

# **Financial Literacy in Lao PDR:**

The Survey Result among Adult in Vientiane Capital, Lao PDR.

by

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## **List of Abbreviations**

ADB	:	Asian Development Bank
AFP	:	Access to Finance for the Poor
ANZ	:	Australia and New Zealand Banking Group Limited
BOL	:	Bank of Lao PDR
CLMV	:	Cambodia, Laos, Myanmar, Vietnam
FDI	:	Foreign Direct Investment
GDP	:	Gross Domestic Product
GIZ	:	German International Cooperation
GNI	:	Gross National Income
GOL	:	Government of Lao PDR
HRS	:	Health and Retirement Study
IPO	:	Initial Public Offering
LAK	:	Lao Kip
LSB	:	Lao Statistic Bureau
LSC	:	Lao Securities Commission
LSX	:	Lao Securities Exchange
MFIs	:	Micro Finance Institutions
MOF	:	Ministry of Finance
NEMs	:	New Economic Mechanism
NERI	:	National Economic Research Institution
NPL	:	Non-Performing Loan
OECD	:	Organization for Economic Co-operation and Development
OECD/INFE	:	The OECD International Network on Financial Education
PISA	:	Program for International Student Assessment
UN	:	The United Nations
WB	:	World Bank
WCY	:	World Competitiveness Year book



## **Certification**

I, LOUANGMOUNNINTHONE Phouhay (Student ID: 51216611) hereby declare that the contents of this thesis “Financial Literacy in Lao PDR: The Survey Result among Adult in Vientiane Capital, Lao PDR” are originally and accurately, have never been submitted at any universities or educational institutions for any purpose whether an award of degree or diploma. All contents provided in this thesis have been written by myself and all information and sources derived from other published have been cited and acknowledged appropriately.

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LOUANGMOUNNINTHONE PHOUHAY

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## **Summary**

Financial markets become more complicated in nowadays, and financial crisis have ever made clearly in time to time, it is hard to make a prediction when it would explode again. So, it would be better to well-prepared at least the basic knowledge of financial concepts, understand how to manage the risk. Thus, many countries even though international organizations emphasize to endorse the awareness of the financial literacy.

Financial education, financial consumer protection, and financial inclusion all are accepted as the fundamental requirements for the financial upgrading of individuals. Measuring the financial literacy level is a crucial step for helping and improving in financial education.

Therefore, Financial literacy assessment rarely appeared in Lao PDR. Based on our understanding, this study would be the first assessment which aims to fulfill the gap by conducting a survey to measure the financial literacy level among the adults in Vientiane Capital, Lao PDR, and attempts to investigate the differences throughout the demographic and socioeconomic factors in order to assist and deliver some criticize information to policymakers in developing the strategy and improving financial literacy in Lao PDR.

This study applies both qualitative and quantitative methods, the existing relevant literatures such as policies and legal documents are reviewed, a cross-sectional survey with random sampling technique is applied. Throughout 400 extensive in-depth interview



are conducted in Vientiane Capital, Laos during July to August 2017 based on a semi-structured questionnaire developed by OECD/INFE (2015).

The empirical overall financial literacy level in Laos is relative low. Most adult people are poor in financial knowledge, especially numeracy skills and interest calculation. We find a huge gap in the financial knowledge, financial behavior, and also financial attitude between male and female. Particularly to the financial attitudes, older people (parents) expect their children to take care (include financial support) after they (parents) get old or retire. In addition, we find demographic factors such as male, married people, low-educational level, and occupation are affecting to the financial literacy considerably



## **Chapter 1: Introduction**

### **1.1. Issue of financial literacy**

Financial markets become more complicated in nowadays, individuals and household are facing to the huge critical increase of the new financial and investment products. The investment opportunity grow beyond coast-to-coast, permitting individuals be able to make an investment in the many types of products. However, as time to time that financial crisis has clearly made in last decades, it is hard to give a precise response to the question: when it will happen again, and how the consequences (impact) will be if the current financial system explodes again. Therefore, what we could do, that is, better prepare ourselves at least the basic knowledge of financial concepts, understanding about how to manage the risk, and consider before engaging into an unfamiliar financial product. In the other hand, preventing from being a victim from financial fraud and prepare ourselves to ready for the next crisis.

As many scholars mention the subprime mortgage crisis had shown in the late 2000s, all stakeholders recognize the financial awareness was a priority issue to emphasis (Robb and Woodyard, 2011, p. 60; Shahrabani, 2012, p. 156). Since financial crisis occurred, a thousand of people across the globe have lost their assets and lost confident in the financial system. Thus, many countries, even though international organizations



are finding the way to develop and enlighten the financial literacy awareness. As well as the US. President's Advisory Council on Financial Literacy addressed "While there are many causes to the economic problems facing the country, it is undeniable that the lack of financial literacy is a contributing factor," (PACFL, 2008).

Financial education, financial consumer protection, and financial inclusion all are accepted as the fundamental requirements for the personal financial upgrading nor the whole financial system stability, they were recognized as the completed sets of high-level principles of financial well-being which was approved by G20 leaders' summit: firstly, in the 'Innovative Financial Inclusion (2010); Secondly, the Financial Consumer Protection (2011); and thirdly, the National Strategies for Financial Education (2012)'.

The OECD International Network on Financial Education (OECD/INFE) recognized the financial literacy assessments as a crucial ingredient for financial healthiness, regarding to the 'High-level Principles on National Strategies for Financial Education' indicated that financial literacy assessment is a main success of the national strategy for the financial education development" (OECD/INFE, 2012). Strong evident indicated that financially illiterate is worldwide, it is found, especially in vulnerable groups, less-educational people, female, and in some subgroups (Lusardi and Mitchell, 2009). Recently, OECD revealed the result of financial literacy survey across the world was relatively low both in emerging and advanced economies (OECD/INFE, 2016). At



the same time, the first financial literacy survey in low-income Southeast Asia countries so call CLMV<sup>1</sup>, pointed that financial literacy level was low, especially among the low-education attainment and low-income people (Morgan and Trinh, 2017).

Since, the government of Lao PDR (GOL) introduced the policy so called “*New Economic Mechanisms (NEMs)*” in 1986, leading to the positive outcome to the rapid growth of GDP from 4.00% in 1991 to 7.28% in 1999 (Bank, 2000). Particularly in the banking industry, there were only 6 commercial banks in the year 2000 and up to 39 banks in 2016, also microfinance increased from 28 units in 2009 to 109 in 2016 (BOL, 2016). In addition, at the end of 2010, the GOL introduced the capital market in order to promote an investment environment and increase the number of fund-flow (both from local and overseas investors) to boost the economic system in Laos. In addition, GOL attempted to provide more channels for Lao people for saving, investing and allocating their resources. In contrast, as the rapid growth of the financial market, and more financial product has become more complex, these kinds of choices might not only be the chance to make a profit but it might be the risk for those who unwell-equipped with a basic financial required.

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<sup>1</sup> CLMV countries consisting of Cambodia, Lao PDR, Myanmar, and Vietnam.



financial literacy assessment is a crucial stage for helping and improving in financial education. Therefore, Financial literacy assessment rarely appeared in Lao PDR. Only one study by GIZ in 2015 attempted to explore the financial inclusion in rural Laos, which focused on the poor people in rural areas. Based on our understanding, there is no study emphasizing the universal population nor using an acceptable tool for assessing the financial literacy in Lao PDR. This study with aims to fulfill the gap by conducting a financial literacy assessment among adult in Laos and employing an international standard OECD/INFE (2015) as a tool of the measurement. And also attempts to investigate the differences through demographic and socioeconomic factors in order to assist and deliver some criticize information to policymakers in developing the strategy and to improve financial literacy of Lao people.

