The Determinate Factors to Wildlife Consumption of People in Urban Areas in Lao PDR*

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Abstract

The study of the determinate factors to wildlife consumption of people in urban areas in Vientiane capital, Bolikhamsay, Khammouane, Savannakhet and Champasak. The results of the study found that most people consume wildlife. The wildlife consumption will include consumption by consumers who do not buy themselves and consumers as buyers themselves. But consumer consumption by the buyer itself is more than that, indicating that Lao people's wildlife consumption is not consumed, for survival but for consumption in the form of Felicity. In addition, consumption is mainly during the period of wildlife (during the rainy season) where the consumption of wildlife of the population does not take into account the effects. But it is thought to be delicious meat and is consumed without respect for the laws. But not only the people who do not respect the laws of the state---the state also has state officials who are the core of the Lao people, which has not yet complied with the laws set out in the self-styled, rule-makers, and forced to use in the area. However, there is still a significant proportion of the population involved in the protection of wildlife, respect for wildlife regulations that the government has set up without hunting and wildlife trade, which is a threat to the population of wildlife. The factors that determine the consumption of wildlife of the population are as follow gender, education, occupation, belief, and law affects the consumption of wildlife of the population, but the factors of faith and legal factors are more influential than other factors. Among these factors are only legal factors that are negative or contradictory to wildlife consumption, while other factors contribute to the consumption of wildlife of the population.

Keywords : The Determinate; Factors; Wildlife; Consumption; People in Urban Areas.

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Introduction

A wildlife resource types that are very important in the economy - society such as food, as medicine, education, research scientist, creates a particular sector of tourism, which earned enormous government (Duckworth et al, 1999; Chardonnet et al, 2002 Brashares et al, 2011) due to the current tourist nature is attracting major issues Of tourists worldwide (Johnson et al, 2004 and Toummanysone, 2017). In addition, wildlife is also an important factor in the natural processes that are potential for socio-economic development, such as ecosystem connectivity, which is propagated through absorption and ingestion, because some species need to be reunited with wildlife and propagated species, such as flowers and fruit (MNRE, 2016). The ability to propagate plants is to make ecological or natural ecosystems sustainable, to create diversity of forest products, including microbial diversity in soil fertility (DEQT, 2017), which is another important factor in the socio-economic development of developing countries or countries that produce agricultural crops especially Lao

In recent years, Laos has been recognized as one of the world's most important areas of biodiversity such as wildlife, forests and forests (Bain & Hurley, 2011, Greatorexet al, 2016), which are highly valued and are of great importance both directly and indirectly to socioeconomic development (Toummanysone, 2017). However, nowadays, Laos has been experiencing a decline in natural resources, with its continued decline in wildlife (Duckworth, 1999, and WCS, 2010). In recent years, there have been 102 species of endangered animals, which are classified in group of prohibited accounts or I type accounts and 65 species that are classified as protected species (PMO, 2009). The continued decline of this wildlife is due to habitat destruction and forest hunting as the main problem (Rao et al, 2005, Lindsey et al, 2007 and Greatorex et al, 2016)

Wildlife hunting is a more serious issue, especially for wildlife trade (Wyler & Sheikh, 2008), as well as the uncertainty, non-sustainability and legal protection (Johnson, 2003; Zhang et al, 2008; Macdonald & Loveridge, 2010). However, illegal wildlife trafficking, which has grown so far, has now become a major problem with drug trafficking (Van Song, 2008). The issue of illegal wildlife trafficking, when considered as a problem resulting from economic, demographic and market expansion, has led to increased consumer demand for wildlife (Rao et al, 2005; Macdonald & Loveridge, 2010, Jnawali et al, 2011), which clearly illustrates that buyer demand is a factor in increasing the commercialization of wildlife (Wyler & Sheikh, 2008; Godoy et al, 2010) As wildlife trade is a highly rewarding activity (Zhang et al, 2008 and Van Song, 2008), the law cannot be restricted. Not only that, the needs of wildlife consumers are also the leading cause of poverty for these groups, such as people who are natural, such as wildlife hunting, NTFP collection as income generation, because when wildlife is traded or sold more or less in the economic system for some time, the ability to harvest NTFPs is reduced. When such a thing goes down or down, it will result in a decrease in people's income (Johnson et al, 2009). The decline in the number of wildlife populations is a serious impediment to long-term economic development (Godoy et al, 2010), if it is not properly addressed and managed.

To solve the problems mentioned above that requires basic information about the health of wildlife (Johnson et al, 2003) to the terms, rules on consumer wildlife and activities to provide wildlife is that hunting is to generate revenue by mobilizing bitter campaigning disclosed and explained the importance of wildlife activities crops, livestock, Bradley, a tour can be a natural replacement revenue income from hunting and income of the people endures. However, the basic problem of using wildlife is a particularly difficult issue, especially for the needs of wildlife consumers, which will vary from time to time and each needs different needs. The difference will depend on factors such as: individual factors, socioeconomic factors and psychological factors (Kotler, 1996). These factors are an attractive and

motivating factor for people's consumption, making people or consumers thinking about how to make choices about how to use, select, and evaluate products and services that people often call "consumer behavior".

From the above-mentioned factors, economists, marketers, planners, and policy makers are interested in consumer behavior behavior, as consumer behavior is a key driver of public policy and public policy and privacy regulations, as policies or regulatory rules must be based on consumer behavior. In that, if we can clearly understand and understand the behavior of consumers, we can effectively and efficiently set policies or rules. On the other hand, if the consumer's behavior is not clearly understood in policymaking, it will not be in line with the policy's inefficiency, which will become a liquid-fueled policy. Therefore, in order to promote the requirements, rules and policies to be consistent with addressing the above-mentioned wildlife reduction problems and effectively utilizing the behavior of wildlife consumers, it is important to be aware of and understand the importance of education.

As mentioned above, wildlife consumption is a major factor in the use of wildlife that has reduced wildlife. Therefore, the attention of the educator and the research questions was raised:Why do people consume wildlife?;What are the determinants of public consumption of wildlife?

Study the overall behavior of wildlife consumption in Vientiane, Bolikhamxay, Khammuan, Savannakhet and Champasak provinces. Determine the defining factors in the consumption of wildlife of the population in Vientiane Capital, Bolikhamxay, Khammuan, Savannakhet and Champasack

Review the concepts and theories involved

Consumption refers to the need to use goods and services and can use the product and service (Keynes, 1936). Thus, wildlife is defined as those who have the need to use wildlife products and to use wildlife products or to meet the objectives of those who are in need of wildlife (Zhang & Yin, 2014).

