

Income Distribution and Community-based Tourism: Three Case Studies in Thailand

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ABSTRACT

This study investigates the impact of CBT on income distribution in three Thai villages, using the Gini Coefficient and the Shorrocks Index. The results indicate that tourism tended to increase income inequality because income was concentrated in tourism committee members and village chiefs. In the third village, most income was from individual households that sold souvenirs and was distributed more equally than that from other nonagricultural activities. The two measures of income distribution used do not account for subsequent distribution of tourism income within the villages. If this secondary distribution were included, the inequality would be less. The results indicate that community-based tourism revenue can be important for communities and recommendations on ways to increase such revenue are made.

Introduction

A widely-held view in Thailand is that tourism can generate a positive impact by increasing incomes; however, it can also result in negative development by worsening income distribution (Mingsarn 2006). This paper analyzes the impact of tourism on income distribution in three villages—Mae Kam Pong, Plai Phong, and Pha Nok Kok—that are known for community-based tourism (CBT).

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The three villages were chosen because of their different characteristics. Mae Kam Pong is a highland village of the ethnic Thai group. Plai Phong Phang is a lowland village of ethnic Thais. Pha Nok Kok is a highland village of the ethnic Hmong group.

Mae Kam Pong. Mae Kam Pong Village is about 50 kilometers from downtown Chiang Mai and is easily accessible by a well-maintained concrete road. With a high altitude (800–1,600 meters), it offers a scenic landscape of steep mountains, flowering forests, and small waterfalls in a pleasant temperate climate. Most (84%) of the 118 households are engaged in agriculture, which is the main source of income. Miang (a chewing snack made of tea leaves) is the main agricultural product, and is one of the unique attractions because the production of miang is now rarely seen. CBT had its origins in 1999 when a home-stay service for Japanese tourists was started. The following year, Mae Kam Pong was officially opened as an ecotourism destination focusing on home-stay services for both Thai and foreign tourists. Three main services are offered: a one-day trip for individual tourists, a one-day trip with a local guide, and an overnight stay in the village. The village provides tourists with both physical and cultural activities. During the day, tourists can trek into the forest or to nearby waterfalls, or take a sightseeing tour of miang production in the village. At night they may enjoy traditional Thai dancing performed by local women, as well as northern Thai music played by local men. Other services include guided tours, souvenirs, and herbal products. A 2003 survey indicated that 30 of the households participated in ecotourism, 9 of which offered home-stays.

Plai Phong Phang. Located in Samut Songkhram Province, Plai Phong Phang has succeeded in ecotourism. This small canal-side village of 30 households has a lot to offer its visitors: a night boat trip to observe fireflies, a typical villager's life along the canal, typically traditional Thai houses along the bank, coconut sugar production, and nature along the Mae Klong River. Tourists can experience the villagers' daily life by participating in a home-stay program. This involves an overnight stay in a traditional Thai house and offering food to the monks in the morning. The villagers started an ecotourism program officially in 1999. A tourist service center provides visitors with general information on the village and a tour program. A guesthouse serving breakfast and dinner can accommodate 10–20 visitors. With almost three fourths of the land devoted to agriculture, most of the Plai Phong Phang villagers are farmers, growing mainly pomelo and coconut. A 2004 survey counted 15 villagers participating in home-stays for tourists, of which 9 are also operating boats for traveling along the canal, and 4 are involved in catering. Tourism is the main occupation for only 8% of the villagers, while 81% make it their supplementary source of income.

Pha Nok Kok. Pha Nok Kok village is a hill tribe village of 59 households in Chiang Mai Province, and is populated mostly by the Hmong, who earn their living through agriculture. They obtained supplementary income from work in the Reforestation and Forest Fire Prevention Project in Suthep-Pui National Park until the project ended in 1996. The villagers found a new source of income in cultural tourism. Only 30 of 345

villagers initially participated in this project. Like many newcomers, they experienced many obstacles and failed to make the project popular among tourists. They subsequently turned to the Department of Welfare for help. Recognizing their potential, the Department of Welfare, in collaboration with the Tourism Authority of Thailand and the Japan Bank for International Construction, granted financial aid of baht (B)100,000 (US\$2,500)² to help establish the cultural center in the village. This center consists of a Hmong cultural museum, displaying tools, utensils, and garden herbs used in daily life. The center is also used for traditional dances and cultural activities.