## **1.2. Research purposes and research questions**

This study conducts with the purpose of understanding the current status or of the financial literacy level of the adult people age 18 and over in Lao PDR (i.e., the understanding financial knowledge concepts, day-to-day financial behave, and also long-term financial attitude) by comparing our result to other study (from OECD/INFE (2016b), and Morgan and Trinh (2017)). As well as, attempts to examine factors affecting the financial literacy level. Especially, attempt to reveal the following objectives: i) investigate the financial literacy level of adult people in Lao PDR by comparing to other



countries; and ii) examine the determinant factor affecting the financial literacy level of adult people by using several demographic, socio-economic, and psychological factors.

This study expects to contribute the initial measurement of financial literacy in Lao PDR with an international standard instrument and it might be the baseline in some extent for further study or assessment in order to increase financial literacy and promote the sound financial education in Lao PDR.

Therefore, to ensure that the main objectives of this study are fully achieved, the following questions attempt to be answered.

- 1) What's financial literacy level of among people in Lao PDR?
- 2) What determinant factors are affecting to the financial literacy level of adult people in Lao PDR?

### **1.3. Scope and Limitations and organization of the thesis**

It is undeniable to have some limitations on this study, firstly, the study scope is limited only in Vientiane Capital, Lao PDR. which it might not represent or explain the whole financial literacy level across the whole country. Secondly, this study is conducted in the certain time (Survey during August-September 2017), and also with a limited resource, thus it might have some constraints or bias in some extent. Due to the limited time-frame and resource, this study could not conduct an in-depth and widespread survey



which focuses only a small proportion of the population (400 people) among four districts in Vientiane Capital, Lao PDR. This matter is purposefully left for the further researcher to fulfill this gap through more in-depth and larger scale of study.

This thesis comprises of six chapters. The first chapter is an introduction chapter which describes the issue, objectives, research questions and significant of study. The second chapter presents an overview of Laos' economics, Chapter three presents the literature reviews both theories and the recently studied related to financial literacy. Chapter four focuses the methods and procedures which are employed and utilized in this study. Chapter five describes the survey result and finding. And chapter six presents the conclusion and discuss on some policy implications.



## **Chapter 2. Recent Growth and Financial literacy in Lao PDR**

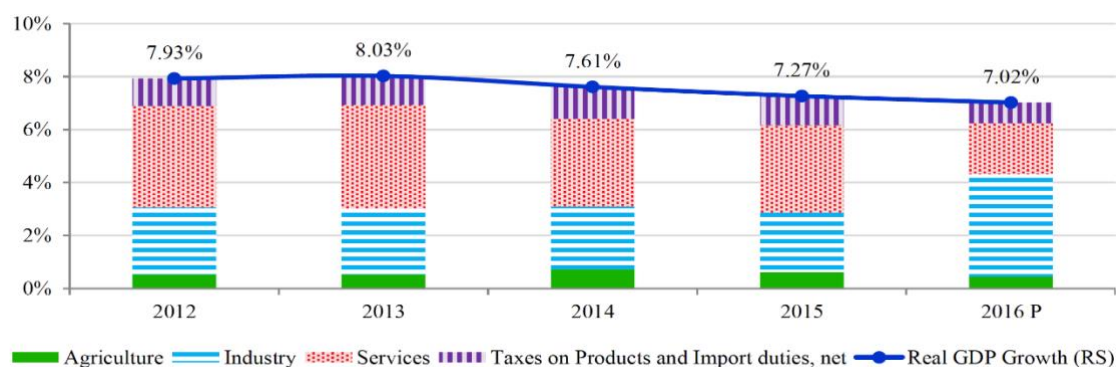
After the establishment to be the Lao PDR in the late 1975, the country was governed and operated under a centrally planned economic system. Until the year 1986, a New Economic Mechanism (NEMs) was introduced, which shifted its economy from a centralized plan to be the market-oriented economy. The considerable change of the policy was done with slow and steady wins' scheme, that making an optimistic outcome to the economic growth in Laos. The core shifted-policies there were price liberalization, wider private ownership (personal ownership), international trade liberalization, and a relaxing foreign exchange market. Followed by an increasing of foreign investment proportion in some sectors which could capture the huge capital flow, and also support from overseas. As the result to make an economic growth and macroeconomic stabilization afterward.

### **2.1. Fact of economic growth in Lao PDR**

Therefore, Lao PDR is a small country, and be classified as one of the least developed countries (United Nations, 2017). With total population of 7 million people, more than half of the people (63%) are in countryside, 78% work base on agriculture, 52% of adult source of income is mainly from farming (Finmark Trust, 2015). Accessing



to the fundamental infrastructure such as education and formal market services are very limited for rural adults. The government has tried the best efforts for the economic development and poverty reduction. By setting up the long-term strategic development plan, one of the key priority is to shift from the least-developed into the status of developing country by 2020. Over last decades, Lao PDR has recorded as a high growth rate country, it is considered as the fastest growing economies in the region, the growing rate was about 8 percent annually since 2000. As in 2016, the GDP reached US\$ 13.76 billion, the GNI per capita increased to around US\$2,330, and the poverty rate reduced to about 23% of total population (World Bank Group, 2017). The Industry and service sectors were the key-driven of growth in Lao PDR, with the huge amount of foreign direct investment (FDI) in hydropower and mining industry accounted 30% of the GDP (ADB, 2017). Exports and imports have been increasing steadily in recent years, approximately 80% of total export in 2015 were predominantly driven by the mining sector, hydropower and agriculture (Leebuapao and Sayasenh, 2017).

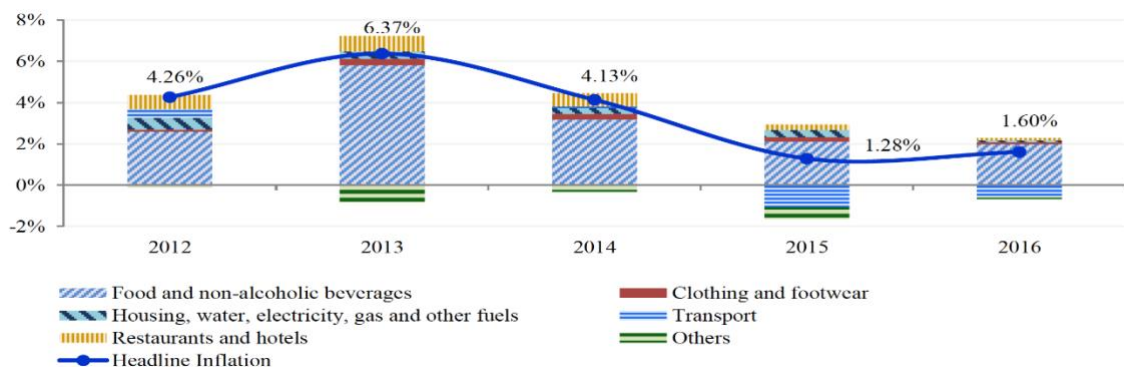


*Figure 2.1 GDP growth rate during the past five years*

Source: Lao Statistics Bureau, Ministry of Planning and Investment



During the second half of 1990s, Asian economic crisis had directly hit the Lao's economic system and suddenly impact to Lao people to experience with hyperinflation up to 110% in 1998-1999 (Bertelsmann Stiftung, 2016). However, since 2000, the inflation rate has decreased year by year, mostly remain at a single digit number, and was below growth rate. By the end of 2016 the inflation in average accounted 1.6%, however, Lao PDR was still the second highest inflation (after Vietnam) amongst the Mekong Region members.