Wildlife is a kind of food that people often consume and can give proteins to people, especially those who live in rural or poor families (Mack and West, 2005; Parry et al., 2014). Wildlife is a naturally occurring, non-proprietary animal (Mack & West, 2005). Anyone can access it independently without having to pay for it to buy it (Brashares et al., 2011). But once again, it is clear that consumption of wildlife is not only a product of the survival of the poorer households, but also as a luxury food product for people living in the city by buying into the market (Godoy et al., 2010; Shairp et al., 2016). At present, wildlife consumption in the market has grown rapidly as the urban economy has been developed and expanded (Zhang & Yin, 2014).Increasing wealth is the thing that drives or promotes large-scale wildlife consumption and enhances the effectiveness of wildlife hunting (Godoy et al., 2010; Brashares et al., 2011). Until wildlife become scarce, the government needs to intervene to conserve wildlife for the protection of natural resources by setting regulations, policies (Parry et al., 2014; Zhang and Yin, 2014). But consumption will differ in the geography, politics and culture of the population (Brashares et al., 2011).Golden and Board (2013) have given a definite definition of wildlife consumption that seasonal or seasonal changes, as some seasons may be rare seasons, and wildlife consumption is likely to decrease and the season that is easy to find is that consumption of wildlife is increasing. As a result, wildlife consumption will be a constant change in consumption or seasonal consumption.In addition, wildlife consumption is also dependent on the size of the human population, which can increase the size of the population (Mack and West, 2005, Godoy et al., 2010). As a result, the increasing population size will increase the demand for wildlife consumption.From the

descriptions and definitions of the above mentioned wildlife consumption, it is clear that the consumption of wildlife is dependent on a number of determinants, but the key is the economic factor that drives and encourages large-scale consumption of wildlife to the point where there is illegal wildlife consumption in the city. Consumption of wild animals to survive the people is consumed small or consumed occasionally, but consumers that a food luxury of watching Michelle demand in the market is a consumption grow faster and larger along than to the size of the human population and the growth of cities, the wealth of the people related to the faith of The individual. In addition, wildlife consumption has changed over the course of the season or changed over time of consumption and differed in terms of geography, politics and culture of the population.

For the protection of biodiversity of the country, it has been used in a tangible and diverse way, with the government adopting laws and policies to protect and protect wildlife without harming nature, habitat, limiting, extinction of wildlife and wildlife, as well as mobilizing the entire population to see the importance of In order to ensure the richness and balance of natural ecosystems in order to contribute to the improvement of the living conditions of the ethnic groups and to strengthen the national socioeconomic development, the following regulations and policies are required: (1) Animals and wildlife are prohibited from exploring or hunting unless they are necessary for research and propagation, but must be approved by the government. (2) Wildlife and wildlife are not allowed to be hunted or hunted except for some species, some areas and some seasons that are required to be used exclusively by using zero-level tools. For business purposes, it is possible to carry out aquatic animals but must obtain permission from the Ministry of Agriculture and Forestry. (3) Typical wildlife and wildlife are permitted to be harvested or harvested according to the season by using a non-standard tool.

There are relevant literature as follows.Godoy et al (2010) have studied the impact of wealth and income on wildlife consumption in Bolivia, with the aim of educating estimates of income and household effects on wildlife consumption and predicting the rate of change in household consumption of wildlife. The study uses the fixed-effect panel linear regressions (FEPLR) and the least-squared (OLS) data analysis into the data and data analysis, which is a panel data derived from 1076 surveys in 13 villages of every month from 2002 to 2006, with an independent estimation of average income per household, household wealth, educational levels and household size. The results of the study found that household wealth was positively correlated and strongly influenced by the consumption of wildlife, whose household wealth affecting wildlife consumption was 0.38 with a statistical significance of 0.01 or 1%. Other factors are not statistically significant.Brashares et al (2011) studied the relationship between economics and landscape characteristics of rural wildlife consumption in the United States. The main objectives of the study were: 1) Study the link between household wealth and domestic and wildlife consumption in rural and urban areas; 2, Study the effects of wildlife closeness on the price of beef related to alternative sources of food and consumption rates; 3, Study the extent of wildlife hunting identified by access to wildlife hunters in the town. The study is the use of chemicals to the table ANOVAs and mixed-effect panel regression to describe the relationship and impact of each issue raised by using data from interview people, 2,000 households from 36 areas of Canada, Cameroon, Tanzania and Madagascar from 2004 to 2008, the study considered the role of individuals, wealth, food prices equivalent, access to markets and expenses Pay of hunting. The results of the study show that wealth is associated with wildlife consumption, where wildlife consumption in rural areas is - 0.71 indicates that the wealth of wildlife consumption is in the same direction, while wildlife consumption in the city is 0.56, which is linked to wealth with a 99% confidence level. In addition, the distance from home to the location of wildlife, the distance

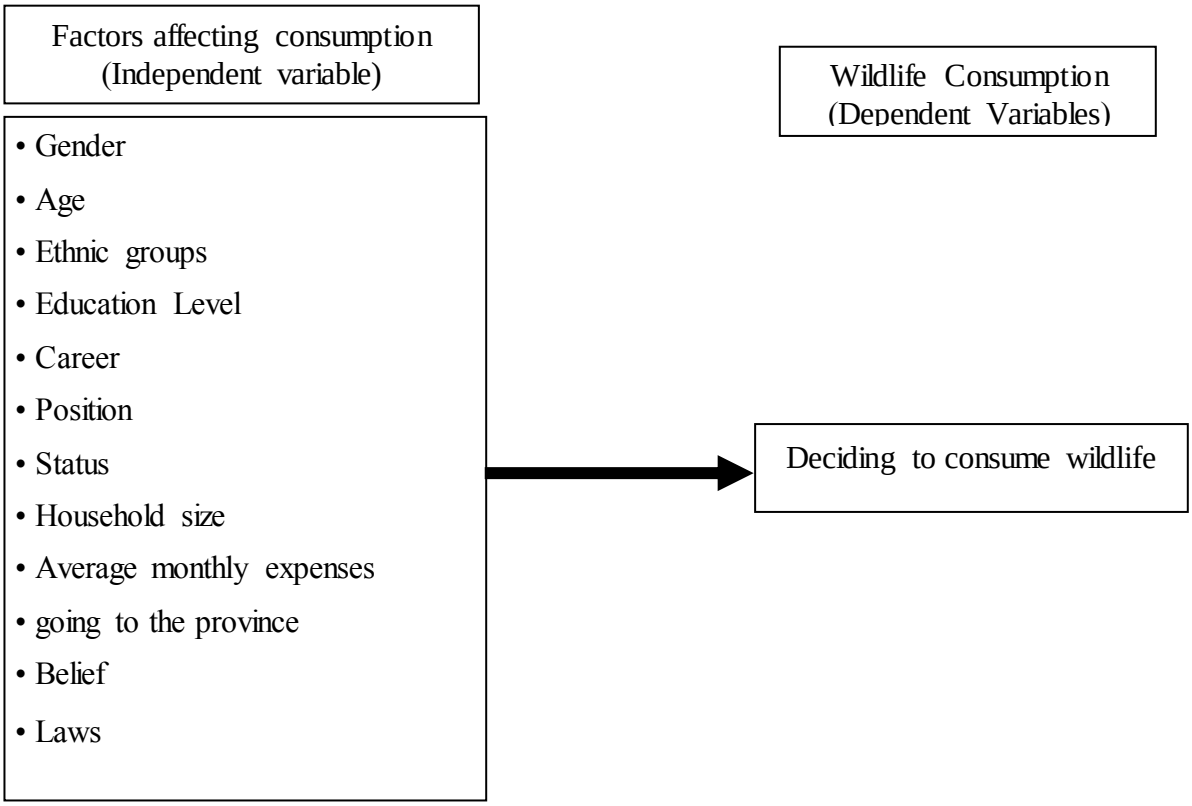
to the center of the city, the price of beef and the wealth of the beef price is shown to be changed at - 0,142, 0,133, - 0,122, 0,354 respectively, with a confidence level of 99%.Van Song (2008) studied wildlife trade in Vietnam, the main purpose of education was to assess the extent of wildlife trade, estimate the benefits of wildlife trade, set limits on the implementation and enforcement of wildlife management policies, evaluate effective policy implementation costs, and provide effective guidelines on effective implementation and management of wildlife in Vietnam. Name. The study was a statistical description using data integrated (Panel data) from surveys restaurants 171 in 2002 to 2007 in 61 cities of the country which the results of the study found that animals 80% is consumed within the country restaurants, revenue and benefit from trade companies is more than 10 thousand dollars / day, organizing and providing funding for conservation of wildlife is not reasonable, budget Estimated cost of the operation is only 6.6% only.Drury (2011) studies the consumption of wildlife in urban areas in Vietnam, the purpose of education is to study the characteristics of consumers and the need to use the wildlife products of the people living in Hanoi. Data analysis uses Logistic as a predictive tool using 915 random sampling data and placing the test results using data that combine independent variables such as age, household income, occupation, sex, wildlife and educational levels. As a result of the study, household income, occupations and sex are the most important relationships for animal feed consumption at a 99% confidence level, and in the same direction as wildlife consumption, age and education level, there is no significant relationship to demand for wildlife products, and other factors are not important.Shairp et al (2016) studied understanding of consumer wildlife in Ho Chi Minh City in Vietnam, the study is intended to find orientation of consumers wildlife and identify consumer wildlife of the Ho Chi Minh City by using Multinomial Logistic Model (MNL) is a data analysis or estimate of 331 samples from the survey, the survey is using a query tool The information gathered from people gender, age, education level, occupation and type of animals consumed. As a result of the study, pork is more popular than other wildlife species or has higher demand for consumption and education has found that prices, education levels and occupations have an important relationship with consumption of wildlife meat by 2.618, 1.629 and 1.323 respectively. But in that case, the price factor is in direct relation to the demand for wildlife consumption and the price factor is more influential than other factors. The educational and occupational factors are linked in the same direction to the demand for wildlife consumption of the people. The above mentioned factors can be predicted with a confidence level of 99%.

