

2. Rural inequality

Summary

- Inequality in living standards (per capita consumption) in rural areas rose between 1993 and 1997 but stabilized between 1997 and 2004. This trend suggests that there has been nothing structurally destabilizing in the pattern of Cambodia's rural growth to date.
- Rural inequality has been driven by inequality among the richest quarter of the population, and inequality between the richest and the poorest. Inequality among the rural majority (the bottom three-quarters of the population) is negligible. Over time, the rich-poor gap (the disparity between the bottom three-quarters and the top quarter) has narrowed as poverty has fallen. Much of the increase in rural inequality is, therefore, due to increased disparities amongst the richest quarter of rural Cambodians.
- Geographic isolation contributes to rural inequality, as less connected localities have lower average levels of income and consumption and have experienced lower rates of growth. Remote villages tend to have higher poverty incidence than better connected villages. Thus, the geographic expansion of public investments in infrastructure such as rural roads will be instrumental in improving connectivity and expanding opportunities for remote communities and reducing poverty and inequality.
- Household and individual factors underlie growing inequality in rural Cambodia. Differentials in household-level human and physical capital result in disparities in returns and income. Differences in intrinsic capacities and skills naturally result in varying ability to participate in and benefit from expanding economic opportunities; the ability to which innate abilities can be realized is in turn significantly influenced by the availability of productivity-enhancing infrastructure (as well as by access to education and healthcare). Thus, poverty reduction and equity goals will be served by public investments in productivity-enhancing infrastructure such as irrigation; public spending on basic services to enhance human capabilities; and policies to improve land tenure, and so encourage investments in land.
- In particular, infrastructure such as irrigation is crucial for the improving and stabilizing the livelihoods of rural households. While a small number of farmers can afford to invest in small-scale irrigation structures, the majority depends on the Government to provide these resources. Investments in irrigation are needed to raise and stabilize agricultural productivity and diversify crop production.

This chapter examines why the rural majority did not experience more rapid gains between 1994 and 2004, and how policies could address this imbalance of gains between the rich and the rest. The first section examines *what* took place during the past decade by describing trends in inequality of consumption in the sub-periods of 1993-1997 and 1997-2004. The second section examines within- and between-group changes in inequality to identify which groups contributed to rising inequality in rural areas. The third section answers *why* inequality rose in the ways it did.

What took place?

A long decade, divided into two sub-periods

A decade is a long time during which structural economic changes are likely to take place. This is especially true for a country like Cambodia that went through simultaneous transitions from war to peace, from one-party to multiple-party politics, and from a closed and planned regime to an open market economy. Running through this period there has also been an important fourth transition in demographics, as the children born in the post-1979 and post-1989 baby booms have worked their way through the schooling system and into the labor force at the same time that the fertility rate has declined markedly. Given these numerous strands of rapid structural change, it helps to divide this past decade into two sub-periods for a closer look at the changing pattern of economic activity and income distribution.

Making the best of deficient data

The Cambodian Government implemented four rounds of household surveys during the 1990s. Unfortunately, each has a different set of deficiencies. The *Cambodia Poverty Assessment* (World Bank, 2006, Box 2.1) documents the shortcomings of these household surveys. Despite the many flaws of the 1997 Cambodia Socio-Economic Survey (CSES), it is clearly superior to CSES 1996 and CSES 1999. We proceed on the working assumption that the downward biases in consumption strongly suspected to exist in the CSES 1997 data (which was collected during a period of political tension) would have affected the entire distribution equally, without being more or less exaggerated in different parts of the distribution: on these grounds, analysis of shifts in the distribution over time will still be robust. It can also be safely assumed that non-consumption measures (e.g. access to infrastructure, services, and public amenities) will be less sensitive to the tensions that existed in June 1997, and comparing these measures in 1997 with those in 2004 provides a reliable and robust measure of trends. Thus, imperfect data from CSES 1997 is used judiciously to complement the 1993 and 2004 data.

Analysis also suffers from some severe limitations of the Socio-economic Survey of Cambodia (SESC) of 1993/4 (henceforth referred to simply as SESC 1993 for simplicity). The entire SESC 1993 dataset contains only limited pieces of useful information (variables): many of the household-level variables recorded in later surveys are not recorded here, others were collected but have since been lost, and there was no village questionnaire module, and thus no information on local amenities of the villages in which the households are located (e.g. whether there was a school or a health facility in the village). Thus, while the SESC 1993 will be utilized to its maximal potential, analysis is constrained in terms of depth, breadth, and rigor for the year of 1993.

Interestingly, when it comes to dissecting overall change between 1993 and 2004, contextual mixed-methods research suggests a slightly different storyline from that suggested by analysis of the national sample survey data. According to respondents in the nine MOPS case study villages, intra-village differences in livelihoods and living standards began to grow from 1993, but accelerated rapidly after the 1998 elections—the reverse of the periodization outlined above (CDRI 2007b, forthcoming, chapter 2). Possible reasons for these different perspectives will be outlined below.

Rural inequality jumped between 1993 and 1997, then leveled off between 1997 and 2004

Table 2.1 presents the Gini coefficients for real consumption in years 1993, 1997 and 2004. Both per capita and total household consumption measures are shown as household structure changed dramatically during this decade, as average household size fell by about 10 percent, especially for households at the bottom end of the distribution. The inequality indices in Table 2.1 indicate a substantial increase in inequality in rural consumption during the four years between 1993 and 1997. The Gini coefficient for real per capita consumption leaped significantly from 0.27 in 1993 to 0.33 in 1997, and then edged upward modestly to 0.35 over the next seven years. The trend for inequality of total household consumption was similar, with a somewhat smaller jump in the first four years.

Table 2.1 Welfare differences in the countryside appear to have widened rapidly between 1993 and 1997, but more slowly after that

Gini coefficients of real consumption for comparable samples of rural_areas, 1993, 1997 and 2004

	1993	1997	2004
per capita real consumption	0.265 (± .005)	0.330 (±.007)	0.354 (±.007)
total household real consumption	0.281 (±.006)	0.338 (±.008)	0.367 (±.007)

Source: SESC 1993/4, CSES 1997, CSES 2004.

Note: Only comparable samples from the identical (1993) sampling frame are used for each survey.

