

Ownership, Organization, and Income Inequality: Market Transition in Rural Vietnam

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In transitional economies, the scale of economic enterprise and the allocation of property rights shape social structures and influence income distribution. In agrarian economies, where labor-intensive family enterprises dominate, political officials' income advantages decline rapidly relative to those of private entrepreneurs. Larger enterprises, however, provide greater income opportunities for officials, especially when a government retains an ownership stake in the initial phases of reform. This article replicates the findings from an earlier study of rural China using comparable survey data from Vietnam. We find that during the first two decades of rural market reform in Vietnam and China, the scale and ownership of firms differed radically. Small family enterprises dominated rural development in Vietnam, whereas China's development was dominated by larger firms, initially established by rural governments. Consequently, while cadre income advantages have kept pace with those of private entrepreneurs in China, they have declined rapidly in Vietnam.

Research on inequality in transitional economies has retreated from an initial preoccupation with claims about the inherent impact of market transition. The claim that the shift from plan to market inherently favors entrepreneurs and direct producers at the expense of political officials—and human capital at the expense of political capital—has attracted a great deal of attention (Nee 1989, 1991). The ensuing debate was largely about how to interpret the findings of survey-based analyses that often failed to detect the predicted decline of political advantages (Bian and Logan 1996; Hauser and Xie 2005; Liu 2003; Nee 1996; Nee and Cao 1999; Parish and Michelson 1996; Szelényi and Kostello 1996; Walder 1996; Wu and Xie 2003; Xie and Hannum 1996). As research accumulated it became apparent that early claims about market transition were underspecified. This made it difficult to test propositions about market transitions and their impact.

The primary source of confusion was a lack of clarity about what constitutes market transition. Researchers have attempted to clarify this question by noting that the relationship between the spread of market mechanisms and changes in ownership is highly variable across nations and economic sectors. In addition, transitional economies differ in ways that affect income distribution that cannot be attributed to marketization. This has led many observers to conclude that the impact of markets is in fact contingent on variable political and economic circumstances. According to this view, these dimensions of change are independent of the spread of markets, and recognizing this fact will lead to a more precise and testable theory (Gerber 2002; Gerber and Hout 1998; Walder 1996, 2002; Zhou 2000).

What specifically does “market transition” mean in the context of twentieth-century state socialism? It means the abandonment of input-output planning based on annual sales and supply quotas devised by planning agencies—a shift from plan to market. Under state plans, customers for products and suppliers of inputs were specified at fixed, state-set prices. Profit was irrelevant as either a measure of performance or

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as an incentive, and virtually all profits were retained by the state. Labor was a fixed cost and full employment a goal: workers were not laid off to cut costs. Capital did not accumulate at the level of the firm; it was accumulated by government jurisdictions that redirected it in the form of investment grants to targeted firms and sectors (Ellman 1989; Kornai 1992).

Market transition does not refer to tinkering with market mechanisms as a supplement to these structures: it means a transition to a system where market mechanisms are dominant, if they have not completely supplanted government plans altogether. A government no longer guarantees customers for products, nor does it specify the sources of supplies. Prices of products and supplies fluctuate to reflect relative scarcities. Profit becomes the primary if not sole measure of performance, capital accumulates at the firm, labor becomes expendable, and employment guarantees disappear. The government reduces or eliminates subsidies for unprofitable firms; uncompetitive firms flounder and eventually disappear. Market transition therefore implies a wrenching process of industrial restructuring and the emergence of forms of competition that did not previously exist, especially as a domestic economy is exposed to global competition. The transition to markets may be rapid or gradual, but the contours of the path are well established.¹

Is ownership an independent dimension of market reform or is it actually an integral part of any definition of a market economy? The previous paragraph describes radical changes in economic organization, but it makes no mention of ownership. Conceptually, researchers have long recognized that market allocation and ownership are distinct and independent dimensions of economic organization. Through much of the twentieth century, critics of capitalism debated the feasibility of market socialism. Indeed, Soviet economists in the 1920s carefully considered the compatibility of market allocation with state ownership of assets before devising the system that came to define state socialism (Erllich 1960; Lewin 1974). As a policy matter, the debate has focused on whether market reforms are effective without a simultaneous

privatization of firms. Kornai (1990), among others, argues that market reforms under state socialism do not work in practice, nor would they work in a postcommunist context if state ownership is maintained.² If market allocation and ownership were not conceptually independent dimensions of change, there would be no policy issue to debate.

Most importantly, as an empirical matter, the world's transitional economies exhibit wide variation in ownership forms. The extent to which government ownership is preserved, how early and rapidly privatization occurs, under what rules privatization occurs, and who obtains ownership rights all vary enormously across transitional economies (Walder 2003). Some transitional economies rapidly privatized state assets at an early stage of reform; others preserved government ownership for decades as they dismantled their command economies. It therefore does not matter whether one agrees that privatization is an integral dimension of market transition or is essential for improved economic performance. Analytically, ownership varies independently from the spread of market mechanisms in observable ways. Ownership must therefore be specified for any theory to have clear empirical implications.

Variation in the pace and procedures of privatization is due primarily to government policy, and this has led some observers to designate political change as a crucially important circumstance that can alter stratification outcomes. The two transitional economies that delayed the privatization of core state assets for the longest period of time—China and Vietnam—are the only ones where the original communist parties still rule in the name of socialism and where political structures have undergone little fundamental change. A wide range of variation in the degree of regime change that has accom-

² Walder (1995) notes that Kornai's arguments are less compelling in a large economy with many small government jurisdictions, each of which operates a small number of enterprises in a competitive environment. The budget constraint on these rural firms is necessarily harder than that of larger firms in more industrialized urban jurisdictions. Indeed, this may be one reason for the surprisingly strong performance of the rural public sector in the first decade of China's market reforms.

¹ The details differ in agriculture, as we will describe below.

panied market transition can be seen in more than two dozen postcommunist regimes. Some communist regimes collapsed and were replaced by competitive multiparty political systems at the outset of market transition. At the other extreme, the previous regime, either in part or in whole, has continued to rule as an autocracy, even as it dismantled a command economy (McFaul 2002). Political incumbents' advantages in these varied circumstances should be very different, even if processes of economic change are otherwise similar. Among other effects, the extent of regime change independently influences the ability of officeholders to derive income from public assets or convert them to their own property (Walder 2003).

