Family Life Course Transitions and Household Economy in Dynamic Perspective:

A Comparative Analysis of Households in China & Northern Vietnam

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Introduction

How does household demography intersect with and further shape the broader economic structure and course of economic development? By viewing the household as a salient economic unit of developing societies (see Smith and Wallerstein 1992), with members engaged to some degree in strategic cooperation to meet subsistence needs, perform social reproduction tasks, and diversify risk, it follows that changes to household composition and life course events will contribute to transformations in household economic arrangements. Demographic and life course events have the potential to generate dynamism not only in household membership, but also in the type of economic arrangements that emanate from the household. Conceived in this way, the household becomes a pivotal space in which macro-level social and economic changes and micro-level economic activities meet. Certain life course events, such as the migration of a young adult for employment, are more likely to occur in households as economic development advances and urban labor markets expand, whereas other events, such as high-parity births, are less likely to occur as the cost of child-rearing rise and family size preferences shift. Previous research which considers the household life course and household economy as interlocking, dynamic processes reveals that that certain forms of economic adaptation, such as creation of a household business, are more likely to emerge from certain household compositional forms, such as those with a large number of working-age males, and to follow in the wake of particular life course events, such as the event of a birth (Korinek et al. 2006). Other life course events, such as deaths and migrations, are also likely to exert a transformative effect on household economies. It is to this array life course transitions that we turn our focus in this prospective, longitudinal examination of household economic activity.

Our analysis of the intersection of household demography, life course transitions, and household economy focuses on China and Vietnam, two countries experiencing rapid transitions from planned, collective economies to globally-integrated, market capitalist forms. Historically in East Asian societies the family was considered the cornerstone of society; and the household was regarded as the basic unit of production (Judd 1994; Mann 2000). Communist revolutions in China and Vietnam in the 1950s facilitated collectivization of agriculture and state-ownership of enterprise. The commune system of

production became ascendant and production decisions were removed from the household. This process has been reversed to a large extent since the late 1970s and early 1980s, when China and Vietnam embarked on major economic reforms. China implemented the "household responsibility system" and decollectivization policies and encouraged expansion of the private sector. Vietnam adopted a series of *doi moi* land laws and household business reforms. Once again, in both countries, the family household became a decision-making unit for organization of labor activities. Agricultural production was once again household based (Gao 1994; Jacka 1997). Outside agriculture, newly established enterprises provided more profitable wage jobs and the private economic sector expanded swiftly through establishment of household businesses and private enterprises.

While market economic reforms have been critical in creating requisite openness and opportunity for household-based entrepreneurship, wage sector employment, and diversification across multiple economic sectors, only particular households have adopted these market-oriented economic strategies, and the timing of their adoption is widely variable, spanning the market reform era. Local village and urban contexts are certainly salient factors influencing household economic strategies, as are national-level policies, development patterns and sociopolitical contexts. Our perspective emphasizes household demography, as reflected in household age-gender composition and recent life course events, as it informs an additional, dynamic context, shaped by broader forces of economic development, market reform policies, and demographic transition, that influences the particular strategies undertaken by households to generate income and diversify risk, as well as the pace and timing of transformation in the household economy. The comparison of China and Vietnam is instructive given that each country's post-socialist return to household based economic decision-making has occurred under markedly different patterns of economic development and demographic behavior. While rural households in China and Northern Vietnam share a legacy of socialism and a culture that emphasizes patriarchal relations and filial loyalty in organizing family relations, the similarities in recent history and cultural influence are shaped by distinctive development trajectories and demographic transitions (Hy and Unger 2003).

It is against this backdrop of market reform and economic development, and through this comparative lens, that we conduct a longitudinal analysis of household economic activity, household composition, and life course transitions in China and Northern Vietnam. To achieve this objective, we use two multi-wave longitudinal surveys, the China Health Nutrition Survey (CHNS 1993, 1997) and the Vietnam Longitudinal Survey (VLS 1995, 1998) to explore household economic transformations that may have occurred in a 3-4 year interval, as a response to important events occurring in the life course of household members. We highlight three types of household economic activity: whether households are engaged in wage employment, nonfarm household entrepreneurship, or multiple activities that span diverse economic sectors. Each of these activities picks up on a relatively novel form of participation in the emerging market economy. We adopt a life course approach to study the interplay between individual life transitions and household work arrangements, particularly when the transition involves the entrance or exit of members from the household.

We view the household as a flexible economic unit undertaking activities that serve to maximize members' economic well-being through coordinated work arrangements, while at the same time adaptively responding to changing external constraints and opportunities (Moen and Wethington, 1992). Specifically, our central question asks: to what extent do household economic activities synchronize with individual life trajectories? For example, when someone leaves the household for marriage, does the household scale back in its economic operation or diversification? Does it stimulate innovation when someone marries into the family? How does the experience of a death transform economic activities in the household? Addressing such questions permits a theorizing of the household as an important micro-level foundation in the course of social and economic development and as an entity whose inner demographic and life course dynamics set in motion economic adaptations that further the course of economic development and change.

Understanding Household Economies and Life Course Transitions as Parcels of Economic of Development and Demographic Transition

The classic works of Chayanov (1925/1986), as well as more recent studies assessing economic disparity across households under China's collective economy (Li 2005), demonstrate that household composition and stage in the family life cycle have accounted for "demographic differentiation," such that households with relatively greater worker-to-dependent ratios tend to prosper relative to those with higher dependency ratios. Recent research on demographic and economic change in more and less developed societies demonstrates that households, and the economic outcomes which arise through household-level dynamics, constitute a powerful force of transformation (Buzar et al. 2005). The splintering of households and reduction of household size accompanying the second demographic transition, for example, have been forces of urban gentrification and new forms of consumption (Buzar et al. 2005; Sassen 1991). A wide range of scholarship demonstrates that the household is crucial site within which the individual and broader society intersects, and it should not be overlooked in assessing the forces of economic development and societal transformation (Buzar et al. 2005). By bringing a dynamic perspective to household life cycles and household economy it is possible to assess the immediate changes in household economic strategy that accompany changes in composition and age structure, which in turn are occasioned by household member life course transitions.

Especially in those societies where cultural norms proscribe filial obligations and maintenance of family ties, the "family can be thought of as an economic unit as well as a social grouping" that is prominent in organizing economic relations, both locally and across geographic loci (Lauby and Stark 1988). Conceiving of the household as the operative economic unit in post-socialist China and Vietnam, we ask, how does this entity change in response to life events of individual family members, such as birth, marriage, migration or death? To answer this question, we draw upon the life course perspective, which "involves a contextual, processual and dynamic approach to the study of change in the lives of individual family members over time, and of families as social units as they change over historical periods" (Bengtson and Allen 1993:469). Several principles in life course studies are relevant for this project: the principle of linked lives, the principle of human agency, and the principle of historical time and place (see Elder and Johnson 2001). Individual lives are lived interdependently, embedded in a network of shared

relationships. For those who live in the same household, the interconnection among lives between family members is undoubtedly strong. With an individual family member leaving a life stage and entering another, other family members work together to make adjustments according to evolving shifts in family and individual needs. Depending upon the resources or demands associated with a household newcomer, existing household members may be compelled to scale back their activities (e.g., in order to care for a dependent child or adult) or to ramp up their activities (e.g., in order to provide additional financial resources to meet rising costs). Alternatively the household newcomer, his- or herself, may provide skills or labor power needed for the household to embark upon novel economic activities. The adjustments or adaptations made by household members are bound by "a larger historical, social and cultural context of shifting opportunities and constraints, resources and demands, norms and expectations" (Moen and Wethington 1992:245).

In developing countries, where families frequently face economic challenges in meeting subsistence demands and insuring against risk, these principles become even more pronounced. Especially where markets are incomplete and social insurance mechanisms are limited, household members commonly bond together in mutually beneficial (though not necessarily egalitarian) collective arrangements to diversify economic risk (Stark and Lucas 1988). A household economic pattern is not simply an aggregation of independent individual work activities, but rather reflects coordinated arrangements informed by resource demands and power relations among household members (Chen 2004, Elder 1999, Tilly and Scott 1978). If family resources and need are embodied, in part, by the presence of laborers and dependents in households, then we expect that household economic activity will have a fluidity that reflects changes in household membership.

Reading the historic record of 18th and 19th century industrialization suggests that household economic organization has been highly flexible and capable of rapid and diverse responses to short-term changes in social and economic conditions (Hareven 1978; Kuznesof 1980). Households in 20th century proto-industrial economies similarly demonstrate that the membership and organization of households are salient factors influencing economic outcomes (Eder 1999). Existing literature validates the use of a

"family adaptive strategy" construct, which views families as flexible, active social participants that undertake short-term or long-term activities that serve to consolidate or enhance members' economic situations. Dynamism and diversifiability are said to characterize households which, resting upon shifting family resources and labor supply, are flexible, adaptive, and "resilient" economic units (Eder, 199:151; Wilk 1991). Previous research reveals, for example, that the gender division of household labor in China is flexible and shifts as a result of changes in husbands' and wives' labor force roles. While housework continues to be performed predominantly by women in China, women's advancement into non-agricultural employment is accompanied by a reduction in their hours devoted to housework (Chen 2005). From the Vietnam case, Korinek (2004) observes that the intensity of women's economic participation is influenced by the number and age of children in the household. These cases suggest that individual women's work profiles are conditioned by features of household composition that influence demand for material resources and supply of production and social reproduction labor. Where households are the units of analysis, the composition of household membership (specifically the gender composition of membership) and the recent event of a birth each have demonstrated effects on the odds of particular economic outcomes, such as whether a household is diversified or operates a nonfarm business (Entwisle et al. 2000; Korinek et al. 2006). Accordingly, we reason that in addition to macrosocial contexts of economic transition, microsocial contexts of household composition, and specifically the demographic expansion and contraction of households occasioned by life course events, will figure prominently in the dynamics of household economic organization and strategizing.

Vietnam and China in Comparative Perspective

Striking similarities and important distinctions typify the neighboring nations of China and Vietnam, making their comparison fruitful for understanding the intersection of household-level demography and household-level economic strategies. The geopolitical boundary separating China and Vietnam sets up an informative comparison by delineating two contexts with distinct, though parallel, historical experiences, cultural systems and geographic conditions within which household members formulate economic strategies (Summerfield, 1997; Hy and Unger, 1999). Both countries have recently

witnessed reform of socialist command economies and implementation of policies that privatized production, decollectivized agriculture, and opened barriers to international trade and investment. These parallel social and economic changes have wrought change in household economic strategies, gender relations, family preferences and ideologies. For instance, an increasing pervasiveness of internal migration in both countries provided new opportunities for rural youth to seek employment in urban labor markets (Liang 2002; Dang 2001). Scholars of gender relations in both countries have observed that traditional gender ideology and practice, rooted in Confucian doctrine and patriarchal family relations, although partially disrupted by socialist policies and production schemes emphasizing gender equality, have reemerged in many rural Vietnamese and Chinese villages and families (Hy 2003; Jacka 1997).