Methodology

Data for the analyses of Mae Kam Pong and Plai Phong Phang villages were from the authors' surveys in 2004, while data for Pha Nok Kok were from the Social Research Institute, Chiang Mai University.

Two economic measures were used to measure income distribution: the Gini Coefficient and the Shorrocks Index. The Gini Coefficient measures the extent to which income distribution among individuals or households within a group deviates from a perfectly equal distribution. A value of 0 means perfect equality whereas a value of 1 represents extreme inequality. The Shorrocks Index is the ratio of household income to average household income. If household income is higher than average income, the ratio is less than one. If household income is less than the average, then the ratio has a value of greater than one. The Index can measure the average disparity of income among members of the population.

The Gini Coefficient was applied to all three villages. Shorrocks indexes were calculated for Pha Nok Kok Village only.

Note that in using the Gini Coefficient and Shorrocks Index, the analysis in this study can only consider direct income generated from tourism and not the income effects of tourist expenditures in the local economy. For instance, if one considers the backward linkages of direct tourism sales of goods and services (e.g., the local purchases of meat and vegetables for food sold to tourists, or employment of locals in tourism enterprises), then income disparity would be less.

² The exchange rate used throughout the paper is US\$1.0 = B40.

Results

Mae Kam Pong Village

Total income in Mae Kam Pong in 2003 was about B5,800,000 (US\$145,000); the average total income of a household was around B49,000 (US\$1,225). To determine the distribution of income among village households, the population was divided into five groups (quintiles) from lowest to highest income per capita. The share of total income received by the highest quintile (wealthiest 20%) was 44% , while that of the two lowest quintiles combined was 16%. The Gini Coefficient for total income of the village was 0.36.

Income from agriculture was about 63% of total income (Table 1), the major component of which was miang production, which made up about half of total income. Table 2 shows that the highest quintile earned 40% of total agriculture income. The other four income groups shared the remaining 60%, a pattern similar to the overall distribution pattern reflected in Table 1.

Nonagriculture income other than tourism comprised 33% of total income, with the average household income being B21,313 (US\$533) (Table 1). The lowest 40% of households took roughly 5% of total nonagricultural income, while the top 20% of households shared nearly 70%, a much more unequal distribution than for agriculture. The Gini Coefficients for agriculture and nonagriculture income were 0.35 and 0.61, respectively (Table 2).

Total income from tourism was B223,500 (US\$5,588), representing 4% of total income. Average income per household was B7,450 (US\$186) (Table 1). The highest quintile received 65% of the village's total tourism income. In contrast, the poorest 60% of households shared only 14% of total tourism income (Table 2). Clearly, the wealthiest quintile earned the bulk of the increase in income from tourism, with the Gini Coefficient being 0.57. The distribution pattern of tourism income is similar to but slightly less unequal than that of nonagriculture activities.

One reason for the unequal distribution of tourism income in Mae Kam Pong is that many villagers lack the funds and skill to run tourism-related businesses. According to the survey, the wealthiest 20% of households involved in tourism are those who are on the home-stay program committee and the village chief. This group of people also pioneered the ecotourism and home-stay program in Mae Kam Pong. They are more experienced in running businesses and have more capital to invest in souvenirs, accommodation, food, and transport services than do other villagers. The limited number of households with funds and skills has resulted in a shortage of home-stay and other tourism providers and discourages other villagers from joining tourism-related businesses. The result is that the income gap between rich and poor has widened since tourism was introduced in the village.

Table 1: Sources of Income of Mae Kam Pong Village, 2003

Source of Income	Amount (B)	Average (B/household)	%
1. Agriculture Income (112 households)*	3,604,501	32,183	63
1.1 Crops	3,429,251	31,065	60
- Fermented tea (miang)	3,111,500	28,810	54
- Coffee bean	308,251	4,342	5
- Other crops	9,500	4,750	<1
1.2 Livestock	175,250	11,683	3
2. Nonagriculture Income (90 households)*	1,918,130	21,313	33
2.1 Commercial	579,150	44,550	10
2.2 Others	1,338,980	17,692	23
3. Tourism (30 households)*	223,500	7,450	4
Total income (118 households)*	5,746,131	49,120	100

Source: Survey data, 26–28 April 2004.

Note: * Some households have sources of income from more than one sector.

