



SEATCA
SOUTHEAST ASIA TOBACCO CONTROL ALLIANCE

**The Collaborative Funding Program for
Southeast Asia Tobacco Control Research**

**LIVELIHOOD IN
TOBACCO FARMING AND
CIGARETTE CONSUMPTION
IN LAO PDR**

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**Financial support from
The Rockefeller Foundation and
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Supported by
Southeast Asia Tobacco Control Alliance (SEATCA)
Under The Collaborative Funding Program for Tobacco Control Research

Financial support from
**The Rockefeller Foundation and
Thai Health Promotion Foundation (Thai Health)**

December 2008

EXECUTIVE SUMMARY

1. Introduction

Agriculture is a major sector in Lao PDR, contributing 51% of GDP and employing 80% of the labor force while the industry accounts for 23% and services for 26%. Rice, sugarcane, vegetables and tobacco covered the majority of agricultural products in Lao PDR. Tobacco is one of the important crops for farmers in the country. The center and south of Lao PDR are main areas for tobacco farming. Furthermore, tobacco is the third largest agricultural product produced that values to about USD 50 million a year. The characteristics of tobacco farming are family-oriented, contract farming and substitute product for other crops especially rice. Smoking, on the other hand, is one of the significant problems of Lao peoples. The statistics of World Health Organization (WHO) showed that about 35% of the country's total population consumes tobacco products. Although, the government has clear policy for tobacco control, the tobacco problems will not reduce since the tobacco control policies have not fully implemented. The nature of tobacco manufacturing belongs to state-own enterprise. Cigarette production has doubled, it increased from 41 million tons in 2000 to 82 million tons in 2005. There are very few studies on smoking and on livelihood of farmers and smokers. Therefore, the issues of revenue and expenditure of the smokers, the expenditure for healthcare, the ratio of cigarette consumption to revenue of the smokers and expenditure on cigarette are interesting to discuss. This study, therefore, aims to find out livelihood of tobacco farmers and also provide significant evidences and policy recommendation to the government.

2. Literature Review

There are few studies in Lao related to tobacco farming and smokers in Lao PDR. The census on agricultural products conducted by the National Statistics Center (NSC) provides very important profiles of tobacco products as well as the National Economic Encyclopedia, 2008. The World Health Organization (WHO) conducted the Lao Health Survey in 2003 which focused on smokers in 3 regions, ie. central, north and south. The results showed that the southern region has the highest percentage of smokers (52.3%) and that the smoking rate was particularly high in the rural area (44.8%). WHO also conducted the Global Youth Tobacco Survey (GYTS) in 2003. Tobacco Control in Lao PDR (2008) reported on status of tobacco use and its control in Lao PDR.

Although a previous study on smokers provided some significant information about tobacco in Lao PDR, no studies have yet been conducted that explores the livelihoods of farmers and smokers.

3. Objectives

The general objective of this study is to assess the livelihood of tobacco farming households and cigarette consumption in Lao PDR with the specific objectives being: to compare the benefits between tobacco growing and non-tobacco growing, to compare

smoker's expenditures on cigarette to other basic needs, and to seek the contribution of tobacco farming and tax revenue from cigarette manufacturing to the economy of Lao PDR.

4. Methodology

The research team interviewed 2 heads of tobacco farming households and another 2 heads of non-tobacco farming households from each region. In total, they interviewed 12 people. About 1,200 samples were collected as representatives of the households from the 3 regions, 200 households were randomly selected from among the tobacco farming households as well as non-tobacco farming households from each region. As for cigarette consumption, 1,200 samples were collected among cigarette smokers from the 3 regions. For the purpose of this research, 4 provinces including Luang Prabang, Bolikhamxay, Vientiane Capital, and Champasack were selected.

All data from the in-depth interviews and focus group discussions were recorded by the researchers. Both tobacco farming and non-tobacco farming data were inputted into the computer using the SPSS 12 program.

5. Results

5.1 Lao Major Agriculture Commodities

The main agricultural crop grown by farmers in the country is rice. Some farmers grow rice in the upland area as rice terraces. The total rice production contributes up to 20% of GDP yearly. Vegetable and tobacco productions account for about 5% and 2% to total GDP, respectively, while other agriculture products make up about 20% of GDP.

5.2 Tobacco Leaves Production

The yield from tobacco farming jumped from 0.77 ton per hectare in 1994 to 3.6 tons per hectare in 1995. The yield increased to over 5 tons per hectare in 1999 and rose slightly between 2000 and 2004. However, there was a slight drop in 2005 because of flooding in many areas of Lao which destroyed much of agriculture products such as rice, sugar cane, soybean and tobacco.

5.3 Tobacco Plantation Area

Tobacco plantations are found almost all over the country. Tobacco is grown in many areas in Khammouane, Bolikhamxay and Savanhnakhet provinces because the cigarette company has contracted many farmers in these areas to plant tobacco for them to produce cigarettes.

5.4 Trading of Tobacco Leaves and Cigarette

Import of tobacco leaves has a negative relation with domestic production of tobacco leaves. In the year that tobacco leaves production was high, tobacco leaves import was low and vice versa. In 1995, tobacco leaves production was 16,000 metric tons and tobacco leaves import was 300 metric tons while in 2000, tobacco leaves production was 33,400 metric tons and tobacco leaves import was 100 metric tons. A local tobacco company uses mainly domestically-produced tobacco leaves.

5.5 Profiles of Tobacco and Non-tobacco Growing

The survey results showed that the number of males who worked on the farm was higher than that of female. Our observations indicated that males were the main workers in the farms. The results suggested that Lao Loum was the largest ethnic group which accounted for 65.33% of the total respondents while Lao Thueng and Lao Soung accounted for 25% and 2%, respectively. Approximately 66.17% of respondents possessed elementary school education only. This figure was not surprising because many respondents commented that higher level education was not available in their region. Most of the land area was made up of paddy fields. This figure is related to tobacco plantations because farmers who have paddy fields tend to also grow tobacco. Overall, the average rental for contracted land was USD22.78/hectare.

5.6 Income from Other Agriculture Products and Non-agriculture Products

The average annual household income of farmers comes mainly from agricultural products. In the Northern region, forestry contributed around USD65.1 to the farmers' income. In the Central region, animal husbandry was the main source of income for farmers, accounting of USD 624.43. In the Southern part, other agricultural products, such as coffee, vegetable, and soybean contributed USD560.99 to farmers' income. An average income of around USD838.63 was from other agricultural products.

The main production cost to grow tobacco and rice accounted for 79.76% and 72.13% of total cost respectively, with about 63% and 15% of it going to material cost for tobacco and rice, respectively. Other production cost was for contract land, administrative, transportation etc. Tax payment for tobacco accounted for 10.51% of total production cost. The majority of respondents did not hire permanent workers to work on their farms.

5.7. Comparison of Income and Cost of Tobacco Farming and Non-tobacco Farming

The respondents distributed their products to 3 channels including station owned unit buy, the free market and self-consumption. In the 3 areas, rice was mainly sold in the free market. The price of rice in the Northern part was higher than the Center and Southern parts due to the higher costs of rice production (chemical fertilizer, materials and equipment) while there was not much difference in the production of rice among the 3 parts. In conclusion, not only the revenue from tobacco farming was relatively high, but the cost of tobacco production was also high. Therefore, the average profit from tobacco

farming in the 3 regions was around USD450 per household per year which accounted for 25% of total cost.

5.8. About Cigarette Smokers

The majority of cigarette smokers were men, based on the survey samples, 96% were men and 4% were women, 71.7% were married and 28.3% were single. Based on the married group, the average number of children were 3.44 people per household. The percentage of respondents who graduated from elementary to high school covered more than 70 % of the total respondents.

The average annual income of smokers from the 3 regions was about USD1,355.70 per year or USD112.97 per month. The farmers, daily workers, and drivers were the majority of smokers, for 65.8% of the total respondents. In addition, more than half of the smokers had no part-time jobs or 60.94% compared to 39.06% who did have part time jobs. The majority of smokers were farmers, followed by merchants, workers, and drivers, accounting for 65.8% of the total respondents.

On cigarette consumption, each of the smokers consumed about 4.9 packs per week and paid about 0.36 USD per pack, meanwhile, about 7.09 USD per month that smokers paid for cigarettes. The average expenditure for cigarettes was 5.88 % while the average expenditure for food, entertainment, education, cloth, and health care were 40.69%, 19.85%, 14.72%, 11.53% and 7.33, respectively. All three regions had average income lower than average expenditure about 90 USD per year. The smokers were usually men who were the the main earner of the family.

5.9 Contribution of Tobacco Farming and Cigarette Manufacturing to Government Revenue

According to the tax policy, the government allows tax exemption for activities related to agriculture including tobacco farming. Cigarette manufacturing companies buy dried tobacco leaves from curing house or farmers and have to pay taxes such as excise tax, profit tax, business tax, and tariff. Tax is the main government revenue for Laos. But tobacco tax contributed a very low percentage to total tax revenue.

Government revenue from tobacco tax dropped from USD5.23 million in 2000 to USD2.36 million in 2004. The percentage of tobacco tax to total government tax revenue decreased sharply from 3.05% in 2000 to 0.87% in 2005 due to decreased tobacco production.