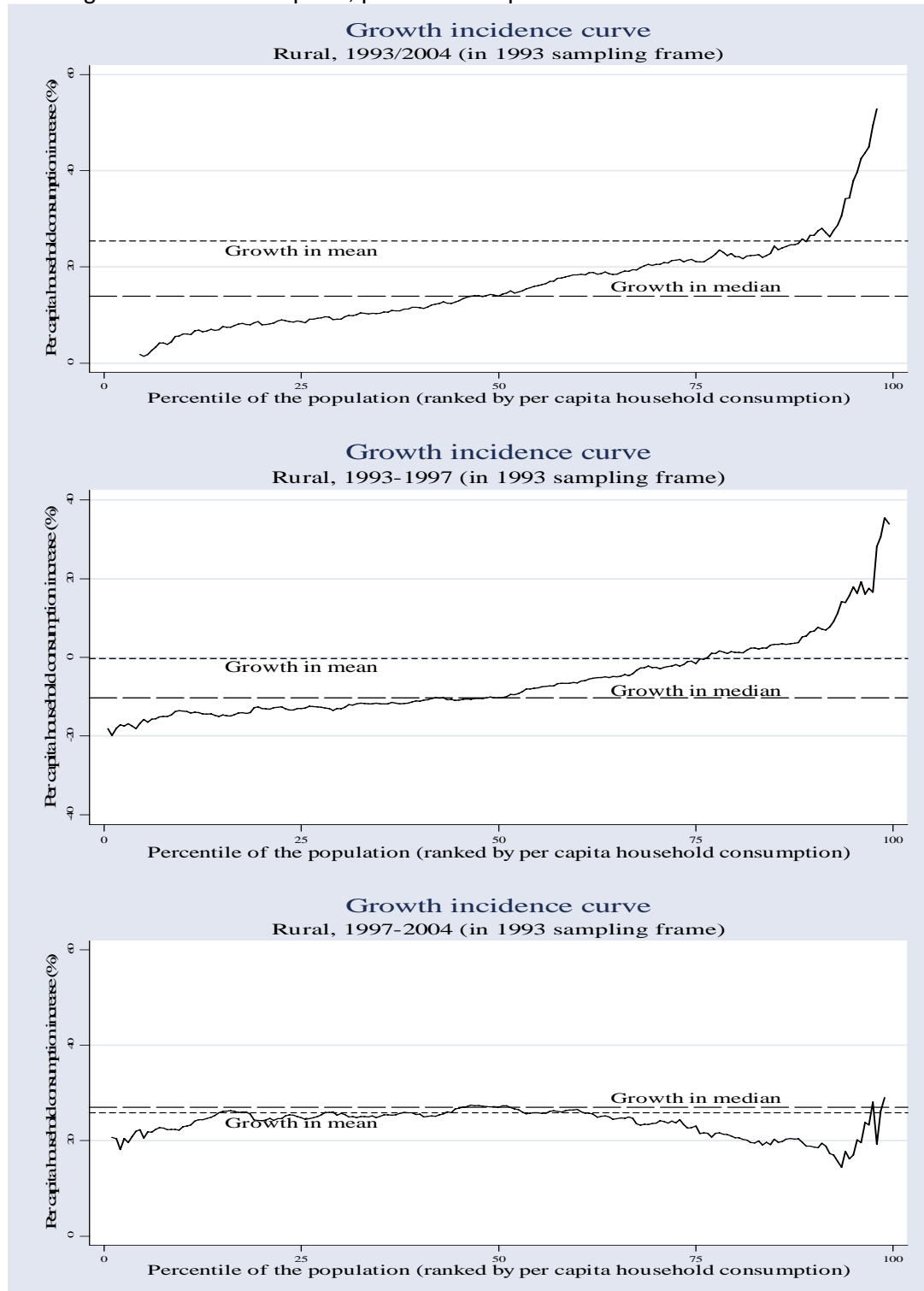
More insights can be obtained from growth incidence curves which show the percent change in real per capita consumption between two points in time for each percentile of the rural consumption distribution. Again, the decade is split into 1993-1997 and 1997-2004. Figure 2.1 presents three growth incidence curves for (i) the decade of 1993-2004; (ii) the sub-period of 1993-1997; and (iii) the sub-period of 1997-2004, respectively. The top panel reveals two features between 1993 and 2004 that contributed to rising inequality:

- Consumption growth amongst rural households increased steadily by distribution percentile, i.e. the richer the households, the bigger their proportionate consumption gains.
- Except for the richest 7 percent, the entire rural population experienced only sluggish growth in consumption. Even households at the 75th percentile only gained 20 percent while those at the top of the poor group, at the 93rd percentile, grew by a mere 25 percent. By contrast, at the richest end of the distribution, growth was 40 percent.

The CSES data suggests that rising rural inequality between 1993 and 2004 masks two very different sub-periods. The consumption changes for each percentile during the earlier sub-period of 1993-1997 are plotted in the growth incidence curve in the middle panel of Figure 2.1 while those for 1997-2004 are represented in the bottom panel.

Figure 2.1 Initially, the very rich made rapid gains while others lagged; later, improvements were spread evenly between wealth groups

- Changes in real consumption, percentile-to-percentile



Source: SESC 1993/4, CSES 1997, CSES 2004.

Note: Only comparable samples from the identical (1993) sampling frame are used for each survey.

1993-1997: the very rich pulled ahead, while others fell behind

Between 1993 and 1997, only a handful of the population (the top three percent) enjoyed rapid improvement in living standards (growth in real per capita consumption exceeding 20 percent). The period 1993-1997 can be characterized as one in which the extremely rich pulled ahead while the poorest, the poor, and the middle of the wealth distribution stagnated. The result was a substantial, statistically significant rise in inequality between 1993 and 1997.

1997-2004: widely- shared growth

The changes recorded in the second sub-period are in sharp contrast with the first. Between 1997 and 2004, almost every percentile in the distribution experienced similar high rates of growth in per capita consumption (between 20 and 28 percent). The growth incidence curve is practically flat at the mean growth rate across the entire distribution. The exceptions are among the upper middle class segment (70th -90th percentiles) and the poorest (1st-15th percentiles) with slightly smaller growth, around 22-24 percent. One can characterize this period as equitable, with growth broadly shared.

Thus, the combination of different trends in 1993-97 (growth concentrated among the rich) and 1997-2004 (broadly-shared growth) has resulted in rising rural inequality. The trend during 1997-2004 is promising, and suggests that there is not necessarily a structural problem with Cambodia's economic growth. Projecting simply on the basis of trends in this period, growth dynamics do not suggest a structural tendency for growth to increase inequality.

Which groups drove inequality?

The analysis in the previous section hinted that a comparison of within-segment inequality for various income (consumption) segments might shed further light. Using real per capita consumption, rural households are ranked into four quartile groups.

Divergence amongst the rich promoted inequality

Table 2.2 presents Gini coefficients for each of the quartile groups in years 1993, 1997 and 2004. Levels of inequality within the two middle quartiles of the distribution were strikingly low throughout these 11 years, implying that the majority of rural households enjoyed similar levels of per capita consumption clustered around the average. However, inequality in the richest quartile was the highest in all three survey years, with the Gini coefficient for this quartile rising steadily (from 0.18 in 1993, to 0.23 in 1997, to 0.28 in 2004) between the three surveys.

At the other end of the spectrum, there was some modest inequality within the poorest quartile group, at a level that remained essentially unchanged throughout the decade. As a result, inequality in the richest quartile group in 1993 was double the inequality in the poorest quartile group; but became triple the level of the latter by 2004.

Table 2.2 There has been increasing divergence in wealth within the richest 25 percent of rural households

Gini coefficients of real per capita consumption by quartile groups, 1993, 1997 and 2004

Quartile of rural households in comparable sub-samples	1993	1997	2004
Poorest	0.094	0.103	0.114
Next poorest	0.044	0.050	0.056
Next richest	0.050	0.065	0.063
Richest	0.179	0.232	0.277
Total	0.265	0.330	0.354

Source: SESC 1993/4, CSES 1997, CSES 2004.

