farming is as important as that of men in generating rural income. The second rationale relates to household well-being. Our findings suggest that women's ability to diversify into off-farm activities has stronger and more consistent implications for the well-being of rural households. The third rationale links to poverty reduction. Households in which women are confined to farming (particularly to the farming of subsistence crops) and households in which women have only been able to diversify into waged employment are systematically poorer than the rest. In addition, female-maintained households tended to be poorer than the rest. The fourth rationale links to equity considerations. It is clear from the various studies cited in this paper that rural women are able to achieve these positive economic and well-being achievements only through extremely long hours of work and very little rest or leisure compared to men. Interventions



to ease women's work burdens would clearly have equity as well as productivity effects.

Our study therefore reaffirms the links recognized by policy makers in Viet Nam between poverty, growth and diversification in the countryside in the achievement of broader goals, but highlights the importance of gender in mediating these links. Increasing overall, but particularly women's, access to off-farm enterprise would reduce household reliance on the production of subsistence or "hunger" crops, possibly allowing them to use their land for other more profitable, but possibly more risky, cash crops. It would also have the effect of tightening the rural labour market and increasing rural wages, thus particularly benefiting female-maintained households and other households that rely on female waged labour. Finally, women would also benefit indirectly from diversification if it reduces the likelihood of male migration, as this would reduce the burden of carrying all household responsibilities on their own.

Obviously not all policy instruments lend themselves easily to gender-differentiated design and implementation. It is difficult to see how foreign exchange or interest rates could be engineered to achieve gender equity—but there are other aspects of macroeconomic and sectoral policy, such as public expenditure allocations, which could. The decollectivization of land rights was one other measure particular to Viet Nam which could have incorporated greater gender equity, but did not. Not only was the principle of distribution an inequitable one, premised on a gender-differentiated definition of who constituted a working member, but land titles were themselves predominantly registered in male names. There was evidence of this gender bias in the research areas, more so in the south than the north. In Mu Luong commune in the south, 3 per cent of households reported co-ownership of homes by husband and wife, and 1 per cent reported joint title to land use certificates. The figures in Cam Vu commune in the north were 20 per cent and 27 per cent, respectively. Many of our study's female respondents commented on the unfairness of the distribution process and pointed out that they had not been consulted by the (largely male) members of the land distribution committees in their areas. Gender inequities in land distribution were also evident in the much smaller holdings of female-maintained households noted earlier.

The inequitable application of the land law in rural areas had a number of knock-on effects. Clearly, women who moved outside the village on marriage, or returned home to their own village in case of divorce, were often forced to forfeit any rights of land use, regardless of the labour they had put into it. When husbands migrated to other areas to work on a long-term basis, as well, the wives left behind had very unclear entitlements regarding use or transfer of the land should this prove necessary.

The inequitable application of the land law also affected access to credit. Loans from formal sources were only granted if the application form was signed by the formal holder of the land title. Women were thus disadvantaged in gaining access to loans that carried lower rates of interest, despite the evidence from this study that credit was a key input through which policy makers could assist women in diversifying into off-farm entrepreneurial activities. Finally, it appeared from key informants in the study villages that women were often overlooked in extension services

(seeds, fertilizer) despite being the primary farmers, particularly in the north, because their name was not on the land registration.

If we return to the three types of gender disadvantage outlined at the start of this paper, it would appear that the egalitarianism of past socialist policies, combined with the gender egalitarianism of Vietnamese cultural practices, may explain why the extreme forms of gender-intensified disadvantage characterizing some regions in the world have not been the major problem here. It is also clear that the male breadwinner model does not apply in Viet Nam today, nor is it likely that it ever did. Women have traditionally played a key role in household production, marketing and financial management in Viet Nam, and they continue to do so.

However, primary responsibility for childcare and domestic chores place a gender-specific form of constraint on women's ability to carry out these roles. And we have cited evidence that the effects of this constraint may be exacerbated by externally imposed, sometimes unintended, forms of gender bias at the policy level, leading to a widening in the gender gap in productivity in the course of economic transition. Along with the adverse implications of this for the current distribution of income, poverty and well-being in the countryside, it could also have inter-generational repercussions. There are already worrying tendencies for girls to drop out earlier from school in order to assist their mothers with childcare and domestic responsibilities, while their mothers attend to their income earning responsibilities (Desai, 1995).