5.10 Focus Group Discussions (FGDs)

All the respondents had been growing tobacco for more than 3 years. They commented that for about more than 100 years, people in the Northern part of Lao has been growing tobacco. Nevertheless, tobacco has only been grown in the Center and Southern parts in

the past 20 to 30 years ago. All of the respondents have never learned the technique of tobacco growing in school, but they learned it from their parents and relatives. They also at times received some training in tobacco growing techniques and pest control from tobacco companies. Although farmers earn a lot more income from tobacco farming, those income were not enough to meet daily needs and other expenditures. Furthermore, the tobacco farmers requested the government to decrease tobacco tax and other tobacco fees.

Most of the smokers were around 35 years of age. There were about 2 cigarette smokers in the family - one was the father and the other the son. The respondents have been smoking for more than 10 years and they were introduced to smoking by friends. Most of the respondents have never been to the hospital for treatment of tobacco related diseases. Some respondents paid about USD1 per day for 2 packs of cigarettes. Another respondent suggested that he paid almost more than USD350 a year for cigarettes

6. Conclusions and Recommendations

Farmers grew both tobacco and other crops in the same land; however, the benefits they gained from farming and non-farming activities were different. The average profit from producing tobacco leaves was USD450.40 per farming household which accounted for 25% of the total cost per household while that for rice was USD39.38, or 8% of the total cost.

The sample group said that they consumed about 4.9 packs of cigarette per person per week and paid about USD0.36 for a pack of cigarettes, or about USD7.09 USD per month which accounted for 5.88% of total expenditure.

From the results, some policy recommendations are the following: 1) farmers should be given more opportunities to learn new process and methods in farming; 2) farmers should have more choices to grow other profitable agricultural products. Rice, coffee, soybeans and other important products could replace tobacco products; 3) tobacco farming should be reduced in terms of production and land area use; 4) tobacco control policy should be implemented immediately in order to reduce smoking and tobacco farming in Lao PDR. Furthermore, the monitoring program should be created for policy enforcement and evaluation; 5) the Ministry of Health should educate more the smokers and the public to understand more the danger of cigarette smoking. In addition, they may provide a campaign to persuade smokers to quit smoking; and 6) the Ministry of Finance should increase taxes (excise tax, business tax, and profit tax) which can reduce the number of smokers due higher cigarette price.

ACKNOWLEDGEMENTS

This study would not have been successful without the kind support of a number of people and organizations who had helped and inspired our team throughout the research process. We wish to express our gratitude and thanks to Southeast Asia Tobacco Control Alliance (SEATCA) for giving us the opportunity to develop this valuable research. We are also deeply grateful to The Rockefeller Foundation and the Thai Health Promotion Foundation (ThaiHealth) for their financial support of the project.

Our sincere thanks to Ms. Menchi G. Velasco for her patience, valuable advice and guidance throughout the project. Our heartfelt gratitude is also extended to Professor Teh-wei Hu for giving us his guidance on our research. Moreover, we would like to thank Dr. Bounlonh Ketsouvannasane who also helped and supported us throughout the project.

Lastly, we would like to express our gratitude for the support given by Dean Khamlusa Nouansavanh and our colleagues at the Faculty of Economic and Business Management, National University of Laos.

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August, 2008

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1. INTRODUCTION

Background

Lao's People Democratic Republic has a predominantly agricultural economy. With a population of about 5.8 million, and a land area of 236,800 square km, agriculture is the major economic sector, accounting for 51% of GDP and employing 80% of the labor force while industry accounts for 23% and services 26% (World Bank, 2006). The 3 main agricultural occupations of the Lao people are farming, fishery and forestry, of which farming is the most important. The majority of farmers in Lao are rice growers. Other crops such as vegetables, tobacco, sugarcane and coffee are also important to the Lao economy. Tobacco is one of significant crops for farmers in Lao PDR. The size of the tobacco plantation area has not been steady over the years, ie. in 1995, it was 7,410 hectares and declined to 5,360 hectares in 2005. Tobacco could be grown in any parts of the country. The center and south of Laos are main areas for tobacco farming (National Statistics Center, 2005).

Tobacco was the third largest agricultural produce that earn USD50 million a year and a substitute for rice in Laos. Farmers grow tobacco as a family business and other farmers are contracted. Tobacco farmers sell their products to cigarette manufacturing companies but keep a small amount of tobacco for household consumption.

Tobacco manufacturing belongs to state-owned enterprises. Cigarette production has increased from 41 million tons in 2000 to 82 million tons in 2005. Although cigarette companies in Laos produced more than a billion stick a year, these products are consumed only by low income people while more expensive cigarettes are imported from other countries to meet the demand of high income people (Baothammavong, 2007).

Tobacco farming is one of the significant agricultural activities in Lao PDR. It created not only income for the people but also job opportunities for farmers. Each year, the country produces 28,000 tons of tobacco leaves and 361 million sticks of cigarettes. On the other hand, tobacco had brought about many diseases to the smoker and the government of Lao had to spend a sizable amount of its budget on the health sector. Although, there have been a few studies conducted on tobacco and smokers, none has yet looked into the livelihood of tobacco farmers and smokers. As such, this research intends to fill this gap by obtaining all the important information that is needed to address this unexplored area.

2. LITERATURE REVIEW

Recently, the Lao PDR conducted a major agricultural census which provided an excellent overview of the basic nature of Laos' agricultural system. The results of this survey indicated that 79.7% of the total population was engaged in farming. The average land holding was 1.62 hectares with 27% of households having 2 hectares or more and 36% having less than 1 hectare. An impressive 97% of farmers own their own land. About 93% of the area devoted to rice production was for the production of sticky rice, a subsistence crop used primarily for home consumption (National Economic Encyclopedia, 2008).

In terms of tons of agricultural production, the top 5 crops in Laos in order of importance were rice, vegetables and beans, sugarcane, starchy roots, and tobacco. Since 1990, among 5 leading crops, production of vegetables and beans had grown the fastest in percentage terms, followed by sugarcane. In the decade since 1990 rice production had increased 47.9%. Among agricultural products often produced as cash crops are mungbeans, soybeans, peanuts, tobacco, cotton, sugarcane, coffee, and tea (National Economic Encyclopedia, 2008).

There were a few studies conducted on cigarette smoking in Lao PDR. According to Lao Health Survey 2003, smoking prevalence among adult smokers (above 18 years old) was 40.3%. It was higher among males (67.7%) as compared to females (16%). The highest smoking rate was reported in Southern Laos (52.3%), followed by Northern (41.3%) and Central Lao (34.5%). The smoking rate was higher in rural areas (44.8%) compared to urban areas (27%). The rate is also higher among the older age groups. More than 40% of those aged 50 and above were smokers as compared to 28% among those between 18 and 29 years of age (WHO, 2003).

Inevitably, youth smoking is also a serious public health problem in Laos. Based on the Global Youth Tobacco Survey 2003, the smoking prevalence among youth (13-15 years old) was 14.4% among boys and 8% among girls. The study was conducted in four provinces. The percentage of youths who had ever tried smoking was found to be 12.3% in Vientiane Capital City, 16.9% in Vientiane, 7.4% in Luang Prabang province and 15.5% in Savanakheth province. Currently tobacco use among youths across the districts ranged between 4% and 9%. It was higher among boys (7%-14%) as compared to girls (0.5%-1%). Most current smokers reported that they have easy access to cigarettes. About 26% to 49% of them mentioned that they purchased cigarettes from stores. Current smokers, ranged from 47% to 79%, mentioned that they were not refused to purchase cigarette because of their age. This was reported highest in Luang Prabang province (78.5%) (WHO, 2003).

Although previous studies of smokers provided some significant information and results on tobacco use in Lao PDR, no study has yet been conducted on the livelihood of smokers. Therefore, this study hoped to fill the gap by investigating the issues of revenue and expenditure of the smokers, the expenditure for healthcare, the ratio of cigarette consumption to revenue of the smoker and expenditure on cigarettes. Research studies on tobacco farming in Lao PDR were also limited and this study hoped to explore issues with

regards to the livelihood of tobacco farming and the revenue generated from tobacco farming in a year.. This study used different methods and samples from previous studies and aimed to provide significant conclusions. From the results of the study it is hoped that workable and practical policy recommendations to government of Lao PDR can be proposed. The details of study and analysis are explained in the next sections.

3. RESEARCH OBJECTIVES

General objective:

To assess the livelihood of tobacco farming households and tobacco consumption in Lao PDR

Specific objectives:

1. To compare the benefits between tobacco growing and non-tobacco growing
2. To compare smoker's expenditures on cigarette to other basic needs
3. To seek the contribution of tobacco farming and tax revenue from cigarette manufacturing to the economy of Lao PDR

4. METHODOLOGY

4.1 Study Design

The study intended to use a combination of qualitative and quantitative methods to analyze the result of the questionnaire survey.

4.1.1 Qualitative Method

For the tobacco farming part, the research team interviewed 2 heads of tobacco farming households and 2 heads of non-tobacco farming households from each region. In total, 12 people were interviewed. The interview with tobacco farmers was related to the objective of study; for instance, how much of tobacco is grown, how much income that they earn in one year, the reason why the farmers grow tobacco. This analysis provided more explanations to the objective of the study (See questions in APPENDIX III).