In China and Vietnam, recent economic reforms have returned, or perhaps even enlarged, the primacy of households in each country's emerging market economy (Vijverberg 1998). Since subsidies for childcare and education have been greatly reduced in both countries' market reform eras, pressure is placed squarely upon families to arrange household activities so as to both provide care for children and provide sufficient economic resources for their sustenance and education. With decollectivization in agriculture, scaling back of social services and public subsidies, and expansion of the private sector, economic coordination of household members' activities becomes crucial in families' efforts to minimize risk and experience positive economic mobility. This point is vividly illustrated in research on the relationship between work and fertility. In China, Vietnam and other Asian countries, with the occurrence of a birth, a powerful life event, new mothers often make little or no adjustment in their work activities because grandmothers and other family members fulfill important roles as alternative childcare providers (Chen et al., 2000, Desai and Jain 1994, Entwisle and Chen 2002). In many situations, women's economic production work is enhanced, rather than scaled back, when infant and small children, and the economic demands they pose, are present within the household (Korinek 2004). At the household level, rather than scale back after a birth, the emergence of a household business or other novel expansion of economic activity often arises, so as to ensure the economic security of the household (Korinek et al. 2006).

Their commonalities notwithstanding, China and Vietnam diverge widely on an array of demographic and economic traits that are significant in forming a context within which household economic strategizing takes place. China and Vietnam each experienced late 20th century implementation of government-sponsored family planning policies and restrictions on births. However, China's family planning policy has been relatively more restrictive, with a lower births-per-couple target and, in most jurisdictions, more complete enforcement of family planning policies. Consequently, although fertility levels have declined dramatically in both countries, Vietnam's total fertility rate (2.3 in 2002) remains noticeably higher than China's (1.8 in 2002) (GSO 2003). Especially in rural areas, births are more numerous in Vietnam than in China. As a result, rural households in Vietnam, as opposed to those in China, were more likely to experience a birth, and births of higher parity, during the 1990s.

Economic reforms have greatly expanded economic opportunity, improved living standards, and fueled economic growth in China and Northern Vietnam. However, economic growth in China has been more robust than in Vietnam's Red River Delta. China's growth has been more diversified, such that the industrial sector production now accounts for nearly half of gross domestic product (47% in 2005), with the service sector ranking close behind (40% of labor force), and just about 12% of domestic product share in agricultural production (CIA Factbook 2006). Vietnam, on the other hand, derives over 20% of gross domestic product from agriculture, and the shares from industry (41%) and services (38%) lag behind China. China's efforts at rural industrialization, or "urbanization from below" have opened a wide range of rural industries and enterprises and hence expanded wage employment opportunities outside of agriculture (Liang et al. 2002). While state-owned enterprises still operate across many Northern Vietnamese villages and towns, efforts at rural industrialization have not matched those of China. Accordingly, in formulating household economic strategies, the Chinese context, compared to the Vietnamese, proffers a broader mix of opportunities across sectors and more extensive wage sector opportunities.

Parallel economic reforms in Vietnam and China notwithstanding, the countries have seen widely divergent patterns of growth, industrialization, property relations and stratification in the post-socialist era

(Hy and Unger 1998). Due to a more disadvantaged starting point, as well as less robust economic growth compared to China, a larger share of Vietnamese households remains in poverty as compared to households in China (Hy & Unger 1998). GDP per capita in China, adjusted for purchasing power parity, is more than twice that of Vietnam ($6,800 versus $2,800) (CIA Factbook 2006). In Vietnam, households are nearly twice as likely to be impoverished (19.5% of the population) than households in China (10% of the population). Furthermore, the rural-urban divide carves a wide gulf between households within each setting and sharply delineates the circumstances and contexts of opportunity within which decisions about household economic activity are made (Nguyen 2003; Yao 1999). Accordingly, decisions about household economic strategizing take shape under widely divergent circumstances of opportunity and need, depending upon whether households are located in Vietnam or China, or in a rural or urban area.

Data & Research Methods

Data

Our analyses of the intersection between household life course transition and household economic activity rely upon two longitudinal, household-based surveys: the Vietnam Longitudinal Survey (VLS, 1995, 1998) and the China Health and Nutrition Survey (CHNS, 1993, 1997). The VLS examines three core provinces of the Red River Delta in northern Vietnam. The study provinces are intersected by Highway One, which links North and South Vietnam and acts as an important conduit for the flow of information and commerce. The VLS utilizes a stratified random sample of households, with households randomly selected from village-commune strata defined according to their distance from regional highways, thereby capturing households located at different points along the rural-urban continuum. From among the 471 enumerated rural and urban communes within the study province (Ha Nam Ninh[1]), communes were selected within strata according to probabilities proportional to the total number of households in the province. The 1995 baseline survey thus included 1,855 households in 10 communes (7 villages and 3 town districts) of the study area province. The VLS was designed and conducted by faculty, students and staff at the University of Washington's Center for Studies in Demography and

Ecology, and Hanoi's Institute of Sociology (a branch of Vietnam's National Center for the Study of Humanities and the Social Sciences).

After three years of annual follow-up surveys, of the 1,855 original 1995 households, in 1998 the VLS staff located and re-interviewed the members of 1,752 original households. The loss to follow-up of nearly 100 households may introduce a degree of selectivity into the longitudinal analysis of household economic activity. Preliminary sensitivity analyses demonstrate that, based on the 1995 baseline survey, the households lost to follow-up were slightly more urban, with greater wealth and assets, and less likely to be engaged solely in agriculture. Many of the households lost to follow-up had no economic activity in 1995, were smaller than average (with 1-2 members) and contained a substantial number of members over age 60, suggesting that the households dissolved as a result of one or more household members' death or migration. In light of these sample differences across the data panels, we proceed with the longitudinal analyses, including only those households that appear in both the 1995 and 1998 surveys (N=1752).

The second dataset derives from the China Health and Nutrition Survey (CHNS), a collaborative project between the Carolina Population Center and the China Academy of Preventive Medicine. The CHNS is a longitudinal survey of households in eight provinces of China: Guangxi; Guizhou; Henan; Hubei; Hunan; Jiangsu; Liaoning; and Shandong. Three of the provinces are coastal; three are in central China; and two are mountainous southern provinces. These provinces span a range of characteristics, although they were not selected according to a probability design. Their population together accounts for roughly a third of China's population and varies substantially in level of economic development. A multistage cluster design was used in the survey. The initial primary sampling units include 32 urban neighborhoods, 32 township neighborhoods, 30 suburban villages, and 96 rural villages.

The CHNS consists of several waves of data collection, which began in 1989, when a sample of 3,780 households was drawn, and subsequently followed up in 1991, 1993, 1997, and 2000.[2] In this paper, to make the analysis comparable to the VLS data, we use data from 1993 and 1997, thereby establishing a four-year interval for assessing changes in household economic activities. With the

[2] In 1997, Liaoning dropped out of the survey and was replaced by another Northeastern province, Heilongjiang.

longitudinal design of the CHNS, substantial numbers of households were lost to follow-up. Specifically, between 1989 and 1993 18% of households (n=684) were lost to follow-up, and between 1993 and 1997 28% of households (n=857) were lost to follow-up. Approximately half of households lost to follow-up were located in Liaoning province, which was dropped from the study between the 1993 and 1997 waves. While we have yet to conduct extensive sensitivity analyses, preliminary assessments of the sample at the 1993 and 1997 data collection points suggest that urban households, as well as those featuring wage workers, and those that were diversified, have disproportionately dropped out of the analyses over time. Removing the cases lost to follow-up from our analyses, we are left with 2,244 households in our analytical sample.

Conceptualizing Household Economic Patterns

Although families and households have long been recognized as dynamic concepts, cross-sectional approaches render a "frozen image" of the household and overlook the processes that eventuate in shifting household composition (Janssens 1993:50). We develop a comparative longitudinal design to avoid this fixed view and inquire how households respond to recent individual life events in China and Vietnam. We consider three types of economic pattern, i.e., whether the household is engaged in a household business, wage employment, or multiple activities that span different economic sectors. Figure 1 shows the incidence of household business, wage employment and diversification at two different time points. It reveals that the type of economic activity undertaken by Vietnamese and Chinese households is not stagnant, but rather undergoes significant change over a relatively brief time period. Engaging in family business activities is much more common in Vietnamese households than in households of China. However, trends in the data demonstrate that household entrepreneurship actually declined among Vietnam households between 1995 and 1998, while in Chinese households, analogous entrepreneurial activity increased. Wage earning is the converse to family business when comparing Chinese and Vietnamese households. While wage employment is far more common within Chinese households, the share of households with wage employment decreased. The incidence of household diversification is quite similar in the Red River Delta in Vietnam, and the Chinese provinces, with around 35-45% of

households diversifying across multiple sectors. Household diversification was mostly stable over time or declined during the mid 1990s.

-Figure 1 about here-

Conceptualizing Events of Life Transition

Could the above described changes in economic activity within a 3-4 year interval be prompted by life transitions experienced by individual family members? In this paper, we consider several types of life events that result in changes in household composition and size. Descriptive statistics are presented in Table 1. We first consider whether anyone joined the household since the last survey period. This is decomposed into three categories: anyone marrying into the household, anyone born into the household, and anyone joining the household for other reasons. The last category is a residual category, with only 2-3% of the households experiencing such movement. As observed in Table 1, both samples have very similar statistics in these categories, except in the incidence of marriage (12% in the CHNS sample vs. 4% in the VLS sample). This difference most likely reflects different levels of patrilocal versus neolocal residence occurring after marriage in China and Vietnam (cites).

-Table 1 about here-

There are other types of life event that result in the departure of household members. Table 1 shows that about 35% of the households in the China sample have members leaving the household during 1993-1997, considerably higher than the 20% losing household members in Vietnam from 1995 to 1998. Among these, about 10% of the China sample and 4% of the Vietnam sample experienced loss of household members due to mortality. Unfortunately, the CHNS did not list marriage as a reason for moving out of the household, but listed "seeking employment elsewhere (*wai chu da gong*)" as one of the reasons. In the VLS sample, the reverse was true. We include both of them in the analysis, because they can both be viewed as life events leading to the transition to adulthood. Although any household member can leave home and seek employment elsewhere, this is much more typical for young adults. Young adults' departures from their parental homes are fundamental and transformative events in the family life course. Patterns of home-leaving, which vary markedly across societies, influence household economies

and social arrangements outside the household, such as welfare systems, housing supply, and consumption patterns (Yi et al. 1994). Because different categories are used in classifying the loss of household members, the residual categories in the China and Vietnam sample are not directly comparable. For the CHNS sample, among the 25% who left the household for other reasons, we suspect a considerable proportion of them left for marriage. Likewise, among the 10% of households who had members left for other reasons, we believe a lot of them left to seek employment. Given the problem of agricultural labor surplus, the draw of urban employment, and the relaxation of migration restrictions linked to household registration, leaving home to seek employment became increasingly common in both China and Vietnam during the late 1980s and 1990s (Anh 1999; Liang 2002; Roberts 1997).

Research Design

We use logistic regression to model household economic activities in Vietnam and China. The multivariate analysis approach is illustrated by the following equation:

$$LN\,[\Pr\,(E_{ijt} = 1)] = aE_{ijt\text{-}1} + bL_{ijt} + cW_{ijt} + dD_{ijt}$$

We model the log odds of the dependent variable, E_{ijt}, i.e., whether household *i* in community *j* engages in a certain type of economic activity or not at time *t* (t=1998 for the VLS, and 1997 for the CHNS). To arrive at the household-level measure, we begin by classifying household members' primary and secondary work activities (based upon work in the previous week) into the following sectors: 1) family agriculture, 2) non-farm family business, or 3) wage employment in the non-farm or farm sector[2]. Aggregating all resident household members' activities, we categorize households according to a three-way economic activity typology that allows for comparison across our three research settings and across the three-to-five year survey intervals.