Although the allocation of assets matters in crucial ways, some argue that the structure of the assets is also an independent dimension that alters stratification outcomes (Róna-Tas 1994; Walder 2003). Large-scale enterprise and concentrated capital tend to favor those in positions of authority. Small-scale assets, especially family-sized firms and private smallholding agriculture, tend to spread their benefits more broadly. Researchers have offered several claims to support this proposition. First, entry barriers vary greatly by the scale of enterprise. Entry barriers are low in small-scale, labor-intensive activities because capital requirements for initial investment are smaller, technologies are accessible, and the expertise required to produce and market goods is widely dispersed in a population.³ Large-scale enterprises in the corporate sector, or assets like oil and mineral rights, are initially under the control of government officials who oversaw them in the past and who have experience, knowledge, and administrative access that few others possess. The opportunities to derive income from or to obtain ownership rights over these concentrated corporate assets are biased toward incumbent officials (unless a government passes laws that are effectively enforced to prevent this). Opportunities are further biased toward incumbents when they

can easily liquidate assets and hide them, especially if the proceeds can be laundered or moved offshore (Ding 2000a, 2000b, 2000c; McFaul 1995). Based on these observations, entrepreneurs' advantages relative to those of officials are inversely related to the scale of enterprise or the concentration of assets: the large corporate sector favors cadres more than smaller enterprises (Róna-Tas 1994); rural settings favor entrepreneurs relative to officials (Walder 1996, 2003).

Despite the obvious comparative agenda implied by these ideas, almost all research on this subject uses observations from a single country examined in isolation. To test claims that the impact of market transition varies according to political circumstances and the ownership and scale of assets, researchers must compare countries that are matched according to theoretically relevant characteristics. This article attempts to do so by examining claims about the ownership and scale of enterprise in an analysis of rural Vietnam that replicates an earlier study of China.

VIETNAM IN COMPARATIVE PERSPECTIVE

Vietnam and China are ideally matched for a cross-national comparison of economic sectors. The two countries' trajectories share many common features. They stand out from all other transitional economies in the continuity of their political institutions, the overall structure of their economies, and the rapid growth that market reform has stimulated. Unlike almost all other transitional economies, the ruling Communist parties of China and Vietnam have survived intact with only modest organizational change. Both have resisted the rapid and wholesale privatization of previously existing state assets, and they have both left the largest such assets under state control for extended periods. Both began as predominantly agrarian societies with relatively high percentages of the population residing in rural regions and employed in agriculture.⁴ Moreover, both have

³ This reasoning about small-scale assets is the same as the "market opportunity thesis" originally articulated by Nee (1989), which did not specify limiting scope conditions. The position here is that the impact of market opportunity varies by scale of assets.

⁴ In 1990, 80 percent of the Vietnamese population lived in rural regions and 75 percent of the labor

had much higher rates of economic growth than other transitional economies.⁵

The processes of reform in rural Vietnam and China are also very similar. Market reforms began with the dismantling of collective farms, where the land and the means of production were both held in common and jobs were assigned by the managers of production units. Income opportunities outside of collective structures were highly circumscribed. The first step of reform divided collective lands into family farms of generally equal size and quality (an initial condition that analyses of market transition often ignore). This reform freed family farms to produce for rural markets, which were expanding rapidly, and to diversify into animal husbandry, cash crops, and nonagricultural sideline activities. It also freed families to establish private businesses, and the private nonagricultural sector expanded rapidly in both countries. Finally, labor was no longer tied by legal obligations to collective farms. Individuals could work for wages in local enterprises or more distant regions. A thriving rural labor market consequently reemerged in both countries.

Despite these parallels, the rural economies of Vietnam and China betray striking differences in ownership and scale. Rural enterprise in Vietnam emerged almost exclusively from small family businesses, some of which have gradually developed into larger private firms. Rural China also developed a thriving sector of small family enterprises, but in addition it developed an extensive sector of larger enterprises. In the first decade of reform, the larger enterprises were typically founded by rural governments with public funds. For the next two decades, these enterprises remained nominally under government ownership, despite the wide

variety of contracting and leasing arrangements through which they were managed.⁶

Why did the rural economies of China and Vietnam develop so differently? First, rural collectives in North Vietnam made more extensive concessions to household production than did China during the Mao era. In South Vietnam, the government never consolidated collectives before the onset of market reform in 1988. Second, the stronger collective structures and peacetime conditions in China left rural communities with higher standards of living and more funds for investment by the late 1970s (Kerkvliet and Selden 1998). As market reform began nationwide after 1982, rural Chinese governments invested funds to create new manufacturing firms at high rates, which led to a rapidly growing industrial sector under public management (Oi 1992, 1999; Peng 2001; Walder 1995; Whiting 2001). In contrast, rural Vietnam was much poorer, due to decades of warfare, and had weaker collective structures. Individual households thus funded and ran almost all new rural enterprises (Kerkvliet and Selden 1998). By the second decade of market reform, the result was a rural economy in China where the scale of enterprise was much larger and ownership much more oriented toward local government than in Vietnam.

Data on the scale and ownership of rural enterprises in the two countries after the onset of market transition reveal radical differences (see Table 1).⁷ In Vietnam, in 2002, individual sector family businesses made up 65 percent of nonagricultural employment and employed an average of 1.7 people. The comparable household sector in China, in 1996, employed only 19 percent of the labor force and an average of 1.9

force was employed in agriculture; the figures for China were 73 and 53 percent, respectively. In contrast, the corresponding figures for the Russian federation were 27 and 14 percent, respectively; and for Poland they were 39 and 25 percent (World Bank 2006).

⁵ The ratio of 2005 per capita gross domestic product to that in 1990 is .94 in the Russian Federation, 1.68 in Poland, 2.37 in Vietnam, and 3.69 in China (World Bank 2006).

⁶ The two exceptions are the rural enterprise sectors of the coastal southeastern provinces of Zhejiang and Fujian. They are famous for developing a thriving private enterprise sector where many firms were initially disguised as government owned (Chen 1999; Liu 1992; Whiting 2001).

⁷ We assembled Table 1 using public data available from tabulations on the official government Web sites listed in the sources for the table. However, to distinguish urban and rural enterprises in Vietnam and classify detailed ownership categories, we obtained the original data set for the "Industrial Complete Survey 2002" from the Government Statistics Office of Vietnam.

Table 1. Scale and Ownership of Rural Enterprises in Vietnam and China

	Vietnam 2002	China 1996
Public Sector		
Employees (1000s)	702.2	135,080
Number of firms (1000s)	5.8	880.7
Employees per firm	121.1	153.4
Percent of total employment	18.1	77.8
Private Sector		
Employees (1000s)	654.2	5,510
Number of firms (1000s)	16.2	333.0
Employees per firm	40.3	16.6
Percent of total employment	16.8	3.2
Individual Sector		
Employees (1000s)	2,529	33,080
Number of firms (1000s)	1,494	17,680
Employees per firm	1.7	1.9
Percent of total employment	65.1	19.0
Total Employment (1000s)	3,885	173,670

Sources: General Statistics Office of Vietnam (2002), Non-farm Individual Business Establishment survey (www.gso.gov.vn), and the National Bureau of Statistics of China (www.stats.gov.cn).