Table 2: Income Share by Quintile Group in Mae Kam Pong Village (% of total income, 2003) and Gini Coefficients

Source of income	1st Quintile (Lowest 20%)	2nd Quintile	3rd Quintile	4th Quintile	5th Quintile (Highest 20%)	Gini Coefficient
Agriculture	4.30	11.17	17.19	27.34	40.00	0.35
Nonagriculture	1.36	4.28	6.78	18.19	69.39	0.61
Tourism	2.42	3.04	8.01	21.92	64.61	0.57
Total	5.35	10.55	17.18	23.05	43.87	0.36

Source: Calculated from survey data, 26–28 April 2004.

Plai Phong Phang Village

Total income for Plai Phong Phang in 2003 was B5,813,810 (US\$145,345). Even though most of the villagers are working in agriculture, the major source of cash income is from nonagriculture activities other than tourism (51% of total income). The share of agriculture income is 22%, while tourism provides 27%.

Most agriculture income is from coconut sugar production (56%) and copra production (36%) (Table 3). For the nonagriculture sector, two thirds of the income is derived from government employment and small businesses. Those working in this sector have the highest average annual income: B247,485 (US\$6,187) per household.

Among tourism activities, catering services contributed the highest share (42%), followed by transportation and guide services (39%).

Table 3: Sources of Income of Plai Phong Phang Village, 2003

Source of Income	Amount (B)	Average (B/household)	%
1. Agriculture Income (24 households)*	1,272,850	53,035	22
1.1 Pomelo Orchard	85,200	9,467	7
1.2 Peeled Coconut Manufacturing	463,650	25,758	36
1.3 Coconut Sugar Production	718,800	119,800	56
1.4 Others (lychee, mixed gardens)	5,200	2,600	<1
2. Nonagriculture Income (30 households)*	2,926,080	134,640	51
2.1 Commercial	96,000	48,000	3
2.2 Remittance	296,400	29,640	10
2.3 General Employment	589,800	84,257	20
2.4 Others (government official, own business)	1,979,880	247,485	67
3. Tourism Income (22 households)*	1,578,880	52,629	27
3.1 Home-stay	235,680	15,712	15
3.2 Boat Trip	620,000	68,889	39
3.3 Catering	667,400	111,233	42
3.4 Souvenir (coconut sugar and pomelo)	55,800	53,035	4
Total income (30 households)*	5,813,810	193,794	100

Source: Survey data, 31 August–1 September 2004.

Note: * Some households have sources of income from more than one sector.

Comparing the 2003 tourism income quintiles as in Mae Kam Pong, the two wealthiest groups (40% of tourism workers) in Plai Phong Phang gained 86% of the revenue from tourism while the other 60% of the workforce received only 14% (Table 4). The Gini Coefficient was 0.61 for the tourism sector and 0.46 for the entire village, indicating unequal income distribution among the villagers participating in tourism projects.

In this village, one factor in the unequal distribution of tourism income is the degree of managerial effort. Villagers who earned a high proportion of their income from tourism were those who belonged to the leading group of tourism promoters in Plai Phong Phang. Villagers who earned less were those who relied on tourism as a supplementary source of income. The latter invested fewer resources (financial as well as human) in tourism activities and, therefore, gained less.

On the whole, Plai Phong Phang villagers have maintained a positive attitude to CBT, recognizing it as an important source of jobs and income. It has encouraged them to be proud of their culture and community, and has taught the importance of caring for the environment. However, there are also some drawbacks. Apart from the fact that the tourism has contributed to inequitable income distribution, increased transport traffic has gradually eroded the banks of the canal. Furthermore, Plai Phong Phang has begun to encounter competition with the expansion of the tourism market.

**Table 4: Income Share by Quintile Group in Plai Phong Phang Village
(% of total income, 2003) and Gini Coefficients**

Source of Income	1st Quintile (Lowest 20%)	2nd Quintile	3rd Quintile	4th Quintile	5th Quintile (Highest 20%)	Gini Coeffi- cient
Agriculture	1	4	10	19	66	0.58
Nonagriculture	2	8	8	23	59	0.52
Tourism	2	5	7	10	76	0.61
Total	3	7	14	24	52	0.46

Source: Calculated from Survey data, 31 August–1 September 2004.