Thus, household economic activity (E_{ijt}) is measured in three ways in our analyses: whether the household is engaged in wage employment (or not), household entrepreneurship (or not), and/or multiple

2. The vast majority of wage employment in both countries is non-farm work. Wages may be earned in a state, collective, or private firm; in the Red River Delta the majority of wage employment occurs in the state sector, whereas wage-earning employees are more evenly distributed across the private and state sectors of South Vietnam and China.

activities that span diverse economic sectors (or not). Each of the household economic activity outcomes signifies a form of participation in the emerging market economy, as well as households' ability to undertake activities that may enhance survival chances and mobility opportunities. Households' breaking their reliance upon agriculture and undertaking more diverse economic activities, including non-farm entrepreneurship, has contributed to declines in household poverty in Vietnam and China (Luong and Unger, 1999). Household involvement in the wage sector is of interest because it often represents the most economically secure and profitable form of employment in the modern, formal sector. Besides demonstrating a relatively modern, market-orientation, the economic outcomes that we measure at the household level—diversification, non-farm entrepreneurship, and wage employment—are indicative of innovative household behavior. Innovation can be detected due to the longitudinal design, which assesses change in households' economic profiles over a three to four year interval, and thus makes it possible to highlight newly emergent economic activities.

We include four groups of independent variables in the model. First, we indicate whether the household had a family business, wage employment, or diversified economic profile in the previous round of data collection (E_{ijt-1}). Controlling for economic activity at *t-1 (*1995 for the VLS, and 1993 for the CHNS) essentially allows us to estimate the effect of our other independent variables on changes in households' economic activities over time.

Second, our focal independent variable (L_{ijt}) indicates whether a life transition has recently occurred among any household members. We first consider whether anyone has joined the household since the last survey, then decompose the addition into whether it is due to marriage, birth or other reasons. We also estimate the effect of whether anyone has left the household due to death, marriage, seeking employment, or other reasons. We hypothesize that these life transitions affect household economy in different ways. It is not simply a matter of change in household size or composition; rather, each addition or loss of a household member represents a change in the type of economic functions the household is equipped to and motivated to perform. Additions and subtractions of household members also reflect changes to the household's ratio of workers to dependents. We do not specify hypotheses

about household economic change for each type of life transition, because multiple social, economic and cultural forces could be at work at the same time, making it hard to predict the nature and direction of effects. For example, with someone marrying into the household, this could potentially increase the chance of starting a household business because of an expansion in household labor pool. On the other hand, because of the patrilineal family system in China and Vietnam, those who married into the household are mostly women. A previous study on family businesses in rural China suggested that households with a large pool of female labor were at no advantage in starting or running a small business (Entwisle et al. 1995). It is also important to keep in mind that movements out of the household often do not usually indicate a severing of ties and cooperation, but rather a spatial extension of family ties and economic relations.

Finally, in order to capture the unique, independent effects of recent household movements upon changes in household economy, we introduce into the models a set of covariates that control for the level of wealth (W_{ijt}) and education resources (D_{ijt}) in the household. (Comment on control for rural/urban location of household?) Our measure of education resources is a dummy variable indicating whether the household has one or more members with upper secondary schooling or higher. To measure household wealth, we use indicators of housing conditions and consumer durable ownership, including: whether the household has a flush toilet; whether the household has an earthen floor; whether the household owns a television; and whether the household owns motorized transport (i.e., most often a motorbike). Additionally, we construct an index for the household's aggregate asset ownership, weighted according to the number and approximate value of select household consumer durables owned by household members (see Korinek et al. 2005 for detailed documentation). In developing countries, where measuring household income poses methodological difficulties, these indicators of household ownership and amenities have proven to be valid proxies of household living standards (Montgomery et al. 2000). Descriptive statistics for these variables are shown in Table 2.

-Table 2 about here-

Results

Do households reconfigure their economic activities when they lose or gain family members? Results from our analyses suggest that the answer to the question is a definite yet a nuanced yes. Indeed, the extent of the household adjustment depends on the type of life transition, the aspect of household economy, and geographic/cultural context under consideration. We present the results from a series of logistic regression models in Tables 3-5, with whether the family has a family business, whether the family diversifies in more than two economic sectors, and whether the family has members engaged in wage employment as the dependent variables. We stratify the samples by rural and urban residence and present two models where we explore the effect of family life transitions in steps.

-Tables 3, 4, 5 about here-

We begin with Model 1, where we first estimate the effect of family member joining and leaving the household between the two survey periods. First, addition of new household members seems to have an overall weak effect in our samples and sub-samples. With anyone joining the household since the last survey year, the household economy seems to have barely changed, except in the case of urban Vietnam, where it appears to encourage household business formation, to decrease household economic diversification, and to decrease wage employment of the household. In comparison, the effect of loss of household members is much more varied across samples. In China, the effect seems to be conservative, in that it decreases the likelihood of the household to engage in household businesses and to diversify. The strongest effect is observed in the model for economic diversification in urban China (see Table 4). With someone leaving the household, the household is 0.38 times less likely to diversify. In the Vietnam sample, however, the effect is just the opposite and much less consistent. While the loss of family members has no significant effect household business formation, it increases the likelihood of household economic diversification and wage employment in the rural Vietnam sample.

While Model 1 can be viewed as a test of the effect of changes in the household size in either direction, it does not inform us on the effect of different types of life transitions experienced by family members. For example, a family can gain members through birth and marriage and can lose members through death or migration. As hypothesized earlier, these types of life transitions can have very different

implications for household economy because they leave distinctive imprints on the household structure and composition. Additionally, certain household exits are more permanent than others (death versus migration) and certain household entrances are associated with distinct obligations. In Model 2, we decompose the addition and loss of family members into more detailed categories. The results are complicated to summarize because there are twelve models in total (3 dependent variables, 2 models and two settings). To help the illustration, we present a set of predicted probabilities to highlight the effects of some key life transitions experienced by the family upon changes in household economic activity (see Figures 2a-3c). The probabilities are simulated in that we vary the value of the key independent variable (e.g., birth vs. no birth), while let the other variables in the model take on their true values.

-Figures 2a-4c about here-

As shown in Figure 2a, the experience of a birth has a positive influence on the probability of the household starting a non-farm family business in Vietnam, with the effect being more pronounced in rural areas (an increase of 0.17 in predicted probability). The effect is in the same positive direction in China, although it is not statistically significant. Birth also has a significant effect on household economic diversification in China. With a birth occurring in the household, the probability of the household engaging in more than two economic activities increases by twenty percent. The effect of birth is not significant in the total Vietnam sample, but is negative in its urban sample. As for wage employment, we again observe opposite effects in China and Vietnam. In rural China, birth increases the likelihood of wage employment. In urban Vietnam, birth reduces the likelihood of wage employment.

In contrast to the mixed effects of birth, new additions to households through marriage generally exert a conservative effect in both Vietnam and China. Such additions decrease the probability of household business formation and diversification. Household additions occurring through marriage have virtually no effect on wage employment at the household level. For example, in urban Vietnam, the probability of having a household business is reduced by 0.18 when new members have married into the household. The magnitude of the effect is smaller in China, but in the same direction.

Interestingly, the effect of out-migration of family members to seek employment elsewhere is the strongest among all the life events in Vietnam and China, particularly in rural areas. Although this variable is only included in the China analysis, we find positive significant effects of similar magnitude for the residual variable ("anyone leaving for other reasons") in the Vietnam analysis. As mentioned earlier, it is reasonable to assume most people in the residual category are those who left to seek employment elsewhere, given that such a trend is conspicuously observed in both settings (see, for example, Dang 2001). As shown in Figures 4b and 4c, the probability of economic diversification in the household is increased by 0.26 and 0.30 in rural Vietnam and China, respectively, when family members seek employment elsewhere. Similarly, the probability of wage employment increases by a substantial margin in all settings (see Figure 4c) following a member's employment-seeking departure. The finding that the effect is stronger in rural areas than urban areas is not surprising, given that the trend of rural-to-urban migration characterizes the market transitions in both countries as a surplus of rural labors, now relatively free to exercise geographic mobility, seek new economic opportunities in cities. However, we find the direction of the effect contrary to our expectation. With loss of family members, especially young adults, from the family labor pool, why would the family be more likely to diversify across sectors and to have wage employment? We have several explanations for this strong positive effect. It could be a selection effect, that is, households more likely to send out household members are also those who are more open to innovative economic behavior. It could be causal too. Given the shortage of wage jobs and economic opportunities in general, with household members leaving, opportunities are opened up for those who are left behind. Either interpretation demonstrates a degree of coordination in economic activity among household members.

Finally, the analysis demonstrates that household socioeconomic status—in terms of educational and material resources possessed by household members, is intertwined with household economic strategy. Due to reciprocal effects, it is impracticable to posit a causal influence between household socioeconomic status and household economic activity. Nonetheless, it appears that households in possession of greater material resources are more likely to be diversified or to have members engaged in

the wage sector. Additionally, diversified and wage sector households also are more likely to have members who have attained secondary schooling and higher. These results uphold the position that wage employment and diversification beyond agriculture are associated with higher standards of living in the market reform era.

We want to stress these results are preliminary in nature. In follow-up analysis, we would like to further explore a number of issues. First, we intend to examine the linkage between different life transitions. Because there is a three to four year interval between the surveys, the family could experience both a marriage and a birth during this time. As a result, it may not be appropriate to treat them as two independent events. Second, we need to closely examine the characteristics of those who leave or join the household. Third, we will investigate the characteristics of local communities. The CHNS collects information on local labor markets. It is possible that communities tend to send out out-migrants may be unique in that different economic processes could be operating. Fourth, we may need to pay closer attention to household structure. Currently, we include age and sex composition of the household as a control, but it could be that it is the structure of the household that is more relevant.

Discussion

The results in this study clearly suggest that household economic transformation is often prompted by life transitions by individual family members. By viewing the household as a dynamic entity, both in terms of the composition of membership and arrangement of economic activity, we gain insights into the strategies adopted by households in the market transition era. While previous analyses of household economy in developing societies have pointed to the size and age-sex composition as determinants of activity and innovation (Korinek et al. 2005; Entwisle et al. 2000), the current study construes economic dynamism as following from the dynamism of family life course transitions. Eder (1999:155) predicts that answers to questions about which households are able to successfully articulate different modes of production in settings of economic development "will emerge from careful attention to the form and composition of particular households over time and to the comings and goings of their constituent members." The current research makes strides in this direction, mapping innovative

household activities, such as entrepreneurship and diversification, onto changes in household membership.

To recap, in side-by-side longitudinal analyses of household economic activity among North Vietnamese and Chinese households in the market transition era we find that particular life course events, namely births and members' departures from households to seek employment, are generative of innovative economic activity. Certain of our findings are robust across settings, whereas others are contextually specific. For example, the addition of a new household member through birth has a positive impact on the odds of household business formation in Vietnam and China. However, the positive effect of a birth on household sectoral diversification only holds in the sampled Chinese households. Likewise, the departure of a household member (for any reason) in China negatively impacts the odds of household business formation. However, analogous member departures from Vietnamese households do not exert parallel, negative impacts on the creation of entrepreneurial ventures. In each reform setting the household economy is in a state of flux, and that fluctuation derives in part through changes in household membership. However, due to divergent local labor markets, business contexts, and other institutional frameworks within which household strategies are formed, Chinese and Vietnamese households do diverge in their forms of responsiveness to household life course transitions. The comparative and longitudinal design featured in the paper is a significant contribution to studies of household economy which have tended to conceive of households and their economies as static entities. Further elaboration upon household members' experiences of constraints and opportunities that arise through shifts in household membership and major life course events, such as death, marriage, and migration, will permit further theorizing of household economy as arising, in aggregate, from household members' experiences of life course and economic transitions.