Notes: "Public sector" in Vietnam includes enterprises classified as central and local state, joint-stock with majority state share, and collective sector enterprises. In China, it includes collective sector enterprises registered under township and village governments. "Private sector" in Vietnam includes limited liability companies, private enterprises, joint stock companies with minority state share or no state share, and foreign joint ventures. In China, it includes firms classified as "private."

people per firm. Larger enterprises employed the remaining 35 percent of the labor force in Vietnam, with the public sector averaging 121 employees per firm and the private sector averaging 40 employees per firm. Only 18 percent of total employment was in the public sector. In China, however, 78 percent of total employment was in public-sector firms that employed an average of 153 people. Privately-owned firms, employing an average of 16 people, accounted for only 3 percent of total employment.

As a transitional economy, rural Vietnam therefore differs markedly from China in two important ways. First, the scale of enterprise is much smaller. Only 35 percent of employment in Vietnam in 2002 was in firms outside the household sector, which employed an average of 62 people. In China, 81 percent of employment in 1996 was in firms outside the household sector, which employed an average of 116 people (calculated from Table 1). Non-agricultural activity in Vietnam was dispersed across a vast number of small household enterprises. In China it was concentrated in a smaller number of larger enterprises. Second, barely over half of employment outside the individual sector in Vietnam was in the public sector. In

contrast, the figure was 96 percent in China (calculated from Table 1).⁸ In short, small private enterprises have led rural industrialization in Vietnam, whereas larger government firms have done so in China.

THE EFFECTS OF ENTERPRISE SCALE AND OWNERSHIP

Scale effects interact with ownership in ways that influence income distribution. In one sense, ownership is implied in scale effects at the lower end of the range: small family enterprise in what is commonly called the "individual" sector is, by definition, privately owned. However, enterprises that draw on pools of capital that transcend what a single family can invest or borrow may take a range of different ownership forms. The wholly owned government enterprise is at one end of the spectrum. These enterprises, though, should not be confused with a state socialist enterprise in a command econo-

⁸ By this point, managers contracted or leased many of these government-owned firms (Walder and Oi 1999).

my. They are not part of input-output planning, they compete on product markets with private enterprises and other government-owned firms, and the government jurisdictions that own them do not have deep financial reserves that guarantee their existence (Walder 1995). These enterprises are founded with government capital, whether classified as "state" or "collective," and they are overseen and operated by the founding government jurisdiction (Walder 1992, 1995). The local government also hires the managers and pays them a salary and bonuses as government employees. At the other end of the spectrum are private firms owned by individual families or partnerships. These are founded with private resources (sometimes from overseas relatives) or bank loans. As these firms expand they may diversify their ownership structures by adding partners or selling stakes to new investors. They remain free, however, of the kind of supervision and obligations that are usually associated with government ownership.

In these larger firms there is a range of ownership forms between full government ownership and fully private firms. The transitional economies of both Vietnam and China have developed a range of mixed ownership forms that combine public ownership with private capital. There are two ways in which the mixed character of ownership is evident. The first is in various joint-venture or joint-stock arrangements (with or without foreign investors) that combine private investment with a government stake. The second develops inside conventional government-owned firms that involve various management contracting schemes. At their extreme, they take the form of renting or leasing publicly-owned firms to individual managers (Walder and Oi 1999). When a manager assumes full legal ownership of the assets, often with some residual debt to the government, the firm shifts into the "private" category (Li and Rozelle 2003).

As a market economy expands in a rural region, the mix of ownership forms outside the individual household sector varies according to existing government policy and local access to capital. Some coastal regions of China, which have strong kinship ties with overseas Chinese communities, rapidly developed thriving private sectors that drew on overseas funds and expertise (Chen 1999; Liu 1992). Initially, these larger private enterprises falsely registered as

publicly owned so that they could buy political insurance. Most Chinese regions, however, established new market-oriented firms as government ventures with public investment or local bank loans (Oi 1992, 1999; Whiting 2001). This latter strategy has been rare in Vietnam, where development in the rural economy has relied primarily on bank loans to small family firms (Kerkvliet and Selden 1998; Ronnäs and Ramamurthy 2001).

To the extent that individual enterprises dominate an economy, we expect that these households will show more rapid income gains than will the households of political officials. In these circumstances, the rural cadres' households will fall behind the entrepreneurs unless they too go into private business. Coastal China witnessed this effect early in its reform process. Indeed, some researchers argue that this is a general proposition about market transition (Nee 1989; see also Walder and Zhao 2006).

Rapid cadre income gains become possible only when a locality develops a sector of larger-scale enterprises. These gains, though, depend partly on the extent of government ownership. We expect that cadre households' income advantages will be large where firms are government owned and where they dominate the nonagricultural economy. Large enterprises generate revenues that directly raise official salaries and bonuses, and they create a larger pool of high-salaried managerial and staff positions. Local officials' power to appoint managers or allocate management contracts provides them with the leverage to place family members in higher-paying positions within these enterprises.⁹ In contrast, we expect that income opportunities for cadre households will be more limited where larger enterprises have few or no ownership ties to government, especially if the private firms have no history of past government ownership. We expect this in part because governments have less authority over private firms and because of the smaller scale and tighter budget constraints of private enterprises. Smaller firms offer fewer high-salaried managerial positions and have fewer financial assets.

⁹ They need not do this by direct intervention; a manager may unilaterally hire a government official's relative as a strategy to cement a relationship.

Large private enterprises, however, are still likely to provide opportunities for official incomes that far exceed those of smaller enterprises from the individual sector. Researchers have found that private entrepreneurs, intent on growing the scale of their operations, actively seek strategic relationships with government officials. For example, they offer them paid positions on their boards or hire their kin (Wank 1999). Large-scale enterprises may therefore have a positive impact on official incomes that is independent of ownership, although public ownership is likely to enhance the effects of scale.

Given the radical differences in the ownership and scale of rural enterprise in Vietnam and China, we expect that a replication of an earlier Chinese study will yield different findings.¹⁰ One Chinese study (Walder 2002) offers three findings based on hierarchical linear models that estimate the effects of economic context. First, cadre households' net income advantages remained large after 15 years of reform and they were equal in magnitude to those of private entrepreneur households. Second, cadre advantages were stable across local economies; they did not change with levels of nonagricultural development, the extensiveness of wage labor, or the extensiveness of private entrepreneurship. Third, entrepreneurs' income advantages were highly sensitive to context. They were smaller where wage labor was extensive and the nonagricultural economy was more highly developed. In other words, although the development of a market economy within China did not diminish cadre advantages, it did diminish entrepreneur advantages. This latter finding resulted from the importance of wage incomes in the highly industrialized Chinese countryside, as well as the diminishing advantages across time for the initial cohort of small household entrepreneurs as rural nonagricultural economies grew.