For the cigarette consumption part, 2 cigarette smokers from each region were invited for the in-depth interview, one was a government staff and the other was a private staff. In total, 12 cigarette smokers were enlisted for the in-depth interview. The research team asked certain questions which could be used to support the quantitative analysis (See questions in APPENDIX IV).

4.1.2 Quantitative Method

For tobacco and non-tobacco growing, a total of 1,200 household samples were collected from all the 3 regions - 200 tobacco farming households were randomly selected from each region and the same applied for non-tobacco farming households. The head of family or person who knew well about the livelihood of households were selected to answer the questionnaires (See APPENDIX I).

For cigarette consumption, a total of 1,200 samples were collected among cigarette smokers from all 3 regions - 400 cigarette smokers were randomly selected from each region (200 were government staff and another 200 were private enterprise staff and all have permanent salaries) (See APPENDIX II).

4.2 Study Area

In Laos, tobacco is grown in almost all the provinces in the country. For the purpose of this research, 4 provinces were selected.

In the Northern part, Nambak district and Luang Prabang province were selected for both the tobacco farming and consumption surveys. These provinces had shown good performances in agriculture, economic and tourism. The tobacco growing area covered 226 hectares and tobacco production was 786 tons in 2003. In addition, the area which has the highest population was the Northern province with 407,039 inhabitants (NSC, 2005).

In the Central part, Borlikhamxay province was selected for the tobacco farming and non-tobacco farming survey and Vientiane Capital City was selected for the cigarette consumption survey because it has the second highest population in the country (698,318 inhabitants) (NSC, 2005). Borlikhamxay province's agriculture sector has performed well, so too was the economy of Vientiane Capital City

In the Southern part, Champasack province was selected for the tobacco and non-tobacco farming survey because it has the largest tobacco plantation area and produced the most tobacco among the 4 provinces in the Southern region. In 2004, tobacco plantation area accounted for 590 hectares and tobacco production was 2,950 tons. Chamapasack province was selected for the tobacco consumption survey because this province was the most populated area in the Southern part of Lao with 640,000 inhabitants (NSC, 2005).

4.3 Data Analysis

4.3.1 Qualitative Data

All in-depth interviews and focus group discussions were documented. All data have been summarized by the research team and information added to support the descriptive data from quantitative analysis.

4.3.2 Quantitative Data

Both tobacco farming and non-tobacco farming data were put into the computer using, namely, the SPSS 12.0 software. Coding manual was developed by the research team. Also, Microsoft excels were used to manage data analysis.

4.4 Scope and Limitations

There are many interesting issues related to tobacco farming and smokers in Lao PDR such as tobacco and poverty, the contribution of tobacco farming to the economy, and impact of tobacco control policy on poverty. However, previous research on these areas were limited in nature. Therefore, this study aimed to address the gap by focusing on the livelihood of tobacco farming and cigarette consumption. The study discovered the general profile of farmers, for instance, their gender, age and education attainment. Furthermore, the study gathered information on land, production, revenue, and cost of production. At the level of the smoker, data on their age, education, occupation, revenue and expenditure, and expenditure for cigarette were analyzed. This study covered 1,200 samples of farmers and 1,200 sample smokers from four provinces. The questionnaire survey was distributed to respondents between June and August of 2007.

5. RESULTS

5.1 Laos' Major Agricultural Commodities

The production of the 20 most important food and agricultural commodities in Lao over the years is presented in table 1. According to table 1, the share of agricultural production to GDP decreased from 50% in 2001 to 30% in 2005. The main crop is rice which farmers grow around the country. Farmers grow rice in rainy season (from June to September) and in dry season (December to May, irrigated rice). The irrigated rice production depends on the water source and irrigation system. Normally, the irrigation system is distributed to the rice farm which are located near water sources. Some farmers grow rice in the upland area or what we call "rice terraces". The total production of rice contributed to 20% of the country's annual GDP. Vegetables and tobacco production share about 5% and 2% of the total GDP while the rest shared about 20%.

Table 1: Share of agricultural products to GDP

Agricultural products	2001	2002	2003	2004	2005
Rice	28.2	28.3	24.1	23.13	17.34
Fresh vegetable	6.72	7.87	5.92	5.01	4.29
Tobacco leaves	3.11	2.76	2.23	2.47	2.18
Indigenous cattle meat	2.14	2.36	2.13	2.05	1.77
Indigenous pig meat	1.81	1.75	1.71	1.1	0.96
Indigenous buffalo meat	1.87	1.85	1.53	1.35	1.14
Sweet potatoes	0.57	1.07	0.72	0.72	0.86
Pimento, allspice	0.78	0.77	0.67	0.57	0.48
Indigenous chicken meat	0.72	0.7	0.79	0.63	0.65
Coffee, green	1.2	1.45	1.53	0.78	0.66
Maize	0.74	0.79	0.79	0.97	0.85
Cantaloupes and melons	0.33	0.32	0.3	0.26	0.22
Fresh fruits	0.34	0.33	0.29	0.25	0.21
Pineapples	0.46	0.38	0.33	0.29	0.25
Cassava	0.29	0.33	N.A	N.A	N.A
Potatoes	0.28	N.A	0.28	0.21	N.A
Sesame seed	N.A	N.A	N.A	0.22	0.2
Oranges	N.A	N.A	N.A	N.A	N.A
Tang mand, clement, satsma	0.3	N.A	N.A	N.A	0.2
Chicken eggs	0.57	0.6	0.53	0.43	0.38
Share in GDP	50.5	51.7	43.86	39.56	32.63

Source: National Statistics Center, 2007

Table 2: Share of crops to total agricultural production

Agricultural products	2001	2002	2003	2004	2005
Rice	55.12%	52.57%	53.17%	54.88%	51.94%
Fresh vegetable	13.12%	14.61%	13.07%	12.42%	12.85%
Tobacco leaves	6.08%	5.12%	4.93%	6.13%	6.53%
Indigenous cattle meat	4.18%	4.38%	4.70%	5.08%	5.29%
Indigenous buffalo meat	3.64%	3.43%	3.77%	3.35%	3.43%
Indigenous pig meat	3.53%	3.25%	3.37%	2.74%	2.88%
Coffee, green	2.34%	2.69%	3.37%	2.41%	2.59%
Maize	1.51%	1.99%	1.75%	1.92%	2.53%
Pimento, allspice	1.44%	1.64%	1.75%	1.80%	1.98%
Sweet potatoes	1.41%	1.47%	1.59%	1.79%	1.94%
Indigenous chicken meat	1.12%	1.43%	1.47%	1.42%	1.45%
Chicken eggs	1.11%	1.30%	1.17%	1.06%	1.13%
Pineapples	0.90%	1.12%	0.92%	0.71%	0.85%
Groundnuts in shell	0.75%	0.88%	0.82%	0.67%	0.74%
Sugar cane	0.73%	0.81%	0.81%	0.65%	0.71%
Cantaloupes & melons	0.67%	0.77%	0.73%	0.64%	0.70%
Fresh fruits	0.65%	0.71%	0.67%	0.62%	0.66%
Tang mand, clement, satsma	0.58%	0.62%	0.67%	0.61%	0.63%
Bananas	0.57%	0.61%	0.64%	0.55%	0.60%
Cassava	0.55%	0.60%	0.63%	0.53%	0.59%
Total	100.00%	100.00%	100.00%	100.00%	100.00%

Source: National Statistics Center, 2007

As shown in table 3, tobacco production was ranked between the second and the fourth from 1990 to 2005. In 2005 tobacco ranked as the third largest in terms of production and value compared to other crops. In terms of percentage to total crops, tobacco production was the third largest among all productions, accounting for about 5-6% of total production during that period. Therefore, it could be concluded that tobacco was one of most important crops for farmers in Lao PDR.

Table 3: Ranking of tobacco production to other crops

Year	Rank	US \$ 1000
1990	2	62,226
1991	2	54,952
1992	2	55,718
1993	2	40,293
1994	2	37,923
1995	4	29,172
1996	2	47,404
1997	2	51,050
1998	3	32,021
1999	3	42,572
2000	3	72,794
2001	3	54,844
2002	3	50,133
2003	3	46,880
2004	3	60,166
2005	3	62,901

Source: Food and Agriculture Organization, 2005

5.2 Tobacco Leaves Production

Lao PDR has a long history of tobacco production traceable back to the early 19th century. Tobacco leaves production had increased dramatically from 1991 to 2005. Table 4 shows that the tobacco productivity was very low between 1991 and 1994 compared to other periods in time. The yield from tobacco production jumped from 0.77 ton per hectare in 1994 to 3.6 tons per hectare in 1995. The yield was over 5 tons per hectare in 1999 and subsequently increased slightly from 2000 to 2004. However, there was a slight drop in 2005 because of floodings in many areas of Lao which destroyed much of the agricultural crops such as rice, sugar cane, soybean and tobacco.

Table 4: Area, production and yield, 1991-2005

Year	Production Area (ha)	Production (ton)	Yield (ton/ha)
1991	10,210	8,037	0.79
1992	10,470	8,259	0.79
1993	7,100	5,236	0.74
1994	7,250	5,607	0.77
1995	7,410	26,643	3.60
1996	7,220	26,040	3.61
1997	7,500	28,000	3.73
1998	6,580	25,600	3.89
1999	4,295	23,350	5.44
2000	7,500	39,822	5.31
2001	5,060	30,081	5.94
2002	5,476	27,497	5.02
2003	4,772	25,713	5.39
2004	5,720	33,000	5.77
2005	5,360	28,100	5.24
2006	5,615	24,690	4.39

Source: Ministry of Agriculture and Forestry and NSC, 2005

Although production has risen since 1995, it has been volatile from year to year, fluctuating in response to changes in price and weather conditions. Increase in tobacco production over the past decade has been driven by expansion in the land area under cultivation and increased yield.