The story unfolding in this research is far more nuanced than a simple description of changes in household size and composition. The view of the household as a meaningful aggregate economic unit is more fully realized by disaggregating the various life course events that serve to enhance or detract from household size and shape household composition. Not all exits from the household are equal, nor are all

entrances to the household equal. While further investigation is needed to confirm our assessment, it appears that both the gender and age of the person entering or departing the household, as well as the motivation for their mobility, is pivotal for subsequent changes to household economic strategizing. We not, for example, that exits due to marriage and those due to seeking employment have entirely different implications for household economy. By disaggregating the reasons for household members' arrivals and departures, we get closer the strategic adaptiveness said to hold sway in household economies.

The prospective, longitudinal design undertaken in the current study is a marked improvement over static, retrospective views of household membership and household economy. Nonetheless, there remain limitations to our empirical approach. First, due to the four year window of time over which change is assessed we cannot precisely gauge the chronology of change in household membership and change in household economic activity. We posit, in conjunction with the family adaptive strategy framework, that changes in household membership permit and beckon adaptation in household economic activity. However, it is possible that changes in household economic activity precipitate particular changes in household membership. Second, we are not equipped to assess the changes that have occurred in households lost to follow-up across rounds of data collection. Further assessment and controls for sample selection bias, to be included in subsequent analyses, will permit more definitive statements on the relationship between household life course transitions and changes in household economic activity patterns.

Recent work in the fields of demography and economics has highlighted the importance of demographic growth and the structure of populations in contributing to macroeconomic growth, the "Asian economic miracle" in particular (Bloom and Williamson 1998). In this paper we've taken an analogous perspective to assess transformation in economic activity at the level of the household. By viewing the household as a core economic unit, buffeted by forces of social and economic development, we see that it is not only acted upon by exogenous change, but also acts as a dynamic, adaptive entity. We find that changes within the demography of households contribute to changes in the economic orientation of said households. Aggregating up from the household level to the level of communities and

regions, the demographic transformation of households can be viewed, not only as a response to the changing economic climate, but also as an element of the complex forces contributing to differential patterns of economic development and change unfolding in Vietnam and China.

Theories of demographic transition commonly emphasize processes of economic development and modernization as fundamental drivers of change in the demographic decision-making and demographic events that unfold within families and households. As such, individual and family life course trajectories are informed by changes in prevailing economic structures, social infrastructure, technologies, and value systems. For example, mortality decline means that life expectancy is extended through advances in public heath infrastructure and medical technology, which in turn creates more elderly persons who may contribute to household production and childcare, or, conversely, demand care and economic support in the face of illness and disability. Fertility decline, a response to higher rates of child survival and changes in desired family size, means that families with fewer dependent children may devote less time to childrearing and more time to accruing resources to invest in each individual child's education and livelihood. Increases in migration fostered by new aspirations and urban labor market opportunities, coupled with novel communication and transportation technologies, propel young adults to seek work in distant settings and provide risk-reducing remittances to origin households. In general, through demographic transition, lifespans are extended, years devoted to caring for young children diminish, and family members are dispersed across widening distances. In societies where traditional patriarchal family systems have prevailed for centuries, and especially where socialist command economies have overlaid traditional family arrangements, the course of demographic transition and the growth and liberalization of market economies can be seen as forces informing and transforming the structure of households, the life course trajectories of individuals, and the economic strategies of household units.

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Table 1. Household Mobility since the Last Survey Year, CHNS (1993-1997), VLS (1995-1998)

	China (%)	Vietnam (%)
Anyone joining household since last survey year	14.2	12.1
Anyone marrying into household	13.2	3.5
Any birth	8.4	8.2
Anyone joining household for other reasons	3.0	2.0
Anyone leaving household since last survey year	34.7	19.5
Anyone died	9.6	4.3
Anyone left household to seek employment	14.1	--
Anyone left for marriage	--	7.3
Anyone left for other reasons	24.5	9.7
N	2244	1779

Table 2. Descriptive Statistics of Selected Variables, CHNS (1993-1997), VLS (1995-1998)

	China (%)	Vietnam (%)
Household has person with upper secondary education	37.7	40.8
Mean household assets score	6.1	4.9
Flush toilet in house	25.0	15.9
Earthen floor in house	21.2	15.3
TV in house	85.5	61.4
Household has motorized transport	13.0	18.9
Urban	26.8	17.8
N	2244	1779

(Note: All the variables are measured in the survey year of 1997 from the CHNS, of 1998 from the VLS unless otherwise stated.)

Table 3: Logistic Regression: Predictors of Houshold Business Formation, CHNS (1993-1997), VLS (1995-1998)

	Paremeter Estimates											
	Model 1						Model 2					
	Total		Rural		Urban		Total		Rural		Urban	
	China	Vietnam	China	Vietnam	China	Vietnam	China	Vietnam	China	Vietnam	China	Vietnam
No. HH members Age 0-14	0.174 ***	0.009	0.092	-0.002	0.420 ***	0.345	0.172 ***	0.012	0.089	0.001	0.441 ***	0.454
	(0.046)	(0.054)	(0.050)	(0.058)	(0.112)	(0.474)	(0.046)	(0.057)	(0.050)	(0.061)	(0.111)	(0.493)
No. Males Age 15-24	0.232 *	-0.056	0.248 *	-0.125	0.190	0.553	0.218 *	-0.047	0.230 *	-0.109	0.139	0.591
	(0.092)	(0.073)	(0.100)	(0.079)	(0.252)	(0.343)	(0.095)	(0.070)	(0.103)	(0.065)	(0.271)	(0.379)
No. Females Age 15-24	0.122	0.057	0.058	-0.019	0.459	0.516 **	0.100	0.111	0.035	0.038	0.496 *	0.692 **
	(0.096)	(0.063)	(0.102)	(0.050)	(0.243)	(0.188)	(0.097)	(0.067)	(0.102)	(0.063)	(0.236)	(0.237)
No. Males Age 25-59	0.056	0.172	0.104	0.226 *	-0.118	0.038	0.022	0.185 *	0.081	0.245 *	-0.205	-0.034
	(0.112)	(0.089)	(0.121)	(0.103)	(0.287)	(0.181)	(0.116)	(0.094)	(0.125)	(0.111)	(0.294)	(0.195)
No. Females Age 25-59	0.173	-0.161 **	0.115	-0.132	0.360	-0.247	0.116	-0.125 **	0.081	-0.107	0.223	-0.130
	(0.111)	(0.062)	(0.125)	(0.071)	(0.245)	(0.161)	(0.109)	(0.053)	(0.123)	(0.065)	(0.249)	(0.279)
No. Members Age 60-69	0.010	-0.008	-0.027	0.090	0.185	-0.234	-0.027	0.017	-0.046	0.111	0.066	-0.181
	(0.102)	(0.137)	(0.115)	(0.144)	(0.200)	(0.227)	(0.101)	(0.135)	(0.116)	(0.144)	(0.205)	(0.244)
No. HH Members Age 70 and older	-0.034	-0.171	-0.076	-0.117	0.016	-0.219	-0.062	-0.183	-0.101	-0.137	-0.039	0.029
	(0.110)	(0.147)	(0.126)	(0.162)	(0.270)	(0.193)	(0.107)	(0.152)	(0.125)	(0.171)	(0.239)	(0.264)
Anyone joining household	-0.143	0.232	-0.185	0.152	-0.290	0.791 *	--	--	--	--	--	--
	(0.161)	(0.127)	(0.194)	(0.145)	(0.314)	(0.375)						
Any birth	--	--	--	--	--	--	0.310	0.483 **	0.226	0.396 *	0.432	1.355 ***
							(0.176)	(0.154)	(0.210)	(0.158)	(0.351)	(0.278)
Anyone marrying into household	--	--	--	--	--	--	-0.373	-0.367 ***	-0.390	-0.385 **	-0.325	-1.155
							(0.224)	(0.107)	(0.250)	(0.141)	(0.574)	(0.630)
Anyone joining household for other reasons	--	--	--	--	--	--	-0.479	-0.194	-0.195	-0.336	-1.375 *	0.345
							(0.336)	(0.437)	(0.414)	(0.552)	(0.669)	(1.305)
Anyone leaving household	-0.344 *	-0.002	-0.278	0.130	-0.673	-0.456	--	--	--	--	--	--
	(0.146)	(0.177)	(0.158)	(0.168)	(0.416)	(0.296)						
Anyone died	--	--	--	--	--	--	-0.120	0.239	-0.130	0.496	-0.271	-1.410 ***
							(0.195)	(0.386)	(0.225)	(0.415)	(0.513)	(0.175)
Anyone left for employment	--	--	--	--	--	--	0.139		0.165	--	-0.155	--
							(0.165)	--	(0.174)		(0.461)	
Anyone left for marriage	--	--	--	--	--	--	--	-0.236	--	-0.133	--	-0.534
								(0.177)		(0.207)		(0.543)
Anyone left for other reasons	--	--	--	--	--	--	-0.199	0.073	-0.192	0.126	-0.314	0.476
							(0.156)	(0.242)	(0.165)	(0.231)	(0.443)	(0.619)
Household has person with upper secondary educ	-0.137	-0.096	0.017	-0.109	-0.699 **	-0.401	-0.127	-0.095	0.026	-0.108	-0.623 *	-0.360
	(0.131)	(0.177)	(0.150)	(0.219)	(0.248)	(0.347)	(0.132)	(0.172)	(0.152)	(0.212)	(0.253)	(0.478)
Mean household assets Score	0.033	0.011	0.054 *	0.067	0.018	-0.057	0.037	0.010	0.057 *	0.069	0.017	-0.059
	(0.023)	(0.037)	(0.025)	(0.053)	(0.053)	(0.045)	(0.023)	(0.038)	(0.025)	(0.054)	(0.054)	(0.057)
Flush toilet in house	0.131	0.482	0.502 *	0.983 ***	-0.417	0.111	0.147	0.497	0.512 *	0.989 ***	-0.349	0.063
	(0.188)	(0.302)	(0.217)	(0.198)	(0.287)	(0.302)	(0.191)	(0.290)	(0.222)	(0.178)	(0.288)	(0.363)