Male advantage in the wider economy means that men benefit by default from strategies intended to promote rural opportunities. Explicit measures need to be taken to ensure that women do not lose out in the process. There needs to be a two-pronged strategy in place: one which addresses women's gender specific constraints, and which may entail gender-specific interventions, and another which seeks to dismantle gender discrimination in the wider policy framework, and to institute a more neutral, and hence more equitable, set of incentives. This was the kind of dual thinking called for by Le Thi (1995) at a workshop held in Hanoi at the start of this project. She suggested that the tensions that women faced in managing their responsibilities in earning household livelihoods and caring for the family could be eased through a two-pronged strategy: one prong entailed investments in health services, schooling and nurseries, which would assist women in caring for their families, while the other prong entailed investments in expanding and equalizing access to vocational training and job service centres in order to promote employment opportunities for all.

To this, our paper also adds the need to ensure equitable access to credit as a key resource in enabling women's diversification strategies. The Vietnamese Women's Union has been active in administering credit programmes targeted at women, and in acting as an intermediary between borrowers and the Vietnamese Agricultural Bank. While women have benefited from this access to mainstream financial institutions, and proved less likely to default on their loans, a 1997 survey by the Bank found that most of its loans reached better-off sections of the rural population. Women in poorer households, or in more remote areas, clearly need credit schemes targeted to their needs and constraints.

## Bibliography

- ActionAid (1994)  
**Identifying and Tackling Poverty**, London.
- Allen, S., A. Fforde and G. Robson (1996)  
**Poverty in Vietnam**, Sida Working Paper 1, Task Force on Poverty Reduction, Sida, Stockholm.
- Beresford, M. (1995)  
**Impact of Macroeconomic Reform on Women in Vietnam**, report prepared for UNIFEM-funded project VIER/93/W02, UNIFEM, New York.
- Boserup, E. (1970)  
**Women's Role in Economic Development**, St. Martin's Press, New York.
- Bruce, J. and D. Dwyer (eds.) (1988)  
**A Home Divided: Women and Income in the Third World**, Stanford University Press, Stanford.
- Buvinic, M. and G.R. Gupta (1993)  
**Responding to Insecurities in the 1990s: Targeting Women-headed and Women-maintained Families in Developing Countries**, Proceedings from Conference on Insecurity in the 1990s: Gender and Social Policy in International Perspective, London School of Economics.
- Cain, M. (1984)  
**On Women's Status, Family Structure and Fertility in Developing Countries**, background paper for the 1984 World Development Report, World Bank, Washington, DC.
- Chambers, R. (1983)  
**Rural Development: Putting the Last First**, Longman, London.
- Chambers, R. and G. Conway (1992)  
**Sustainable Rural Development: Practical Concepts for the 21<sup>st</sup> Century**, IDS Discussion Paper No. 296, Institute of Development Studies, Sussex.
- Chant, S. (1997)  
**Women-headed Households: Diversity and Dynamics in the Developing World**, Macmillan Press, London.
- Chi, N. T. (1991)  
"Preliminary notes on the family of the Viet", in T. Lai and R. Lijljestrom (eds.), **Sociological Studies on the Vietnamese Family**, Social Sciences Publishing House, Hanoi, pp. 65–78.