¹⁰ Although Walder (2003) identified the scale and concentration of assets as an important determinant of elite opportunity, he incorrectly assumed that there were similar asset structures in rural Vietnam and China. Consequently, he erroneously predicted similar elite opportunities in the rural sectors of the two countries.

Given the different scale and ownership structures of rural Vietnam, we expect that income distribution will look very different than in China. First, we expect to find that private entrepreneurs prosper relative to cadres to an extent not observed in China. Second, we expect to find a different relationship between rural development and trends in income advantages. If these scale and ownership effects are strong, we may also find that the further development of this type of market economy enhances the relative prosperity of entrepreneurs.

EVIDENCE FROM A 2002 NATIONAL SURVEY

The 2002 Vietnam Household Living Standards Survey (VHLSS) contains data that are ideal for a replication of the Chinese study. Like the 1996 Chinese survey, the data were gathered 15 years after the onset of market reform. Conducted by the General Statistics Office of Vietnam, the survey is a multistage probability sample of all 61 Vietnamese provinces. It yields a rural sample of 13,698 households.¹¹ We coded data from the households to replicate as closely as possible the variables used in the Chinese study. In most cases the measures are identical. In some cases, due to differences in

¹¹ The primary sampling unit in rural areas is the commune, the lowest level of rural government (this corresponds to the Chinese village, but the commune has a larger average population). Of the total 10,511 communes nationwide in Vietnam, the survey randomly selected 3,000 with probability proportional to population. The survey then further divided each commune into three enumeration areas. Of the resulting total of 9,000 enumeration areas, the survey again selected 3,000 with probability proportional to population. Next, it randomly allocated the enumeration areas to two separate samples: 2,250 for a short income survey and 750 for a more elaborate income and expenditure survey. In these 750 enumeration areas, the survey randomly selected 20 households from a complete list of commune households, resulting in a target sample of 15,000 households. The data from this sample were used to construct the working data set of 13,698 valid cases. A description of the survey is available online (<http://survenetwork.org/surveys/index>). Further information about the General Statistics Office and its survey methodology is available at its Web site (<http://www.gso.gov.vn>).

administrative definitions between the two countries, we devised a measure that is as close as possible to the one used in the original study.

HOUSEHOLD-LEVEL MEASURES

HUMAN CAPITAL. We calculate two measures of human capital at the household level to control for education and experience. Both are identical to those in the Chinese study. We define education as the average level of education (in years) of currently employed members of the household. We define experience as the average age of currently employed members of the household.

HOUSEHOLD LABOR FORCE. This variable controls for wide variations in the size of the household labor force resulting from household structure and life-cycle effects. It is the sum of currently employed household members (identical to the measure in the Chinese study).

CADRE HOUSEHOLD. This variable indicates the presence of at least one current government officeholder in a household. Successive surveys of rural China have used different definitions of “cadre” (see Walder 2002), but they have yielded consistent results. The 1996 survey bases the definition on respondents’ verbatim descriptions of their occupations. The working definition in that study is a village or township leader, whether salaried or not, in a government organization. The Vietnam survey does not contain verbatim descriptions, so we base the definition on the occupational category recorded by the enumerator. We code as cadre those classified as “leaders” in government or party organizations, “managers” in government-owned organizations or enterprises, or “other leader” in official organizations or associations. This yields a sample of “cadre households” that make up 2.4 percent of the sample, compared to 3.8 percent in the Chinese survey. Given the evident differences in the definitions, it is not possible to treat them as strictly equivalent. If there is a bias, the smaller Vietnamese category might inflate cadre household incomes because it is more restrictive: it excludes the unsalaried and part-time village leaders included in the Chinese study.

ENTREPRENEUR HOUSEHOLD. This variable measures whether a household derives income from a private nonagricultural enterprise. In the Chinese study, these households are identified by an answer of “yes” to the question of whether the family derived income from a private nonagricultural business—21 percent of the households fit this category. The Chinese survey also contains verbatim descriptions of these activities, which reveals that large numbers of these households were actually engaged in piece work or hired themselves out as repairmen or construction workers. The study uses these verbatim descriptions to restrict the entrepreneur category to three types of activities that the researchers consider to be private enterprise: drivers who own their own vehicles and haul passengers or goods; a retail shop, guest house, or wholesale business; or a manufacturing enterprise. This more restrictive definition applies to 8 percent of the households (see Walder 2002).

The Vietnamese survey does not record verbatim descriptions of nonagricultural work activities. Instead, we create a similarly restrictive definition of an “entrepreneur” household using a variable for whether a household operates a nonagricultural enterprise that it registered with the government and for which it paid taxes in the prior year. Although using registered tax status might exclude small-scale and informal private activity, this method identifies 9 percent of households as entrepreneur. This is almost identical to the proportion of entrepreneur households in the Chinese study. Even if this category excludes smaller operators who avoid taxation, it is consistent with our desire to include only the more substantial private enterprises in the Vietnamese definitions, in line with the Chinese study. If there is a bias in this definition, it is similar to that in the Chinese study and it would tend to inflate the net income advantages of entrepreneurs.

HOUSEHOLD INCOME. As in the Chinese survey, the VHLSS asks about various sources of income. We sum the income from these sources to derive a measure of total household income during the prior year. Self-reported income estimates are subject to significant error, especially when they involve the recall of incomes from earlier periods. Zhou (2000) shows that the detailed retrospective income questions in

Chinese surveys closely approximate official data, suggesting that responses to such questions are consistent across surveys. If there is a bias in Vietnam, it is unlikely to be different from that in rural China. The dependent variable used in the income equations is the natural log of total household income.

COMMUNE-LEVEL MEASURES OF ECONOMIC CONTEXT

The focus of this analysis is whether the relative net returns to political position and private household enterprise vary by levels of economic expansion, or whether they vary by type of local market economy. The Chinese study reasons that the composition of household income directly reflects local economic contexts. It thus uses sample data on the sources of household income to derive a series of village-level measures of local economic context. We use the same methods to derive identical commune-level measures from the VHLSS data.

AVERAGE COMMUNE INCOME. We compute the mean annual household income of the commune from the 25 households in each of the 550 communes. This is an overall measure of the level of economic development. The income levels of the sampled communes vary widely, from around 12 million dong per year at the 10th percentile (US\$730) to around 34 million a year at the 90th percentile (US\$2,050) (see the Appendix, Table A).

NONAGRICULTURAL DEVELOPMENT. Non-agricultural development is a direct measure of a locality's shift out of agriculture. We define it as the proportion of total commune income derived from nonagricultural sources. The average commune derives 46.4 percent of its income from nonagricultural sources (see the Appendix). The sampled communes range from those almost wholly dependent on agriculture to those that have moved almost entirely out of agriculture.