Flush toilet in house	0.131	0.482	0.502 *	0.983 ***	-0.417	0.111	0.147	0.497	0.512 *	0.989 ***	-0.349	0.063
	(0.188)	(0.302)	(0.217)	(0.198)	(0.287)	(0.302)	(0.191)	(0.290)	(0.222)	(0.178)	(0.288)	(0.363)
Earthen floor in house	0.002	-0.152	-0.075	-0.076	0.446		0.002	-0.166	-0.076	-0.093	0.457	
	(0.164)	(0.253)	(0.188)	(0.244)	(0.279)		(0.162)	(0.249)	(0.184)	(0.238)	(0.293)	
TV in house	0.163	0.196	0.227	0.079	-0.376	-1.458 ***	0.195	0.199	0.262	0.075	-0.340	-1.415 ***
	(0.206)	(0.203)	(0.236)	(0.258)	(0.374)	(0.248)	(0.210)	(0.208)	(0.240)	(0.264)	(0.401)	(0.237)
Household has motorized transport	0.475 *	0.326	0.186	0.371	0.882 **	0.326 ***	0.455 *	0.321	0.158	0.350	0.921 **	0.317 ***
	(0.196)	(0.230)	(0.232)	(0.303)	(0.338)	(0.098)	(0.197)	(0.231)	(0.234)	(0.311)	(0.343)	(0.068)
Household had family business in last survey year	1.662 ***	1.878 ***	1.600 ***	1.688 ***	1.867 ***	2.645 ***	1.662 ***	1.878 ***	1.597 ***	1.694 ***	1.946 ***	2.779 ***
	(0.135)	(0.142)	(0.150)	(0.113)	(0.288)	(0.326)	(0.136)	(0.141)	(0.150)	(0.126)	(0.288)	(0.307)
HH in Urban Setting	-0.260	0.982 **					-0.257	0.962 **				
	(0.228)	(0.314)					(0.226)	(0.309)				
Constant	-2.359 ***	-2.143 ***	-2.460 ***	-2.313 ***	-2.009 ***	0.427	-2.382 ***	-2.232 ***	-2.500 ***	-2.400 ***	-1.989 ***	-0.001
	(0.259)	(0.176)	(0.269)	(0.154)	(0.542)	(0.471)	(0.256)	(0.166)	(0.271)	(0.146)	(0.520)	(0.830)
Pseudo R square							0.13	0.23	0.13	0.16	0.20	0.29
BIC'							-146.6	-443.5	-95.1	-226.5	13.2	-103.8

(Robust Standard Error in Parentheses;***p<=.001, ** p<=0.01, * p<=0.05

Table 4: Logistic Regression: Predictors of Household Economic Diversification, CHNS (1993-1997), VLS (1995-1998)

	Paremeter Estimates											
	Model 1						Model 2					
	Total		Rural		Urban		Total		Rural		Urban	
	China	Vietnam	China	Vietnam	China	Vietnam	China	Vietnam	China	Vietnam	China	Vietnam
No. HH members Age 0-14	0.115 *	-0.144 ***	0.026	-0.129 ***	0.374 **	-0.375	0.112 *	-0.155 ***	0.038	-0.142 ***	0.347 **	-0.316
	(0.047)	(0.032)	(0.051)	(0.026)	(0.122)	(0.252)	(0.048)	(0.031)	(0.052)	(0.025)	(0.118)	(0.249)
No. Males Age 15-24	0.473 ***	-0.020	0.534 ***	-0.024	0.331	-0.208	0.354 ***	-0.097	0.394 ***	-0.098	0.272	-0.219
	(0.084)	(0.069)	(0.095)	(0.090)	(0.212)	(0.301)	(0.091)	(0.078)	(0.106)	(0.103)	(0.213)	(0.311)
No. Females Age 15-24	0.260 **	0.063	0.192	-0.004	0.604 **	0.326 **	0.179	0.134	0.088	0.090	0.710 **	0.351 *
	(0.091)	(0.097)	(0.099)	(0.106)	(0.202)	(0.135)	(0.096)	(0.084)	(0.102)	(0.093)	(0.247)	(0.159)
No. Males Age 25-59	0.126	0.375 ***	0.143	0.345 ***	0.177	0.443	0.097	0.401 ***	0.099	0.381 ***	0.207	0.491
	(0.100)	(0.069)	(0.107)	(0.056)	(0.240)	(0.358)	(0.104)	(0.072)	(0.110)	(0.061)	(0.259)	(0.385)
No. Females Age 25-59	0.026	0.022	-0.068	-0.045	0.320	0.698	-0.028	0.018	-0.130	-0.043	0.295	0.430
	(0.097)	(0.118)	(0.105)	(0.116)	(0.240)	(0.444)	(0.096)	(0.106)	(0.106)	(0.108)	(0.251)	(0.466)
No. Members Age 60-69	-0.169	0.028	-0.217 *	-0.022	0.032	0.442 ***	-0.165	0.056	-0.222 *	0.015	0.089	0.385 **
	(0.100)	(0.125)	(0.108)	(0.147)	(0.207)	(0.082)	(0.100)	(0.130)	(0.111)	(0.154)	(0.208)	(0.125)
No. HH Members Age 70 and older	-0.171	-0.026	-0.282 **	0.022	0.051	-0.373 *	-0.194	0.023	-0.359 **	0.057	0.140	-0.238
	(0.101)	(0.090)	(0.109)	(0.086)	(0.249)	(0.159)	(0.109)	(0.088)	(0.119)	(0.085)	(0.249)	(0.150)
Anyone joining household	0.078	-0.038	0.036	0.075	-0.050	-0.966 *	--	--	--	--	--	--
	(0.155)	(0.141)	(0.183)	(0.125)	(0.295)	(0.409)						
Any birth	--	--	--	--	--	--	0.457 **	-0.019	0.394	0.185	0.516 *	-1.202 ***
							(0.168)	(0.239)	(0.204)	(0.203)	(0.257)	(0.227)
Anyone marrying into household	--	--	--	--	--	--	-0.491 *	-0.464 **	-0.432	-0.536 **	-0.954	-0.781
							(0.201)	(0.161)	(0.232)	(0.176)	(0.582)	(0.559)
Anyone joining household for other reasons	--	--	--	--	--	--	0.108	0.406	0.476	0.236	-0.709	0.742
							(0.342)	(0.299)	(0.455)	(0.375)	(0.625)	(1.210)
Anyone leaving household	-0.356 **	0.422	-0.225	0.564 **	-0.948 ***	-0.387	--	--	--	--	--	--
	(0.126)	(0.225)	(0.139)	(0.249)	(0.295)	(0.264)						
Anyone died	--	--	--	--	--	--	-0.219	-0.292	-0.011	0.024	-1.084 *	-1.582 *
							(0.172)	(0.379)	(0.179)	(0.373)	(0.470)	(0.724)
Anyone left for employment	--	--	--	--	--	--	1.457 ***	--	1.622 ***	--	0.937	--
							(0.195)		(0.215)		(0.521)	
Anyone left for marriage	--	--	--	--	--	--	--	-0.273	--	-0.288	--	-0.137
								(0.201)		(0.224)		(0.647)
Anyone left for other reasons	--	--	--	--	--	--	-0.243	1.089 ***	-0.110	1.219	-0.891 *	0.572
							(0.152)	(0.259)	(0.169)	(0.283)	(0.360)	(0.296)
Household has person with upper secondary educ	0.154	0.163	0.216	0.120	-0.079	0.154	0.187	0.126	0.281 *	0.080	-0.155	0.135
	(0.118)	(0.098)	(0.130)	(0.116)	(0.286)	(0.246)	(0.121)	(0.105)	(0.132)	(0.118)	(0.289)	(0.275)
Mean household assets Score	0.048	0.005	0.093 **	0.064	-0.029	-0.099 **	0.061 *	0.005	0.104 **	0.063	-0.015	-0.085 *
	(0.027)	(0.036)	(0.033)	(0.043)	(0.054)	(0.037)	(0.027)	(0.036)	(0.034)	(0.045)	(0.054)	(0.039)
Flush toilet in house	-0.568 **	0.111	-0.265	0.253	-0.909 **	0.091	-0.566 **	0.081	-0.232	0.212	-0.920 ***	0.024
	(0.192)	(0.184)	(0.247)	(0.246)	(0.301)	(0.397)	(0.197)	(0.188)	(0.258)	(0.267)	(0.287)	(0.379)

Flush toilet in house	-0.568	**	0.111		-0.265		0.253		-0.909	**	0.091		-0.566	**	0.081		-0.232		0.212		-0.920	***	0.024	
	(0.192)		(0.184)		(0.247)		(0.246)		(0.301)		(0.397)		(0.197)		(0.188)		(0.258)		(0.267)		(0.287)		(0.379)	
Earthen floor in house	-0.143		-0.299	*	-0.245		-0.260		0.585				-0.229		-0.268		-0.348		-0.236		0.522		--	
	(0.166)		(0.153)		(0.178)		(0.162)		(0.387)				(0.168)		(0.144)		(0.180)		(0.151)		(0.430)			
TV in house	0.056		0.233		0.046		0.059		-0.300		0.434		0.215		0.226		0.241		0.057		-0.324		0.218	
	(0.203)		(0.153)		(0.235)		(0.141)		(0.401)		(0.289)		(0.214)		(0.171)		(0.243)		(0.169)		(0.392)		(0.260)	
Household has motorized transport	0.184		0.215		-0.147		0.101		0.634	*	0.559		0.153		0.243		-0.159		0.140		0.633	*	0.459	
	(0.206)		(0.199)		(0.262)		(0.240)		(0.282)		(0.537)		(0.208)		(0.212)		(0.275)		(0.273)		(0.290)		(0.509)	
Household had family business in last survey year	1.432	***	1.188	***	1.369	***	1.126	***	1.403	***	1.637	**	1.458	***	1.227	***	1.396	***	1.163	***	1.431	***	1.631	*
	(0.129)		(0.116)		(0.148)		(0.079)		(0.272)		(0.635)		(0.131)		(0.112)		(0.153)		(0.067)		(0.272)		(0.671)	
HH in Urban Setting	-0.733	***	-0.454	**									-0.687	**	-0.421	**	--		--		--		--	
	(0.226)		(0.145)										(0.226)		(0.158)									
Constant	-1.381	***	-1.723	***	-1.420	***	-1.750	***	-1.675	***	-2.327	***	-1.672	***	-1.747	***	-1.753	***	-1.794	***	-1.803	***	-2.005	***
	(0.226)		(0.153)		(0.238)		(0.174)		(0.473)		(0.331)		(0.227)		(0.143)		(0.243)		(0.174)		(0.505)		(0.436)	
Pseudo R square													0.20		0.11		0.20		0.11		0.25		0.17	
BIC'													-465.0		-183.4		-310.7		-172.5		-53.8		-56.9	

(Robust Standard Error in Parentheses;***p<=.001, ** p<=0.01, * p<=0.05

Table 5: Logistic Regression: Predictors of Wage Employment, CHNS (1993-1997), VLS (1995-1998)