Pha Nok Kok Village

Table 5 shows the income structure of Pha Nok Kok Village classified by source of economic activity. (Note that these data are for 2001, while those of the other two villages are for 2003). Of 59 households, 57 derive some income from agriculture, 34 from nonagriculture, and 34 from tourism. (Some households earn income from more than one sector.) In 2001, agriculture—mainly production of corn, upland rice, vegetables, lychees, and flowers—accounted for 70% of total income. In this village, income earned from nonagriculture activities other than tourism accounted for only 15% and was mainly from day labor. Income earned from tourism was 14% of total income, not much different from that earned from other nonagriculture activities.

Tourism revenue in the village comes from donations to the cultural center, which are used to pay the 8-member management committee and performers, and for

Table 5: Income Structure of Pha Nok Kok Village, 2001

	Agriculture	Non- agriculture	Tourism	Total
Number of Households	57	34	34	59
Total Income of All Households (B)	3,865,000 (71%)	846,400 (15%)	789,000 (14%)	5,500,400 (100%)
Lowest Income (B)	2,000	3,000	1,000	80,000
Highest Income (B)	141,000	120,000	50,000	200,000
Average Income per Household (B)	65,508	14,346	13,373	93,227
Average Income from Different Sources per Household (B)	67,807	24,894	23,205	93,227

Source: Social Research Institute, Chiang Mai University.

maintenance and a village general fund. The 30 project members act as performers or guides, while individual households sell souvenirs.

Of the participating households, income from selling souvenirs accounted for 98% of total tourism income (Table 6). Donations received as entrance fees to the center amounted to B5,016 (about US\$125). Each management committee member received a share of B456 (US\$11). Income from guided tours amounted to B4,500 (US\$112) shared equally among 5 guides. Income from cultural performances was B3,500 (US\$88) shared equally among 10 performers. Income from tourism activities is, thus, equally distributed among participants. Income from the sale of souvenirs however, accrues directly to the individual household and may be, thus, unevenly distributed.

Table 6: Income from Tourism Classified by Activities in Pha Nok Kok Village, 2001

Source of Tourism Income	Number of Households	Total Income of All Households (B)	Lowest Income (B)	Highest Income (B)	Average Income per Household (B)
Income from Souvenirs	34	775,984	1,000	58,123	22,823
Donation	8	5,016	627	627	627
Guided Tours	5	4,500	900	900	900
Cultural Shows	10	3,500	350	350	350
Total Income	34	789,000	1,000	60,000	23,206

Source: Social Research Institute, Chiang Mai University.

In studying the structure of income distribution in the village, households were first classified according to their average income from agriculture and from all other activities (i.e., nonagriculture and tourism) (Table 7). In the agriculture sector, the proportion of households with income below the average in 2001 was 53% while that for all other activities was about 59%. Based on total income, 49% of households had lower than average income.

Income from nonagriculture activities was then further divided into income from tourism and income from other nonagriculture activities (Table 8). The data show that among households with nonagriculture income, the proportion falling below the average income is higher when tourism is excluded (68% compared with 59%). For households with tourism income, the proportion of households falling below the average income is only slightly higher than the number of those above the average (roughly 53% and 47%, respectively).

Shorrocks indexes were calculated to determine the impact of tourism on income distribution (Table 9). The disparity between the Shorrocks indexes for income from agriculture and nonagriculture, including tourism—0.26437 and 0.53787, respectively—

indicates that income inequality is greater in the nonagriculture than in the agriculture sector. These index values were then compared with the results of a study by Thitipon (2003) who calculated the Gini Coefficients using the same data (Table 9). The results showed a similar pattern: the Gini Coefficient for nonagriculture was higher than that for agriculture.

Table 7: Numbers of Households in Pha Nok Kok Village with Income Higher or Lower than Average, from Agriculture and Other Sources, 2001

	Source of Income		
	Agriculture	Other Sources	Total
Lower than Average	30 (53)	29 (59)	29 (49)
Higher than Average	27 (47)	20 (41)	30 (51)
Total	57 (100)	49 (100)	59 (100)

Source: Social Research Institute, Chiang Mai University.
Note: numbers in parentheses are percentages of households.

Table 8: Numbers of Households in Pha Nok Kok Village with Income Higher or Lower than Average, by Source of Income from Agriculture, Nonagriculture, and Tourism, 2001

	Source of Income			Total
	Agriculture	Nonagriculture	Tourism	
Lower than Average	30 (53)	23 (68)	18 (53)	29 (49)
Higher than Average	27 (47)	11 (32)	16 (47)	30 (51)
Total	57 (100)	34 (100)	34 (100)	59 (100)

Source: Social Research Institute, Chiang Mai University.
Note: numbers in parentheses are percentages of households.