- Desai, J. (1995)  
**Vietnam through the Lens of Gender: An Empirical Analysis Using Household Survey Data**, UNDP, New York.
- Dollar, D. and J. Litvack (1998)  
“Macroeconomic reform and poverty reduction in Vietnam”, in D. Dollar et al. (eds.), **Household Welfare and Vietnam’s Transition**, World Bank, Washington, DC, pp. 1–28.
- Dollar, D., P. Glewwe and J. Litvack (eds.) (1998)  
**Household Welfare and Vietnam’s Transition**, World Bank, Washington, DC.
- Dollar, D. and P. Glewwe (1998)  
“Poverty and inequality in the early reform period”, in Dollar et al. (eds.), *op.cit.*
- Ellis, F. (1998)  
**Rural Livelihood Diversity in Developing Countries: Analysis, Policy, Methods**, DFID, London.
- Fetzer, J. (1995)  
**Who Are the Self-employed in Vietnam? Entrepreneurs or Misfits?**, mimeo, Department of Economics, Boston College, Boston.
- Fong, M.S. (1994)  
**Gender and Poverty in Vietnam**, World Bank Discussion Paper Series, World Bank, Washington, DC.
- Friener, M.D. and K. Mancini (1996)  
“Vietnamese women in Confucian setting”, in K. Barry (ed.), **Vietnam’s Women in Transition**, Macmillan Press, London.
- General Statistical Office (1994)  
**Results of the Survey on Wealth and Poverty in Vietnam in 1993**, mimeo, General Statistical Office, Government of Vietnam, Hanoi.
- Haddad, L., J. Hoddinott and H. Alderman (eds.) (1997)  
**Intrahousehold Resource Allocation in Developing Countries: Models, Methods and Policy**, Johns Hopkins University Press, Baltimore.
- Haggblade, S., P. Hazell and J. Brown (1989)  
“Farm-nonfarm linkages in rural sub-Saharan Africa”, **World Development**, 17(8), pp. 1173–1201.
- Hitchcox, L. (1991)  
**A Review of the Impact on Women of Two Oxfam UK/I-Supported Water Control systems in Hai Hung and Thanh Hoa, Vietnam**, mimeo, Oxfam-Viet Nam, Hanoi.

- Houtart, F. and G. Lemerminier (1984)  
**Hai Van Life in a Vietnamese Commune**, Zed Press, London.
- Huou, T. D. (1991)  
“Traditional families in Vietnam and influence of Confucianism”, in  
T. Lai and R. Liljestrom (eds.), **Sociological Studies on the  
Vietnamese Family**, Social Science Publishing House, Hanoi, pp.  
27–54.
- Hussein, K. and J. Nelson (1998)  
**Sustainable Livelihoods and Livelihoods Diversification**, IDS  
Working Paper No. 69, Institute of Development Studies, Sussex.
- Kabeer, N. (1989)  
**Monitoring Poverty as if Gender Mattered: A Methodology for  
Rural Bangladesh**, IDS Discussion Paper No. 255, Institute of  
Development Studies, Sussex.
- \_\_\_\_\_ (1994)  
**Gender, Demographic Transition and the Economics of Family  
Size: Population Policy for a Human-Centred Development**,  
mimeo, UNRISD, Geneva.
- \_\_\_\_\_ (1998)  
**Money Can't Buy Me Love?: Gender, Credit and Empowerment  
in Rural Bangladesh**, IDS Discussion Paper No. 363, Institute of  
Development Studies, Sussex.
- Kabeer, N. and R. Subrahmanian (1996)  
**Institutions, Relations and Outcomes: Framework and Tools for  
Gender-Aware Planning**, IDS Discussion Paper No. 357, Institute  
of Development Studies, Sussex.
- Kabeer, N., G. Tipping and Tam (1994)  
**Demand-Driven or Supply-led? Household Economics, Fertility  
Decline and Population Policy in Vietnam**, mimeo, Institute of  
Development Studies, Sussex.
- Kabeer, N. and A. Whitehead (1999)  
**From Uncertainty to Risk: Poverty, Growth and Gender in the  
Rural African Context**, background paper for the report on The  
Status of Poverty in Africa, 1999 (Forthcoming as IDS Working  
Paper), Institute of Development Studies, Sussex.
- Lanjouw, J.O. and P. Lanjouw (1995)  
**Rural Non-Firm Employment: A Survey**, background paper for  
the 1995 World Development Report, World Bank, Washington,  
DC.
- Le Thi (1995)  
**Job Creating, Income Increasing for Female Workers in the  
Conditions of Renovation of the Country and Development of  
the Market Mechanism from a Gender Perspective**, paper

presented at a conference held by UNRISD and Centre for Women and Family Studies (Hanoi).

Narayan, D., with R. Patel, K. Schafft, A. Rademacher and S. Koch-Schulte (2000)

**Voices of the Poor. Can Anyone Hear Us?**, World Bank, Washington, DC.

Palmer, I. (1991)

**Gender and Population in the Adjustment of African Economies: Planning for Change**, ILO, Geneva.

Piesse, J. and C. Thirtle (1998)

**Does Non-farm Income Reduce Poverty: A Gini Decomposition for the Communal Lands of Zimbabwe**, proceedings of the International Association of Agricultural Economics Symposium, (Badplaas, South Africa, August).