*Figure 2.2 Inflation Composite during the past five years*

Source: Bank of Lao PDR

## **2.2. Financial system in Lao PDR**

### **2.2.1. Banking Sector**

Apart from Ministry of Finance (MOF) who is the key player for managing fiscal policy of the country. Resulted from NEMs, the financial system in Laos has been improved and developed in the positive direction. In the second half of 1980s, the decree on the transformation of banking system was adopted by the government, allowing



commercial banks could fully operate their functioning differently from the national bank.

The State Bank office in Vientiane capital was transformed to be the central monetary agency (after that change the name to be the Bank of Lao PDR<sup>2</sup> or BOL), and the other 96 offices widespread across country were merged together to be only seven<sup>3</sup> autonomous State-Owned commercial banks. The BOL as a central bank assumed to act as the regulatory and supervisory agency such as maintenance the foreign reserve, issuing and supervising money circulation, financial services licensing and regulating (both bank and non-bank), providing monetary policy, and so on. In the other hand, for the purpose of promoting and encouraging the private investment is the role of the commercial banks supposed to take place. These banks were mainly served as saving deposits from the enterprise, government organizations, and individuals; and also, granting credit.

For a decade, Laos' financial system has been developed and growth rapidly under the BOL supervision. As the role of financial supervisory organization, BOL attempted the best effort in order to enhance its role and responsibility to provide monetary policy, and also prevent the systemic risk. BOL had established the Depositor Protection Fund<sup>4</sup> in 1999, followed by the restructuring of the State-owned banks in 2003. The turning

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<sup>2</sup> In June 1990, the National Assembly adopted the Law on the bank of Lao PDR, which was an establishment of the Bank of the Lao People's Democratic Republic, or Central Bank.

<sup>3</sup> in 1999, The seven branch have been integrated into three state-own banks (Banque pour le Commerce Extérieur Lao (External Commercial bank), Lao Mai Bank and Lane Xang Bank).

<sup>4</sup> According to the regulation on Depositor Protection Fund, No. 283/BOL, date 30 Aug 1999.



point of the banking sector, that is, after the announcement of the Commercial Bank Law<sup>5</sup> in 2006. The number of the financial institutions and organizations were increased, and a bunch of regulations and laws have been promulgated in following years. As vividly seen that BOL had established the Special Bank (Nayoby bank<sup>6</sup> or Policy bank) in 2006 in order to implement the direct policy of the government for poverty reduction, as well as the establishment of the Anti-Money Laundering Intelligence Unit<sup>7</sup> in 2008, the Asset Management Center in 2008, the Lao Security Exchange<sup>8</sup> in 2010, and the Credit Information Bureau<sup>9</sup> in 2012. these revolutions caused Lao financial system constantly develop and became a main source of fund in the economic system.

The Government of Laos (GOL) had provided the incentive policies and BOL had also created and established the basic infrastructure to serve the need of the domestic and off-shore users in order to promote sound banking system in Laos. BOL had encouraged the commercial bank to improve their services by promoting and expanding their services to cover all countryside. Up to the end of 2016, the number of commercial banks in Lao PDR increased up to 42 banks, consisting of three State-Owned Banks, a specialized bank (the Policy bank), three Joint-Venture Banks, and the Commercial Bank (7 domestic

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<sup>5</sup> Law on Commercial Bank, No. 03/NA, date 26 Dec 2006.

<sup>6</sup> Agreement on the establishment of Nayoby Bank, No. 03/BOL, date 15 Sep 2006.

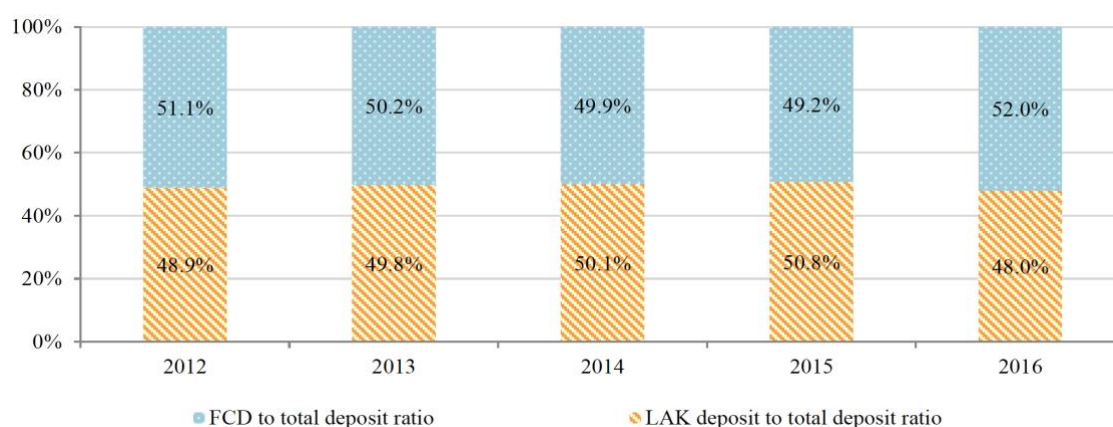
<sup>7</sup> According to the agreement on Organization and Operation of the Anti-Money Laundering Intelligence Unit, No. 673/BOL, date 02 Sep 2008.

<sup>8</sup> According to the Certificate of Lao Securities Exchange establishment, No. 012/LSC, date 6 Oct 2010.

<sup>9</sup> According to the Agreement on the operation of credit information Bureau, No. 928/BOL, date 20 Sep 2012.



private banks, 9 subsidiary banks, and 19 branches of the foreign banks). The total commercial banks deposit recorded as LAK 60,933.30 billion accounted for 47.18% of GDP and be able to provide a credit to economy recorded as LAK 59,745.40 billion accounted for 46.21% of GDP. (BOL, 2016).



*Figure 2.3 Commercial Banks' Deposit during past five years*

Source: Bank of Lao PDR

### 2.2.2. Microfinance

The microfinance development in Laos has started in 1990s, when the country decided to open up doors to welcome international assistants and introduced new market economy based. A number of domestic institutions and international organizations have involved in credit fund across the country. According to first national microfinance survey conducted in late 1997, the total number of village funds were 1,640 units both in cash and in-kind (NERI, 2007). The GOL emphasized the microfinance as one of the



priority strategies for poverty eradication, and had assigned a huge amount of LAK 25 billion (approx. 3 million USD) for 47 targeted poorest districts to established the village funds in 2003-2004. Afterward, the number of microfinance has increased rapidly after the 7<sup>th</sup> survey in 2013, nearly 5,000 of village funds were reported (GIZ, 2012). BOL had provided the fundamental environment, with international support to encouraged and improved sector coordination, transparency, sustainability and quality of microfinance services, by issuing a number of regulations, policy advocacy, and capacity building. By the end of 2016, there were 175 non-banks consisting of 17 deposit-taking microfinance institutions, 59 non-deposit-taking microfinance institutions, 28 saving and credit unions, 31 leasing companies, 32 pawn shops, 5 transfer agencies and others. The total asset accounted 1.5% of GDP (around 200 mil U.S dollar), in the same time, MFIs credit providing increased by 300% compared to 2015 or up to 1% of GDP (BOL, 2016).