Note: Only comparable samples from the identical (1993) sampling frame are used for each survey.

Rising rural inequality is a result of rich-poor disparity and rising inequality among the richest quarter of the population

While Gini coefficients allow comparison of inequality across groups, they do not readily allow comparison of the relative contribution of each group to total inequality. The Theil index, another commonly used measure of inequality, provides ease of decomposition and can easily identify the relative importance of each component (in this case the contribution of each quartile group to total rural inequality).

Table 2.3 presents a decomposition of inequality, using the Theil Index. Total rural inequality is decomposed into within-quartile inequality for each of the four quartiles and (between) inequality across quartiles. Three main findings emerge:

- Within-quartile inequality was insignificant among the bottom three quartile groups (i.e., between the 1st percentile and the 75th percentile): their joint contributions to total rural inequality is essentially zero.
- Inequality within the richest quartile group became increasingly significant over time. Its contribution to total rural inequality increased from 24 percent in 1993 to 40 percent in 2004.
- Between-quartile inequality remained the largest component, even as its share has been eroded by inequality in the richest quartile.

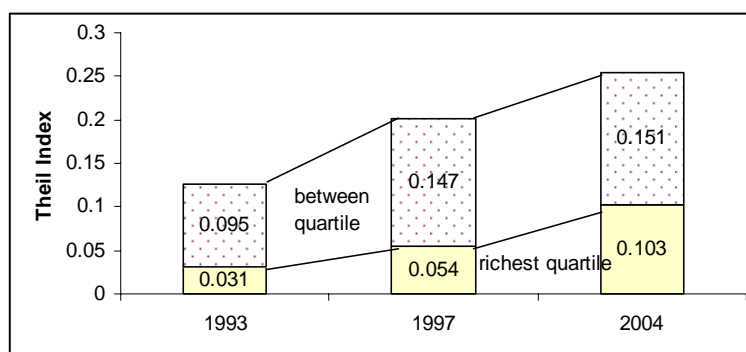
These results, as summarized in Figure 2.2, suggest that the gap between rich and poor (i.e., between-quartile inequality) is one of the two determinants of rural inequality. The other determinant of rural inequality is the inequality within the richest quartile group. This within-richest-quartile inequality is rising, and contributing much more weight, or importance, to total rural inequality over time. By contrast, the rich-poor gap is closing, albeit very gradually, as a result of economic growth that has benefited the rural majority, in particular between 1997 and 2004. This suggests that pulling the bottom end of the distribution out of poverty will also directly address inequality. That is, a direct way to reduce inequality will be to understand and remove the impediments to growth among the poorest. Generating absolute increases in income for the rural majority (i.e., the bottom 50-70 percentiles) will close the income gap, and lower between-quartile inequality.

Table 2.3 Theil Indices: a decomposition of within-quartile and between-quartile inequality of per capita consumption, 1993, 1997 and 2004

Quartile of rural households in comparable sub-samples	1993	1997	2004
Poorest	0.002	0.002	0.003
Next poorest	0.001	0.001	0.001
Next richest	0.001	0.001	0.001
Richest	0.031	0.054	0.103
Between Quartiles	0.095	0.147	0.151
Total Theil Index	0.129	0.205	0.259
Inequality in the Richest Quartile Group 4 as a % of Total Rural Inequality	24	26	40
Between Quartile Inequality as a % of Total Rural Inequality	76	74	60

Source: SESC 1993/4, CSES 1997, CSES 2004.

Note: Only comparable samples from the identical (1993) sampling frame are used for each survey.

Figure 2.2 A decomposition of rural Theil Indices

Source: SESC 1993/4, CSES 1997, CSES 2004.

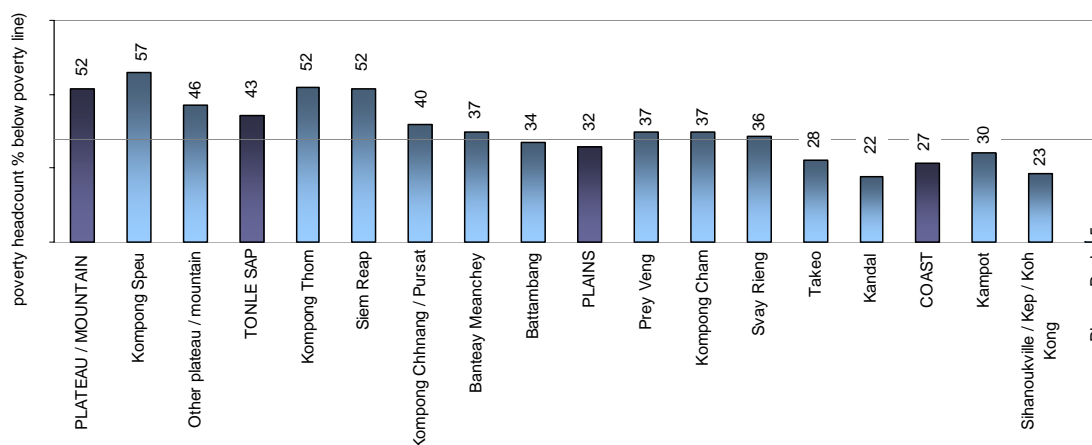
Note: Only comparable samples from the identical (1993) sampling frame are used for each survey.

Differences in growth rates and inequality

There are clear geographical components to patterns of inequality of opportunity and outcomes within the countryside. These spatial inequalities can be picked out at a variety of scales. In terms of outcomes there are, for example, very large inter-Provincial variations in the incidence and severity of poverty (Figure 2.3). These Provincial averages may themselves conceal considerable spatial variation at a more fine-grained resolution: with severely underdeveloped rural roads network, communities next to a national road can enjoy dramatically better opportunities, and as a result demonstrate significantly better outcomes, than communities located a mere 5 kilometers away.

The MOPS research found that over the three years between surveys, inequality in income had grown both between the nine study villages; and between rich and poor households within most of the villages. In 2001, average incomes in the richest village were 2.4 times those in the poorest village: by 2004/5, this had grown to 2.9.

Figure 2.3 Poverty rates in upland areas are significantly higher than on the coast



Source: CSES 2004 analyzed in Knowles 2005a.