Reardon, T. et al. (1999)

“Effects of non-firm employment on rural income inequality in developing countries: An investment perspective”, **Journal of Agricultural Economics**.

Tiem, N.V. (1995)

**Jobs for Rural Female Labourers in the Transition of Economic Structure**, paper presented at a conference held by UNRISD and Centre for Women and Family Studies (Hanoi).

UNDP (1996)

**Catching Up: Capacity Development for Poverty Elimination in Vietnam**, New York.

\_\_\_\_\_ (1998)

**Expanding Choices for the Rural Poor: Human Development in Vietnam**, New York.

United Nations (1995)

**Poverty Elimination in Vietnam**, report of UNDP, UNFPA and UNICEF, New York.

Vijverberg, W.P.M. (1998)

“Non-firm household enterprises in Vietnam”, in Dollar et al. (eds.), op. cit.

Wiens, T.B. (1998)

“Agriculture and rural poverty in Vietnam”, in Dollar et al. (eds.), op. cit.

World Bank (1995)

**Vietnam Poverty Assessment and Strategy**, Washington, DC.

**Annex Table 1: Selected characteristics of the Red River and Mekong River deltas, 1992–93**

	Schooling of head (years)	Adult literacy	Health workers per 10,000 people	Agricultural land per capita (sq. m.)	Agricultural wage rate (thousand dong per day)	Households with electricity	Sanitary toilets	Months road is impassable
Red River delta	7.2	91.6	17	478	8.4	76.4	70	0.2
Mekong River delta	4.5	84.8	14	1,219	14.7	24.1	12	0.7
Viet Nam	NA	88.1				47.8	52	

Sources: Dollar and Glewwe, 1998, tables 2.3 and 2.10

**Annex Table 2: Poverty and inequality in the Red River and Mekong deltas**

	% Households below the poverty line 1993	Gini coefficient
Red River Delta	53	33
Mekong Deltat	46	31
Viet Nam	55	34

Source: Dollar and Litvack, 1998, table 1.2

**Annex Table 3: Distribution of livelihoods in the Red River and Mekong deltas**

	Waged employment (% of hhs)	Farming (% of hhs)	Non-farm employment (%)
Red River delta	17.0	60.4	21.2
Mekong River delta	23.9	51.9	19.7
Viet Nam	14.2	65.7	17.3

Source: Vijverberg, 1998, table 5.1b

**Annex Table 4: Household characteristics in the study villages**

Mean values	Per capita income (thousand dong)	Total income (thousand dong)	Household size	% of households landless	Per capita land owned (sq. metres)	Assets
Mi Loi	1394	7250	5.7	66	2,820	2.7
Mi Trung	1312	6798	5.4	26	6,075	2.4
Hoang Gia	1165	4909	4.2	0	1,747	3.9
Phu Loc	1432	6039	4.3	5	1,398	2.6

**Annex Table 5: Mean number of earners, activities and percentages of households with more than three activities in the study villages**

Village	Total number of earners	Total number of activities	Total number of hh with > 3 activities
Mi Loi	3.06	2.19	33.8
Mi Trung	3.17	1.86	21.5
Huang Gia	2.53	4.02	98.1
Phu Loc	2.33	3.43	88.0

**Annex Table 6: Gender dimensions of livelihood strategies**

Village	Male earners per hh (mean)	Male-managed activities per hh (mean)	Female earners per hh (mean)	Female-managed activities per hh. (mean)	Households with at least one male working away (%)	Households with at least one women working away (%)
Mi Loi	1.54	1.43	1.52	.76	16	8
Mi Trung	1.70	1.29	1.48	.57	12	6
Hoang Gia	1.17	1.90	1.36	2.12	60	6
Phu Loc	1.13	1.21	1.20	2.23	18	2

**Annex Table 7: Types of activities reported by households and by gender of manager (%)**

	Total	Female	Male
Rice	72	46	25
Subsidiary crops	49	30	18
Other crops	3	1	1
Gardening	7	2	4
Waged labour	42	6	35
Handicrafts	31	19	12
Husbandry	55	23	32
Trade and services	25	14	11
Other activities	10	2	8