### **2.2.3. Capital market**

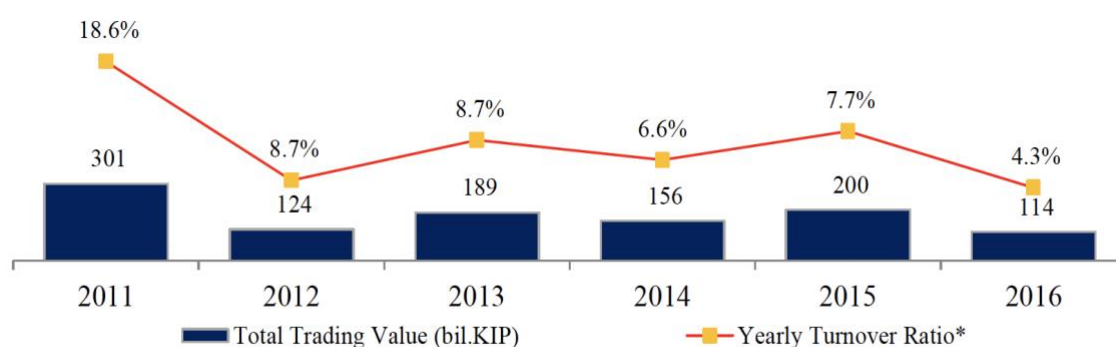
Lao Securities Exchange (LSX) was introduced in late 2010<sup>10</sup> with the two former State-Owned Enterprises were the first listed stock companies. The shares were sold throughout two brokerage firms, with two of big-four firm who served as an auditor. The successful of the primary market (by the issuing securities through Initial Public Offering

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<sup>10</sup> According to the agreement of the prime minister No.051/pm, date 25 May 2009.



or IPO) could capture a huge amount of (long-term) funds accounted to LAK 1,087.17 billion (136 million USD) in the very first year (LSC, 2012). The volume of transaction in the secondary market also worked well, with total trading value at the end of 2016 amounted LAK 114 billion (approx. 14 million USD). Trading account has increased approximately 12,416 accounts from 8,187 accounts in 2011, of which 80% were domestic investors and 20% were foreign investors (LSX, 2016). Lao Securities Commission (LSC) had tried to promote and encourage investors (both from domestic and foreign investors) to involve in LSX, by facilitating a fundamental infrastructure, providing a number of incentive policies such as issuing a number of rules and regulations to support all activities, tax exemption for both entrepreneur and individual. The most important, that is, in 2015 LSC has adopted the Strategic Plan on Capital Market Development for 2016-2025. Which will be the guidelines for the long-term capital market development in Lao PDR.

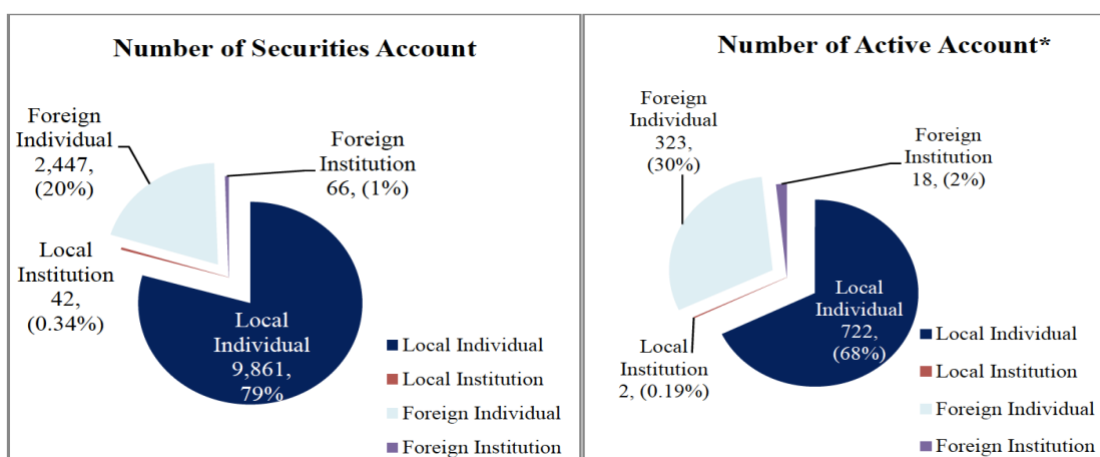


Remark: \*adjusted base on tradable shares

Figure 2.4 Total trading Value

Source: Lao Securities Exchange





Remark: \*Number of Active Accounts mean accounts that have traded at least in once in 2016

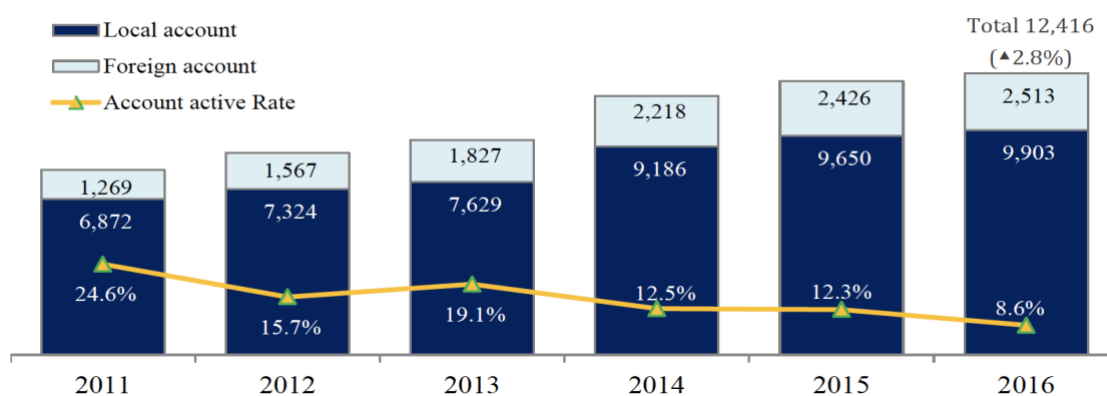


Figure 2.5 Number of trading account since 2011-2016.