PRIVATE ENTREPRENEUR ECONOMY. This variable gauges the relative importance of private entrepreneurship in a commune's nonagricultural economy: the proportion of nonagricultural income derived from private household pro-

duction, taxed or untaxed. Communes vary widely in their dependence on private income. Some have almost no private household activity, while others derive almost all of their non-agricultural income from private activities (see the Appendix).

WAGE-LABOR ECONOMY. We define wage-labor economy as the proportion of a commune's nonagricultural income derived from salaries. This is a form of market expansion in which households sell labor to enterprises rather than engage in private enterprise. An average commune derives 38 percent of its nonagricultural income from wages (compared to 70.6 percent in the average Chinese village).

WAGE EMPLOYMENT. This is the proportion of total commune income derived from salaries and bonuses. This measure shows even more clearly the relative unimportance of wage labor in rural Vietnam: communes derive an average of only 16.2 percent of their overall income from wages (compared to 33.1 percent in China).

These contextual variables capture qualitatively different dimensions of economic expansion, and they directly reflect the huge differences in the structure of the enterprise sectors. The predominance of the individual sector in Vietnam leads to much higher proportions of income from household businesses, whereas the predominance of large-scale enterprises in rural China leads to much higher proportions of income from wages. Within each country, moreover, the relative proportion of income from wages versus household enterprise is an indirect indicator of the regional scale of local enterprise. Where larger enterprises dominate a local economy, wages will make up a higher share of income; where the individual sector is dominant, income from household business will occupy a larger share. Although the income data are a direct reflection of the scale of enterprises, they do not contain any information about ownership. In Vietnam, unlike China, roughly half of employment outside the individual sector is in private firms.

Table 2. Comparison of the Vietnamese and Chinese Samples

	Vietnam 2002	China 1996
Mean household education (years)	5.3	5.7
Mean household age (years)	30.4	40.0
Mean household labor (persons)	3.7	2.5
Cadre households (percentage)	2.4	3.8
Entrepreneur households (percentage)	9.0	8.1
Cadre-entrepreneur households (percentage)	.2	.4
Percent of total income from agriculture	49.3	43.2
Percent of total income from wages	15.2	35.4
Percent of nonagricultural income from household enterprise	52.6	24.8
Percent of nonagricultural income from wages	30.1	75.8

Table 3. Correlates of High Income in Rural Vietnam and China (pearson correlation coefficients)

	Private Entrepreneur Economy	Wage Employment	Nonagricultural Development
Vietnam 2002			
Nonagricultural development	.822***	.447***	—
Average (commune) income	.480***	-.147***	.293***
China 1996			
Nonagricultural development	.203***	.749***	—
Average (village) income	.421***	.646***	.646***

*** $p < .001$ (two-tailed tests).

THE RURAL ECONOMIES OF VIETNAM AND CHINA COMPARED

These variables reveal marked structural differences between the two rural economies (see Table 2).¹² Although both derive less than half their total income from agriculture, wage income is much more important in China: 35.4 percent of total income versus 15.2 percent in Vietnam, and 75.8 percent of all nonagricultural income versus 30.1 percent in Vietnam. Households in rural Vietnam are far more dependent on income from private activities: 52.6 percent of nonagricultural income versus 24.8 percent in China.

More striking are the different correlates of private entrepreneurship and wage employment

¹² Although household educational levels are roughly the same in both samples, the Vietnamese households are considerably larger (by 1.2 persons) and younger (by 10 years) (see Table 3). The smaller size and higher age of the Chinese households reflects the impact of China's one-child policy, which dramatically reduced fertility rates after the early 1980s.

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in the two countries. Private entrepreneurship is much more strongly correlated with nonagricultural development in Vietnam (.822) than in China (.203). In this respect, the relative roles of wage employment and private entrepreneurship are reversed in the two countries. Wage employment is highly correlated with both nonagricultural development (.749) and average village income (.646) in China; in Vietnam it is more weakly correlated with nonagricultural development (.447) and in fact negatively correlated with average commune income (see Table 3).

INCOMES OF CADRES AND ENTREPRENEURS IN 2002

The relative incomes of cadre and entrepreneur households highlight the differences between the two rural economies. In China, cadre households' income depends heavily on wages. Furthermore, in the context of a highly industrialized rural economy, cadre households have double the average income of ordinary households and roughly the same income as entrepreneurs (Walder 2002). In Vietnam, by contrast, the average annual incomes of entrepreneur

Table 4. Level and Composition of Rural Household Income, by Household Type, Rural Vietnam, 2002

Household Type	Mean Annual Income (thousand dong)	Median Annual Income (thousand dong)	Mean Proportion of Income From			Number of Households
			Agriculture	Private Enterprise	Wages	
Cadre	30,474	22,650	.525	.099	.269	297
Entrepreneur	50,052	26,635	.176	.731	.043	1,199
Cadre-Entrepreneur	76,295	41,000	.188	.615	.076	29
Ordinary	20,342	15,322	.571	.157	.175	12,173
Total	23,281	16,208	.493	.287	.152	13,698

households are much higher than those of cadres: 50 million versus 30.5 million dong (see Table 4). Cadre households still make 50 percent more than the average income of ordinary rural households (20.3 million dong), but they lag well behind entrepreneurs.

In Vietnam as in China, cadres' and entrepreneurs' incomes have markedly different sources. Cadre households have by far the highest earnings from wages of any group, and entrepreneur households derive most of their income from private household activity. The relative lack of wage labor in rural Vietnam, however, forces cadre households to rely almost as heavily on agricultural income as do ordinary households (see Table 4). What elevates cadre household incomes above their ordinary neighbors is their access to wage income.

Cadre households can rival the incomes of entrepreneurs only if they become heavily involved in entrepreneurship. In Vietnam, as in China, cadre-entrepreneur households have extraordinarily high average incomes—50 percent higher than entrepreneurs. However, cadre-entrepreneur households are extremely rare: only 29 out of the more than 13,000 households in our sample (this is a smaller proportion than in the Chinese study).¹³ Cadre households in Vietnam are no more likely to become entrepreneurs than other rural residents. The percentage of cadre households that are also entrepreneurs (8.9 percent) is nearly the same as the total sample (8.7 percent).

AN ANALYSIS OF INCOME DETERMINATION

Although average incomes are revealing, our primary interest is in net returns to cadre and entrepreneur households, and how these returns vary by levels of economic growth and characteristics of local economies. To estimate these magnitudes we employ the same multilevel models that the Chinese study uses, along with interaction terms between village- and household-level variables.¹⁴ Because the dependent variable is the natural log of household income, we can transform coefficients (100 [$e^b - 1$]) to express the percent change in the dependent variable resulting from a one unit change in the independent variable. We rely on this feature to provide clear and intuitive interpretations of the findings.