Zhang and Yin (2014) studied the consumption and conservation of wildlife in China with the aim of studying the current consumption of the people and knowledge of wildlife conservation in Beijing, Shanghai, Guangzhou, Kunming and Nanning. The data used in the study were 1,065 samples, with the use of the Kruskall-Wallis test and the Chi Square test in the analysis of data to determine the differences between each of the cities and their consumption. As a result, the study found that understanding of the conservation of wildlife in the five major cities of China has increased significantly between 2004 and 2012, Which shows that Beijing's consumption of wildlife is up by 40.3%, Shanghai 12.3% and Kunming 14.6%. The two districts of Guangzhou and Nanning are not important. In addition, studies show that people in Guangzhou are the most conspicuous of wildlife, with 83.3% of the total population in Guangzhou.In the past, Laos had studied wildlife consumption, especially in the Suwannarong et al (2015) sections of the study on hunting for food and consumption of rats in Lao PDR. The main objective of the study was to identify characteristics related to the use of ratios and ethnic-related behaviors. The data used in the study were from interviews conducted by 584 households in 29 villages in Bolikhamsay province, and the method used for data analysis was Logistic, which found that 39.9% had been hunting or catching in the

last year, 77.7% of whom caught the mouse for food and 86.3% were used for use. In addition, the analysis of the factors affecting mice by using gender, age, educational attainment, occupation, ethnic group, religion, household size, household characteristics, avoidance of infection and the number of jobs involved in education but with only the sex, age, occupation and ethnic group factors affects about 3,247 (male), -0,710, 1,008 Gardeners) and -0.98 (Laos) at a 99% confidence level. However, age factors and ethnic groups show that there are fewer rodents.

From the review of science and related theories, the students have summarized the concepts of factors affecting people's livestock consumption: sex, age, ethnicity, education, occupation, position, status, household size, monthly household expenditure, provincial migration, beliefs and legal knowledge of wildlife management in Lao PDR. Shown in Figure 2.1 below:

Figure 2.1: The concept of people's wildlife consumption



Source: Built from the educator

Data and Methodology

This study aims to study the wildlife consumption behavior of Vientiane, Bolivia, Mangrove, Savannakhet and Champasak provinces and determined factors in wildlife consumption. So in order to find the answer to the purpose of the study, there must be a form of description and volume: (1) Comparative study: A study of nature and concepts of wildlife consumption samples using statistical models to analyze percentages to explain and find the appropriate answers to the problems. (2) Quantitative study: The study on the modeling of economic dimensions to determine the determinants of animal populations in Vientiane, Bolikhamxai, Mueang, Savannakhet and Champasak. The model is based on Kotler's

fundamental theories and scientists. Recent research related to consumer behavior (Godoy et al., 2010; Drury 2011; Suwan and, as of 2015, and the Shairp Board of 2016) discusses the key determinants of consumer equality in wildlife consumption:

$$\mathrm{Cons}(y = 1) = \mathrm{f}(\mathrm{gender}, \mathrm{age}, \mathrm{Ethnic}, \mathrm{educ}, \mathrm{occu}, \mathrm{posit}, \mathrm{status}, \mathrm{Hs}, \mathit{expend}, \mathrm{GTP}, \mathrm{Belief}, \mathrm{law}) \quad (1)$$

From the side-by-side equation, each of the variables can be changed, as shown in Table 3.1 below:

Table 3.1: Converters and Converter Definitions

Variables	Definitions	Unit	The source of variable
Dependent Variables			
Cons	Wildlife consumption	1= consumer 0= non consumer	
Independent Variables			
Gender	Gender of respondents	1= male 0= female	Drury, 2011
Age	Age of respondents	Year	
Ethnic	Ethnic of respondents	1 = Lao 0 = Other	Suwannarong et al, 2015
Educ	Education of respondents	Year	Drury, 2011
Occu	Occupation of respondents	1=State officials 0= Other	Suwannaronget al., 2015
Status	Status of respondents	1= Married 0 = Other	Sonevily, 2017
Hs	Household size of respondents	People	Godoy et al, 2010
Expend	Average household expenditure / month	Kip	
GTP	Go to province of respondents	1 = go 0 = not go	

Belief	believed to consume wildlife of respondents	1= Healthy 0 = Other	Kotler, 1996
Law	Recognition of his Lao Wildlife Law for respondents	1 = Know 0 = Unknown	

Source: Built from the educator, 2018.

From the theoretical tests and studies of the relevant science research, it is possible to create an assumption of the relation between individual freedom to the consumption of wildlife consumption and the consumption of wildlife, as shown in Table 3.2 below:

Table 3.2: Assumption of Education

Independent Variables	Relationship	Assumption
Gender	+	Men (gender) are more likely to wildlife consumption than women
Age	+	As age increases, it is possible to make more decisions about wildlife consumption
Ethnic	+	If it is Lao (ethnic), possible to make a decision to consume wildlife rather than other ethnic groups.
Educ	-	The higher the education level, the lower the decision to wildlife consume
Occu	+	If the state employee (Occu) is able to make a decision to consume wildlife, it is more likely than other occupational groups.
Status	+	If there is a marriage (status), the likelihood of a decision to consume wildlife is more than those who are not married
Hs	-	If the household size (Has) increased the likelihood of making a decision the wildlife consumption of will be less.
expend	-	If the expenditure increase the likelihood of a decrease in the consumption of wildlife.
GTP	+	If work or tourism in the province (GDP) increases the likelihood of making wildlife consumption decisions increases
Belief	+	Anyone who believes that eating wildlife is making healthier and better (Belief) The possibility of using wildlife is more than

		anyone who has other beliefs.
Law	-	Legal awareness of wildlife management will make it possible to consume wildlife
The mark (+) refers to the relationship in the same direction as the dependent variable		
The mark (-) refers to the relation in the opposite direction with the dependent variant		

Source: Built from the educator, 2018.