Source: Lao Securities Exchange

### 2.3. Current financial activity in Laos

As mention earlier, the high proportion of the population in Laos live in rural and remote areas with the limitation in basic services attainment. The poverty rate still high with approximately 30.3% of the population live below the U.N. income poverty line (Bertelsmann Stiftung, 2016). Poverty reduction, rural-urban gap, gender inequality, or



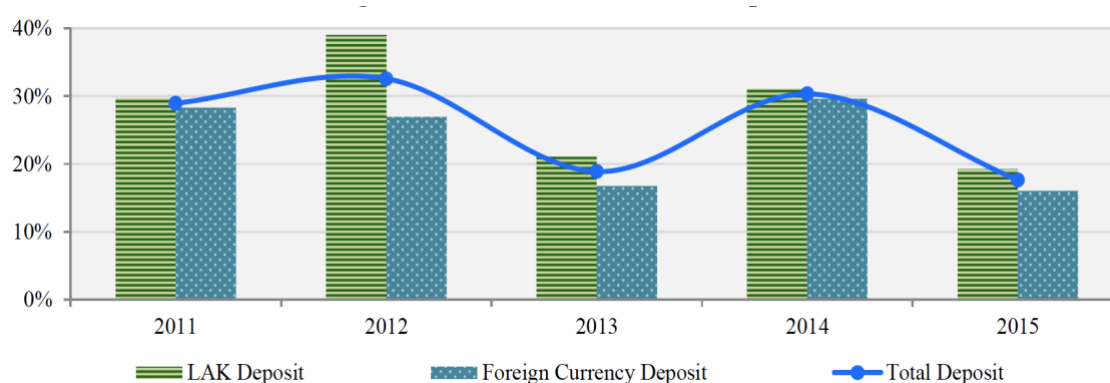
even though, capital shortage as well is the main challenge to the Lao government currently.

However, the previous evidence had shown the increasing number among the banking sector, non-bank institution, and the capital market development in Laos. It is the fact that financial system in Laos are growing, but only in urban areas (mostly financial service providers are located in Vientiane Capital). The financial sectors still need to be developed, the improvement of basic infrastructure and initial environment such as the complete set of fundamental regulatory frameworks, more supported fund, expanding the services network to rural areas, and also human resource capacity building in financial sectors are the main challenged and need to take into account in order to increase the transparency, improve the sound services, and raise people awareness and trust.

In addition, the majority of the household in Laos are engaged in agriculture sector, the main source of income is generated from farming accounted 52%, followed by salary or wages (government and private companies), and self-employed (formal sector) covered 19% and 9% respectively (Finmark Trust, 2015). Provided by the Lao Statistic Bureau (2016), the average wage of labor in Laos is about LAK 1.6 million (approx. 200 USD) and LAK 1.1 million (approx. 137 USD) for the agriculture sector. It is undeniable that people do not have enough money left for saving, or even to cover the daily consumption. Traditionally, Lao people are the active saver. Due to accessing to the



common financial services take longer time, instead of saving with the formal providers, people tend to save their money in their secret place (at home) accounted 28%, buying livestock (23%), saving in other types such as buy jewelry/gold, and save in village bank or with family members accounted 7% and 5% respectively (Finmark Trust, 2015). Even though, the interest rate of saving in the commercial bank is higher than the developed countries, the proportion of saving in formal sectors still low. More interestingly, people believed that they could earn more profit than the commercial banks provided, some people tend to take advantage from poor victims (vulnerable group) by acting themselves as a creditor (illegally) with high interest rate to make more profit rather than saving or investing in the financial market. That might be the result to make the proportion of deposit decreased recently (see figure 2.6).

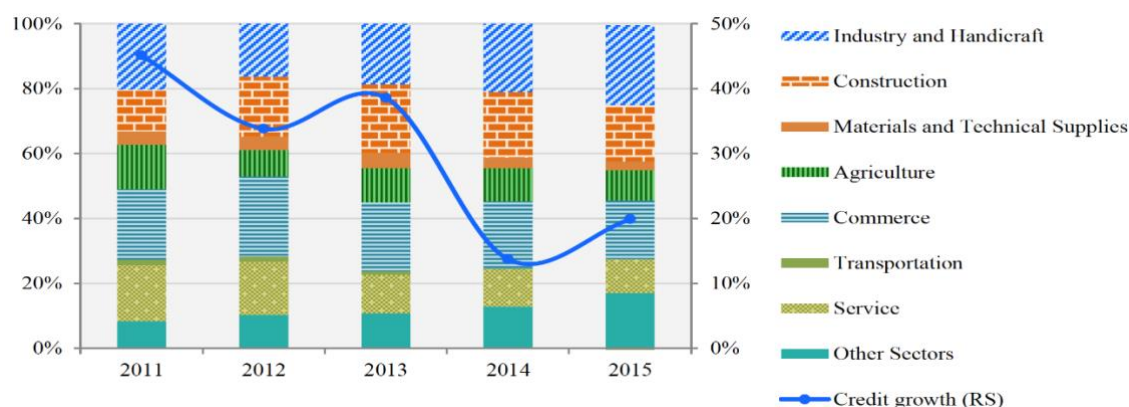


*Figure 2.6 Commercial bank's deposit during 2011-2015*

Source: Bank of the Lao PDR



The huge demand for small and medium-size businesses has made a high competition between entrepreneurs in accessing the formal credit provider. Because of inadequate resource available, the commercial banks could provide only a short-term loan (normally not more than 5 years' term) with the limited amount to some particular sectors. which clearly shows in figure 2.7 the proportion of credit providing mainly focus on industry sectors covered 34 percent (World Bank Group, 2017) greater than agriculture sectors only tiny proportion (however, agriculture is the main job producer in Laos).



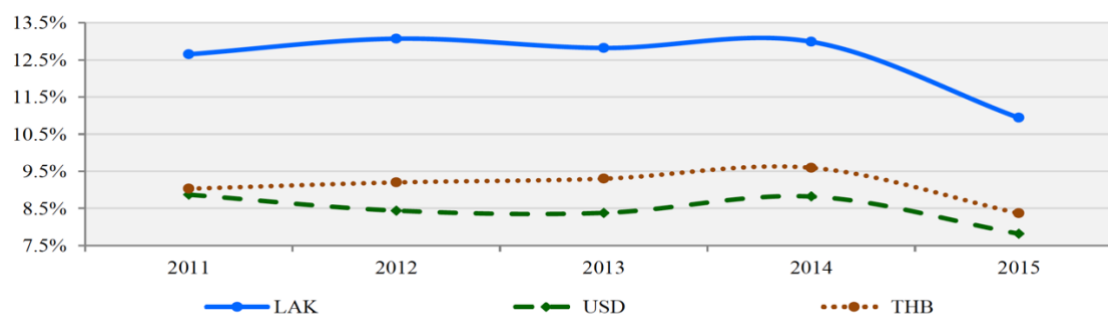
*Figure 2.7 Commercial Banks' Credit by Sectors*

Source: Bank of Lao PDR.

The high-interest rate on loan seem not to be a big concern for individuals or enterprise in Laos, the proportion of borrower has declined year by year, because of commercial banks had been facing with high non-performing loan (NPL) ratio (BOL, 2016). Therefore, the BOL attempted to manage to make financial stability, and promote the sound environment in the banking sector. In the other hand, the commercial banks



also concerned and more carefully to the loan documents screening, that is the reason why small businesses and entrepreneurs faced a problem to access the resources. Another choice to cope with a problem, which is looking for other available sources, that is informal credit providers, however, they have to carry an extremely high-interest rate up to 20-30 percent per month compared to the normal interest rate only 10-13 percent (figure 2.8).



*Figure 2.8 The one year normal lending rates during 2011-2015*

Source: Bank of the Lao PDR

Microfinance institutions (included informal mechanism as village funds) seem to be the best answer for poor by looking at the number that widespread across the country. In contrast, more than half (60%) of adults tend to use informal services to manage their finance (Finmark, 2017). Table 2.1 shows the high proportion of saving at home is higher at 28%, buy a livestock 23% and buy other assets like goal or jewelry cover 7%. While village banks which are expected to be the first option are the least. For the demand side, people choose to borrow money from village banks covered only 3%.