**Annex Table 8: Types of activities reported by households in study villages (%)**

	Mi Loi	Mi Trung	Hoang Gia	Phu Loc
Handicrafts	45.7	5.4	15.3	52.0
Waged labour	47.7	32.2	67.3	18.7
Husbandry	22.5	8.1	94.0	94.0
Rice	19.9	67.1	100.0	96.0
Subsidiary crops	29.8	43.0	96.0	24.7
Gardening	13.2	6.0	2.7	4.7
Trading	31.1	18.8	9.3	38.0
Other crops	4.0	1.3	2.0	0
Other activities	4.6	4.0	15.3	16.0

**Annex Table 9: Gender-disaggregated management of activities by village (% of households reporting)**

	Mi Loi		Mi Trung		Hoang Gia		Phu Loc	
	Female	Male	Female	Male	Female	Male	Female	Male
Handicrafts	17.9	27.8	1.3	4.0	12.7	2.7	38.7	13.3
Waged labour	15.2	32.5	5.4	26.8	4.0	63.3	0.0	18.7
Husbandry	12.6	9.9	6.7	1.3	16.7	77.3	56.7	37.3
Rice	2.6	17.2	14.8	52.3	82.7	17.3	82.7	18.3
Subsidiary crops	5.3	24.5	10.7	32.2	84.0	12.0	20.0	4.7
Gardening	2.6	10.6	4.0	2.0	1.3	1.3	1.3	3.3
Trading	18.5	12.6	11.4	7.4	5.3	4.0	18.7	19.3
Other crops	0.7	3.3	0.7	0.7	2.0	0.0	0.0	0.0
Other activities	0.0	4.6	2.0	2.0	3.3	12.0	4.0	12.0



**Annex Table 10.1: Pearson correlation coefficients between total, farm and off-farm income (all villages)**

	Total income	Farm income	Off-farm income
Total income	1.00	.48**	.28**
Farm income	.48**	1.00	-.02
Off-farm income	.76**	-.21**	1.00

\*\* Correlation is significant at 0.01 level (2-tailed test)

**Annex Table 10.2: Pearson correlation coefficients between total, farm and off-farm income (Mi Loi)**

	Total income	Farm income	Off-farm income
Total income	1.00	.21**	.06
Farm income	.21**	1.00	.03
Off-farm income	.06	.03	1.00

\*\* Correlation is significant at 0.01 level (2-tailed test)

**Annex Table 10.3: Pearson correlation coefficients between total, farm and off-farm income (Mi Trung)**

	Total income	Farm income	Off-farm income
Total income	1.00	.83**	.22**
Farm income	.83**	1.00	.04
Off-farm income	.22**	.04	1.00

\*\* Correlation is significant at 0.01 level (2-tailed test)

**Annex Table 10.4: Pearson correlation coefficients between total, farm and off-farm income (Hoang Gia)**

	Total income	Farm income	Off-farm income
Total income	1.00	.43**	.46**
Farm income	.43**	1.00	-.04
Off-farm income	.46**	-.04	1.00

\*\* Correlation is significant at 0.01 level (2-tailed test)

**Annex Table 10.5: Pearson correlation coefficients between total, farm and off-farm income (Phu Loc)**

	Total income	Farm income	Off-farm income
Total income	1.00	.15*	.49**
Farm income	.15*	1.00	-.04
Off-farm income	.49**	-.04	1.00

\* Correlation is significant at 0.05 level (2-tailed test) \*\* Correlation is significant at 0.01 level (2-tailed test)

**Annex Table 10.6: Income gini coefficients for study villages**

	Gini coefficient
Mi Loi	0.37
Mi Trung	0.40
Hoang Gia	0.30
Phu Loc	0.41
Viet Nam	0.38

\*\* Correlation is significant at 0.01 level (2-tailed test)

**Annex Table 11: Determinants of per capita income (OLS regression coefficients)**

	<b>b</b>	<b>B</b>	<b>T</b>
Constant	693.0		.002
Credit	.006	.11	3.16**
Household size	-223	-.35	-7.3**
Assets	96.3	.15	3.00**
Land	.122	.40	9.9**
Economically active members	33	.04	.88
No. of activities	135	.17	3.2**
Female education	3.3	.009	.24
Male education	20.0	.06	1.6
Mi Loi	1083	.45	6.2**
Mi Trung	564	.23	3.3**
Phu Loc	589	.25	4.9**