5.3 Tobacco Plantation Area

Tobacco plantations are distributed almost throughout the country. Khammouane, Bolikhamxay and Savanhnakhet provinces have large area of tobacco plantation since the cigarette company has contracted many farmers in this area to plant tobacco for them to produce cigarettes. Saravane province had seen the most significant change whereby the tobacco plantation area increased sharply from 385 hectares in 2005 to 990 hectares in 2006. Champasack province saw a slightly decreased in the land area occupied by tobacco plantations because coffee plantations became popular. Furthermore, the turnover of coffee plantations was relatively higher than from tobacco plantations.

Table 5: Tobacco plantation area by province (Hectare)

	Provinces	2001	2002	2003	2004	2005	2006
01	Vientiane Capital	657	564	435	325	310	260
02	Phongsaly	-	-	-	22	-	5
03	Luangnamtha	78	89	114	138	25	120
04	Oudomxay	392	282	40	10	65	70
05	Bokeo	70	60	28	37	-	-
06	Luang Prabang	354	190	226	-	110	135
07	Houaphanh	-	610	-	-	10	-
08	Xayaboury	172	100	172	167	190	110
09	Xiengkhouang	-	-	20	-	-	5
10	Vientiane	90	160	453	836	225	225
11	Borikhamxay	490	490	544	971	930	1,120
12	Khammouane	1,070	475	986	1,275	1,175	1,235
13	Savannakhet	660	790	1,056	948	1,485	955
14	Saravane	192	40	240	590	385	990
15	Sekong	100	173	80	161	70	60
16	Champasack	695	543	208	170	380	250
17	Attapeu	40	910	170	70	-	75
18	Xaysomboon SR	-	-	-	-	-	-
	TOTAL:	5,060	5,476	4,772	5,720	5,360	5,615

Source: National Statistics Center, 2007

5.4 Trading of Tobacco Leaves and Cigarettes

5.4.1 Annual Tobacco Trade

As mentioned above, although the domestic production of tobacco leaves was quite high, the tobacco manufacturing companies imported much tobacco leaves from neighboring countries such as Vietnam, China and Cambodia. Table 6 below shows the statistics of annual tobacco trade from 1990 to 2003. The tobacco leaf imports had a negative relation with the tobacco leaves production. In the year that tobacco leaves production was high the tobacco leaves imports were low and vice versa. In 1995, the tobacco leaves production was 16,000 metric tons and tobacco leaves import was 300 metric tons while in 2000 the tobacco leaves production was 33,400 metric tons and tobacco leaves import was 100 metric tons.

Table 6: Annual tobacco trade

	Unit of Measurement	1990	1995	2000	2001	2002	2003
Cigarette imports	Sticks in millions	-	-	864	-	-	-
Cigarette exports	Sticks in millions	-	-	-	-	-	-
Tobacco leaves imports	metric tons	160	300	100	120	220	190
Tobacco leaves export	metric tons	-	-	-	-	-	-
Cigarette Production	Sticks in millions	-	1,062	-	-	-	-
Tobacco leaves production	metric tons	34,130	16,000	33,400	3,0081	27497	25,713
Land devoted to tobacco growing	Hectares	11,665	7,410	7,500	5,060	5,476	4,772

Source: WHO WPRO Countries' Profiles, 2001

5.4.2 Import and Export Value of Tobacco and Cigarette

There are two main cigarette manufacturing companies in Lao PDR. The first is Lao-China Lucky Co., Ltd which is 100% owned by Chinese investors and is established in 1992. The second cigarette manufacturing company is Lao Tobacco Co., Ltd established in 2001 under the Lao Investment Law and is a joint-venture of government of Lao PDR (47%), French (34%) and Singaporean investors (19%).

Under the Investment Law, Lao-China Lucky Co., Ltd and Lao Tobacco Co., Ltd are entitled to a 25-year concession that consists of the right to a 5-year profit tax holiday (from 2002 to 2006), and a privilege to a lower excise tax rate for 25 years (from 2002-2026).

Table 7 below shows that the Lao-China Lucky Co, Ltd mainly used tobacco leaves from domestic source. However, the company started importing tobacco leaves from China in 2003 due to insufficient domestic supply.. And the company has been contracting farmers to grow tobacco since 2005 to augment demands . The domestic tobacco leaves grew about 25 to 30 times in 2006 compared to previous year 2003.

The Lao Tobacco Co, Ltd, on the other hand, used mostly imported tobacco leaves and started using domestic leaves in 2004.

In terms of exports of cigarettes, both companies exported very small volume compared to the amount of tobacco leaves that were imported. However, Lao Tobacco Co, Ltd has dramatically increased its exports from USD 527,963 in 2005 to USD 1,103,392 in 2006, or doubled in a year.

Table 7: Source of tobacco leaves for producing cigarettes

Year	Lao-China Lucky Co, Ltd			Lao Tobacco Co, Ltd		
	Domestic tobacco (USD)	Imports tobacco (USD)	Exports of cigarettes (USD)	Domestic tobacco (USD)	Imports tobacco (USD)	Exports of cigarettes (USD)
2002	6,449,953.53	-	-	-	653,122.71	-
2003	217,256.77	5,153,432.10	-	-	693,328.30	-
2004	2,743,351.83	3,713,953.90	189,415.80	614,328.32	421,477.89	97,312.32
2005	5,487,986.48	3,308,849.55	-	39,253.38	896,033.06	527,963.00
2006	6,402,957.26	4,340,279.34	1,020,531	414,020.33	417,974.53	1,103,392.56

Source: Ministry of Finance, 2007

5.5 Profiles of Respondents in Tobacco and Non-tobacco Growing

This section provides the profiles of respondents. Table 8 shows the gender of tobacco farmers. The survey results showed that the number of males who work in the farm was higher than females while males were the main workers on the farms. In the north, the percentage of male working in the farm was the highest (87.11%).

Table 8: Gender

	North		Central		South		Total	
	Person (s)	%	Person (s)	%	Person (s)	%	Person (s)	%
Male	196	87.11	212	62.98	96	66.2	504	71.28
Female	29	12.89	125	27.02	49	33.8	203	28.72
Total	225	100	337	100	145	100	707	100

Source: Author's survey in 2007

Table 9 presents the breakdown of ethnic groups of the respondents in the 3 regions of Lao. The result suggested that Lao Loum was the largest ethnic group which accounted for 65.33% of total respondents while Lao Thueng and Lao Sung accounted for 25% and 2%, respectively.

Table 9: Ethnic groups

	North		Central		South		Total	
	Person (s)	%	Person (s)	%	Person (s)	%	Person(s)	%
Lao Theung	10	4.44	14	4.15	128	88.28	152	21.50
Lao Loum	147	65.33	321	95.25	17	11.72	485	68.60
Lao Soung	9	4.00	2	0.59	0	0.00	11	1.56
Other	59	26.22	0	0.00	0	0.00	59	8.35
Total	225	100.00	337	100.00	145	100.00	707	100.00

Source: Author's survey in 2007

Table 10 shows the education level of farmers. The survey results illustrated that more than 60% of farmers had elementary school education. Approximately 66.17% of respondents in the central part has elementary school education while in the southern part, 59.31% of the respondents had elementary school education. The fact that most of the respondents in each of the region attain only elementary school education was not surprising because many respondents commented that there was no higher school level in their region. Therefore, they had not much opportunity to pursue higher education. Furthermore, many children had to quit school very early since they had to help their parents in the farm.

Table 10: Education level of farmers

	North		Central		South		Total	
	Person (s)	%	Person (s)	%	Person (s)	%	Person (s)	%
Illiterate	43	19.11	19	5.64	16	11.03	78	11.03
Elementary	144	64.00	223	66.17	86	59.31	453	64.07
Junior. High	31	13.78	71	21.07	41	28.28	143	20.23
Senior High	3	1.33	19	5.64	2	1.38	24	3.39
Technical	3	1.33	4	1.19	0	0.00	7	0.99
Collage/University	1	0.44	1	0.30	0	0.00	2	0.28
Total	225	100	337	100.00	145	100	707	100

Source: Author's survey in 2007

The average number of members in a family was about 4 to 5 people. Many families had 6 to 7 members in the family. These figures are relatively high compared to the number of persons capable of earning money in the family. Table 11 shows that households have

about 4 people who were capable of earning and approximately 3 people who were capable of earning cash.

Table 11: Household size and number of persons who can earn money

	North	Central	South	Average
Total (person)	4.5	4.5	3.95	4.32
Number capable person to earn	3.85	3.85	3.58	3.76
Number capable person to earn cash	3.04	3.03	3.21	3.09

Source: Author's survey in 2007

Table 12 indicates the cultivated land owned by households in terms of hectare. Paddy fields in the Northern part have the largest cultivated area averaging about 0.8 hectare per household, followed by dry land which averaged about 0.72 hectare per household. In the Center part, paddy fields averaged about 2.39 hectares per household and dry land averaged about 1.65 hectares per household. The paddy fields in the Southern part were about 1.09 hectares per household which was higher than dry land. These figures are related to tobacco plantations because farmers who have paddy fields tend to also grow tobacco.