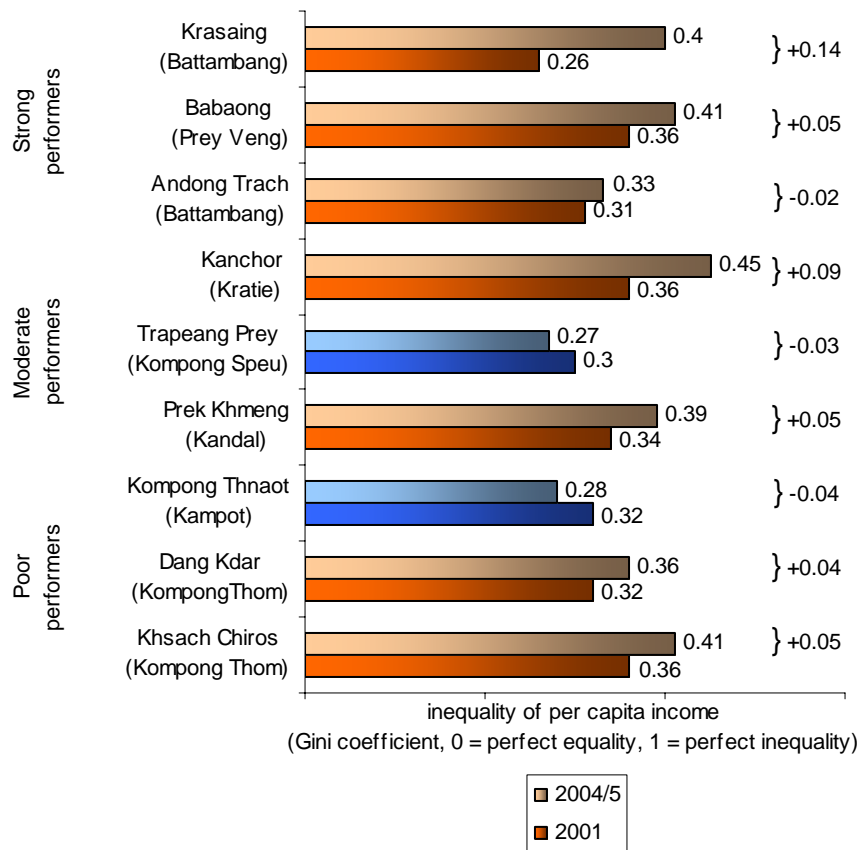
Within the MOPS villages, meanwhile, groups with different mobility status saw their incomes diverge further. The chronically poor (those who remained poor in both rounds of the panel) saw their incomes rise by 33 percent; the comfortably rich (those who remained non-poor in both rounds) experienced double that rate (61 percent). As a result, the ratio between the incomes of the two groups changed from 1:3.2 to 1:3.9. This widening gap is reflected in the income Gini, which increased by around 0.05 in most villages, with more dramatic jumps in inequality in two sites and small *declines* in inequality in another two sites (Figure 2.4).

Richer provinces have higher inequality

If within-quartile inequality in the richest quartile group is one of the main causes of inequality, we would expect to see that Provinces with greater population shares in the richest quartile group experienced higher intra-provincial inequality. Figure 2.5 demonstrates the relationships between provincial Gini coefficients and rural population shares in the richest quartile group¹. The top panel (a) of Figure 2.5 presents the level-by-level relationship between inequality and population shares in the richest quartile. By pooling all observations in the survey years of 1993, 1997 and 2004, it is possible to plot provincial inequality levels on the y-axis and provincial population shares in the richest quartile group on the x-axis. The plot shows a (statistically) significantly positive relationship. Richer provinces with higher percentages of their populations belonging to the rural richest quartile group tended to experience higher inequality.

¹ All analyses in this section are carried out on only the sample of rural households. Note that only compatible samples with identical sampling frame of 1993 are selected from each survey to be analyzed.

Figure 2.4 In the MOPS dataset, most villages recorded an increase in the income Gini averaging 0.05; two registered much higher increase



Source: CDRI 2007b (forthcoming)

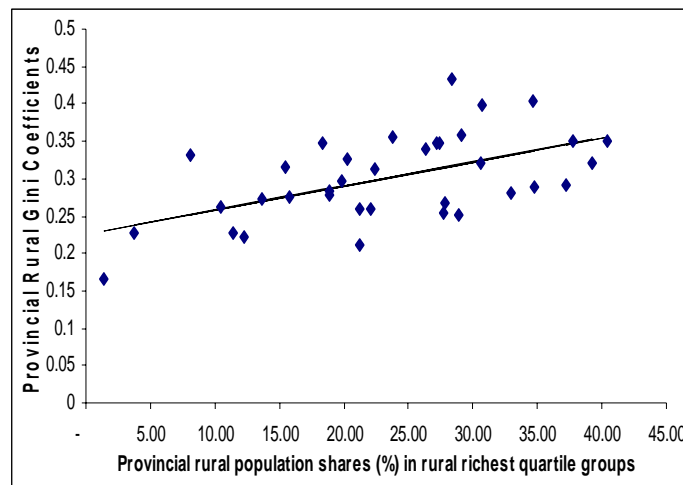
Provinces that grew much richer have faster growth in inequality

The bottom panel (b) of Figure 2.5 presents the difference-by-difference relationship of provincial inequality and population in the rural richest quartile. By pooling the two sub-periods of 1993-1997 and 1997-2004, we plot percentage point differences of provincial Gini coefficients on the y-axis and percentage point differences of provincial population shares in the rural richest quartile on the x-axis. The results also indicate a (statistically) significantly positive relationship between *changes* in inequality and *changes* in the proportion of rich people.

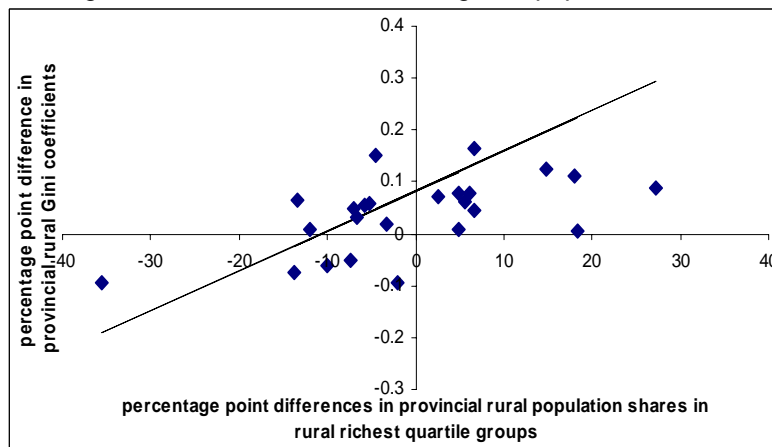
These results suggest that provinces that grew richer or more rapidly as more of their residents becoming rich (i.e., greater movement into rural richest quartile) tended to experience rising inequality. Equally striking is the finding that provinces that regressed or observed falling shares of their populations falling in the rural richest quartile tended to experience stable or declining inequality.

Figure 2.5 The relationships of provincial Gini Coefficients and the population shares in the richest quartile group (rural areas), 1993-2004

a. Levels: Gini coefficients vs. population shares in richest quartile groups



b. Differences: changes in Gini coefficients vs. changes in population shares in richest quartile



Source: SESC 1993; CSES 1997; CSES 2004.

Note: Only comparable samples from the identical (1993) sampling frame are used for each survey.

The analysis and findings in this section supplies three messages:

- Rising rural inequality was due to rising inequality within the richest quartile group.
- Rising provincial inequality coincided with increasing shares of the richest (provincial population).
- Rising rural inequality coincided with faster growth.

The first message is a description of basic facts. The second message is a result from time-series analysis that shows provinces with increasing proportions of rich residents are more likely to experience rising inequality. A note to highlight is that there is no evidence of concentrated wealth in any particular provinces and the fluctuations of provincial inequality appear random. Thus, the speed and magnitude with which the

population in any province makes it into the rural richest quartile are very likely to be a result of economic growth. The third message is a direct implication from the data that provinces with higher inequality are those with greater shares of rich people; and provinces that have more rapidly rising inequality have also grown much richer.