*Table 2.1 Financial activity in rural Laos*

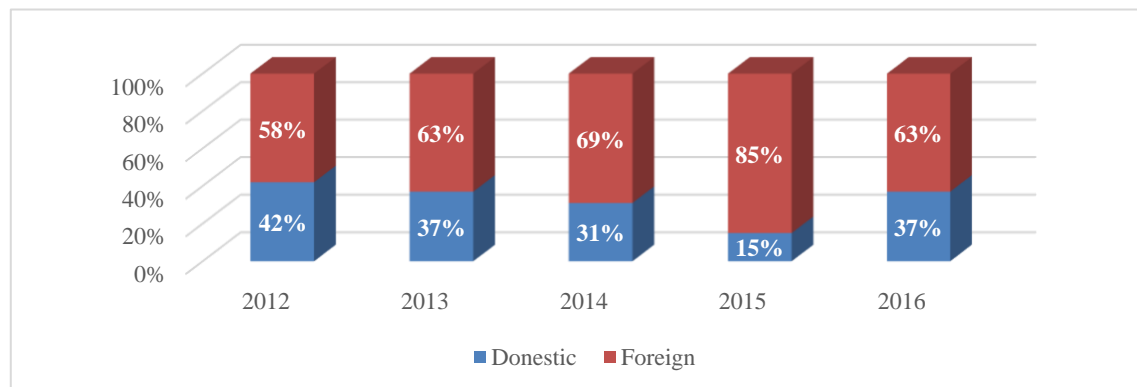
Saving methods	Total (%)	Borrowing type	Total (%)
Secret place at home	37	Commercial bank	7
Commercial banks	33	Family/ friend that need to pay back	4
Livestock	29	Vil. development fund/ vil. bank	3
Jewelry or gold	9	Got goods in advance from a shop to pay back later	3
Vil. development fund/ Vil. bank	6	Money lender in community	2
Family member or friend	4	Employer	0.4

Source: Finmark (2017)

Lao people are not an active investor/trader. Figure 2.9 shows the proportion of domestic and foreign investors actively participate in the LSX. However, the large number of the investment accounts are occupied by domestic investors, but majority of the transaction in LSX is actively made by foreign investors covered 58% in 2011 and up to 85% in 2014 (LSC, 2015). It is the fact that, there is not much liquidity in LSX, the limited number of trading products (only 7 listed stocks), less diversity (only common stock), even low dividend yield (approx. 7-10 percent). These might be the reasons why local investors do not actively engage in the transaction. In the other hand, it might because of local investors enjoy getting benefit from the share dividend, or even they might not know how to make the profit from trading (capital gain). According to Finmark



(2017) reveals that one-third of Lao people do not trust in stock markets. Figure 9 shows the proportion of investors actively participate in LSX during 2011-2016.



*Figure 2.9 Active market participation in 2012-2016*

Source: Lao Securities Commission

## 2.4. The financial education in Laos

In order to promote public awareness and engage in developing in the capital market, LSC has embraced the financial education as the priority. Which clearly shows since 2012, LSC has paid attention to provide a number of training and education in various forms such as advertising via newspaper, radio, television channel, website, and social media. More specifically, LSC has provided a number of seminars which targeted to the educational institutions, communities, and governmental organizations in both capital city and provinces. Which could deliver the basic knowledge of investment and how to manage their finance. Furthermore, in nearly future, LSC will have plan to set up the investment education center to provide knowledge and to be the panel to share experience within investors.



From macro policy in central to micro-unit implementation in rural areas, BOL in cooperation with GIZ launched the project in 2009 namely '*Microfinance in Rural Areas – Access to Finance for the Poor (AFP)*' to promote the framework for sustainable financial services and provide financial knowledge and skills throughout financial literacy courses, which targeted to poor people in rural areas. Apart from that GIZ helped BOL to conduct financial literacy assessment in 2014 which was new issues in Laos. Financial literacy survey rarely appears in Lao PDR. GIZ conducted the first survey to measure the financial literacy in three provinces<sup>11</sup> in the southern part of Laos (GIZ, 2015). The survey attempted to measure the knowledge, awareness of financial concepts, and financial performance issues, especially saving and credit taking of the rural poor. The study clearly showed the valuable information and revealed interesting issues that need to be considered and urgently resolved; and also, provided some information that would be a baseline for the other researcher who interests to do a study in this field.

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<sup>11</sup> Three provinces Consist of Champasak, Salavan, and Savannakhet.



### **Chapter 3: Literature Review**

Several researchers have investigated and measured the financial literacy level, not only in developed countries itself but across the world. Most study mainly emphasis to examine the demographics and social-economic factors affect to the financial literacy level. This section attempts to make a revision on the financial literacy definition from many aspects, the impacts and methods for measuring in financial literacy, and provides some empirical evident of the previous study on the assessing financial literacy.

#### **3.1. The Definition of Financial Literacy**

For last decades, the financial literacy was defined in different ways by different researchers. The first defined of the Financial literacy study was back to 1997 within the high school survey in financial literacy namely ‘Jumpstart’ it provided a basic characterization of the financial literacy as ‘the personal capability to combine such knowledge and skill into an effectively management of financial resources for the long-run financial well-being” (Hastings, et, al. 2012 p.5). Furthermore, several researchers and organizations have defined the term of financial literacy into their own views. Lusardi and Mitchell (2007) defines “the financial literacy is the processing of personal understanding in the financial products, the developing skills to cope with risk and return,



and the effectively performed to promote a personal financial well-being”. While Servon and Kaestner (2008) claim that “financial literacy is the core competency to understand the concepts of financial and the ability to take advantages”. Also, some other study mentions that to become financially literate means the combination of using the knowledge and skills together in order to manage with wealth in a good manner (Howlett et al. 2008).

In addition, Huston (2010) describes the financial literacy is the needed literacy that consists of two main components: one is the understanding on the financial knowledge, and how to use it. Therefore, it might say that assessing how well people understand and how people use into the real life. Wachira and Kihiu (2012) point that financial literacy increases consumer awareness for preparing with financial difficulty such as criticize risk mitigating strategies, effectively use of financial products, and the most important is making reasonable decisions. ANZ (2011) mentions financially literate should be consisted of five components such as ‘keep tracking, planning ahead, products considering, always staying up-to-date in financial concern’.

Moreover, Lusardi and Tufano (2015) conduct survey a more deeply skills of financial knowledge, they define ‘the debt literacy is an ability to apply the fundamental knowledge and skills such as interest compounding into their everyday financial activities including any kinds of debt contract’.



In addition, the PISA 2012 describes ‘financial literacy is an ability of applying their understanding of financial knowledge and skills to improve personal well-being in their entire life’ (OECD, 2012).

From all definitions above, we find out that the definition which accurately covered the whole aspects of financial literacy which is proposed by the OECD. Thus, this study devotes an agreement to the definition of financial literacy as “the combination of personal capability to engage one’s awareness, knowledge, skills, manners, and behavior regarding the financial aspects. Those combination of abilities and skills must reflect to enrich the personal’ financial engagement, and of which would enhance an entire-life of personal financial well-being” (Atkinson and Messy, 2012).