Table 12: Cultivated land owned by households

	North	Central	South	Average
Total	1.52	4.04	1.57	2.38
Paddy field	0.8	2.39	1.09	1.43
Dry land	0.72	1.65	0.48	0.95

Source: Author's survey in 2007

Table 13 below illustrates the contracted land of farmers. Some farmers had to rent land from others because they did not have their own land. The rental payment could be in the form of crops or money depending on the negotiated terms between the farmer and the landlord. The figures showed that there were a fair similarity between the cost of contracted land in the Central and Southern parts. All of the respondents in the Northern part did not have contracted land. Overall, the average rental for contracted land was USD22.78/hectare.

Table 13: Contracted land of others

	North		Central		South		Total	
	ha(s)	\$/ha	ha(s)	\$/ha	ha(s)	\$/ha	ha(s)	\$/ha
Land	0	0	1.27	24.1	0.86	21.45	1.07	22.78

Source: Author's survey in 2007

5.6 Income from Other Agriculture Products and Non-agricultural Products

In this section the sources of income from other non-agricultural products are discussed and shown in Table 14. Although the main income of respondents was from tobacco farming, there were other important sources of income that farmer could have access to such as forestry, fishery and animal husbandry. But the main source of income for farmers was from agricultural products. The table below shows that the proportion of income from agriculture was 30.99% while income from other activities was 18.92%.

Table 14: Grand total income

Unit: USD

	North	Central	South	Average
	(%)	(%)	(%)	(%)
Total income from other agricultural products	216.68 (10.77)	1650.23 (41.72)	648.98 (30.18)	838.63 (30.99)
Total income from other non-agricultural activities	312.26 (15.51)	1129.84 (28.56)	93.89 (4.37)	511.99 (18.92)
Total income from tobacco	1483.78 (73.72)	1175.67 (29.72)	1407.66 (65.46)	1355.70 (50.09)
Total income of farmer	2012.72 (100)	3955.74 (100)	2150.53 (100)	2706.32 (100)

Source: Author's survey in 2007

Income from other agricultural products is represented in Table 15. Forestry contributed around USD65.1 per household to farmers in the Northern part. In the Center part, animal husbandry contributed as much as USD624.43 per household. In the Southern part, other agricultural products, for instance, coffee, vegetable and soybean contributed USD560.99 to each household. Table 16 represents the income from other non-agricultural activities including income from family businesses (retail, service, restaurant, etc), wages from working, and others. In the Northern and Center parts, business had contributed an income of around USD179.76 per household and USD527.68 per household, respectively. In the Southern part, USD36.81 was derived from other non-agricultural activities. Generally, an average income of around USD838.62 per household was from other agricultural products.

In the Center and Southern parts, income from other agricultural products was higher than the income from other non-agricultural activities.

Table 15: Income from other agricultural products (USD per household)

	North	Central	South	Average
Forestry	65.1	120.69	6.04	63.94
Fishery	35.87	294.21	34.16	121.41
Animal husbandry	43.44	624.43	47.79	238.55
Other	72.24	610.90	560.99	414.71
Total	216.65	1650.23	648.98	838.62

Source: Author's survey in 2007

Table 16: Income from other non-agricultural activities (USD per household)

	North	Central	South	Average
Business	179.76	527.68	32.55	246.66
Wage of working	86.23	126.71	24.53	79.16
Other	46.27	475.45	36.81	186.18
Total	312.26	1129.84	93.89	512.00

Source: Author's survey in 2007

5.7 Comparison of Income and Cost of Tobacco Farming and Non-tobacco Farming

The results of respondents' average production cost per household per year are shown in Table 17. The respondents produced 2 crops, i.e. tobacco and rice. Respondents grew rice only in the rainy season in a limited area since the main crop was tobacco. Therefore, the production cost was highly weighted to tobacco. The production cost of tobacco and rice farming were divided into production cost for material, manpower, tax and other costs.

Table 17: Production cost (Average per household per year)

Production cost	USD	Percentage
Materials	1 775.36	78.17 %
Of which for tobacco	1 432.73	63.08 %
Of which for rice	342.63	15.09 %
Man power	41.79	1.84 %
Of which for tobacco	23.51	1.04 %
Of which for rice	18.28	0.80 %
Other	257.67	11.34 %
Of which for tobacco	151.25	6.66 %
Of which for rice	106.42	4.69 %
Tax	196.41	8.65 %
Of which for tobacco	188.7	8.31 %
Of which for rice	7.71	0.34 %
Total cost for tobacco	1 796.19	79.08 %
Total cost for rice	475.04	20.92 %
Sub - Total	2 271.23	100.00 %

Source: Author's survey in 2007

The main production cost involved in growing tobacco and rice was the purchase of materials which accounted for 78% of total cost. Of that, about 63% and 15% were material costs for tobacco and rice respectively. Manpower cost included the cost of hiring temporary and permanent employees to work in the farm. The majority of respondents did not hire permanent employees to work in their farms. They hired temporary workers during the cultivation and harvesting seasons. Other costs of productions were expense for contract land, administrative, transportation, etc. Tax payment for tobacco accounted for 8% of total production cost. As mentioned above, the respondents mainly produced tobacco; therefore, the total cost for tobacco production and total cost for rice production were 79% and 20.92%, respectively.

The main production cost in growing tobacco and rice was purchasing materials which account for 79.76% and 72.13 % of the total cost, respectively. The manpower cost is the cost to hire temporary and permanent workers to work in the farm. Majority of respondents do not hire permanent workers to work in their farm. They hire temporary workers in cultivation period and harvesting season. Other costs of productions are expenses for contract land, administration, transportation, etc. Tax payment for tobacco accounts for 10.51% of the total production cost.

The respondents distributed their products to 3 channels including station owned unit buy, the free market and self-consumption. But rice was mainly sold in the free market. Data for self-consumption of rice could not be obtained because the respondents could not estimate the amount they consumed. The price of rice in the Northern part was higher than the Center and Southern parts due to the higher costs of rice production (chemical fertilizer, materials and equipment) while the production of rice was not much different among the 3

parts. The Northern part produced the least tobacco. Nevertheless, the price of tobacco in this area was the highest when sold in the free market. The revenue from the sale of tobacco from the 3 channels in the Northern, Center, and Southern parts were USD810, USD3119.49 and USD2810.28, respectively.

Table 18: Channel to sell agricultural products directly

Type of crop	North			Central			South			Average		
	Kg	\$/Kg	Value(\$)	Kg	\$/Kg	Value(\$)	Kg	\$/Kg	Value(\$)	Kg	\$/Kg	Value(\$)
Rice												
Station owned units buy	1250	0.19	237.5	1525	0.15	228.75	607.5	0.17	103.275	1127.5	0.17	189.84
Selling in free market	1550	0.18	279	1636.67	0.18	294.6	2223	0.18	400.14	1803.22	0.18	324.58
Sub-total	2800		516.5	3162.67	0	523.35	2830.5	0	503.42	2930.72	0	514.42
Tobacco												
Station owned units buy	250	1.45	326.5	214.69	1.29	276.95	128	1.52	194.56	197.56	1.42	278
Selling in free market	260	1.6	416	1642.67	1.68	2759.69	1560.07	1.63	2542.91	1154.24	1.64	1906.2
Farmer self-consumption	22.5	1.4	31.5	57.14	1.45	82.85	52.01	1.4	72.81	43.88	1.42	62.39
Sub-total	532.5		810	1914.5		3119.49	1740.08		2810.28	1395.69		2246.59
Grand Total			1326.5			3642.84			3313.7			2761.01

Source: Author's survey in 2007

Table 19 compares the revenue of farmers from various sources. The sources of income for other agriculture products and non-agriculture activities were introduced in Table 15 and Table 16. The average income of respondents came mainly from tobacco farming, which accounted for 50% per cent of total revenue. It accounted for 70% of total revenue in the Northern part, and 29% in the Center part. Therefore, tobacco farming was a very important source of income for farmers in each region.

Table 19: Comparison of cost and revenue of tobacco farming and non-tobacco farming (Average per household per year)

	Cost (%)	Revenue (%)	Profit (%)
Of which for tobacco	1796.19 (79.08)	2246.59 (81.36)	450.40 (91.95)
Of which for rice	475.04 (20.92)	514.42 (18.64)	39.38 (8.05)
Total	2271.23 (100)	2761.01 (100)	489.78 (100)

Source: Author's survey in 2007

In conclusion, not only was the revenue from tobacco farming relatively high, but so was the cost of tobacco production. Therefore, the average profit from tobacco farming in the 3

regions was around USD450.40 per household per year which accounted for 25% of total cost. The average profit from rice farming was USD39.38 per household per year which accounted for 8% of total cost. The average profit of respondents in the 3 regions was USD489.78 per year.

5.8. About the Cigarette Smokers

5.8.1 Smokers' Profiles

The majority of the cigarette smokers were men (96%), according to the sample survey, while 4% were women. About 71.7% of respondents were married and 28.3% were single. Within the married group, each household has an average of 3.44 children.