Drivers of inequality in the rural population

Current patterns of inequality within the Cambodian countryside reflect a complex interaction among many processes. These processes operate at the individual, household, community and national level; and came into play—and in some cases, have faded out again—at different stages over the last fifteen years of transition. The remainder of this chapter will provide analyses of some underlying factors of rural inequality.

History and geography

Equality in initial conditions?

The state that replaced the Khmer Rouge, the People's Republic of Kampuchea (PRK), was premised upon socialist ideals of equality. In the early years, as the PRK sought to prevent famine following the collapse of the Khmer Rouge regime, low-level collectivism was mandated, with land and scarce productive assets such as draft animals shared in *krom samaki* (solidarity groups). Within a few years, however, there was increasing popular pressure for a return to individual family farming, and the *krom samaki* were gradually abandoned (Frings 1993). Research in the late 1990s (Box 2.1) suggests that at this stage—and perhaps even earlier—small but significant differences began to emerge in household asset endowments and production opportunities.

Box 2.1 Initial conditions and the re-emergence of difference

Overall, the Khmer Rouge revolution succeeded in deliberately and comprehensively breaking the pattern of wealth which had existed in the 1960s, to the advantage of some and the disadvantage of others. (In a few cases people were able to reclaim wealth that they had held before the revolutionary cataclysm: some families managed to dig up gold, jewellery or other wealth that they had buried before the Khmer Rouge took over.)

Nonetheless, devastated as Cambodia was when the new regime took Phnom Penh in January 1979 and set about re-establishing the state, the situation of “equality in poverty” was subject to some small but important variations at the local level. Villagers in Kompong Chhnang related how those who were able to gather and transport cattle, buffalo, carts, tools and the like back from the hills when the Khmer Rouge cadre fled, effectively gained ownership of these assets. Many respondents stressed that single women and the seriously ill were disadvantaged at this stage, lacking the physical strength or power (*komluhng*, a term with inherently masculine connotations: Ledgerwood 1990 pp. 23-4) required to claim and move such goods. Although these assets were then collectivized and came to belong to the *krom samaki* as the PRK established control, with *de facto* decollectivization in 1982 or 1983 they reverted to those who had “owned” them in 1979. In 1982, such productive assets were in short supply and those families who did have them had a head start on productive use of the land they received.

Source: Conway 1999 pp. 207-8.

The lack of private markets for products or imports, reinforced by Cambodia's political and economic isolation, meant that the economy before 1990 was largely subsistence-oriented, with very few opportunities for individuals to exploit their differential sets of endowments or to accumulate wealth. The equality that existed before the Paris Peace Agreement was somewhat less complete in practice than principle, which meant that when market relations were reintroduced from 1989 some households did enjoy a head start, even if only a small one. To some extent the difference that has emerged since the early 1990s reflect these different starting positions. For example, favoritism in the allocation of land provides a second caveat to the picture of decollectivisation as an egalitarian process in which distribution of resources reflected consumption needs at that time. On a number of occasions, relatives of village and commune authorities received more than their fair share (Frings 1994).

“Location and legacy” explain the geography of inequality

The complex set of interacting environmental, economic and political processes have thus created and sustained expanded opportunities in some localities relative to others. Households living in settlements close to towns, roads and markets had an early lead on households living in remote areas. These advantages took the form of better access to social services (preventative and curative health services, basic education) that might enable the accumulation of human capital; dramatically lower time and cost to move goods to market; and much greater probability of benefiting from a donor, NGO or Government development scheme. Lowland settlements with national roads running through them tend to be located where they are in the first place because of favorable production conditions (better soils or, more typically, better water control conditions); communities away from roads are almost by definition generally upland, poor quality, and difficult or impossible to irrigate. The final aspect to geographical “legacy” is the date at which armed political conflict ended in the locality: this effectively defines the point at which economic activity and accumulation could start. Those parts of the country which came out of conflict late—in MOPS, several of the sites were vulnerable to Government-Khmer Rouge clashes right up until 1998—lag those regions which have had peace since 1993 (Box 2.2).

Well-connected provinces enjoyed higher levels and faster growth of consumption

Using the CSES data, this section² examines the impact of isolation and remoteness on inequality or the rich-poor gap. Figure 2.6 shows the levels and growth in mean daily real consumption for all provinces (in comparable samples, based on an identical 1993 sampling frame) during 1993-2004. The top Panel (A) reveals that mean consumption levels in Battambang, connected to fast-growing Thailand, were more than twice those in a poor, upland, central province such as Kompong Speu. The growth rates of consumption for provinces connected to the world markets (e.g. Kandal surrounding Phnom Penh; or Kampot on the coast) were also higher than inland provinces,

² All analysis in this section is carried out on only the sample of rural households, and only between compatible samples within the identical (1993) sampling frame.

Box 2.2 Peace has opened up opportunities for investment, trade and accumulation

In the MOPS research project, participants consistently emphasized how the end to armed political conflict lifted the burden of fear and opened up livelihood opportunities.

(Ksach Chiros, Kompong Thom)

Before Pol Pot troops defected to the Government, most villagers dared not sleep in their houses; most of the time they slept on the ground close to a safety hole. Whenever Khmer Rouge or government troops came to the village, they took our chickens and ducks or burned our houses if we were not willing to give our belongings to them.

In 1993, we could not move freely because we had to ask for a permit from local authorities. By contrast, in 1998 we got more freedom, because we could go everywhere and our community was secure after the integration of the Khmer Rouge.

(Dang Kda, Kompong Thom)

Before the Khmer Rouge integration in 1998, this community was unsafe because this area was a stronghold of the Khmer Rouge. At that time, the situation was not stable. People had to be well prepared and ready to escape from the bombing. They felt unsafe, so never cared about building or improving their houses... That's why security always came first to our mind and we had less time to think about our economic life.

At that time I cared only about my pots and dishes rather than other useless things when each time serious fighting took place in this community. I never thought about earning money and how to improve my family's standard of living because I had no time to think about it. The only one thing I had to do was to learn how to escape from bombing.

Kanchor, Kratie

This village was free from armed conflict after the defection of all Khmer Rouge troops in 1998. Having security significantly helps improve people's livelihoods in this area.

Source: CDRI 2007b (forthcoming).