$R^2=.25$   $F=18^{**}$

**b** refers to the unstandardized regression coefficients; **B** refers to the standardized coefficient; **t** refers to the value of the t-statistic;  $R^2$  refers to the adjusted coefficient of determination; F refers the value of the F-statistic

\*\* Correlation is significant at 0.05 level (2-tailed test)

**Annex Table 12: Per capita income by gender of activity and earner**

<b>Variables</b>	<b>b</b>	<b>B</b>	<b>t</b>
Constant	669	.18	2.9**
Credit	.006	.18	3.1**
Household size	-223	-.35	-7.2**
Assets	98	.16	3.0**
Land	.12	.40	9.9**
Total male earners	64	.05	1.1
Total female earners	11	.05	1.1
Total male activities	121	.11	2.5**
Total female activities	152	.17	3.0**
Male education	19	.06	1.5
Female education	4	.01	.28
Mi Loi	1097	.46	6.5**
Mi Trung	573	.24	3.3**
Phu Loc	579	.24	3.3**

$R^2=.25$   $F=1^{**}$

**b** refers to the unstandardized regression coefficients; **B** refers to the standardized coefficient; **t** refers to the value of the t-statistic;  $R^2$  refers to the adjusted coefficient of determination; F refers the value of the F-statistic

\*\* Correlation is significant at 0.05 level (2-tailed test)

**Annex Table 13: Per capita income by gender management of activity**

Variables	Male			Variables	Female		
	b	B	t		b	B	t
Constant	1159		6.2**	Constant	1220		5.5**
Credit	.005	.10	2.9**	Credit	.006	.11	2.9**
Hh size	-199	.30	-7.8**	Hh size	-195	-.31	-7.6**
Assets	107	.17	3.3**	Assets	139	.22	4.3**
Land	.14	.48	12.0**	Land	.13	.41	10.1**
Male rice crops	-152	-.06	-1.39	Female rice crops	36	.01	.29
Male subsistence crops	-135	-.05	-1.15	Female subsistence crops	-276	-.12	-2.2**
Male other crops	-118	-.01	-.32	Female other crops	-84	-.01	-.34
Male garden cultivation	324	.06	1.73*	Female garden cultivation	442	.06	1.78*
Male animal husbandry	-185	-.08	-1.73*	Female animal husbandry	183	.07	1.75*
Male handicrafts	275	.09	2.3**	Female handicrafts	225	.08	2.13**
Male trade and services	677	.20	5.6**	Female trade and services	285	.09	2.5**
Male other employment	474	.12	3.3**	Female other employment	146	.01	.35
Male education	9.2	.03	.78	Female education	1.3	.004	.10
Mi Loi	720	.30	4.5**	Mi Loi	724	.30	3.9**
Mi Trung	271	.11	1.7*	Mi Trung	224	.09	1.28
Phu Loc	387	.16	3.1**	Phu Loc	232	.09	1.6

R<sup>2</sup> = .30 F = 15\*\*

R<sup>2</sup> = .27 F = 12\*\*

**b** refers to the unstandardized regression coefficients; **B** refers to the standardized coefficient; **t** refers to the value of the t-statistic; R<sup>2</sup> refers to the adjusted coefficient of determination; F refers the value of the F-statistic

\* Correlation is significant at 0.01 level (2-tailed test) \*\* Correlation is significant at 0.05 level (2-tailed test)

**Annex Table 14: Per capita by gender and livelihood diversification**

Variables	b	B	t
Constant	1055		4.5**
Credit	.004	.09	2.5**
Hh size	-202	-.32	-8.1**
Assets	107	.17	3.4**
Land	.15	.50	12.2**
Male farming	-232	-.16	-3.4**
Female farming	-254	-.21	-3.2**
Male off-farm activity	375	.26	6.0**
Female off-farm activity	356	.26	6.0**
Male waged labour	217	.10	2.6**
Female waged labour	103	.02	.65
Male education	11	.03	.95
Female education	-6	-.01	-.49
Mi Loi	673	.28	3.7**
Mi Trung	427	.18	2.4**
Phu Loc	208	.09	1.6

R<sup>2</sup> = .33 F = 19\*\*

**b** refers to the unstandardized regression coefficients; **B** refers to the standardized coefficient; **t** refers to the value of the t-statistic; R<sup>2</sup> refers to the adjusted coefficient of determination; F refers the value of the F-statistic