Model 1 in Table 5 reports coefficients estimated for a baseline model that excludes household-village interactions. Note that there are large net returns to education and household labor. Each additional year of average household education adds 6.5 percent to total household income (the comparable estimate for China is 6 percent). Each additional employed member of a household adds 15 percent to household income (the comparable estimate for China is 22 percent). Average household age, a measure of experience, is more weakly related to income. Each year of average household age increases household income by 1 percent (versus 9.4 percent in the Chinese study), and as in China the effect shrinks with age.¹⁵ These estimates remain constant across all the models reported in Table 5.

¹³ Cadre-entrepreneur households are .4 percent of the Chinese sample and .2 percent of the Vietnamese sample.

¹⁴ These are multilevel mixed effects linear regressions estimated with the `xtmixed` command in Stata 9.

¹⁵ As seen in the statistical significance of the quadratic term, age squared.

Table 5. Multilevel Model Coefficients, Regression of Household Income (ln) on Household Characteristics and Commune Economic Contexts, Rural Vietnam, 2002

Independent Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Household Level					
Education	.063*** (.002)	.065*** (.002)	.062*** (.002)	.065*** (.002)	.065*** (.002)
Labor	.143*** (.003)	.143*** (.003)	.144*** (.003)	.143*** (.003)	.143*** (.003)
Age	.010*** (.002)	.009*** (.002)	.010*** (.002)	.009*** (.002)	.009*** (.002)
Age squared	-.0003*** (.00002)	-.0003*** (.00002)	-.0003*** (.00002)	-.0003*** (.00002)	-.0003*** (.00002)
Cadre	.214*** (.034)	.217*** (.034)	.216*** (.034)	.213*** (.034)	.215*** (.034)
Entrepreneur	.444*** (.018)	.383*** (.022)	.344*** (.022)	.407*** (.021)	.466*** (.018)
Cadre-entrepreneur	-.028 (.111)	-.010 (.114)	-.012 (.011)	-.008 (.114)	-.027 (.112)
Commune Level					
Household income × 100	.002*** (.0001)				
Nonagricultural development		.144* (.063)			
Entrepreneur economy			.269*** (.059)		
Wage labor economy				-.076 (.070)	
Wage employment					-.095 (.134)
Delivered by Ingenta to : Stanford University Sat, 12 Apr 2008 21:40:32					
Interaction					
Cadre		-.001 (.148)	-.139 (.151)	.138 (.176)	.060 (.310)
Entrepreneur		.577*** (.082)	.778*** (.083)	-.643*** (.108)	-.620*** (.181)
Constant	9.65*** (.010)	9.65*** (.014)	9.65*** (.014)	9.65*** (.014)	9.65*** (.014)
-2 log-likelihood (IGLS)	9123.7	8544.5	8637.5	8511.9	8471.1

Notes: Standard errors are in parentheses. All continuous variables are centered on their means. The main effects for cadre and entrepreneur households therefore represent the effect at the sample mean for the village context variable used in the equation. N = 13,698 for all models.

* $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed tests).

Our primary interest is in the coefficients for cadre and entrepreneur households, which represent their net returns after controlling for these household attributes and local income levels. The term for the cadre-entrepreneur households in these equations serves primarily to ensure that their high incomes are not included in the estimates for either cadre or entrepreneur—their numbers are too small to generate meaningful coefficients.

The estimates for cadre and entrepreneur households mirror differences in mean household income. In the baseline model (Model 1),

entrepreneur households' net advantage (56 percent) is more than double that of cadre households (24 percent). This difference is statistically significant at $p < .001$.¹⁶ In the Chinese study, the net advantage of cadre and entrepreneur households was statistically indistinguishable: 41 and 53 percent, respectively (Walder 2002).¹⁷

¹⁶ Obtained by estimating the equation with cadre household as the reference category.

¹⁷ Although cadres and entrepreneurs likely possess individual attributes that distinguish them from others—attributes that standard human-capital meas-

Does the expansion of a rural market economy lead to a relative decline of cadre income advantages? If so, then cadre advantages should be lower relative to entrepreneurs in regions with higher levels of nonagricultural development or more extensive development of either labor markets or the private household economy. Models 2 to 5 report estimates of the main effects and interaction terms for four different measures of commune economic context. Model 2 reports estimates that include interaction terms for both cadre and entrepreneur households with nonagricultural development. Models 3 and 4 provide the same estimates for measures of the extent to which private entrepreneurship versus wage labor dominates a commune's nonagricultural economy. Model 5 examines the impact of growth in wage labor overall.

A key question is whether the spread of markets diminishes cadre households' income advantages—whether this is conceived as the expansion of the economy, the spread of labor markets, or the spread of private household entrepreneurship. One of the key findings of the Chinese study is that none of these measures diminishes cadre advantages: none of the interaction terms between cadre household and the measures of economic context are statistically significant. We find the same pattern in Vietnam. Cadre income advantages in Vietnam are smaller, but as in China, the levels of growth or the spread of either wage labor or private entrepreneurship does not affect them.

The second key finding for China is that net returns to entrepreneurship are sensitive to local economic context. They decline sharply with the spread of labor markets and increase sharply to the extent that private household entrepreneurship is widespread (Walder 2002). We find the same pattern in Vietnam, with one important exception. As in China, the interaction term for entrepreneur \times commune in Model 3 is large and positive. This indicates that entrepreneurs' net advantages are larger in regions with widespread private entrepreneurship. Also as in China, the same interaction terms in Models 4 and 5 that gauge the impact of high levels of wage employment are large and negative. In

other words, entrepreneur advantages are smaller where wage labor is more widespread. The only difference with the models estimated in the Chinese study is in the coefficient for Model 2 that gauges the impact of the shift out of agriculture. In the Chinese study, the coefficient is small and negative but not statistically significant. In Table 5, the coefficient is large and positive. The contrast results from the different composition of incomes in the two countries. In China, wage income is highly correlated with total income, but in Vietnam it is negatively correlated with total income (see Table 3). The fact that entrepreneur advantages increase with nonagricultural development in Vietnam, but not in China, reflects the different roles of wages versus private household production in the two economies.