### **3.2. Why does financial literacy important?**

Financial literacy becomes more important not only for an individual, or household itself but also at a global stage. It is undeniable that the key success of financial welfare of individual and household in order to manage and deal their financial affairs (Blalock et al., 2004). Financial literacy has directly impact for the understanding of financial functions and enable individual to process financial well-being (Bhushan and Medury, 2013: 115). Financial literacy has directly impact to promote individual’s in saving, investing financial asset, monitoring financial affairs, and also minimizing in the borrow



rate and helping them get out of debt so far (Blalock et al., 2004). Consumer with high-level of financial competency is likely to make the high-quality financial choices (Guiso and Jappelli, 2008; Tamimi and Bin Kalli, 2009).

Financially illiterate, therefore, affect to the healthiness of individuals, it might cause a negative impact on long-term financial goals. Consumers with misunderstanding the concept of compound interest is more likely to spend costly in any types of transactions, tend to have an unnecessary debt, engage in unfair interest rate on a loan (Lusardi and Scheresberg, 2013; Lusardi and Tufano, 2015). For the student, lack of financial knowledge cause the increasing of financial difficulty till later years (Taylor and Wagland, 2013). Chen and Volpe (1998) suggest student who has limited knowledge in financial likely to have a negative in financial attitude and tend to make mistake in financial decision. The OECD (2005) argues that financial literacy could significantly contribute to the economic growth, support poverty reduction and promote financial markets stability. The ability to perform financially decisions properly is critical to be the developed a sound personal finance (Lusardi, and Mitchell, 2008; Lusardi and Tufano, 2015).

Therefore, financial literacy influences the individual's saving and investment decision making, it additionally affects to the capital allocation of the financial institutions in short-run, and tend to affect to the entire growth rate of economy in long-



run as well (Widdowson and Hailwood, 2007: 37-38). Financial competency is an essential component to increase the size of people saving, in the other hand it promotes of lending to poor who is the most appreciate client (Cole, Sampson and Zia, 2011). Financially illiterate affects to the saving and building-up personal asset (Lusardi and Mitchell, 2013), involving risky financial decision-making, people tend to engage in the unfair borrowing, and misunderstanding to their investment in the financial markets (Jappelli, 2010; Lusardi and Mitchell, 2011b; Lusardi, 2012; Xu and Zia, 2012). Consumer with misunderstanding the compound interest concept is likely to spend costly on any transaction fees, create up an unnecessary debt, and involve in higher interest loan (Lusardi and Tufano, 2015; Lusardi and Scheresberg, 2013). financially illiterate not only affect the normal operation of single financial institutions, but the financial system stability as a whole (Santos and Abreu, 2013). Most importantly, financially illiterate causes the impact to the future workforce contribution. Especially to the young generation, thus promoting financially education in young-age might significantly contribute the short and long-run to one society.

Financial literacy assessment has changed years by years, many scholars focus on demographics and social-economic determinants factors affecting to the financial literacy, and most study describes the role of demographics on being financially competency level including gender, education level, working experience, level of income,



working place etc. (e.g., Lusardi and Mitchell, 2008; Guiso and Jappelli, 2008; Tamimi and Kalli, 2009; Müller and Weber, 2010; Ansong and Gyensare, 2012). In addition, Chen and Volpe (1998) suggest that financially illiterate is easily find within female, younger ages, and unskillful people. Lusardi et al. (2010) also confirm that women has a lower-skilled in financial than men, they also add that people with an effectively financial decision making always come with the high-thinking skills, and higher-school attainment. Furthermore, between the male, who working in the financial services, and making more-income tend to be financially competent (Tamimi and Kalli, 2009). In contrast, Ludlum et al. (2012) argue that the different in financial skillful is not because of gender' differences, but the employment, and marital status have some influenced.

As the different perspectives, Cole et al. (2011) suggest that people with higher-number of schooling, and larger of their consuming are more likely to have higher level of the financial proficiency. Ansong and Gyensare (2012) indicate that the number of schooling, working condition, chance to make media accessing are the main impact for making a financial proficiency.

Delavande et al. (2008) argue that in order to be the financially proficiency is depending on the private property level, meaning that people with more available resources is more likely to have higher chance to gain more financial skillful. Monticone



(2010) pointed that the personal financial well-being is not an external factor, saying that more asset they invested, more knowledge they equipped.

Measuring financial knowledge is kind of studying in human capital which needs to perceive via life cycle, learn by doing or mistakes, so the consequences affect to the ability to the asset management, saving, investing and controlling their expenses effectively (Delavande et al 2008). In addition, the OECD recognized only measuring financial knowledge itself is not enough to reflect the individual's financial literacy level. Hence, the OECD attempt to add more elements that believed as essential components of financial literacy, those are, financial behavior (to capture personal behave in financial aspects); and financial attitude which reflects to the inside thinking whether people have positive or negative view on their financial aspects such as saving, short-term and long-term financial planning (OECD, 2013). Increasing the financial behavior such as budget planning, long-term goal setting, and avoiding unnecessary borrowing is considered to be an increasing of personal financial empowerment (Atkinson and Messy, 2012). Positive financial attitude is constructed throughout economic and non-economic beliefs, it starts from the unique mentality decision to be the definitely results of behavior. Which is key factor of personal thinking process (Ajzen, 1991).

OECD conducts the widespread survey within 14 countries, the core question covered various aspects of finance, including financial knowledge, behavior and, attitude.



For instance, money management, short and long-term planning, ways of choosing products (Atkinson and Messy, 2012). More specifically, the three main ingredients for financial literacy evaluation are employed, which there were:

- i. The financial Knowledge: the idea is to capture the key concepts of financial such as numeracy skills, simple calculation in compound interest, defining term of profit and lost in investment, and the understanding of inflation;
- ii. The financial Behavior: the set of questions relates to the financial behaviors which attempt to capture day-to-day personal behavior such as whether do they consider before purchasing, timely bill payment, household budgeting, personal saving, investing and also whether do they borrow to make ends meet;
- iii. The Attitude: to inspect individuals' attitudes toward financial scheme such as financial management, financial goal, and perspective towards some psychological of financial statements, in order to understand the inside personal financial perception.

### **3.3. Empirical Evidence**

Measuring adult financial literacy has started since 90s in the U.S. (Volpe et al., 2006). Several studies unveil their finding, that is, relatively low across the globe in financial competency. The OECD conducts a survey within 14 countries, concludes that



financially illiterate is widespread particularly in Albania, Poland, Malaysia, UK, and South Africa (Atkinson and Messy, 2012). In addition, Mitchell and Lusardi (2015) point that low-level of financial understanding is appeared not only in the well-developed of financial like the United States, but also found in many developed market economies as well.

Other study reveals that only 33% adult worldwide equipped with financially competency, most of them are likely appeared in the developing market economies, the highest rate is found in some Asia countries, North America, and European countries. in contrast, the lowest financial literacy rate is more likely in the emerging economies. Especially, in South Asia (Lusardi and Oggero, 2017).

Jappelli (2010) uses dataset of the IMD World Competitiveness Yearbook (WCY), together with the human capital indicators for 55 countries between 1995 and 2008. In this survey, the business leaders are asked to provide their perception on financial literacy, she finds that the human capital indicators have some positive correlation to the financial proficiency.