\*\* Correlation is significant at 0.05 level (2-tailed test)

**Annex Table 15: Economic characteristics of female-maintained and other households (mean values)**

	Credit (’000 dong)	Assets	Land (sq.m.)	Per capita income (’000 dong)	Total number of earners	Number of economic activities	Female farming activities	Female waged labour	Female off-farm activities	Female educa- tion proxy
Female- maintained hh	373	2.4	776	1,209	1.2	.54	.8537	.1220	.9268	3.7
Other hh	630	2.9	2,224	1,336	2.9	1.29	.7585	.00572	.5653	4.1

**Annex Table 16.1: Food security, gender and livelihood diversification (logistical regression results)**

Variable	B	Wald statistic	Level of significance
Constant	-2.0876	8.122	.004**
Credit	-.0001	2.5	.11
Assets	.3417	11.071	.0009**
Land	-7.4E-05	1.350	.2453
Per capita income	.0012	32.267	.0000
Hh size	-.1898	5.853	.0155
Male farming	.1956	.805	.3695
Female farming	-.3022	1.479	.2239
Male off-farm activity	.3309	2.377	.1231
Female off-farm activity	.3745	3.529	.0603
Male waged labour	-.2125	.736	.3908
Female waged labour	-.5798	1.782	.1818
Male education proxy	.1046	7.860	.0051
Female education proxy	.0463	1.278	.2582
Mi Loi	.9651	3.026	.0819
Mi Trung	1.8343	11.000	.0009
Phu Loc	1.9157	19.6137	.0000

Chi square\* (df15) 164.387

**B** refers to the standardized coefficient; df refers to degrees of freedom

\*\* Correlation is significant at 0.05 level (2-tailed test)

**Annex Table 16.2: Ability to save, gender and livelihood diversification**

Variable	B	Wald	Sig
Constant	-3.6064	24.757	.0000
Credit	-8.0E-05	2.0077	.1565
Assets	.1045	1.2602	.2616
Land	4.01E-05	.9543	.3286
Per capita income	.0003	7.9470	.0048
Hh size	-.1335	3.4113	.0647
Male farming	-.1506	.6347	.4256
Female farming	-.1417	.3800	.5376
Male off-farm activity	.5965	11.315	.0008
Female off-farm activity	.6700	15.358	.0001
Male waged labour	-.1546	.3828	.5361
Female waged labour	-.8317	2.9634	.0852
Male education	.0011	.0013	.9718
Female education	.0374	1.0383	.3082
Mi Loi	2.6790	20.637	.0000
Mi Trung	2.5322	19.234	.0000
Phu Loc	1.3866	9.6698	.0019

Chi square\* (df16) 123.875  
df refers to degrees of freedom

**Annex Table 16.4: Meat consumption, gender and livelihood diversification**

Variable	B	Wald	Sig
Constant	-2.78	3.459	.0002
Credit	-9.6E-06	.0210	.885
Assets	.518	23.56	.0000
Land	5.03E-05	21.525	.4686
Per capita income	.0005	7.8007	.005
Hh size	.1661	4.55	.0329
Male farming	.1497	.4620	.4967
Female farming	-.0231	.0077	.9300
Male off-farm activity	.7303	10.59	.0011
Female off-farm activity	.6626	10.202	.0014
Male waged labour	-.0160	.004	.949
Female waged labour	-.7344	2.57	.1087
Male education	.0246	.4701	.493
Female education	.1067	6.689	.0097
Mi Loi	.2147	.1445	.7038
Mi Trung	2.108	13.533	.0002
Phu Loc	2.44	23.24	.000

Chi square\* (df16) 212.50  
df refers to degrees of freedom

**Annex Table 16.3: Durability of housing, gender and livelihood diversification**

Variable	B	Wald	Sig
Constant	-1.8734	6.6642	.0098
Credit	-5.9E-05	1.0243	.3115
Assets	.4299	16.608	.0000
Land	.0001	4.4110	.0357
Per capita income	.0002	1.2024	.2728
Hh size	.1537	4.1757	.0410
Male farming	.1439	.5085	.4758
Female farming	.4489	3.3623	.0667
Male off-farm activity	.3616	3.2873	.0698
Female off-farm activity	.4962	6.6453	.0099
Male waged labour	-.4889	3.6360	.0565
Female waged labour	-1.1359	5.9529	.0147
Male education	.0184	.2786	.5976
Female education	.0331	.7366	.3908
Mi Loi	-.9461	2.9632	.0852
Mi Trung	-1.0759	4.0042	.0454
Phu Loc	.1416	.0997	.7522