As mentioned above, Laos is rich in biodiversity around the world. But now it has been partially reduced to the endangered, so he is an interesting study. But because of the time limit cannot collect educational data across the country, it has identified 5 cities in southern Laosas, the Vientiane capital, Bolikhamsay, Khammouane, Savannakhet and Champasak area in this study because the process smuggling wildlife violent in southern Laos (Duckworth et al., 1999), and to study the behavior of consumers wildlife of buyers in towns large is the area suitable for studies on this topic (Zhang & Yin, 2014).

The duration of this scientific research is in the period of 2017-2018 starting from September 2017 and will be collected in late December 2017 to the end of February 2018.

In this study, the population of all households in the municipality of Vientiane, Bolikhamxay, Khammouane, Savannakhet and Champassak Provinces, including households that used to consume wildlife and never consume wildlife, is that the study will examine the concepts and factors affecting decision making and not deciding on the consumption of wildlife of each household.Since this study is limited and the population is large, we cannot collect data from all households in the urban areas of Vientiane, Bolikhamxay, Khammouane, Savannakhet and Champasak. It is therefore necessary to randomly select random samples from the population to represent them in education. But we cannot know that the number of households living in the capital
of Vientiane, Bolikhamxay, Khammuan, Savannakhet and Champassak provinces has all households. Therefore, in this set of samples, it is based on the statistical data that the samples are routinely distributed (Cochran, 1963), with the following formula:

$$n_i = \frac{z^2 pq}{e^2}$$

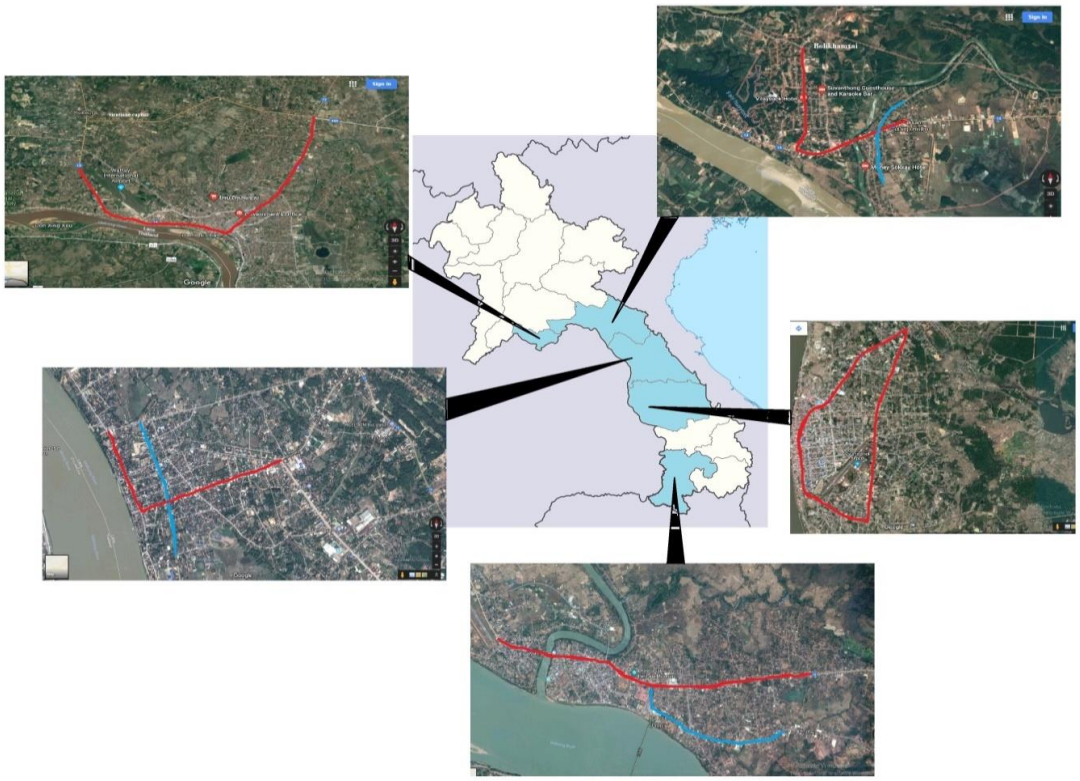
n_i = sample size.
i = each area.
z = Normal distribution values, which are equal to 1.96.
p = Estimated percentage of population distribution, which is set to p = 50% or p = 0.5.
q = 1-p
e = a predictor that sets the confidence level of 95% or e = 0.05
From the top formula and above, we can set the sample group as follows:

$$n_i = \frac{1.96^2 \times 0.5 \times (1 - 0.5)}{0.05^2} = 384$$

As defined, it is recommended that at least 384 samples in each of the target areas or districts are allocated to represent the population, with a total of 1,920 examples.

How sampling is random random is based on fundamental research (Yiakhang, 2016) where sampling is not specific to households that consume wildlife or never consume wildlife and households with high income or low income each household will have a chance to interview the same way random examples to collect information or to interview is to use a map to help in Sampling is to route the cities which will determine households along the right side by counting the number of households from the beginning 1 to 3 already a household 3 as an example, but if households 3 is to ask households 4 instead, and if household 4 is to ask households 5, which will do this until full amount required. The survey is not exclusively collected from a single home, but is a survey of the planned map for the distribution of good samples.

Figure 3.1: Discs of each educational area.



Source: From google earth, 2017

The data used in the study of data from the interview with people directly, including gender, age, ethnicity, religion, level of education, occupation, position, status, size of household or screen members in the household, income, household consumption wildlife, the number of times consumers wildlife, the cost of buying animals to consumers, many times to work or travel in the provinces, being Believers information, those involved in the decision to consume wildlife, nature of purchase and the time of purchase.

The way to collect data is to use an interviewer interviewing directly from each of the families living in the municipality of Vientiane, Bolikhamxay, Khammouane, Savannakhet, Champasack provinces, with a questionnaire or a face-to-face interview. Using a face-to-face interviewer, it is one of the ways in which information is comprehensively comprehensible, and it is better to use the questionnaire for each household to compile.

This study uses questionnaires as an important tool for data collection from sample groups. The questionnaire formulation is based on the basis of a number of previous scientific studies, which include quantitative and qualitative information such as: (1) The quantitative data will include information on household income, the cost of purchasing wildlife for consumption and the number of times per province. (2) Quality information is information about consumer behavior that includes: beliefs, information, decision-makers, wildlife consumption, consumer purchasing behavior, and buying time. In addition, there are general data about groups such as gender, age, ethnicity, religion, education, occupation, occupation and status.