Table 20: Smokers' gender

Gender	Central		South		North		Average total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Male	390	98.23	365	91.47	412	98.32	1167	96
Female	7	1.76	34	8.52	7	1.67	48	4
Total	397	100	399	100	419	100	1215	100

Source: Author' survey in 2007

Table 21: Marital status

Status	Central		South		North		Average total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Single	131	32.99	72	18.04	141	33.65	344	28
Married	266	67.01	327	81.95	278	66.10	871	72
Total	397	100	399	100	419	100	1215	100

Source: Author's survey in 2007

Three ethnic groups were selected for the survey. They were: Lao Theung, Lao Loum and Lao Soung. The majority of respondents from the Lao Loum group were smokers (88.13%), followed by Lao Theung and Lao Soung, 6.83% and 5.03%, respectively.

Table 22: Ethnic groups

Ethnic	Central		South		North		Average total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Lao Theung	10	2.52	27	6.77	47	22.21	84	7
Lao Loum	373	93.95	362	90.73	334	79.71	1069	88
Lao Soung	14	3.53	10	2.51	38	9.06	62	5
Total	397	100	399	100	419	100	1215	100

Source: Author's survey in 2007

The majority of respondents graduated from junior and senior high school. In comparison to the farmers, the average education level of the smoker's was higher than that of the farmer's (See Table 7). The percentage of respondents who graduated from elementary to high school was over 70% of all the respondents. The reason for the high figure could be that the smokers were selected from the cities in the 3 provinces where they had a greater chance of obtaining higher education.

Table 23: Education of smokers

Education	Central		South		North		Average total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Illiterate	12	3.02	16	4.01	8	1.91	36	2.96
Elementary	52	13.10	111	27.82	81	19.33	244	20.08
Junior High	84	21.16	117	29.32	103	24.58	304	25.02
Senior High	95	23.93	79	19.80	92	21.96	266	21.89
Technical	10	2.52	6	1.50	9	2.15	25	2.06
College	57	14.36	33	8.27	56	13.37	146	12.02
University	87	21.91	37	9.27	70	16.71	194	15.97
Total	397	100	399	100	419	100	1215	100

Source: Author's survey in 2007

Table 24 shows a summary of important statistics with regards the respondents. The total average number of persons in each household was about 5.63 persons with each family having on average 3 children. The average number of smokers in one family was about 1.44, which usually comprised of the father and son. The average age of smoker was about 37.55, this figure significantly high in each region. Some smokers commented that they had been smoking for more than 10 years.

Table 24: Average number of household members

	Central	South	North	Average
Number of member in one family (person)	5.33	5.77	5.79	5.63
Number of children in smoker's family (person)	2.95	3.42	3.94	3.44
Number of smokers in one family (person)	1.42	1.43	1.48	1.44
Age of smoker (year)	37.06	35.79	39.82	37.55

Source: Author's Survey

5.8.2 Income and Expenditure of Smokers

Smokers' Income

The average annual income of the smokers in the 3 regions was about USD1,355.7. The respondents in the Center part earn the highest income because they had a better chance of earning income from various jobs. The average number of family members who can earn money and food was about 2.94 people, while the average number of family members who can earn only money (cash) was 2.69 people.

Table 25: Income statistics

	Central	South	North	Average
Income (USD per year)	1,483.78	1,175.67	1,407.66	1,355.70
Number of member of family can earn (person)	2.92	3.02	2.89	2.94
Number of member of family can earn cash (person)	2.83	2.56	2.67	2.69

Source: Author's Survey

Smoker's Expenditures

The smokers consumed about 4.9 packs per person per week and paid about USD0.36 per pack. They spent about USD7.09 per month on cigarettes (See table 26 below).

Table 26: Comparison of smokers' expenditure on cigarette and other basic needs

	Central		South		North		Average	
	USD per month	%						
Cigarette	7.57	5.54	6.80	5.59	6.90	5.30	7.09	5.88
Entertainment	25.91	18.95	20.97	17.23	24.90	19.11	23.93	19.85
Food	43.51	31.83	56.68	46.58	46.92	36.01	49.04	40.69
Clothings	15.81	11.57	11.44	9.40	14.42	11.07	13.89	11.53
Health care	11.37	8.32	5.39	4.43	9.74	7.47	8.83	7.33
Education	22.62	16.55	12.57	10.33	18.04	13.84	17.74	14.72
Others	9.90	7.24	7.83	6.44	9.38	7.20	9.04	7.50
Total	136.69	100.00	121.68	100.00	130.30	100.00	120.52	100.00

Source: Authors' survey, 2007

Table 26 shows that the smoker's monthly expenditure on cigarettes was smaller than for other basic needs. The average expenditure on cigarettes was 5.88% of total expenditure while the average expenditure for food, entertainment, education, clothings, and health care were 40.69%, 19.85%, 14.72%, 11.53% and 7.33%, respectively.

Comparison between Income and Expenditures of Smokers

Table 27 below shows the comparison between income and expenditure of a smoker. All 3 regions recorded an average deficit of about USD90 per year. The Southern region has a large deficit about USD284.53 per year. The deficits can be explained by the following reasons. There were some biases among respondents because income and expenditure were sensitive questions. The respondents might be concern about tax and security, therefore, they tended to give low figures for income and high figures for expenditure. Table 28, illustrates the share of smoker's expenditure to income. Food accounted for the largest share of expenditure to revenue at about 43% while cigarettes expenditure accounted for about 6% of total income.

Table 27: Comparison between Income and Expenditure of Smokers

	Center	South	North	Average
Income (USD per year)	1,483.78	1,175.67	1,407.66	1,355.70
Expenditure (USD per year)	1,640.31	1,460.20	1,563.62	1,446.24
Gains (loss)	(156.53)	(284.53)	(155.96)	(90.54)

Source: Author's survey in 2007

Table 28: Share of smoker's expenditures to smoker's income

	Central	South	North	Average
Cigarette	6.12	6.94	5.88	6.28
Entertainment	20.95	21.40	21.23	21.18
Food	35.19	57.85	40.00	43.40
Cloth	12.79	11.68	12.29	12.29
Health care	9.20	5.50	8.30	7.82
Education	18.29	12.83	15.38	15.71
Others	8.01	8.00	8.00	8.00

Source: Author's survey in 2007

5.9 Contribution of Tobacco Farming and Cigarette Manufacturing to Government Revenue

The revenue from tobacco tax dropped from USD4.65 million in 2001 to USD2.3 million in 2005 (table 29). The percentage of tobacco tax as a proportion of total tax revenue decreased sharply from 1.61% in 2002 to 0.56% in 2003 due to the decreasing tobacco production. Therefore, the average tobacco tax accounted for only about 1% of total tax in that year. In view of this, there was support to increase tobacco tax from other related agencies such as the Department of Tax which handles issues related to imported cigarettes while the Department of Customs was responsible for locally produced cigarettes. Although the government had some allocation for health promotion, there was however no specific financial support given for Tobacco Control.

Table 29: Tobacco tax from 2001 to 2005

Year	Total Tax (USD)	Tobacco tax (USD)	%
2001	220,906,351.16	4,656,992.97	2.10
2002	230,299,218.83	3,723,919.71	1.61
2003	266,207,417.19	1,491,459.85	0.56
2004	301,034,807.15	1,923,330.20	0.63
2005	363,260,706.24	2,356,029.30	0.64

Source: Lao tobacco control, 2007

5.9.1 Contribution of Tobacco Farming to Tax Revenue

According to the tax policy, activities related to agriculture including tobacco farming are exempted from tax. Tobacco farmers pay only land tax which is very low tax rate and depends on the size of the lands being used. The survey results in table 17 showed that tobacco farmers paid tax on average around USD 188 per household or 10.51% of the production cost. For the tobacco leaves produced, tobacco farmers have direct and indirect contributions to government revenue with their tobacco leaves harvest. After harvesting the tobacco leaves, farmers cure and dry the leaves themselves and sell them. Those without curing and drying houses sell their raw tobacco leaves to private tobacco processing business owners (with own curing and drying houses). However, the tobacco processing business owners have to pay 10% turnover tax after 2005, it was 5% before and during 2005. Furthermore, they have to pay profit tax between 8% and 20% depending on the range of profit. The data on profit taxes paid from the tobacco processing (curing and drying) were not variable. However, the data on domestic tobacco used from two cigarette manufacturing companies could be assumed that tobacco processing business owners sold dried tobacco leaves to tobacco manufacturing companies. Therefore, we estimated and calculated that the tobacco processing businesses owners paid turnover tax around more than USD 300,000 a year. The contribution of tobacco processing business owners would be higher than this estimate if profit taxes were included. From table 30, tobacco tax from tobacco processing businesses shared very low percentage between 0.005 to 0.19% of the total government revenue.

Table 30: Tobacco tax from processing businesses

	Domestic tobacco leaves used by two manufacturing companies (USD)	Turnover tax	Profit tax	Total tax paid by tobacco processing business (USD)	Share in total government tax revenue
2002	6,449,953.53	5%	N/A	322,497.68	0.17%
2003	217,256.77	5%	N/A	10,862.84	0.005%
2004	3,357,680.15	5%	N/A	167,884.01	0.07%
2005	5,527,239.86	5%	N/A	276,361.99	0.09%
2006	6,816,977.59	10%	N/A	681,697.76	0.19%

Source: Ministry of Finance, 2007

5.9.2 Contribution of Cigarettes to Tax Revenue

In 2005, the Minister of Finance stipulated a 55% tax on tobacco products. However, this was not fully implemented due to the agreement signed in 2001 between the local tobacco

industry and the National Committee for Planning and Investment. This agreement was valid for 25 years and it states:

- If the price per pack is less than 1,500 kip (approximate USD0.15), only a 15% tax is applied
- For the higher priced cigarettes, a 30% tax would be imposed. These taxes are applied to locally produced cigarettes which account for the most saleable cigarettes in the country.