The sizes of the coefficients for the contextual effects illustrate how the relative returns to private business vary by economic context. Table 6 displays estimated net returns to private household enterprise across the percentile range of the contextual variables in Models 2, 4, and 5. Because net returns to cadre households do not vary by local context, the cadre figure is reported as a constant percentage in Column 4.¹⁸

Column 1a in Table 6 reports the percentile range for nonagricultural development, and column 1b reports the corresponding estimates of net entrepreneur advantage. At the lowest ranges of nonagricultural development, where nonagricultural enterprises generate no more than 13 to 28 percent of local incomes, the estimated net advantages of entrepreneurs range from 21 to 32 percent. This is roughly the same as cadres' net advantage of 23.8 percent. However, as the economy relies less and less on agricultural incomes, entrepreneurs' estimated net advantages grow. Where nonagricultural enterprises generate 62 to 88 percent of local incomes, the entrepreneurs' net advantages increase to between 60 and 86 percent, 3 to 4 times the net advantage of cadres. Columns 2b and 3b in Table 6 show the same pattern, although in a reverse direction. At the lowest levels of wage employment, entrepreneur advantages are 3 to 4 times larger than cadres; at the

ures do not capture (Gerber 2000)—there is no reason to suspect that entrepreneurs have these characteristics to any greater degree than cadres.

¹⁸ This table corresponds to Table 3 in Walder (2002:246).

Table 6. Estimated Net Returns to Cadre Position and Entrepreneurship, by Structure of Commune Economy

Sample Percentile	Nonagricultural proportion of total commune income (1a)	Net return to entrepreneur households (percent) (1b)	Wages as proportion of commune non-agricultural income (2a)	Net return to entrepreneur households (percent) (2b)	Wages as proportion of total commune income (3a)	Net return to entrepreneur households (percent) (3b)	Net return to cadre households (percent) (4)
5th percentile	.138	21.4	.065	84.1	.030	73.1	23.8
25th percentile	.288	32.4	.223	66.3	.089	66.9	23.8
50th percentile	.437	44.3	.372	51.1	.143	61.3	23.8
75th percentile	.622	60.5	.517	37.6	.215	54.3	23.8
95th percentile	.877	86.0	.725	20.4	.357	41.3	23.8

Sources: Columns 1a, 2a, and 3a are from sample tabulations. Columns 1b, 2b, and 3b are calculated from model estimates in Table 5, columns 2, 4, and 5, respectively. Column 1b is calculated as $b = .383 - (.577[-.464 - x])$, where .464 is the sample mean for the village context variable and x is the figure reported at each percentile of column 1a. The adjusted b is then transformed $(100 [e^b - 1])$ to obtain the percentage figure. Column 2b is similarly calculated as $b = .407 - (-.643[.380 - x])$, and column 3b as $b = .466 - (-.620[.162 - x])$. Column 4 is derived from the coefficient for "cadre household" estimated in Table 5, column 1, and is constant across all village contexts.

highest levels of wage employment, cadre and entrepreneur advantages are roughly the same.

Although this pattern is reminiscent of the Chinese findings, there is one obvious difference: entrepreneurs have benefited much more relative to cadres in Vietnam. In China, at median levels of all measures of economic context, cadre and entrepreneur households' net advantages are large and roughly the same. At the highest levels of wage employment or nonagricultural development, cadre advantages are twice as large as entrepreneurs, while the reverse is the case at the lowest levels. In Vietnam, by contrast, it is only at the highest levels of wage employment or the lowest levels of nonagricultural development that estimated cadre advantages are equal to those of entrepreneurs. At median levels of the contextual variables, cadre advantages are only half as large as entrepreneurs, and at the other extreme they are only one-fourth as large. Estimated cadre advantages are not larger than those of entrepreneurs in any economic context in Vietnam. Moreover, although in China entrepreneur advantages do not increase with the expansion of the nonagricultural economy, in Vietnam they do.

A NOTE ABOUT NORTH-SOUTH DIFFERENCES

Any generalization about income inequality in Vietnam must confront the obvious differences in the recent political and economic histories of the North and the South. The South was ruled by a different regime until 1975, and collectivization was never fully implemented before the nationwide reversion to household agriculture in 1988 (Kerkvliet and Selden 1998). In the North, by contrast, the government collectivized agriculture between 1957 and 1960, and for two decades they harnessed it in support of a major war effort (Vickerman 1986). When collective agriculture was abandoned in 1988, it had been only a few years since families had tilled their own land and operated their own family enterprises in the South, while it had been more than a generation in the North. Moreover, the political system that gave power to rural officials had been in place much longer and was more firmly entrenched in the North.

Given these historical differences, one would expect that cadres' advantages would be larger in the North and entrepreneurs' advantages larger in the South. Surprisingly, we find no evidence of such North-South differences in the 2002 data. Average incomes in the South are indeed significantly higher than incomes in the North. However, the pattern

of findings presented in Table 5, both in terms of net group differences and the interaction effects, is almost identical in the two regions.¹⁹

The lack of North–South differences is open to a variety of interpretations. The previous VHLSS survey, conducted in 1992, might reveal differences in the expected direction. If so, this would suggest a rapid convergence between the two regions. On the other hand, small household enterprise has dominated the rural economy in both the North and the South: the North never had a Chinese-style rural government enterprise. Without a foundation for large cadre income advantages in the North, cadres would be expected to quickly fall behind the first entrepreneurs—this was observed very early in rural China (Nee 1989) and later in the least developed Chinese regions (Walder and Zhao 2006). For our purposes, it is sufficient to note that our findings for the nation as a whole do not mask large regional differences that beg further exploration.

THE FINDINGS INTERPRETED

Within China and Vietnam, the impact of household enterprise is the same: the more extensive the development of the household sector, the greater the income advantages of entrepreneur households relative to all others, including cadre households. In Vietnam, however, the predominance of small family businesses nationwide has boosted the income advantages of entrepreneurs well above those of cadres. Only in the regions of Vietnam where household entrepreneurship is the least developed do cadre households enjoy income advantages that rival those of entrepreneurs. In China, by contrast, cadre advantages are equal to those of entrepreneurs

at median levels of household enterprise development. In regions where wage labor rather than household business is the dominant form of income, cadre advantages far outstrip those of entrepreneurs. Because household enterprise is the dominant force in rural Vietnam, economic growth leads to declining cadre income advantages relative to those of entrepreneurs. In China, where wage labor outside the household sector is the dominant form of nonagricultural development, this effect is absent. Economic growth in rural China has no discernible impact on the relative advantages of cadre and entrepreneur households.

The decisive difference is in the estimates for the contextual effects of Model 2 in Table 5, which gauges the impact of nonagricultural growth on the net advantage of entrepreneurs. It is large and positive, which means that the more that rural Vietnam moves away from agriculture, the greater the income advantages of entrepreneurs relative to cadres—and everyone else. Column 1b in Table 6 illustrates the strength of this relationship. We see that in the most economically developed regions of rural Vietnam, entrepreneur households' net income advantages are already an estimated 3 to 4 times greater than those of cadre households.