The data analysis of this study was a logistic regression analysis of Green (1997). Due to the determinants of wildlife consumption, it is known that the factors that make the decision. To eat wildlife and factors that make people eat. So the variation used in the variant is analyzed by 2 values: 1 consumer and 0 Non-consumption. However, if the analysis may not match the low effective fit because of the expected number of ways of listing this spirit (Logistic model) Therefore it is appropriate to dependent variable by logistic regression as:

$$Prob(event) = \frac{1}{1 + e^{-z}}$$

$$z = \beta_0 + \beta_1 \text{gender} + \beta_2 \text{age} + \beta_3 \text{Ethnic} + \beta_4 \text{educ} + \beta_5 \text{occu} + \beta_6 \text{posit} + \beta_7 \text{status} + \beta_8 \text{Hs} + \beta_9 expend + \beta_{10} \text{GTP} + \beta_{11} \text{Belief} + \beta_{12} \text{law} + \varepsilon$$

In analyzing this mass equation, independent variables should not be related or should not be multicollinearity, which must be ascertained if independent variables are related. Correlation Matrix is used to verify that if each independent variable has a higher connection of 0.6, there is a multicollinearlity problem (Kyophilavong et al, 2015).

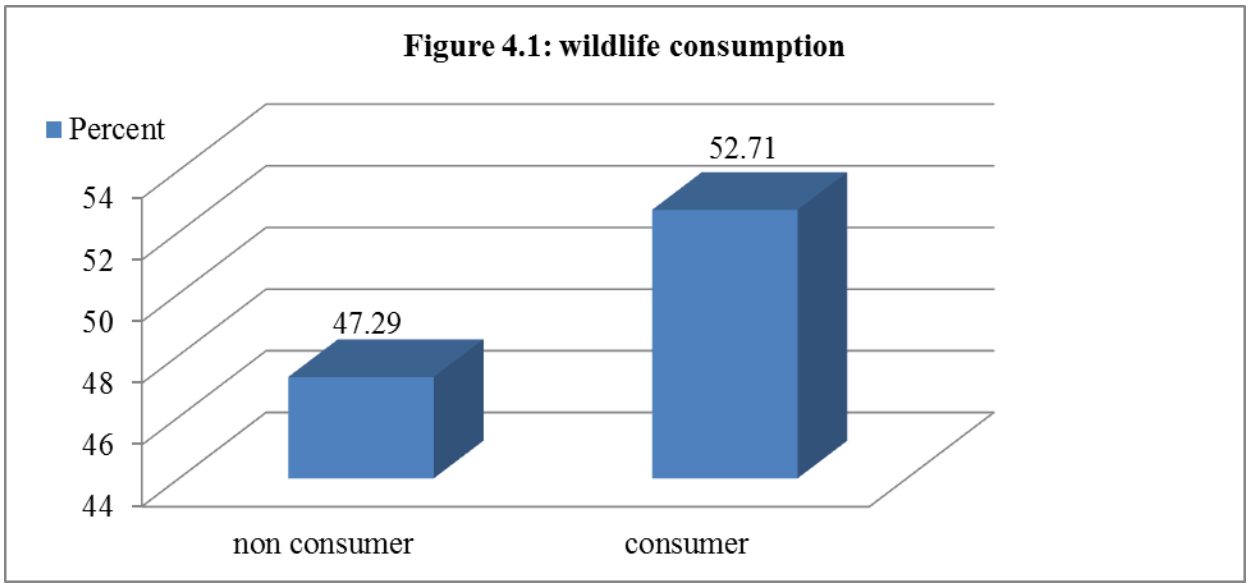
In order to be able to explain the relationship of independent variables to the dependent variable, we must look for the Marginal Effect. Finding the final unit effects can be calculated from the following equation:

$$\frac{\partial Prob(event)}{\partial x_k} = \frac{\partial \left(\frac{1}{1 + e^{-z}}\right)}{\partial x_k} = \frac{\beta_k \exp(-x'\beta)}{[1 + \exp(-x'\beta)]}$$

Empirical Results of the Research

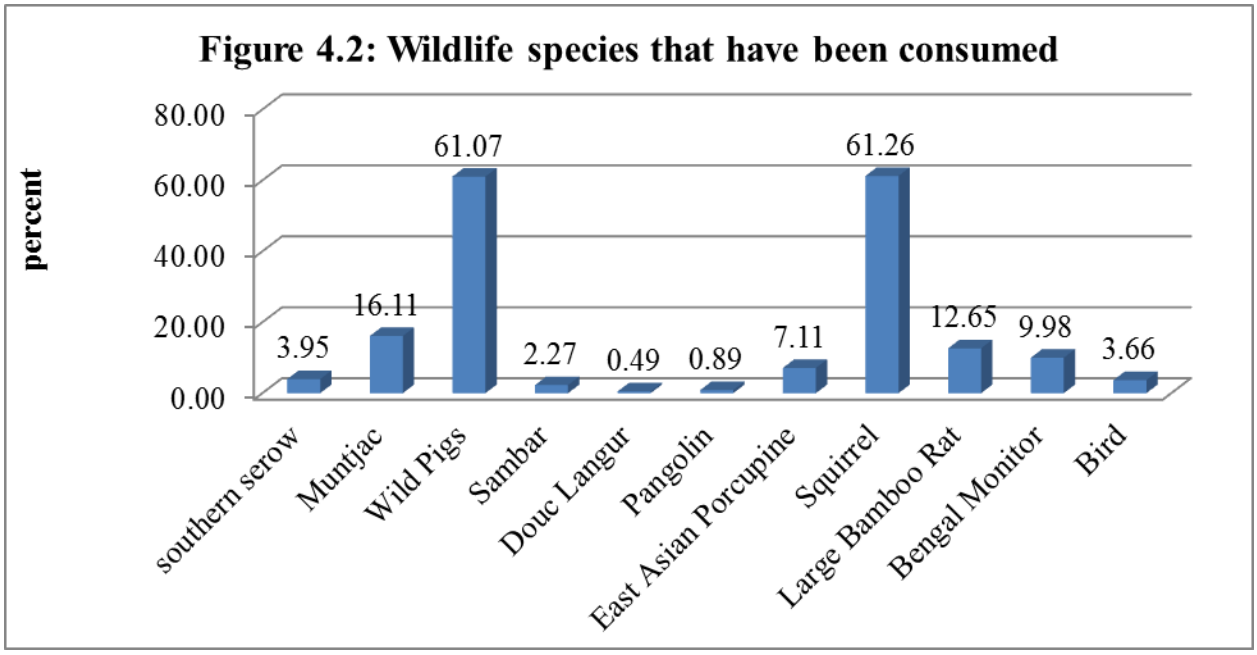
(1) Wildlife consumption behavior of people's in the municipality

From a survey of wildlife consumption of the population of Vientiane, Bolikhamxay, Khammouane, Savannakhet and Champassak, the total population of 1,920 households has shown that in the last year, the proportion of households consumed wildlife and households that did not consume wildlife is not very different. However, it is shown that of these samples are fairly well consumed, accounting for 52.71% of the samples (Figure 4.1). People's wildlife consumption has many reasons: (1) Most people do not take into account the impact, but they think that Wildlife meat is delicious, then consumption; (2) Since meat is non-toxic because wild animals are naturally consumed, the meat does not have the same chemical properties as the animals we eat, feed fast and do not prevent disease; (3) As the price of poultry in the market increases, even the meat is a little more expensive, but it is also a tasty and high protein; (4) Wild meat is a rare meat, sometimes for a year or two. so it is likely when it is found then bought to consumption.