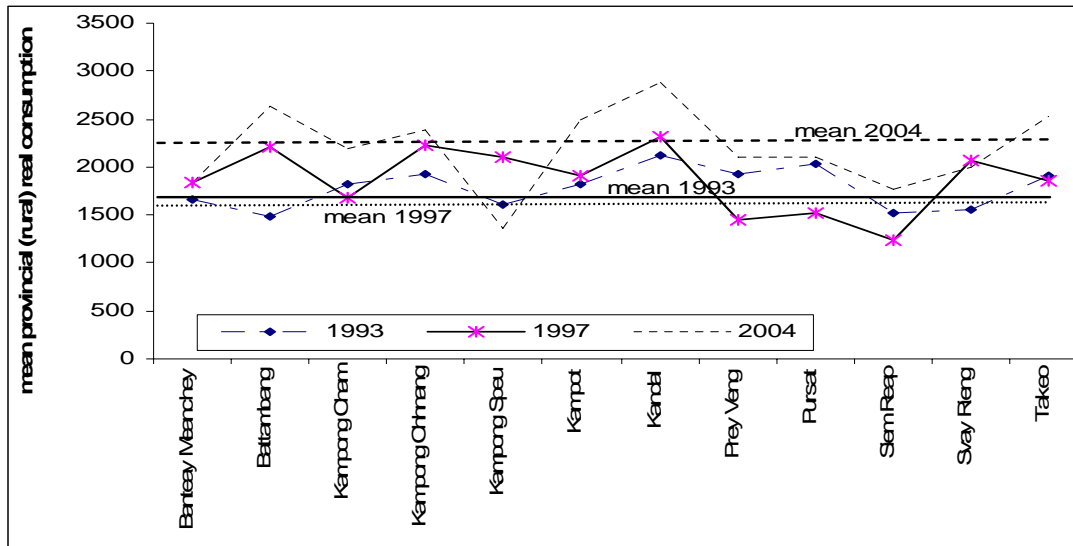
particularly Tonle Sap provinces. Siem Reap is a curiosity, and highlights the importance of examining spatial variations at a fine-grained level: although the provincial town is the center of a multi-billion dollar tourism industry, the surrounding province, much of which has poor soils, limited irrigation and poor roads, remains extremely poor.

However, lagging provinces are catching up overtime

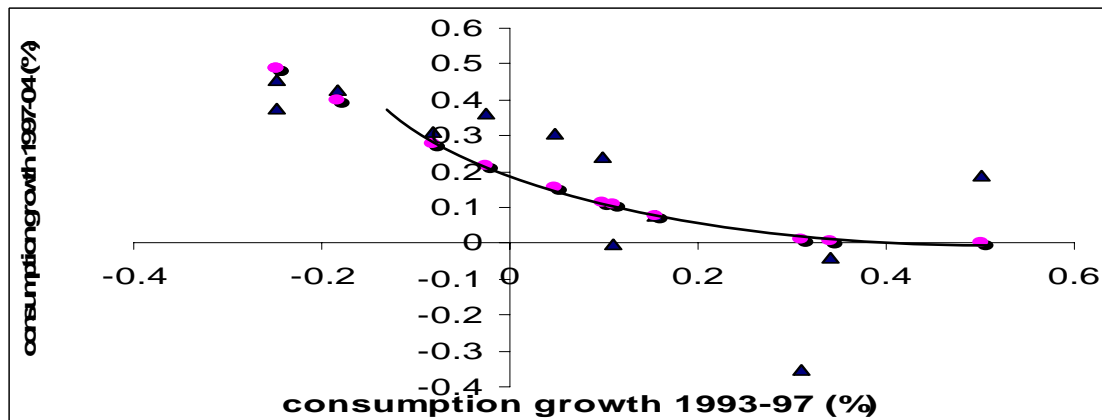
The bottom Panel (B) plots growth during 1997-2004 on the y-axis and growth during 1993-1997 on the x-axis. The plot suggests evidence of catching-up among provinces. In other words, provinces which grew less or grew more slowly during 1993-1997 tended to grow more rapidly in the subsequent period of 1997-2004. These results suggest not only that geographic isolation plays an important role, but that roads play a critical role in overcoming this isolation. As remote areas become more connected through additional road investments, an increasing proportion of the rural population can participate in the country's development and growth. During this process, some locations or provinces will grow sooner than others. Encouragingly, the data suggest that over time lagging provinces are catching up.

Figure 2.6 Levels and growth of provincial (rural) mean real consumption, 1993-2004

Panel (A) Better connected provinces experienced greater mean and higher growth in consumption



Panel (B) Lagging provinces during 1993-1997 grew faster subsequently during 1997-2004



Source: Socio-economic Survey Cambodia, 1993; Cambodia Socio-economic Survey 1997; Cambodia Socio-economic Survey 2003-04.

Note: Only comparable samples from the identical (1993) sampling frame are used for each survey.

Welfare levels are lower in remote localities

Differences in living standards can be compared by classifying households into either remote or connected villages on the basis of location-related attributes. Two measures of remoteness or connectivity are used. The first defined by the existence of any all-weather road in the village: villages with at least one all-weather road are classified as connected, and all other villages classified as remote. The second measure is defined by the distance to the district headquarters: villages further than 10 km are classified as remote.

Table 2.4 shows the mean levels of consumption for the two types of households for 1997 and 2004. Partition (1) uses the all-weather roads measure, and partition (2) uses the district headquarters distance measure. We observe a consistently higher mean

consumption levels among connected villages in both years. Mean consumption in connected villages was about 10-13 percent higher, according to both measures of remoteness. The results indicate that geographical location contributes to rural inequality through the income gap or consumption disparity between richer connected and poorer remote localities.

Table 2.4 Differences of mean consumption between connected and remote households in rural areas (compatible samples), 1997 and 2004

	(1)		(2)	
	measured by existence of all-weather road in the village: with <i>versus</i> without		measured by distance to district headquarter: less than <i>versus</i> more than 10 km away	
	1997	2004	1997	2004
Connected villages	1,651	2,380	1,764	2,470
Remote villages	1,930	2,130	1,945	2,180

Source: based on comparable sub-samples from the 1993 sampling frame, CSES 1997, and CSES 2004.

Note: motor-road is used for 1997 because information on all-weather road was not collected.

Poverty rates are higher in isolated localities

Rural households can then be classified into villages of varying sizes and degrees of connectivity. Village size serves as a proxy for population density, whereby large villages tend to be in densely populated areas and small villages in sparsely populated regions. Remoteness is defined as when the distance to the nearest all-weather road exceeds 5km. Table 2.5 presents the poverty rate (proportion of population with consumption less than the national poverty live), for these four types of rural villages. In small or sparsely populated and isolated rural villages, more than half of the population lived below the national poverty line. In larger or more densely populated and well connected villages, less than a third of the population lived in poverty in 2004. These results suggest that isolation due to lack of infrastructure affects poverty and the existing gap between rich and poor, in turn, underpins inequality.

Table 2.5 Percentage of population below the total poverty line, by village size and distance to the nearest all-weather road, 2004

Village size	Distance to the nearest all-weather road	
	Less than 5km	More than 5 km
More than 1,000 persons	32.5 (±0.7)	38.0 (±1.7)
Less than 1,000 persons	43.4 (±0.9)	52.5 (±1.8)

Source: based on the sub-sample from the 1993 sampling frame, 15-month sample, that included both urban and rural areas, based on 15-month sample, CSES 2004.

Household-level difference in opportunity and outcome

Returns to individual ability

As in any society, wealth differences at least in part reflect returns to individual ability and hard work. Cambodian culture is often described by sociologists as being at one level very individualistic: certainly, when asked to list the factors explaining why some households are richer than others, rural Cambodians will credit that for many, their success is due to “good ideas” (*khomnuht alohr*)—even as others among the rich are seen to have got ahead due to connections, corruption or inheritance.