It was observed that virtually all the locally produced cigarettes are sold within 1,500 kip per pack. It was estimated that the price of the domestic brand cigarettes ranged from USD0.15 to USD0.41 per pack. As for imported cigarettes, it is sold with a 55% applied tax. For example, a pack of Marlboro cigarettes costs approximately USD1.35. According to this study (table 31), revenue from taxes was the main source of government revenue for Laos from 2000 to 2007, contributing about 80% to the government's coffers. However, the share of cigarette tax to the total government revenue has been declining from 2.47% to close to 1% during the same period. Therefore, tobacco tax contributed a very low percentage to total government revenue.

Table 31: Government revenue from cigarette tax

Year	Cigarette tax (USD)	Total govt. revenue (USD)	Total govt. tax revenue (USD)	Cigarette tax as a percentage of total govt. revenue* (%)	Percentage of cigarette tax to total government tax revenue (%)
2000	5,229,745.69	211,994,108.80	171,335,171.72	2.47	3.05
2001	4,203,702.09	220,906,351.16	177,653,756.00	1.90	2.37
2002	1,562,909.68	230,299,218.83	186,186,097.10	0.68	0.84
2003	1,929,380.83	266,207,417.19	219,684,816.46	0.72	0.88
2004	2,360,065.65	301,034,807.15	249,670,743.18	0.78	0.95
2005	2,646,352.53	363,260,706.24	305,597,295.27	0.73	0.87
2006	3,513,805.44	421,083,802.19	359,391,965.26	0.83	0.98
2007	4,989,410.36	477,483,571.70	417,085,427.14	1.04	1.20

Source: Bank of Lao P.D.R and various issues

* Cigarette tax from only one company

5.10 Focus Group Discussions (FGDs)

Tobacco farmers from the 3 parts were invited for the in-depth interview comprising a set of questions (See questions in APPENDIX III). All respondents had been growing tobacco for more than 3 years. They commented that people in the Northern part of Lao has been growing tobacco for more than 100 years. Nevertheless, tobacco farming in the Center and Southern parts only began about 20 to 30 years ago.

“In the past, the purpose of growing tobacco was for household consumption. However, the purpose of growing tobacco nowadays is to supply tobacco leaves to cigarette manufacturers”.

All of the respondents had never learned the technique of tobacco growing in school, but they learned it from their parents and relatives. They also received some training on tobacco growing techniques and pest control from tobacco companies. This was confirmed by the results of the questionnaire survey which found that farmers in the rural areas have very low level of education (See Table 7).

“We learned from our parents and relatives on how to grow tobacco. We occasionally learned some techniques from cigarette manufacturing company. Therefore, the production of tobacco leaves has been increasing.”

Tobacco farmers went to the farms almost every day to clear grass and water the crop. They performed these activities daily because they had no choice as tobacco farming was the only chance for them to earn extra income.

“There were not many opportunities for us to earn an income. If we did not grow tobacco, we would not know what to do”

From the farmer’s perspective, they could get a better standard of living if they grew tobacco. Revenue from growing rice and other crops were not steady because the price of rice depended on the demand and supply of the market, weather, rain and other conditions.

“We had more income from growing tobacco than from growing rice and other crops. Furthermore, we were ensured that our products would be sold.”

Although farmers earn a lot more income from tobacco farming, those incomes were not enough to meet daily needs and other expenditures. Furthermore, the tobacco farmers requested the government to reduce the tobacco tax and other tobacco fees.

“Although we earned some income form growing tobacco, we did not get much profit since we had to pay a lot of tobacco tax and fees. Thus, the government should reduce the tobacco tax and fees for us.”

Cigarette smokers from the 3 regions were interviewed (See questions in APPENDIX IV). Most of the smokers were around 35 years of age. There were about two cigarette smokers in the family, namely, the father and son. The respondents commented that they had never taught their children to smoke; however, children learned it from friends.

“We will not introduce smoking to our children eventhough we smoke. We think our children learned to smoke from their friends.”

The respondents have been smoking for more than 10 years and they started to smoke because they learned it from friends. Most of the respondents have never been to the hospital for treatment of diseases caused by smoking. They also commented that the more

they smoked, the more healthy they were. Most of the smokers thought that smoking was not a problem for them.

“I could not quit smoking. I did not feel very healthy if I were not smoking. I did not have any problems with my health although I had been smoking for 10 years.”

Some respondents paid about USD1 per day for 2 packs of cigarettes. Another respondent suggested that he paid almost more than USD1,000 a year for cigarettes. Nevertheless, he could not quit smoking.

“I could afford 4 packs of cigarettes per week. It was not expensive for me.”

If the cigarette price was to increase by 20%, all of the respondents would still smoke because they could not stop.

“If the price of cigarette increases, we will keep smoking but smoke less. Price is not an issue for a smoker.”

On the other hand, some of the respondents might quit smoking because they want to live longer and spend the rest of their lives with their family. Furthermore, the smokers suggested that since other non-smokers never smoked, they will not understand how difficult it is to quit smoking.

“I saw on television that smoking was bad for health, then I quit smoking. I could use the expenditure for cigarette on my children. I felt better than before.”

6. CONCLUSIONS AND RECOMMENDATIONS

Tobacco farming is a very important source of income for the Lao people. It created a lot of jobs for poor people in the rural area. Furthermore, tobacco production contributed about USD2 million to government revenue. Tobacco farming was the second major agricultural production of Laos over the period of the study, accounting for around 2.18%-3.11% of GDP in the agricultural sector. The results from the survey in the 3 regions illustrated that farmers grew both tobacco and other crops within the same area. However, the benefits they gained from farming and non-farming activities varied. The average profit derived from tobacco leaves was very different from that of rice. The profits earned from tobacco leaves production was USD450.40 per farming household per year which accounted for 25% of the total cost per household while rice generated a profit of USD39.38 per farming household per year, or 8% of total cost.

Based on the results, the following policy recommendations are proposed:

- a) Farmers should have more opportunities to gain higher level of education. They should learn new processes and agricultural methods;
- b) The Ministry of Agriculture should provide some support, especially training and marketing, to farmers. The farmers should have more knowledge on how to grow other agricultural products and to replace tobacco products. Some main agricultural products (ie. rice, coffee, and soybean) should be subsidized in order to keep the prices higher than the cost of production. This could motivate farmers to produce other agricultural produce instead of tobacco.
- c) Although tobacco farming is an important source of income for farmers, nonetheless, tobacco can also cause many diseases to the smoker such as cancer, heart disease, and stroke. Therefore, tobacco farming should be reduced in terms of the scale of production and the land area under cultivation.
- d) Tobacco control programs are needed in order to reduce tobacco farming in Lao PDR.

For this study, samples have been collected from smokers in 3 different parts of Lao. According to the findings, the respondents consumed about 4.9 packs of cigarette per person per week and paid about USD0.36 for a pack, or about USD7.09 per month which accounted for 5.88% of total expenditure.

It also found that tobacco manufacturing played a very small role in terms of its contribution to the Lao government's revenue (the figure covered only from one Cigarette Company). Revenue from cigarette tax accounts for 0.68% - 2.47% of total government revenue during the period under study. Therefore, the following policy recommendations are proposed:

- a) The Ministry of Health should educate the smokers on the detrimental effects of cigarette smoking. The Ministry could also launch a campaign to persuade smokers to quit

smoking by advertising on TV, radio and newspapers and this should be done continuously.

b) The government should levy a consumption tax to increase the price of cigarettes.

Although the study provided some information on tobacco farming and non-tobacco farming in Lao PDR, it could not provide a detailed analysis of the contribution of tobacco farming and tobacco manufacturing to the Lao economy. The lack of data at macro level such as on workers involved in tobacco farming, the total number of smokers, value of imported tobacco leaves in the current year were some of the main constraints in our analysis.