The same coefficient in the Chinese study, by contrast, is small and not statistically significant (and its sign, in fact, is negative). Entrepreneurs did not outpace cadres, let alone all others, as the local economy grew. The correlations presented in Table 3 made clear the reasons for this difference. Wage labor is very highly correlated with high nonagricultural income in China; private household income is not. In rural China, the much greater prevalence of wage income, and its high correlation with nonagricultural development, indicates that the spread of wage employment is the primary driver of market expansion. The reverse is the case in Vietnam, where the spread of private household activities is the primary form of economic growth. These entrepreneurs' income advantages already outstrip those of cadres in almost all local contexts. Furthermore, these advantages increase with the expansion of the nonagricultural economy, while cadres' modest advantages remain unchanged. Not only are the relative income advantages of rural cadres already much smaller than those of entrepreneurs, but this decline

¹⁹ We examined these differences by splitting the sample in two, analyzing the North and the South separately. The results (available on request) are so similar that we found it unnecessary to explore these differences further. Net cadre and entrepreneur advantages are almost the same in both regions. The pattern of interaction effects is also identical, except that the interaction of local wage income with entrepreneurship is not statistically significant in the South. In the South, average household income is 30 percent higher, but cadre household income is over 50 percent higher, bringing cadres' average incomes closer to entrepreneurs than in the North.

will likely continue so long as small household firms dominate Vietnam's economy.

With these data, we cannot clearly distinguish the effects of ownership from the effects of scale. The two are very closely connected because household enterprise is small and private by definition, and because it is so much more widespread in Vietnam than in China. The measure "private entrepreneur economy" directly gauges the relative importance of household business in a local economy. It therefore clearly indicates an economy in which enterprises are both private and very small in scale. The measures "wage employment" and "wage labor economy" do not provide the same kind of information. They do indicate the presence of larger enterprises capable of generating significant wage employment. We can, therefore, treat these measures as an imprecise and indirect gauge of enterprise scale. Table 1 clearly shows that household firms in the "individual sector" generate very little employment in either country (fewer than two persons per firm). Furthermore, most of these employees are likely family members who would not report wage income. Instead, a significant number of firms outside of the individual sector generate widespread wage income, whether private or public. Average firm size in this larger enterprise sector ranges from 62 employees (Vietnam) to 116 (China) (calculated from Table 1). We do not know, however, whether this wage employment is in private or public firms.

We can confidently conclude that the joint effects of enterprise scale and ownership are large. We cannot, however, disentangle the effects of the two, nor can we disentangle the mechanisms involved. It is highly unlikely, though, that the effects primarily or exclusively result from ownership. Note that wage employment has a similar cross-sectional impact in both Vietnam and China: it lowers the relative advantages of household entrepreneurs but does not affect those of cadres. But note too, that in Vietnam almost half of the employment outside the individual sector is in private firms; in China, less than 4 percent of such employment is nominally under private ownership. This suggests that enterprise scale generates a significant portion of these findings. We could plausibly consider it even more important than ownership. Indeed, the fact that ownership of rural firms in China is often an ambiguous mixture of public

and private reinforces this suspicion. In short, scale matters—how much relative to ownership remains a question for future research.

Future research can use two obvious strategies to further explore these effects. First, to explore variations in outcomes within each country, researchers should develop direct measures of both enterprise scale and ownership at the local level. These data are not readily available for either country, and they probably require intensive data gathering in a restricted sample of localities. Second, future research should replicate these studies using more recent samples, preferably with longitudinal data that assess these economic changes across time. This would be particularly useful for China, where large proportions of the rural public sector have privatized in the decade since the original study. In light of the contrasts between Vietnam and China revealed in this study, it would be difficult to draw conclusions about the impact of markets without attention to both the scale and ownership of the enterprise sectors involved.

CONCLUSION

The differences between Vietnam and China result from the different paths of development that characterized their first two decades of market reform. Vietnam's path relied on individual and household enterprise. Since the earliest years of reform, China's path relied on local governments to mobilize capital in an effort to create large numbers of substantial firms. In Vietnam, the primary source of economic expansion has been petty commodity production. In China, factory production in small and medium-sized enterprises has been far more prevalent than in Vietnam. As a consequence, wage employment has been a much more important source of household income. The larger sector of substantial firms in rural China has created a foundation for rising cadre incomes, primarily through larger salaries. These opportunities were not available to cadres in rural Vietnam, and thus cadres quickly fell behind entrepreneurial households. In this respect, Vietnam resembles the coastal Chinese province of Fujian in the early 1980s. This is the research site that generated findings showing a rapid and early decline in cadre income advantages (Nee 1989). Later Chinese surveys echoed

these findings: the regions with the least developed economies show the largest entrepreneur advantages over cadre households (Walder and Zhao 2006). Only when larger firms develop, creating a foundation for higher wage incomes, do cadre income advantages rebound and grow to rival those of small entrepreneurs.

Our findings reinforce the proposition that specific variations in economic organization shape the impact of markets. The scale and ownership of rural enterprises jointly have a large impact on the distribution of income. Although we have been unable to disentangle the effects of enterprise scale from the effects of ownership, we strongly suspect that both operate independently and have a substantial

impact on the distribution of income. Subsequent studies should develop research designs that disentangle these effects through cross-national and cross-sector comparisons of the kind attempted here. This type of research will further deepen our understanding of the ways that social context alters the impact of markets on patterns of power and privilege.

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APPENDIX

Table A. Definitions and Descriptive Statistics for Variables Used in the Analysis

Variables	Definition	Min	Max	Mean	SD	N
<i>Household-Level</i>						
Total Household Income	Log (n) of annual household income	3.2	14.9	9.7	.788	13,698
Household Education	Average years of education of all working household members	0	16	5.3	2.68	13,698
Household Age	Average age of all working household members	9.7	96	30.4	13.8	13,698
Household Labor	Number of working household members	1	13	3.7	1.66	13,698
Cadre Household	Household that contains at least one officeholder, but no private business	0	1	.024	.152	13,698
Entrepreneur Household	Household that operates a private business, but has no officeholder	0	1	.090	.286	13,698
Cadre-Entrepreneur Household	Household with both an officeholder and private business	0	1	.002	.046	13,698
<i>Commune-Level</i>						
Average Household Income	Average total annual household income in the sampled commune (thousand VN dong)	5,398	239,487	23,266	15,222	550
Nonagricultural Development	Proportion of total commune income earned outside of agriculture	.029	.994	.464	.223	550
Private Entrepreneur Economy	Proportion of commune nonagricultural income earned from private household enterprise	0	.988	.381	.234	550
Wage Labor Economy	Proportion of commune nonagricultural income earned from salaries and bonuses	0	.975	.380	.200	550
Wage Employment	Proportion of total commune income earned from salaries and bonuses	0	.650	.162	.104	550

Note: The comparable tabulations for the Chinese sample are in Walder (2002:251).

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