The perceived importance of individual ability and application is also apparent in the IRL opinion poll. The poll asked the respondents to assess whether their economic situation was better, about the same, or worse than the average people in their village or communities. Some 61 percent replied that they were about the same as the average. For those who answered that they were worse off, they were asked two further questions. The first asked them to choose from a list of reasons why others are better off. The second asked why they think they are worse off. In both cases, more than one answer could be given. 81 percent reasoned that others were better off because they “worked hard, had ideas, and took initiative” (Table 2.6).

Inequality of opportunity, poverty traps and capital ownership

As would be expected, central to the poverty trap is a clear relationship between consumption poverty and poor health. The poor work hard in physical jobs involving greater risk of accidents and injury and have poor nutrition, and have less access to clean water, poorer housing conditions, and less contact with preventative health service, all of which make it more likely that they will need medical treatment—which they can less well afford, and which may well push them deeper into poverty. A critical difference between the rich and poor lies in their relationship to capital (see Box 2.3 for accounts from the MOPS fieldwork). Whereas the poor have to borrow to meet subsistence needs, and frequently then become trapped in a situation in which they work to repay loans and so have no opportunity to save or invest, those with a little security start to lend money to their neighbors at interest, providing a supplemental source of family income.

Table 2.6 Ability, family background and education were seen as the most important reasons why some people can get ahead

- answers to the question “If others in your community are richer than you, why do you think they are richer? (no prompts)

If others are better off than you in your community, why do you think they are better off?	% of respondents
they work hard, have ideas, and take initiatives to make money	81%
they have family members who work in cities or abroad	25%
they have education and good skills	63%
they have privileges because they're connected to the government, army officials, police etc.	17%
they are from a rich family	70%
they engage in illegal activities	4%
they have farms or plantations	10%
they have good luck	16%
they have good karma	4%
they have good health	3%

Source: IRL 2007

Box 2.3 Poverty and debt traps

It is not easy for the poor to catch up with the medium because the poor have lots of outstanding debts accumulated over time ... How can they move out of poverty in such a situation? ... In the end, they have to sell their small plots of land to repay their loans ... Losing land is a loss of food security ... The poor have no land or other assets to rely on ... no capital to invest in alternative businesses ... Most poor here take a new loan to repay an outstanding loan, meet food shortages or cure sick household members ... If someone falls into this vicious poverty, it is almost impossible for them to escape ... Unlike the poor, the medium are free of debt. If they do take a loan, they use it for raising a cow that produces a calf, which then can be sold to repay the loan ... There is no hope for the destitute to escape chronic poverty without help from a humanitarian programme ...” (Trapeang Prey, Kampong Speu)

The have-nots earn just enough for food and consumption and cannot make any savings. The rich can earn more than household consumption... [and] make some savings for investing in new income-earning activities. (moved-out, Krasaing Village, Battambang)

Source: CDRI 2007b (forthcoming)

Investments in enhancing human capability address poverty and inequality

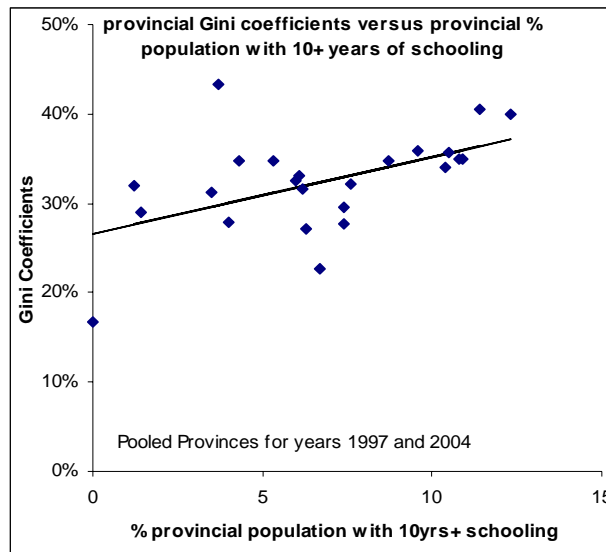
To examine the relationship between education and living standards, household consumption inequality is related to the skills of the head of household. Two measures of skills are used: literacy and levels of schooling attainment. Table 2.7 presents mean consumption levels according to these two measures of skill levels for 1997 and 2004. Partition (1) presents estimates for literate and illiterate households, while partition (2) presents estimates for those with 7+ years of schooling and those without. The main findings are that consumption was significantly higher among the skilled, and the differential increased overtime.

Table 2.7 Mean levels of consumption are significantly higher for households with skilled heads than those with unskilled heads

	(1)		(2)	
	measured by literacy: literate <i>versus</i> illiterate		measured by years of schooling: 6 or fewer <i>versus</i> 7 or more years	
	1997	2004	1997	2004
household heads with skills	1,906	2,480	2,323	2,824
household heads without skills	1,740	1,990	1,733	2,137

Source: based on comparable sub-samples from the 1993 sampling frame, CSES 1997, CSES 2004.

Provincial and time variations can be used to analyze the relationship between inequality and the educational stock of Cambodia's population. By pooling provinces in years 1997 and 2004, it is possible to plot provincial Gini coefficients on the y-axis and the proportions of provincial populations with 10 or more years of schooling on the x-axis in Figure 2.7. The result is a statistically significant positive relationship that suggests provinces with greater shares of highly educated population experienced higher inequality. Thus, individual attributes such as educational attainment influence inequality through the channel of increasing disparity of incomes between educated and uneducated workers, especially (as in Cambodia in recent years) during a period of rapid growth and expansion of economic opportunities in manufacturing and services.

Figure 2.7 Inequality rose with greater education stocks

Source: CSES 1997; CSES 2004.

Note: Only comparable samples from the identical (1993) sampling frame are used for each survey.

Thus, the role of Government in providing the services necessary to increase human capability for the young generation, as well as for the adult generation, is critical. An aggressive and inclusive nation-wide universal literacy campaign, with particular attention to out-of-school prime-aged individuals, should be a pressing priority. Because of its history, Cambodia has the least educated adult population in East Asia. If it is able to turn this entire generation of adults into literate citizens, the Government will undoubtedly be able to multiply productivity and growth. As Chapter 3 will show, the returns to schooling have been high and increasing in recent years.

Investment in physical capital will also address inequality

In addition to human capital, differences in investments in other capital, such as land, are also important factors for income differentials. Investments in land depend on security of tenure. To illustrate this, investments, productivity and consumption are compared between households with and without any paper proof of ownership. Table 2.8 shows different types of households with varying shares of land held with any form of papers proving land ownership (e.g., application receipts, land investigation papers, certificates), and the average consumption and yields for these households. Those with at least half of their plots of land held with some form of papers enjoyed daily *real* total consumption of 12,609 Riel, which is 18 percent higher than those households with less than 30 percent of their plots held with papers. Households with *all* of their plots held with papers enjoyed the highest yields of 9.05 million Riel of annual outputs per hectare, which is 32 percent higher than households with less than 30 percent of plots titled.

Table 2.8 Household consumption and crop yields, by shares of land with land papers, 2004

Share of land held with any papers of proof of ownership	real daily household consumption (in Riel, 1993 prices)	yields measured by value of output per hectare (Riel, current 2004 prices)
households with less than 30% of plots	10,290	6,134,149
households with at least 50% of plots	12,609	8,350,061
households with 100% of plots	12,407	9,049,014

Source: CSES 2004.