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APPENDICES

APPENDIX I

Questionnaire on Tobacco and Non-tobacco Farming

I. Basic Information

1. Gender: 1) Male 2) Female
2. Ethnic: 1) Lao Theung 2) Lao Loum 3) Lao Soung
3. Age _____
4. The highest education level of the head of family
 - 1) Illiteracy 2) Elementary school 3) Junior high school 4) Senior high school
 - 5) Technical school 6) College or university
5. Household size
 - 5.1 Number of persons who are capable of earning _____ persons
 - 5.2 Number of persons who are capable of earning cash _____ persons
6. Household annual net income _____ kip
7. Cultivated land owned by household _____ ha
 - 7.1 Paddy field _____ ha
 - 7.2 Dry land _____ ha
 - 7.3 Contracted land of others _____ ha _____ kip per ha
8. Total sown of planting _____ ha
 - 8.1 Tobacco _____ ha _____ Kg per ha _____ kip per Kg
 - 8.2 Other crops
 - 1) _____ ha _____ Kg per ha _____ kip per Kg
 - 2) _____ ha _____ Kg per ha _____ kip per Kg
 - 3) _____ ha _____ Kg per ha _____ kip per Kg
 - 4) _____ ha _____ Kg per ha _____ kip per Kg

5) _____ ha _____ Kg per ha _____ kip per Kg

6) _____ ha _____ Kg per ha _____ kip per Kg

9. Non-cultivated land owned by the household _____ ha

9.1 Forest _____ ha 9.2 desolate mountain _____ ha

9.3 Water area _____ ha 9.4 River beach _____ ha

10 Total cost from other agricultural product except crops _____ kip

11. Total income from other agricultural product except crops: _____ kip

11.1 Forestry _____ kip 11.2 Fishery _____ kip

11.3 Animal husbandry _____ kip 11.4 others _____ kip

12. Total income of other non-agricultural activities: _____ kip

12.1 Business _____ US\$ 12.2 wage of working _____ kip

12.3 others _____ kip

II. Cost

(1) Production cost

1. Material expense

1.1 Value of present agricultural fixed assets _____ kip

1.1.1 in which, for tobacco production and toasting _____ kip

1.2 Expense of purchasing and repairing small agricultural tools _____ kip per year

1.2.2 in which, for tobacco _____ kip

1.3 Expense of administration, errand and insurance for planting _____ kip per year

1.3.1 in which, administration, errand for tobacco planting _____ kip per year

1.3.2 Premium for tobacco _____ kip per ha

1.4 Expense of seed

1.4.1 Tobacco _____ kip per ha

1.4.2 Others 1) _____ kip

2) _____ kip

3) _____ kip

4) _____ kip

1.5 Expense of fertilizer (including farmer manure)

1.5.1 Tobacco _____ Kg per ha, _____ kip per Kg

1.5.2 Others 1) _____ Kg per ha, _____ kip per Kg

2) _____ Kg per ha, _____ kip per Kg

3) _____ Kg per ha, _____ kip per Kg

4) _____ Kg per ha, _____ kip per Kg

1.6 Expense of pesticide _____ kip per ha

1.6.1 in which, for tobacco _____ kip per ha

1.7 Expense of animal power _____ kip per ha

1.7.1 in which, for tobacco _____ kip per ha

1.8 Expense of machinery _____ kip per ha

1.8.1 in which, for tobacco planting _____ kip per ha

1.9 Expense of irrigation _____ kip per ha

1.9.1 in which, for tobacco _____ kip per ha

1.10 Expense of shelf _____ kip per ha

1.10.1 in which, for tobacco planting _____ kip per ha

1.11 Expense of tobacco toasting _____ kip per ha

1.11.1 Fuel

1.11.1.1 Firewood or grass: _____ Kg, _____ kip per Kg

1.11.1.2 Coal _____ Kg, _____ kip per Kg

1.11.1.3 Gas _____ m³, _____ kip per m³

1.11.1.4 Electric power _____ kwh, _____ kip per kwh

2. Manpower expense

2.1 Total number of agricultural labor force _____ person per day

2.1.1 Grain _____ person per day per ha

2.1.1.1 Temporary employee _____ person per day per ha

2.1.1.2 Pay for wage _____ kip per person per day

2.1.2 Tobacco _____ person per day per ha

2.1.2.1 Temporary employee _____ person per day per ha

2.1.2.2 Pay for wage _____ kip per person per day

2.1.3 Other crops _____ person per day per ha

2.1.3.1 Temporary employee _____ person per day per ha

2.1.3.2 Pay for wage _____ kip per person per day

2.2 Expense of agricultural technical employee _____ kip per person per day

2.2.1 in which, guiding tobacco planting _____ kip per person per day

2.3 Labor force of tobacco toasting _____ person per day

2.3.1 Temporary employee _____ person per day

2.3.2 Pay for wage _____ kip per person per day

(2) Other expenses

1. Expense of contracted land _____ kip per ha

1.1 For planting _____ kip per ha

1.2 For tobacco planting _____ kip per ha

2. Expense of administrator _____ kip per ha

2.1 For planting _____ kip per ha

2.2 For tobacco planting _____ kip per ha

3. Selling expense _____ kip per ha

3.1 For planting _____ kip per ha

3.2 For tobacco planting _____ kip per ha

4. Interest of borrowing current funds _____ kip per ha

4.1 Interest of borrowing funds for planting _____ kip per ha

4.2 Interest of borrowing funds for tobacco planting _____ kip per ha

III. Taxes

1. Agricultural tax _____ kip per ha

1.1 Grain tax _____ kip per ha

1.2 Tobacco tax _____ kip per ha

1.3 Other fee for tobacco _____ kip per ha

IV. Channels to sell agricultural products directly

1. Grain

1.1 Station-owned units buy

1.1.1 Amount _____ Kg, _____ kip per Kg

1.2 Selling in free market

1.2.1 Amount _____ Kg, _____ kip per Kg

2. Tobacco

2.1 Station-owned units buy

2.1.1 Amount _____ Kg, _____ kip per Kg

2.2 Selling in free market

2.2.1 Amount _____ Kg, _____ kip per Kg

2.3. Farmer's consuming themselves _____ Kg, _____ kip per Kg

Date of interview: _____/_____/2007

Interviewer: _____

APPENDIX II

Questionnaire on Cigarette Consumer's Expenditure

I. Basic Information

1. Gender: 1) Male 2) Female
2. Status: 1) Single 2) Married
 - 2.1 If married, how many children do you have _____ person (s)
3. Ethnic: 1) Lao Theung 2) Lao Loum 3) Lao Soung
4. Age _____
5. The highest education level of the head of family
 - 1) Illiterate 2) Elementary school 3) Junior high school 4) Senior high school
 - 5) Technical school 6) College or university level
6. Household size
 - 6.1 Number of family member in the family _____ persons
 - 6.2 Number of persons who are capable of earning _____ persons
 - 6.3 Number of persons who are capable of earning cash _____ persons
7. Number of smoker in your family _____ person (s)

II. Revenue and type of job

- (1) Permanent job
 1. Annual cigarette smoker net income _____ kip
 2. Type of job
 - 2.1 Works for government _____
 - 2.2 Works for private _____

2.3 Works for NGO _____

2.4 Works for other _____

(2) Part time job

1. Do you have part time job

1.1 Yes ____ 1.2 No ____

2. If yes, please kindly indicate

2.1 _____

2.2 _____

III. Expenditure

1. About cigarette consuming

(1) Pay for tobacco _____ kip per month

(2) How many you smoke per day or week? _____ Pack

(3)How much for one pack _____ kip

2. Pay for entertainment _____ kip per month

3. Pay for foods _____kip per month

4. Pay for clothes _____ kip per month

5. Pay for medical check up and health care _____ kip per year

6. Pay for education of yourself _____kip per month

7. Pay for other needs _____ kip per month

Date of interview: ____|____| 2007

Interviewer: _____

APPENDIX III

Questionnaire for Individual Interview (Tobacco and non-tobacco farming)

I. General Information

Province: _____

District: _____

Village: _____

Sex: _____

Age: _____

Number of family _____ persons

Status in the family: (1) Head of family (2) Member of family

II. Contribution to tobacco and non-tobacco farming

1. How long have you been doing this kind of activity?

(1) 1 year (2) 2 years (3) 3 years (4) More than 3 years

2. Did you go to technique school?

(1) Yes (2) No

3. If yes, where did you go? (Please indicate)

(1) _____ (2) _____

4. If no, did you have a chance to train how to get a new technique of doing farming?

(1) Yes (2) No

5. How often you spend your time on doing this activity in a week?

(1) Three times a week (2) Four times a week (3) Five time a week

APPENDIX IV

Questionnaire for Individual Interview

(Cigarette smokers)

I. General Information

Province: _____

District: _____

Village: _____

Sex: _____

Age: _____

Status in family: (1) Head of family (2) Member of family

How many smokers in your family: _____ person (s)

II. About your expenditures

1. On cigarette

(1) How long have you been smoking? _____ Month (s) _____ Year (s)

(2) How did you get enter to smoke?

(2.1) By friends (2.2) Someone in family (2.3) Other _____ (specify)

(3) How much do you think you have paid for cigarette up to now? _____ kip

(4) If the price of cigarette increase by 20%, will you still go on smoking?

(4.1) Yes (4.2) No

(5) If yes, say why? _____

2. On health care

(1) How often do you go to the doctor for medical check-up in a year? _____

(2) How much do you pay for one time service? _____ kip

III. Current health condition

1. What do you think about your health condition now?

(1) Good (2) Bad

2. If bad, do you think it is because of your smoking?

(1) Yes (2) No

3. When do you think you should give up smoking?

(1) Cigarette price increase by 20% or higher (2) Getting old

(3) Other _____ (specify)

4. Any Comment for other non-smokers?

Date of interview: ____|____| 2007

Interviewer: _____



About SEATCA

The Southeast Asia Tobacco Control Alliance (SEATCA) works closely with key partners in ASEAN member countries to generate local evidence through research programs, to enhance local capacity through advocacy fellowship program, and to be catalyst in policy development through regional forums and in-country networking. By adopting a regional policy advocacy mission, it has supported member countries to ratify and implement the WHO Framework Convention on Tobacco Control (FCTC)

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