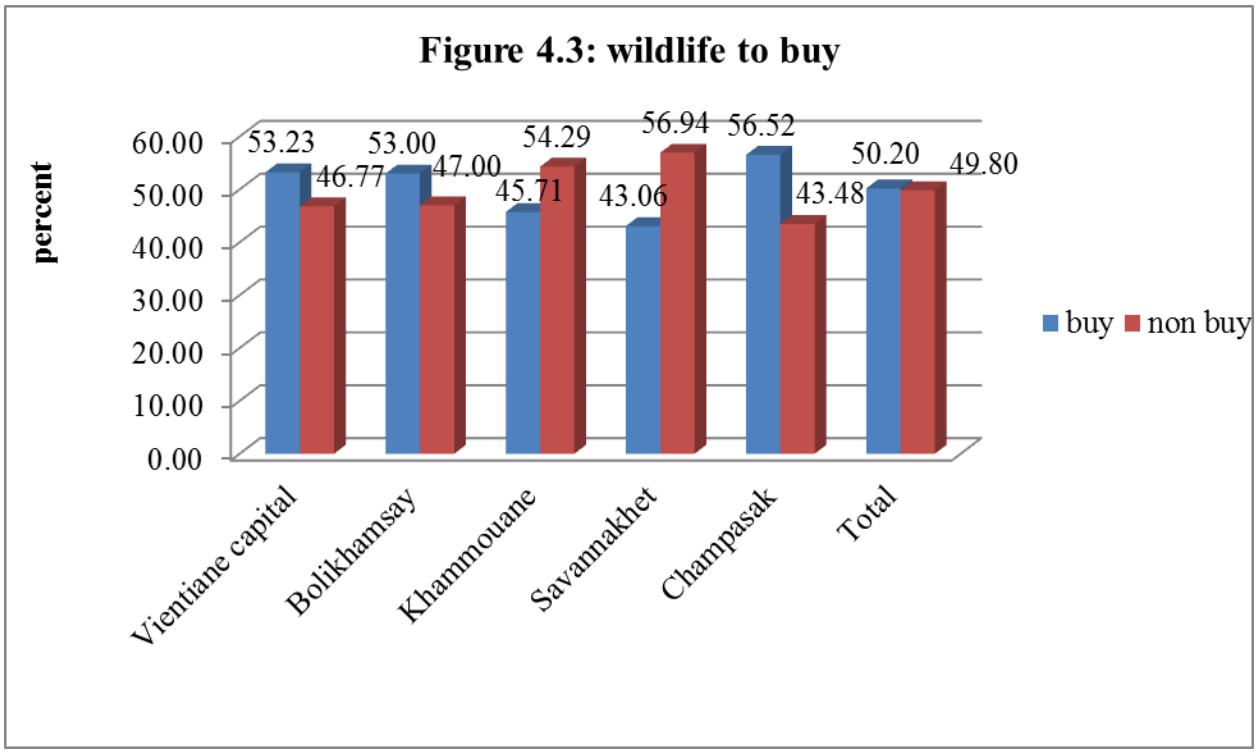
Source: From Surveys the peoples, 2018

Studies show that the most consumed wildlife in last years is squirrels, 61.26% of households consumed wildlife were consumed with squirrels, 61.11% were consumed by wild pigs, 16.11% were consumed by muntjac, 12.65% were consumed by Large Bamboo Rat, 9.98% were consumed by Bengal Monitor, 7.11% were consumed by East Asian Porcupine, 3.95% were consumed by Southern Serow, 3.66 were consumed by birds, 2.27% were consumed by Sambar, 0.89% were consumed by Pangolin and 0.49% were consumed by Douc Langur (Figure 4.2). The reason that people use these two types (squirrels and wild pigs) of wildlife is because they are relatively easy to find, especially during the rainy season, possibly because of lower prices in the market. Therefore, it makes people more likely to consume more.



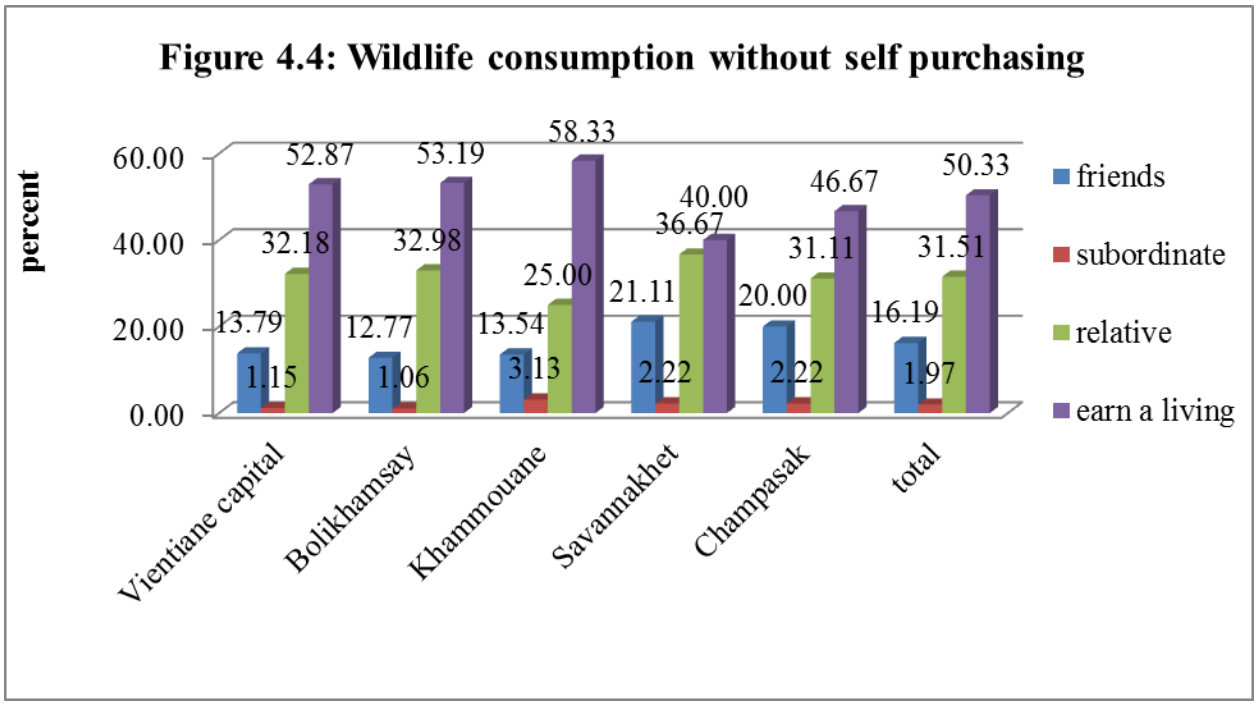
Source: From Surveys the peoples, 2018

Studies show that the acquisition of wildlife in the consumption of people in the 5 districts is mainly consumer by consumer to buy. But wildlife consumption in Khammouane and Savannakhet provinces shows that sampling groups that wildlife consumption by consumer did not buy is which covers more than. Khammouan accounting for 54.29% and Savannakhet accounting for 56.94%. However, overall consumption also shows that samples consumed by consumers to buyers accounted for more than 50.20% (Figure 4.3). Reason to wildlife consumption by consumers to buy covers more than that, because the most professional traders - selling no time to consumers. In addition, people answer that the reason to buy wild meat consumption is due to price domestic meat market higher price of wild meat is more expensive but less forgotten no more That any wildlife meat is delicious, with high protein. Therefore, people have been buying meat from wild animals, but sometimes some of them are found only for sale.