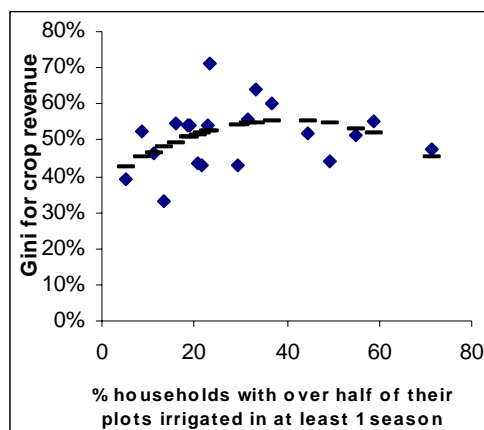
We now utilize variations of investments, crop revenue, and consumption across provinces to analyze the relationship between inequality and investments. Figure 2.3 presents the Gini coefficients of outcomes, either measured in consumption or crop revenue, on the y-axis, and actual investment in irrigation works or potential investments (i.e., land titles) on the x-axis. Panel A shows a robust quadratic relationship between inequality and actual investments in irrigation works. Panel B also plots a significant quadratic relationship between inequality and potential investments (i.e., land titles). The results suggest that inequality tends to rise as the economy is just starting to have small proportions of households investing in their land, but as the proportions of households with investments increased, inequality tapered off. In other words, when the economy has little capital stock, the income gap between the investors (capitalists) and non-investors (the poor or net consumers) is high, and inequality would keep rising with additional investments when the capital stock is low. However, once the economy has sufficiently large capital stock, the income gap begins to close as the proportion of non-investors (net consumers) is dwindling (as we see in the downward turn of the quadratic part of the curve).

The *Poverty Assessment* (World Bank, 2006) found that households with secure land tenure tend to invest, which resulted in higher yield, larger cultivation revenue, and greater income and consumption. Thus, another measure to close the disparity of rural income is to create incentives for households to invest in their land.

Figure 2.8 Inequality and investments (actual and potential), 2004

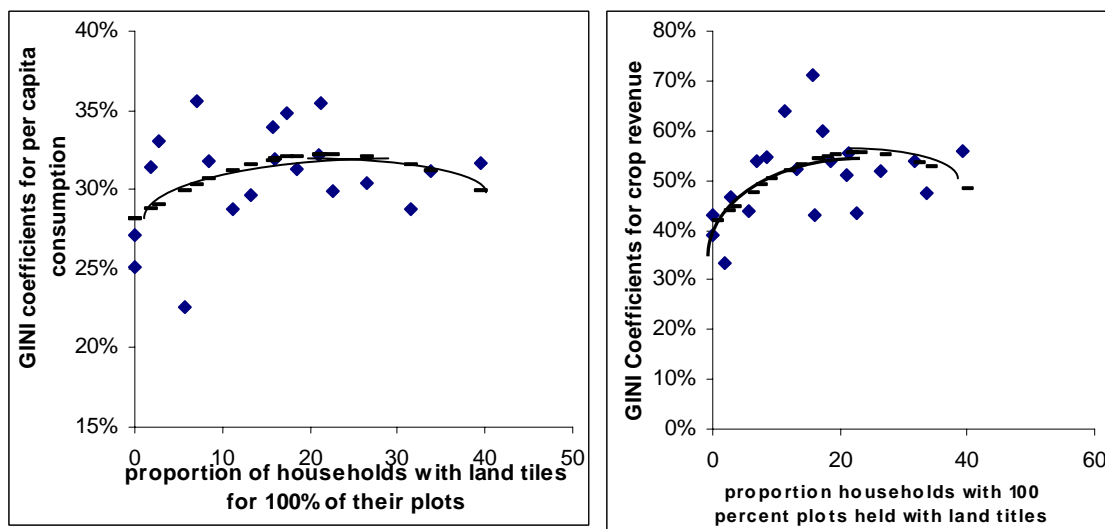
Panel A.

Inequality of crop revenue increases with additional actual investments (in irrigation) when the economy has very small capital stock (of irrigation infrastructure) but inequality begins to falls off with additional investments when there is sufficiently large capital stock in the economy



Panel B.

Inequality of consumption and crop revenue rose with additional potential investments (secure land tenure) when the capital stock is small but inequality tapers off with additional investments once the capital stock is sufficiently large



Source: Cambodia Socio-economic Survey 2003-04.

Institutions, governance and inequalities in power

Both the MOPS and the PPA generated detailed discussion about the nature of power in village life and identified high levels of concern about the behavior of local authorities. MOPS suggests that satisfaction with local authorities is greater in poor and/or slow-growth villages: in dynamic villages where there were resources to be allocated and rents to be extracted, there is less confidence that local authorities will act in the public good. Confidence is particularly low, unsurprisingly, in communities in which households are heavily dependent upon access to local natural resources.

The final chapter of this report (Chapter 8) will look at the theory regarding the influence that institutions have on economic outcomes (such as equitable development). It will do this by focusing loosely on two key roles of the state—namely (i) raising and spending public money and (ii) establishing viable and equitable laws to provide essential regulation and protection to interaction between citizens, between citizens and the state, and between the state and the private sector.

Box 2.4 Individuals with a “strong back” (connections or corrupt influence) enjoy greater—often illegal—economic opportunities

Two kinds of power were identified, negative and positive power. The concept of power is essentially paternal in nature, positive power is associated with the qualities of a good father, often described in terms of the parent child or teacher student relationship...[whereas] negative power is abusive and corrupt; self-interested and greedy...This kind of power is associated with wealth, greater rights and freedom and the ability to control access to resources and decision-making. Power is also associated with having or buying connections and influence, or “strong back” [*khmorng thom*, literally “big back”]. In some communities, those with this kind of power included rich households within the village; in other villages power was concentrated in the hands of outsiders, and no villagers were perceived to have this kind of power over other villagers. For example, in Babaong, rich households control access to markets, and in Kompong Thnoat local traders control prices, while in several villages, participants said that money-lenders had considerable power over their lives. In Dang Kdar and Kanchor, some households with money were able to access rights to logging which were denied to ordinary villagers... It is very difficult for ordinary villagers to question the behaviour of those who have economic power over them or complain about abuse or exploitation.

“It is easy to buy power here since the pockets of all high-ranking officials are open ... Those with power just make a few trips to the forest and cut trees; then they can earn enough money to cover their expenses for a position ... It would be fortunate for us if they didn’t use their power to reap profits from us ... but that is not the case. Normally they threaten other villagers for money ... How can the poor survive? ... The poor are normally the victims and the powerful people are those who benefit ... Unlike before, the powerful should not be respected. But what can we do? They have guns and always make money from our backs.”

(Community timeline focus group, Dang Kdar)

“The rich have more power. They have power to control the local market price... They have lots of jobs and have money to hire us. Since there are neither companies nor factories in or nearby this village, and there are only 8 salt-farms in our area, the salt farm workers’ wage depend on the farm owner’s words.”

(Moved in focus group, Kampong Thnoat)