Table 9: Shorrocks Indexes and Gini Coefficients* for Pha Nok Kok Village

	Shorrocks Index	Gini* Coefficient
Total Income	1.88018	0.38
Agriculture	0.26437	0.35
Nonagriculture, including Tourism	0.53787	0.46

Source: Social Research Institute, Chiang Mai University.
Note: * Gini Coefficient as calculated in Thitipon (2003).

When nonagriculture income is divided into tourism and other nonagriculture activities, the Shorrocks Index including tourism is higher than when tourism is excluded, reflecting higher income disparity within the nontourism, nonagriculture sector (0.67687 and 0.53787, respectively) (Table 10).

An advantage of the Shorrocks Index is that, unlike the Gini Coefficient, it can be used to account for within-group and between-group inequality. These sources of inequality were analyzed for the income distribution pattern of Pha Nok Kok Village (Table 10). The Shorrocks Index value within the tourism group was 0.35867, higher than the value within the agriculture group, 0.26437. This translates into higher disparity between groups, with index value of 1.86988. Increasing disparity between and within the three groups, combined with higher average household income, results in a higher total index of 2.72204.

The results of the study show that tourism has contributed to greater income disparity within groups and between groups. Within groups, income is more equally distributed within the agriculture than within the nonagriculture group.

Table 10: Shorrocks Indexes for Pha Nok Kok Village

	Shorrocks Index	
Shorrocks Class Indexes	1.88018 ^a	2.72204 ^b
Within-group	0.70213	0.85217
Between-group	1.17806	1.86988
Shorrocks Subclass Indexes		
Agriculture	0.26437	0.26438
Nonagriculture	0.53787	0.67687
Tourism		0.35867

Source: Social Research Institute, Chiang Mai University.

Notes: ^a Values in this column reflect the case where nonagriculture income *includes* tourism income.

^b Values in this column reflect the case where nonagriculture income *excludes* tourism income.

Conclusions and Recommendations

The extent of income disparity in the three villages would be less if backward linkages from tourism were considered. Neither the Gini Coefficient nor the Shorrocks Index can account for these effects. For instance, the case study for Plai Phong Phang revealed that income from tourism was generated mostly by catering services. This suggests that local purchases of food also provided additional income for the villagers. Further research is thus needed to capture the effects of second and subsequent rounds of expenditures by those who receive the tourist dollar directly in order to accurately measure tourism's overall impact on income disparity within a community. From the point of view of policy, the design of CBT schemes should make a conscious effort to

promote activities with a high degree of backward linkages so that income distribution effects are enhanced.

Nevertheless, the three case studies have shown that CBT is an important source of additional income for communities. It provides opportunities for households primarily engaged in agriculture to earn cash. Apart from tourism, government jobs and small enterprises are also important sources of cash income for the community.

In Mae Kam Pong and Plai Phong Phang, the additional revenue from tourism has mostly benefited community leaders. These leaders have taken part in bringing tourism to the village and promoting it, and are involved in management and operation of tourism projects. Villagers who engage in tourism activities as a supplementary source of income have benefited less.

Income disparities among households engaged in tourism activities may be due to several factors. One is lack of financial resources and managerial skills, especially among poorer households. To help overcome the lack of skills, government and/or nongovernment organizations should conduct awareness raising and capacity-building activities in tourism for interested communities, such as promoting better understanding of the nature of the ecotourism industry, home-stay management, development of cultural products, and CBT management at the community level. English training is also important and should be included in capacity-building efforts. To help overcome funding constraints, loans through microcredit schemes could be extended to poor households wishing to participate in tourism enterprises.

Tourism information—highlighting a community's natural attractions—as well as tourism products and prices, should be packaged and marketed to tour operators. Strategic partnerships with tour operators are crucial. Few village communities have the capacity for forward linkages and will remain invisible in the market place unless they can harness tour operators and travel agencies to assist them. Linkages with tour operators should be forged from the start of product development to ensure that what is being developed will interest a market. Community tourism officials should also encourage media coverage of CBT. The community should establish a system of monitoring visitor arrivals, preferences, and feedback as a basis for continuously improving the quality of its tourism products and services.

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