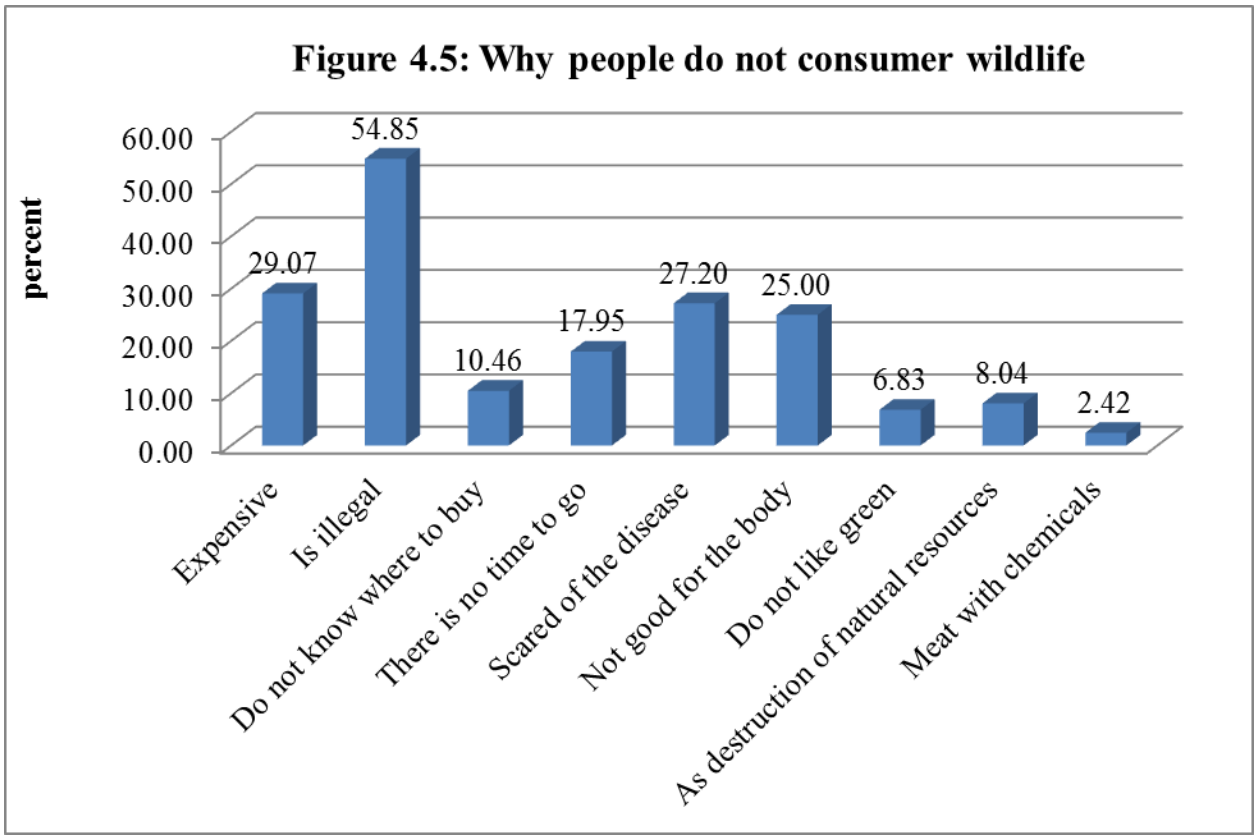
Source: From Surveys the peoples, 2018

For wildlife consumption by consumers do not buy themselves does not necessarily mean consuming alone, it also includes the consumption that other people buy or give, such as friends, relatives. However, wildlife consumption by consumer did not buy then showed that to bring the self-consumption accounted for the largest share, accounting for 50.33%, followed by relatives with 31.51%, friends buying for 16.19%, and subordinate buying for 1.96% (Figure 4.4). The reason that to bring the self-consumption most of wildlife consumption by consumers do not buy group is that the family economy is slowing down as a food guarantee, so it is necessary to access consumption, which is often referred to as consumption for survival. But it does not mean that it will be used for survival, but it is also used for rest, which is used during the vacations by visiting friends and relatives.



Source: From Surveys the peoples, 2018

From studies of wildlife consumption sampling groups there 54.85% say that wildlife trade and sale of wildlife are very illegal, so they do not consume wildlife, 29.07% said that wildlife consumption was due to the Wild prices Expensive, 27.20% did not consume wildlife due to fear of disease because of wildlife. The take from nature without checking that the infection lead, 25% is said to consume wildlife not results a good draft, because if people with the disease get the virus to disease that occurs immediately samples the dalbergiarimasaroxb, 17.95% is no time to consumers would not consumed, 10.46% is said also no time to also know to buy is not eaten, 8.04% Were said to consume wildlife is destroyed resources natural to nothave reason amputated therefore do not consume wildlife, 6.83% is the consumer does not consume and 2.42% is said that wildlife meat with chemicals because those who come often sold on preservatives to make to keep meat was when the musicians. Therefore, wildlife sold in the market or sold in other places often has a chemical compound, which is something that has a lot of impact on the lives of the people. The reasons for not consume wildlife are illustrated in Figure 4.5 below:



Source: From Surveys the peoples, 2018

(2) The factor that determines theconsumption of wildlife of the population

From the study, the average age of the sample was 34.08 years, the standard deviation was 11.69, the lowest was 14 years and the maximum was 68 years. The average education level is 11 years, the standard deviation is 3.95, the lowest level of education is 0 years (unprotected) and the highest education level is 18 years. Household size by 6.79 persons, the standard deviation is 2.98, the minimum household size is 2 and the maximum is 19. The total household expenditure is 3,490,599 kip per month, with the standard deviation of 2,634,581, the lowest monthly household expenditure is 300,000 kip per month and the maximum expenditure is 15,000,000 kip per month. As shown in Table 4.1 below:

Table 4.1: Average, Standard deviation, minimum and maximum values of variables

Variable	Obs	Mean	Std. Dev.	Min	Max
Cons	1,920	0.53	0.49	0	1
Gender	1,920	0.60	0.49	0	1
Age	1,920	34.08	11.69	14	68
ethnic	1,920	0.90	0.29	0	1
Educ	1,920	11.05	3.95	0	1

Occu	1,920	0.17	0.37	0	1
Status	1,920	0.76	0.43	0	1
Hs	1,920	6.79	2.98	2	19
Expend	1,920	3,490,599	2,634,581	300,000	15,000,000
GTP	1,920	0.60	0.49	0	1
Belief	1,920	0.67	0.47	0	1
Law	1,920	0.93	0.25	0	1

Source: calculation from STATA 11, 2018

(2) Check the multicollinearlity

For cross-sectional estimates, cross-section data need to be monitored by multicollinearlity because often there is a fusion problem that makes the prediction ineffective. These problems can be checked and resolved in many ways, but in this estimation, Correlation Matrix will be used.Examining the relationship of independent variables or multicollinearlity testing, if each individual variable is more than 0.6 (for data), it shows that there is a probable problem (Kyophilavong et al, 2015). It is found that in this model there is no multicollinearlity. The maximum contact of independent variables is 0.54, which is still in standard or less than 0.6. As shown in Table 4.2 below:

Table 4.2: multicollinearlity of variables

	Gender	Age	ethnic	Educ	Occu	Status	Hs	Expend	GTP	Belief	Law
Gender	1										
Age	0.22	1									
ethnic	-0.03	0.00	1								
Educ	0.13	-0.10	0.07	1							
Occu	0.15	0.14	-0.01	0.48	1						
Status	0.18	0.55	0.02	-0.06	0.14	1					
Hs	0.10.	-0.07	-0.05	-0.16	-0.20	-0.12	1				
Expend	0.04	0.08	0.08	0.13	0.02	0.05	0.15	1			
GTP	0.05	0.05	0.07	0.09	0.08	0.05	0.00	0.05	1		
Belief	0.06	0.00	-0.07	-0.07	-0.05	0.01	0.04	-0.04	0.02	1	

Law	0.01	0.07	-0.02	0.00	0.01	0.13	-0.01	0.01	0.05	0.23	1

Source: calculation from STATA 11, 2018

Results of estimated

To estimate the logistic regression model, n = 1,920, LR chi2 (11) = 346.54, and prob> chi2 = 0.00 show that the estimated use equation is valid with a 99% confidence level. In addition, R2 = 0.1305 indicates that each independently variable can be explained by 13.05%. The estimated Marginal Effects in the logistic for each independently variable affecting the consumption of wildlife in the provinces of Vientiane, Bolikhamxay, Khammouane, Savannakhet and Champassack provinces can explain the relationship with the following variables: **Gender** is based on the assumption that the relationship is in the same direction as wildlife consumption and is tested with a confidence level of 99% or a statistical significance of 1%. Meaning that sex has a bearing on the wildlife consumption decision, If the other factor is fixed, it can be explained, if people are men more likely to consume wildlife than women, the opportunity to consume more than females 0.16. The reason may be that because men are sexually abusive, they may also consume another animal. It is also a sexually active masculine, Fun with friends at work of people, especially those who consume rare foods such as wildlife. When buying or buying a house, it is important to make friends with their friends and make fun of each other, making men more likely to consume more than women. The results of this study are consistent with the study (Suwannarong et al, 2015), as opposed to education (Drury, 2011).The education level does not depend on the assumption that the level of education is in direct relation to the consumption of wildlife, but the effect of estimation is that the level of education is linked to the same direction of wildlife consumption and is tested with a confidence level of 95% or a statistical significance of 5%. Meaning that education levels have an impact on wildlife consumption, if there are other fixed factors that can be explained that when people have a higher education level, the opportunity to consume wildlife is added to 0.008. The reason may be that because of high education, they know how to use a lot, for example, because those with high education are able to access information sources that are consistent with education (Shairp et al, 2016).The occupation is based on the assumption that it is related to the same direction of wildlife consumption and passed by 95% confidence level or 5% statistical significance. Meaning that the occupation has a bearing on wildlife consumption, if the other fixed factor can be explained, if the sample of occupations is a state employee, the opportunity to consume is much higher than the other occupations, with the opportunity to consume more than the other occupation 0.09. The reason may be that as a government employee, there are many friends and relatives, whether they are in the province or province, because of the opportunity to have someone else buy and eat more friends, there is more time than other professionals who are in line with the education (Drury, 2011, Suwannarong et al, 2015, Shairp et al, 2016).Getting the province is based on the assumption that there is a direct link between wildlife consumption and testing with a confidence level of 99% or a 1% statistical significance. This means that going to a province has a bearing on wildlife consumption, if there is another fixed factor that can explain that if anyone has ever traveled to the province, the opportunity to consume wildlife is greater than those who do not, which is likely to consume wildlife rather than those who do not go about 0.14. The reason may be that those who have gone to the provinces may have the opportunity to find people selling wildlife rather than the ones who do not go because people know that they are illegal, they are often sold in large areas outside the city.Beliefs are based on the assumptions that have been linked to the same direction of wildlife consumption and tested by a 99% confidence level or a 1%

statistical significance. This means that belief is likely to affect wildlife consumption, if there are other factors that can be explained that if people believe that wildlife consumption is healthy, the opportunity to consume wildlife is more than those who believe that consumption of wildlife is not beneficial to health, which is likely to consume more than about 0.39. The reason why those who believe that wildlife consumption is healthy is because they often go to consume or buy food for their health.The law is based on the assumption that there is relationships are in the opposite direction with wildlife consumption and testing with a confidence level of 99% or a statistical significance of 1%. It means that the law affects wildlife consumption, if there is any other fixed factor that can be explained that if anyone knows about wildlife protection laws, the opportunity to consume wildlife is less than those who do not know, and less likely to consume less wildlife than those who do not know about wildlife protection -0.17. The reason may be that they know that there is a law and then follow the laws laid down and not buy wildlife. It shows that people in Vientiane, Bolikhamxay, Khammouane, Sannakhet, and Champassak respect the laws of wildlife management completely.

The proportion of ethnic minorities, status, household size and total expenditure per household (expend) has a direct relation to wildlife consumption. For age factors, there is a similar link with wildlife consumption, but these variables are not statistically important (not through statistical tests or not Signifecance). No impact on wildlife consumption. Perhaps because the people living in the municipality of Vientiane, Bolikhamxay, Khammouane, Savannakhet and Champasak will be Lao or non-Lao ethnic, married or unmarried, small or large household size, household expenditure more or less, and age lows or higher years there is also the opportunity to wildlife consumption as well. As shown in Table 4.3 below:

Table 4.3: Logistical Outcome on Factors Affecting Wildlife Consumption

Variable	dy/dx	Std. Err.
Gender	0.157***	0.026
Age	0.002^{ns}	0.001
Ethnic	-0.038^{ns}	0.043
Status	-0.048^{ns}	0.036
Educ	0.009**	0.004
Occu	0.127**	0.044
Hs	-0.007^{ns}	0.005
Lnexpend	-0.015^{ns}	0.017
Gtp	0.145***	0.025
Biefe	0.394***	0.024
Law	-0.171***	0.044
Number of obs		1920
LR chi2 (12)		348.59
Prob > chi2		0.000
Pseudo R2		0.131

Note: * 90% confidence level; ** Have confidence level 95%; *** There is a confidence level of 99% and (ns) is not statistically reliable

Source: calculation from STATA 11, 2018

Conclusions and Recommendations

The study of the determinate factors to wildlife consumption of people in urban areas in Vientiane capital, Bolikhamsay, Khammouane, Savannakhet and Champasak. The data

used in this analysis or study is a source of data from 1,920 households in Vientiane, Bolikhamxay, Khammouane, Savannakhet and Champassak, using statistical data and logistic modeling into the analysis. Which can be summarized as follows:

A study on the factors that determine consumer wildlife people who live in the municipalities Vientiane capital, Bolikhamxay, Khammouane, Savannakhet and Champasak show that affect consumption of wildlife, and other factors, gender, level of education, occupation of the province, beliefs and law to protect aquatic and wildlife her but that other factors The believe factors andlegal factorsare significant impacts on wildlife consumption.

To reduce the problem of illegal wildlife trafficking, it is important to increase the legal dissemination of law on the protection of wildlife and wildlife through television, radio, newspapers, and so on. The remote areas should provide the staff with the basis of strictly explaining and executing, in practice they should be initiated by state employees to be exemplary to the people, otherwise the laws laid out will be ineffective.

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