	Paremeter Estimates											
	Model 1						Model 2					
	Total		Rural		Urban		Total		Rural		Urban	
	China	Vietnam	China	Vietnam	China	Vietnam	China	Vietnam	China	Vietnam	China	Vietnam
No. HH members Age 0-14	-0.053	-0.300 ***	-0.025	-0.319 ***	-0.243 *	-0.237	-0.063	-0.330 ***	-0.023	-0.354 ***	-0.274 *	-0.294
	(0.046)	(0.065)	(0.050)	(0.067)	(0.110)	(0.240)	(0.049)	(0.063)	(0.052)	(0.067)	(0.123)	(0.197)
No. Males Age 15-24	0.275 **	0.024	0.386 ***	0.016	-0.353	-0.153	0.107	-0.101	0.197	-0.131	-0.438	-0.224
	(0.098)	(0.105)	(0.105)	(0.123)	(0.234)	(0.198)	(0.104)	(0.112)	(0.116)	(0.144)	(0.250)	(0.196)
No. Females Age 15-24	0.210 *	-0.088	0.191 *	-0.141	0.302	0.125	0.115	-0.035	0.078	-0.049	0.380	-0.037
	(0.091)	(0.122)	(0.096)	(0.150)	(0.317)	(0.092)	(0.093)	(0.102)	(0.096)	(0.136)	(0.349)	(0.131)
No. Males Age 25-59	0.200	0.168	0.172	0.044	0.387	0.491	0.168	0.185	0.129	0.059	0.445	0.566
	(0.107)	(0.134)	(0.114)	(0.062)	(0.257)	(0.660)	(0.112)	(0.133)	(0.121)	(0.076)	(0.257)	(0.645)
No. Females Age 25-59	0.049	0.065	-0.119	-0.027	0.903 ***	0.730 *	0.009	0.071	-0.175	-0.036	1.032 ***	0.588
	(0.113)	(0.144)	(0.122)	(0.154)	(0.229)	(0.306)	(0.115)	(0.130)	(0.124)	(0.146)	(0.238)	(0.318)
No. Members Age 60-69	-0.320 **	0.125	-0.259 *	0.056	-0.506 **	0.433	-0.327 **	0.144	-0.273 *	0.090	-0.441 *	0.398
	(0.102)	(0.151)	(0.121)	(0.179)	(0.178)	(0.302)	(0.106)	(0.134)	(0.126)	(0.159)	(0.189)	(0.405)
No. HH Members Age 70 and older	-0.370 ***	0.048	-0.293 *	0.096	-0.559 *	-0.170	-0.444 ***	0.119	-0.401 **	0.156	-0.516 *	-0.382 ***
	(0.106)	(0.087)	(0.122)	(0.095)	(0.230)	(0.289)	(0.113)	(0.087)	(0.133)	(0.099)	(0.229)	(0.091)
Anyone joining household	0.067	-0.254	0.106	-0.167	-0.204	-0.716 ***	--	--	--	--	--	--
	(0.178)	(0.273)	(0.206)	(0.330)	(0.319)	(0.215)						
Any birth	--	--	--	--	--	--	0.336	-0.626	0.431 *	-0.344	-0.233	-1.809 ***
							(0.198)	(0.390)	(0.218)	(0.441)	(0.373)	(0.203)
Anyone marrying into household	--	--	--	--	--	--	-0.401	0.038	-0.355	--	-0.623	--
							(0.228)	(0.321)	(0.258)	-0.277	(0.474)	0.587
Anyone joining household for other reasons	--	--	--	--	--	--	0.310	0.362	0.833	(0.298)	-0.794	(0.754)
							(0.411)	(0.456)	(0.558)	0.228	(0.494)	1.801 ***
Anyone leaving household	-0.198	0.713 *	-0.104	0.902 **	-0.428	-0.399	--	--	--	(0.562)	--	(0.150)
	(0.138)	(0.280)	(0.148)	(0.293)	(0.352)	(0.593)						
Anyone died	--	--	--	--	--	--	0.159	-0.113	0.210	0.106	0.048	0.385
							(0.171)	(0.338)	(0.180)	(0.377)	(0.432)	(0.424)
Anyone left for employment	--	--	--	--	--	--	1.622 ***	--	1.747 ***	--	0.741	--
							(0.208)		(0.217)		(0.707)	
Anyone left for marriage	--	--	--	--	--	--	--	-0.404	--	-0.494	--	-0.251
								(0.239)		(0.260)		(0.517)
Anyone left for other reasons	--	--	--	--	--	--	-0.191	1.465 ***	-0.076	1.768 ***	-0.578	-1.025
							(0.158)	(0.408)	(0.181)	(0.356)	(0.316)	(0.740)
Household has person with upper secondary educ	0.789 ***	0.470 **	0.641 ***	0.441 *	1.204 ***	0.530	0.848 ***	0.415 *	0.715 ***	0.361	1.151 ***	0.545
	(0.130)	(0.166)	(0.151)	(0.181)	(0.262)	(0.660)	(0.131)	(0.182)	(0.151)	(0.201)	(0.255)	(0.545)
Mean household assets Score	0.205 ***	0.056	0.212 ***	0.122 *	0.173 ***	-0.029	0.223 ***	0.055	0.232 ***	0.121 *	0.179 ***	-0.010
	(0.029)	(0.039)	(0.037)	(0.062)	(0.045)	(0.036)	(0.031)	(0.037)	(0.038)	(0.061)	(0.052)	(0.031)

Flush toilet in house	0.574	*	0.156		0.662	**	0.480		0.427		0.087		0.621	***	0.123		0.771	**	0.401		0.448		0.116	
	(0.183)		(0.257)		(0.247)		(0.306)		(0.298)		(0.237)		(0.192)		(0.249)		(0.257)		(0.304)		(0.304)		(0.232)	
Earthen floor in house	-0.177		-0.327		-0.165		-0.283		-0.279		--		-0.281		-0.293		-0.274		-0.246		-0.313		--	
	(0.169)		(0.275)		(0.178)		(0.288)		(0.464)				(0.174)		(0.259)		(0.182)		(0.274)		(0.493)			
TV in house	-0.323		0.187		-0.267		-0.032		-0.243		1.194		-0.187		0.161		-0.090		-0.048		-0.310		1.068	
	(0.217)		(0.269)		(0.240)		(0.302)		(0.604)		(0.650)		(0.218)		(0.276)		(0.246)		(0.312)		(0.568)		(0.654)	
Household has motorized transport	-0.067		0.238		-0.349		0.073		0.671		0.469		-0.076		0.268	*	-0.359		0.154		0.685		0.386	
	(0.260)		(0.131)		(0.308)		(0.211)		(0.413)		(0.263)		(0.263)		(0.133)		(0.320)		(0.257)		(0.448)		(0.278)	
Household had family business in last survey year	1.319	***	2.058	***	1.302	***	1.712	***	1.572	***	3.551	***	1.354	***	2.134	***	1.336	***	1.813	***	1.633	***	3.739	***
	(0.149)		(0.267)		(0.161)		(0.221)		(0.370)		(0.371)		(0.153)		(0.241)		(0.169)		(0.192)		(0.344)		(0.374)	
HH in Urban Setting	-0.203		0.416		--		--		--		--		-0.163		0.469		--		--		--		--	
	(0.180)		(0.315)										(0.190)		(0.309)									
Constant	-1.741	***	-2.549	***	-1.696	***	-2.344	***	-2.494	***	-4.225	***	-2.036	***	-2.495	***	-2.042	***	-2.283	***	-2.647	***	-4.000	***
	(0.240)		(0.355)		(0.266)		(0.281)		(0.544)		(0.514)		(0.239)		(0.362)		(0.266)		(0.321)		(0.543)		(0.393)	
Pseudo R square													0.29		0.30		0.28		0.22		0.38		0.44	
BIC'													-525.4		-733.0		-475.8		-288.2		-153.0		-186.2	

(Robust Standard Error in Parentheses;***p<=.001, ** p<=0.01, * p<=0.05

Figure 1. Household Economic Activities, CHNS (1993, 1997), VLS (1995, 1998)