Chi square\* (df16) 218.011

**Annex Table 16.5: Consumer assets, gender and livelihood diversification**

Variable	B	Wald	Sig
Constant	-3.0975	16.291	.0001
Credit	-1.2E-05	.0203	.8866
Assets	.6455	31.318	.0000
Land	.0002	2.9328	.0868
Per capita income	.0003	2.4972	.1140
Hh size	.0400	.2510	.6161
Male farming	-.2228	.9097	.3402
Female farming	-.2268	.7585	.3838
Male off-farm activity	.4265	3.6552	.0559
Female off-farm activity	.3796	3.3694	.0664
Male waged labour	-.1988	.5825	.4453
Female waged labour	-.0238	.0031	.9556
Male education	.0991	6.5564	.0105
Female education	.0126	.0929	.7605
Mi Loi	1.5032	6.9489	.0084
Mi Trung	2.0171	12.121	.0005
Phu Loc	1.9845	18.645	.0000

Chi square\* (df16) 113.966

**Annex Table 17.1: Determinants of female involvement in off-farm activities**

Variable	Coefficient	Wald	Sig
Constant	-.1106	.0622	.8031
Credit	.0001	5.4000	.0201
Assets	-.1127	2.1282	.1446
Land	-2.8E-05	.5483	.4590
Hh size	-.0113	.0337	.8544
Female education	-.0377	1.2381	.2658
Mi Loi	.2641	.5514	.4577
Mi Trung	-.5755	2.5220	.1123
Phu Loc	1.7823	37.2847	.0000

Chi square\* (df8) 116.716  
df refers to degrees of freedom

**Annex Table 17.2: Determinants of male involvement in off-farm activities**

Variable	Coefficient	Wald	Sig
Constant	-.3369	.5210	.4704
Credit	-4.4E-05	.6416	.4231
Assets	.3871	19.1225	.0000
Land	-.0002	8.8342	.0030
Hh size	.0452	.4837	.4868
Male education	.0860	7.0526	.0079
Mi Loi	-.8390	4.8757	.0272
Mi Trung	-2.3745	34.8133	.0000
Phu Loc	-.5418	2.9408	.0864

Chi square\* (df8) 199.27

**Annex Table 18: Means and standard deviations of variables used in regression analysis**

	Mean	Standard deviation
Credit	613.17	1910.5601
Assets	2.92	1.0289
Land	2125.48	3441.9267
Per capita income	1327.98	1044.3706
Hh size	4.8950	1.6427
Economically active members	2.78	1.3244
Number of economic activities	2.88	1.2888
Number of male earners	1.39	.8131
Number of female earners	1.39	.8789
Male-managed activities	1.46	.9781
Female-managed activities	1.42	1.1425
Male education proxy	4.97	3.2109
Female education proxy	4.07	2.8109
Male rice crops	.25	.4334
Male subsidiary crops	.18	.3873
Male other crops	1.000E-02	9.958E-02
Male gardening	4.333E-02	.2038
Male husbandry	.3150	.4649
Male handicrafts	.1200	.3252
Male trade and services	.1083	.3111
Male waged labour	.3533	.4784
Male other employment	7.777E-02	.2663
Female rice crops	.4567	.4985
Female subsistence crops	.3000	.4586
Female other crops	2.333E-02	.1511
Female gardening	2.333E-02	.1511
Female husbandry	.2317	.4222
Female handicrafts	.1767	.3817
Female trade and services	.1350	.3420
Female waged labour	6.167E-02	.2407
Female other employment	8.333E-03	9.098E-02
Male farming	.4417	.7286
Male off farm activities	1.0183	.8461
Female farming	.7650	.8452
Female off-farm activities	.6517	.7925
Food security	.7167	.4510
Ability to save	1.4167	1.1425
Durability of housing	.6633	.4730
Frequency of meat consumption	.6923	.4619
Consumer assets	.7833	.4123