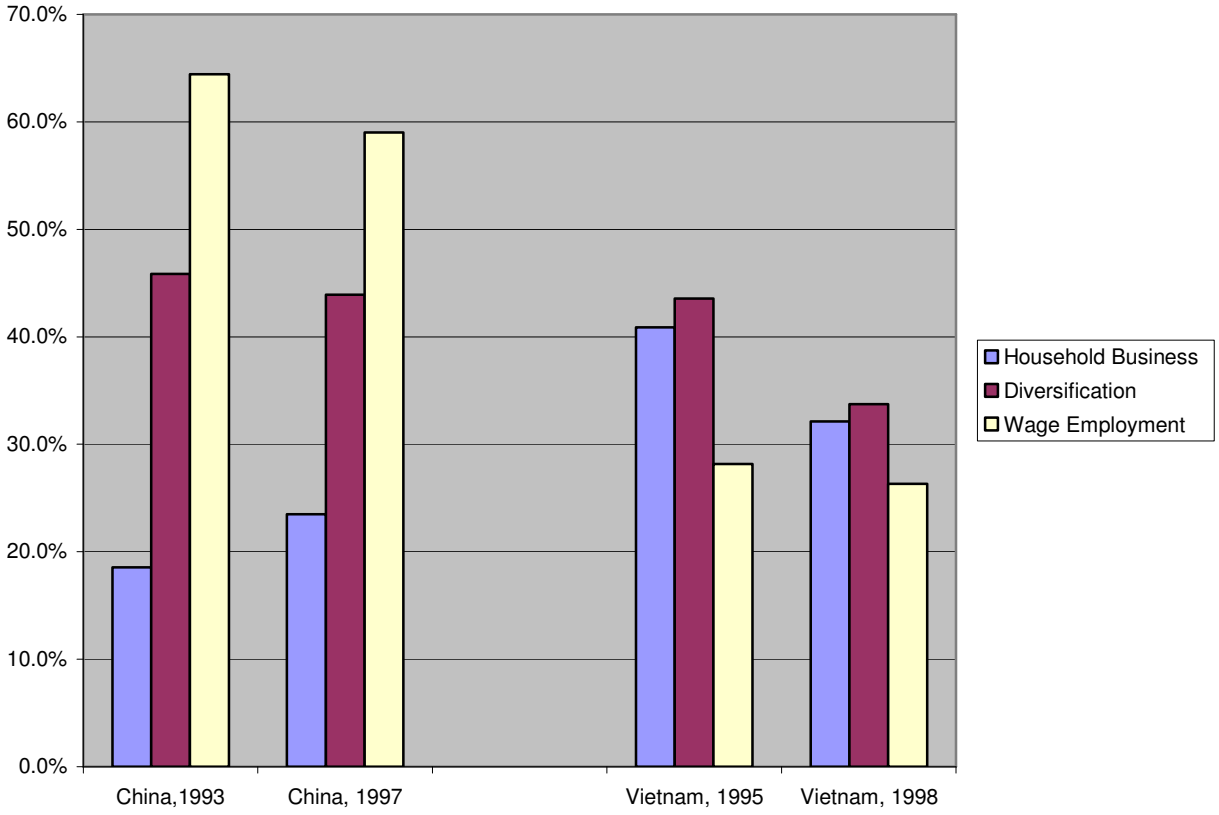

Figure 2a. The Effect of Births on Household Business Formation

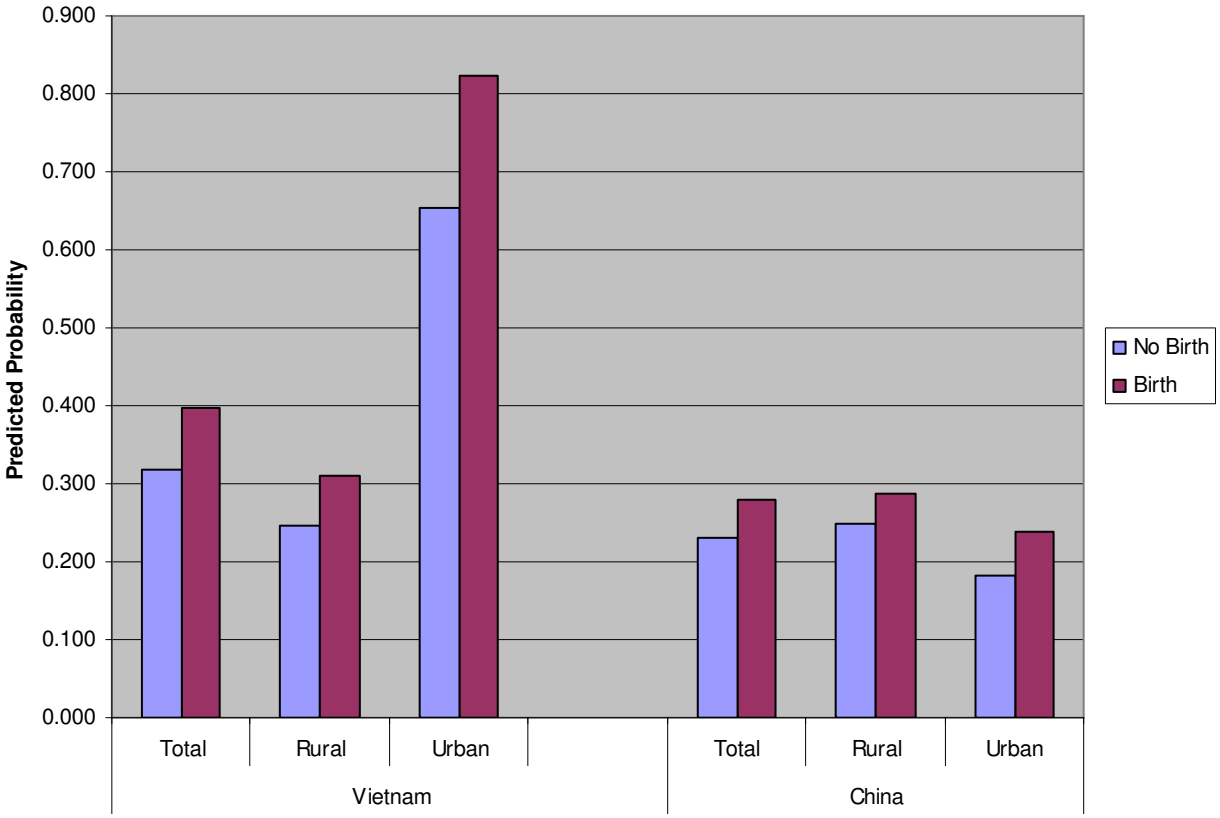

Figure 2b. The Effect of Birth on Household Economic Diversification

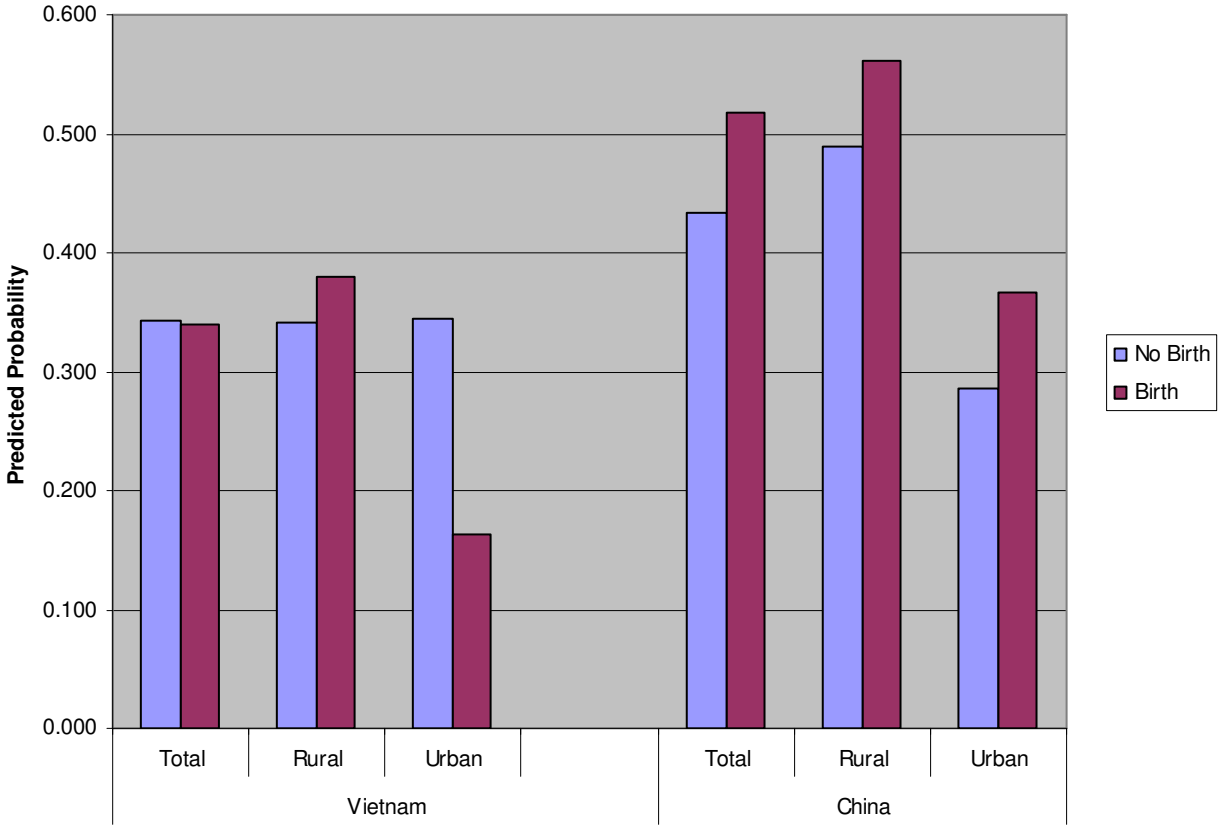

Figure 2c. The Effect of Births on Wage Employment

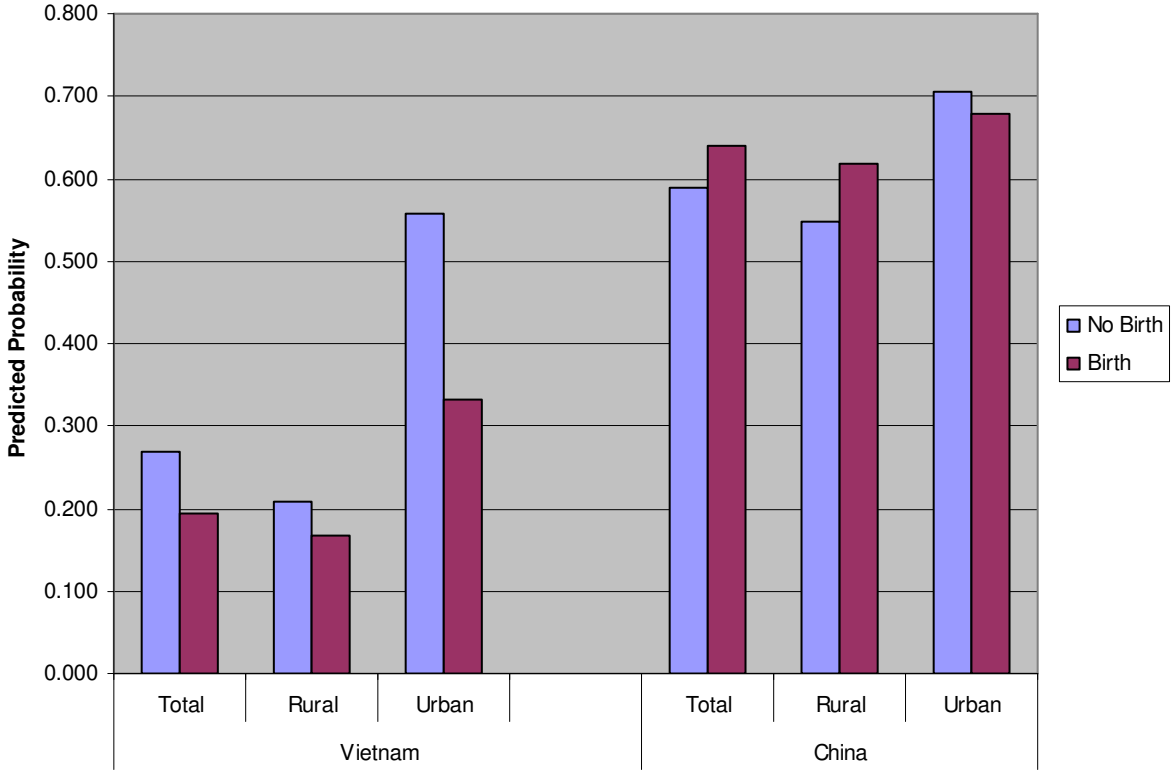

Figure 3a: The Effect of Anyone Married into Household on Houshold Business Formation

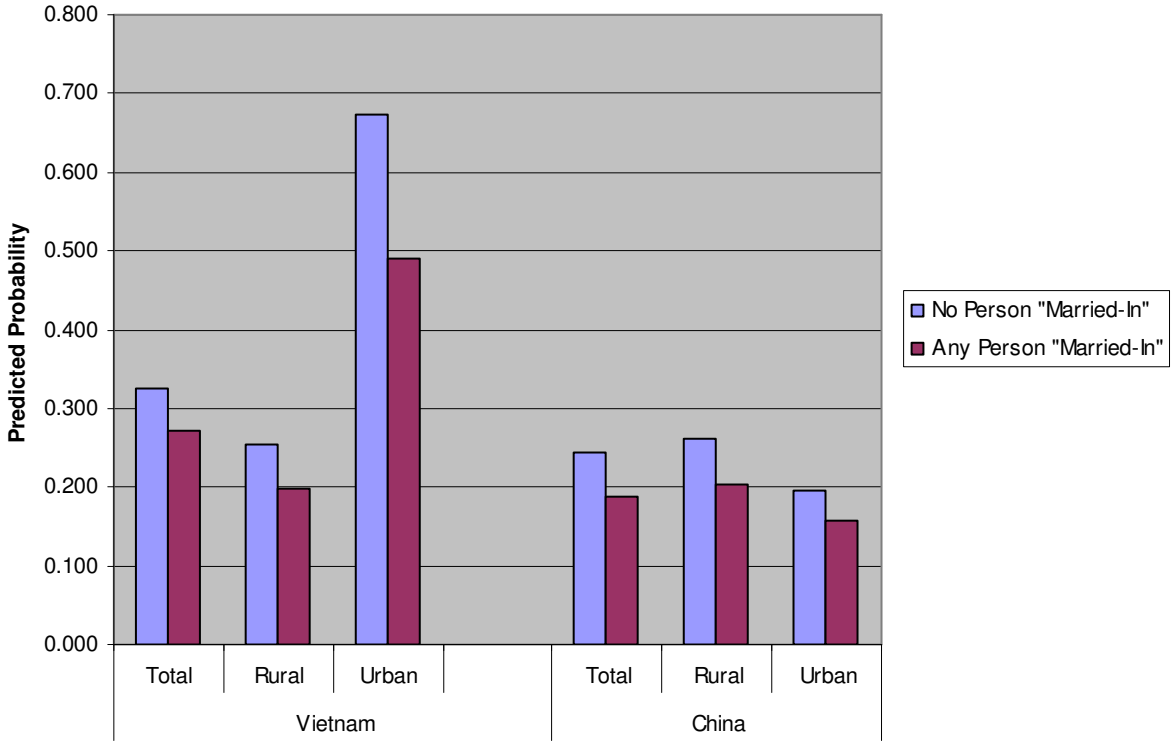

Figure3b. The Effect of Any Person Married into the Household on Economic Diversification

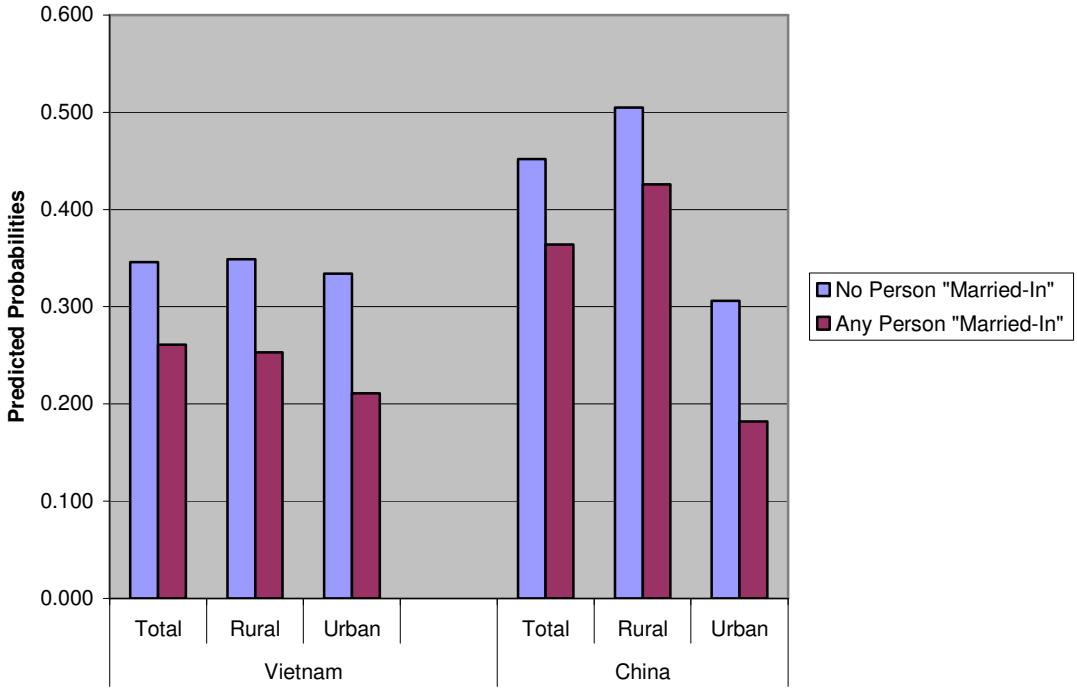

Figure 3c: The Effect of Anyone Married into the Household on Wage Employment

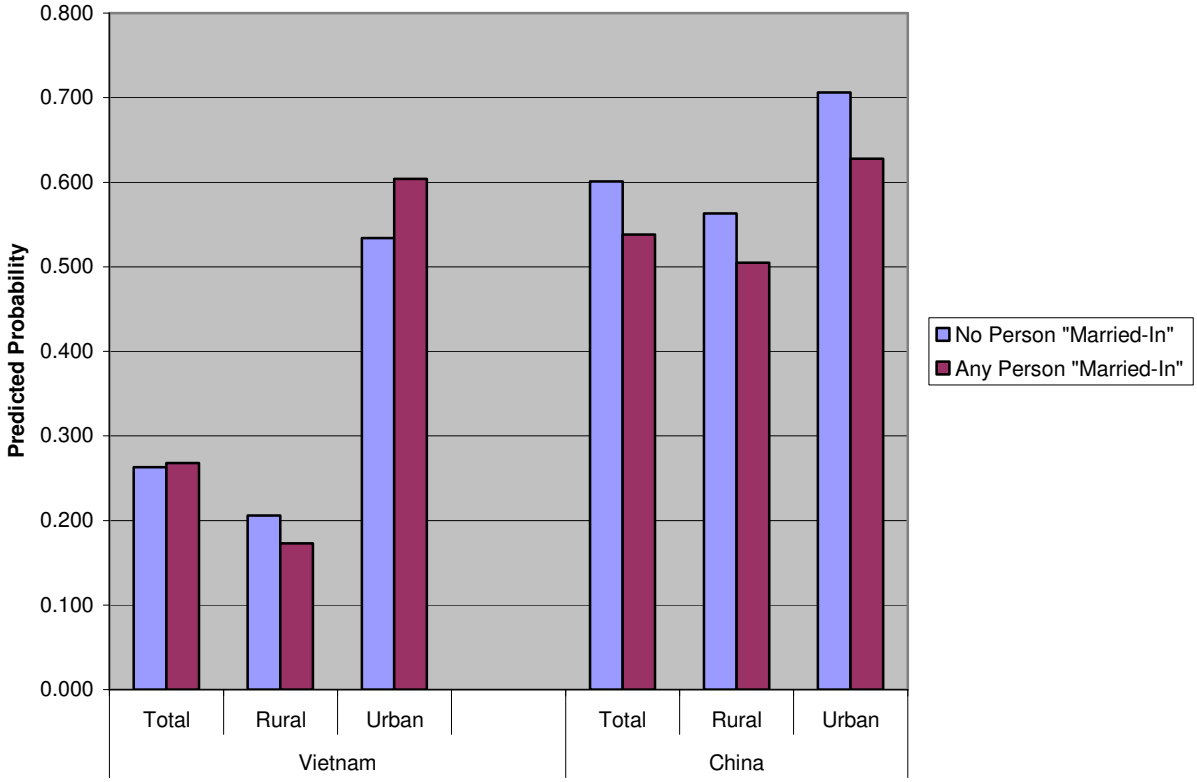

Figure4a. The Effect of Out-migration for Work on Household Business Formation

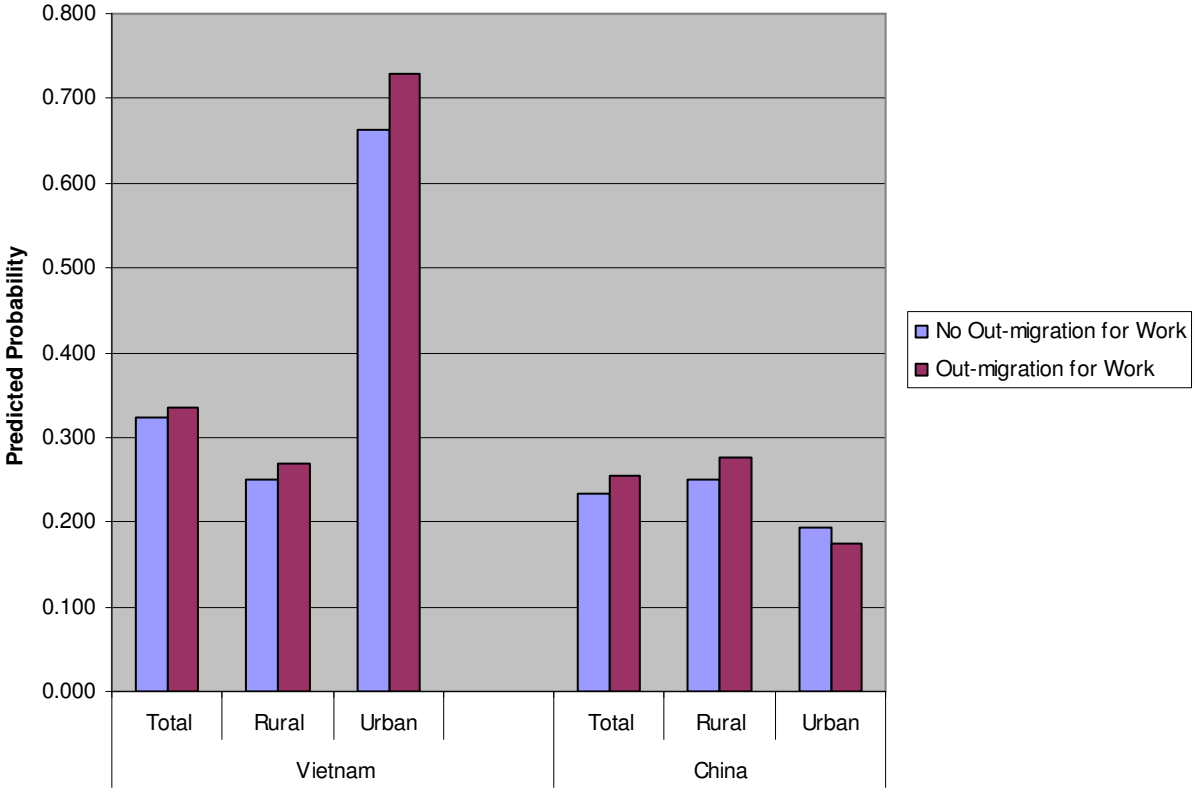

Figure 4b. The Effect of Out-migration for Work on Economic Diversification

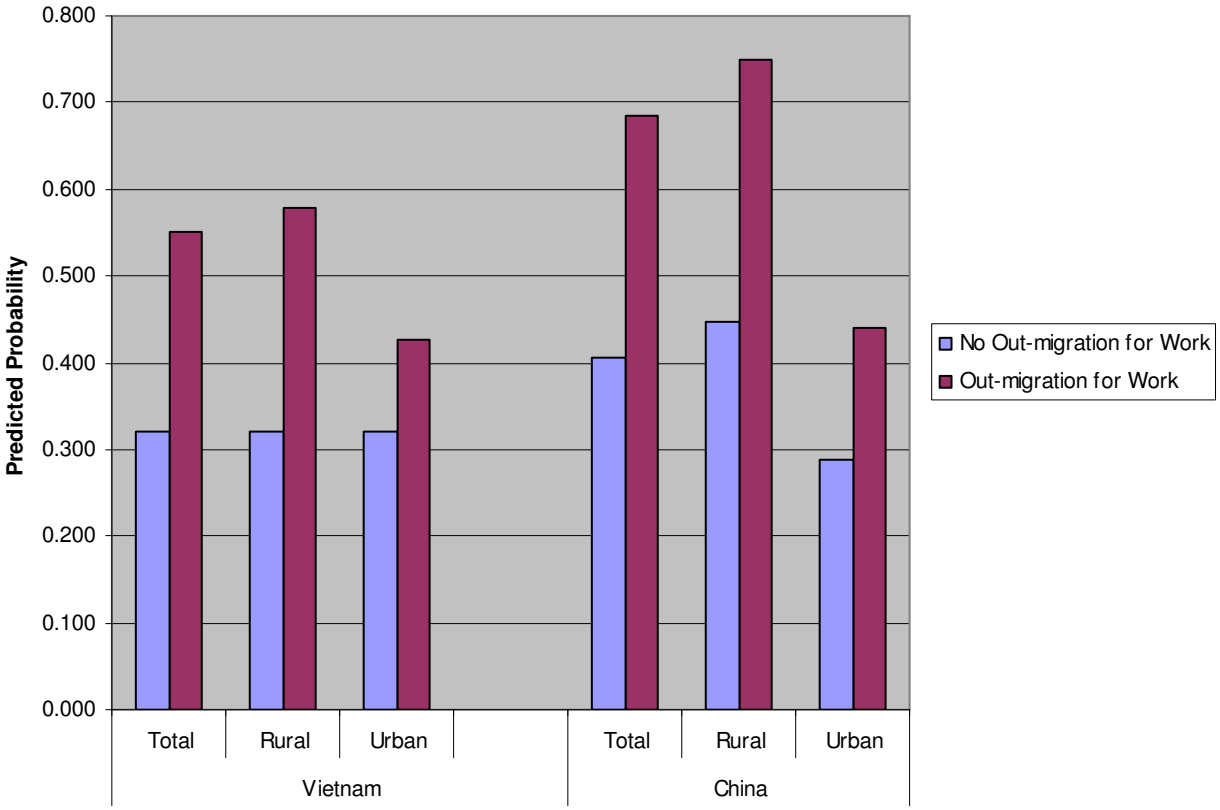

Figure4c. The Effect of Out-migration for Work on Wage Employment