Lusardi and Mitchell (2011a) provide an analysis in eight different countries, using the same administer in the Health and Retirement Study (HRS) in 2004. They conclude that the higher scoring in science and math tests are associated with higher financial



competency. In addition, country with experiencing in pension reformed is more increasing in financial understanding.

Alpha (2010) interviews 1,432 respondents in Bulgaria for evaluating the financial literacy level purpose, using eight basic financial literacy questions. They indicate only 2% could provide the answer correctly, 66% has skills to calculate a profitable discount, 53% could calculate the simple interest, while most of the respondents claim that calculating a complex interest such as interest on a deposit or interest paid on a loan are serious difficulties for them.

Fornero and Monticone (2011) uses the household income survey from Bank of Italy's in 2006 and 2008 to define the financial literacy level of the people in Italy. They suggest that most of individual people are far from the needed basic concepts of financial knowledge. Italians people are more aware of the stock pricing and inflation than the basic concept of interest compounding. The proportion of the correct answer on compounding interest is only 40%, while 32% provide an incorrect answer, about 28% do not even know the answer. In addition, Rooij and Lusardi (2011) design a module for household survey in the Netherlands, in order to capture financial literacy status with approximately 1,508 households. They claim that financially illiterate could be found particularly in women, and low-educational attainment.



Bucher-Koenen and Lusardi (2011) use SAVE dataset to detect the financial literacy level with 1,059 German households, and the three-basic financial literacy<sup>12</sup> assessment questions are employed. The result shows that financial literacy among German household is fair. 82% could provide an answer to the interest questions appropriately, more than half (78%) respond correctly to the question of inflation, about the risk diversification question, about 62% of the respondents could provide answer rightly. The study also find female, lower secondary education, individual without employment (student, unemployed, and retired individuals), and those who live in East German have significantly lower financial literacy. They add more finding that age group has no effect to the financial proficiency (Koenen and Lusardi, 2011).

Klapper et al (2012) use a panel dataset from over 1,000 Russian individuals before and during 2008 to examine the financial competency and attempt to seek its effect on people behavior. The result shows less than half (41%) could do simple calculation on compound interest appropriately, and 46% could answer the basic question as a definition of inflation correctly. Furthermore, Arrondel et al. (2013) examine the financial proficiency level among adult in France, PATER<sup>13</sup> survey's data is used, and Lusardi

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<sup>12</sup> The three basic-questions of financial literacy assessment is developed by Lusardi and Mitchell in 2004, mainly focus on 1) Simple interest rate calculation (Numeracy), 2) recognizing of inflation, and 3) risk diversification concept.

<sup>13</sup> The PATER is first household survey, which is conducted by the French National Statistics Institute in cooperation with Taylor-Nelson Sofres (Arron and Masson 2013).



and Mitchell's (2011b) method is employed into this study. They find less financial literacy is likely appeared to women, young and also less-educational people, they find more likely difficult to engage with the basic interest compounding, the inflation, and the risk diversification concepts.

The most recently of financial competency survey in the United States is conducted by Harris Poll (2018) within 2,017 U.S. adults ages 18 above via online survey, they reveal that 41% of adults in the U.S. have a budget and keep monitor their day-to-day payment, over than half of the adults (69%) have non-retirement saving, and majority 61% report that they all had a credit card debt in last 12 months.

Boisclair et al, (2014) uses an interview data which conducted by Canada Securities Administrators (CSA) in 2012 to investigate how financial literate on Canadian individual will be. Approximately 6,911 Canadians are interviewed and the result shows most of the respondents with 78% well-known about interest question, following by 66% answer to the inflation question correctly, and more than half 59% could provide the correct response to risk diversification question. The overall result of the financial proficiency shows fewer than half (42%) could do answer correctly to all three-questions. They find some demographic factors such as women, lower education attainment, non-working people (students, homemakers, and unemployed) are found to display low-level of financial literacy.



Financial proficiency assessment in South-America is limited. Moure (2016) explores the level of financial literacy among 14,500 Chilean people, she finds that financial literacy is remarkably low in Chile, with nearly half (47%) aware the concept of interest compounding, and only 18% can clarify about inflation scheme.

In Asia continental, Agarwal et al. (2015) conduct an assessment on the financial competency of the people in India via an online investment survey, with around 1,694 customers. By using the three-basic financial literacy assessment questions, the finding presents 81% among the respondents answer correctly on the interest rate question, 79% could explain to the inflation question, and 79% do correctly on the risk diversification question. Further finding shows that male, married female, the higher-school attainment is more easily to answer all three question correctly. Surprisingly, they find there is no significant difference within the income group in this study.

Similar result to the study by Agnew et al. (2012) with the amount of 1,024 Australians representative are being sample group of the study. The result reveals that financially illiterate is found among young, less-educational people, unemployed and those who is not belong to any type of labor force. Another periodically survey study conducted by ANZ in 2014 presents the fifth survey<sup>14</sup> result of adult financial literacy in Australia. With approximately 3,400 Australian adults have been asked, the survey claims

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<sup>14</sup> ANZ survey adult financial literacy is first conducted in 2003



that the overall Australians remain somewhat precaution. A number of differences still exist in financial attitudes, financial knowledge and financial behavior between women and men, such as in the financial attitude women has a higher score on dealing with money is stressful than men, while the numeracy skill women seem to be lower, for the behavior indicators women with aged between 28 to 50 has higher score than men on keeping track of finances (ANZ, 2015).

The first large-scale survey on financial literacy in Japan which conducts by Bank of Japan in 2016, with approximately 25,000 individuals. The result indicates that people are more understanding about the basics of financial transactions with 72.9%, and less understand about basic finance and economy cover 48.8% of the respondents. Refer to the concept of insurance, loan/credit, and wealth building cover 52.5%, 53.3%, and 54.3% respectively (Yoshino et al, 2017).

GFK Marketwise Ltd conducts a financial literacy assessment with totally 10,000 Thai people, they employ the standard tool, which is developed by “OECD Financial Literacy Study<sup>15</sup>” to be the questionnaire and analysis methods. the question attempt to capture on three financial aspects including financial knowledge, behavior and attitudes. The result shows the overall score of financial literacy is in acceptable level with 14 out of 21 scores or 63.6%, Thai people do well in financial behavior score with 67.7%, while

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<sup>15</sup> OECD financial Literacy Study is known as “2015 OECD/INFE Toolkit for Measuring Financial Literacy and Financial Inclusion”.



in financial knowledge and financial attitudes is slightly lower at 60.4% and 61.3%. they suggest that lower score in financial literacy assessment is appeared to the older people age 70-79 years old, to low-income household, low education level and to people in the Northern part of the country (GFK Marketwise Ltd, 2015).

Others study among low-income Asia economies, Morgan and Trinh (2017) use the OECD/INFE questionnaire to detect the level of financial proficiency within two low-income countries (Cambodia and Vietnam). Approximately 1,035 Cambodian and 1,000 Vietnamese have been assessed. They find that the overall score is low in both Cambodia (11.5) and Vietnam (12.0) compare to others 30 countries which is presented in OECD/INFE (2016). They claim that financial literacy is found within higher-level education respondents, higher income groups, also with the self-employed workers and salary workers. they also suggest there is no difference among male and female, and age groups. on the financial literacy level in two countries.

Financial Literacy in Laos is a new issue and assessing the financial competency is just in beginning stage, only one study which conducted in 2015 by GIZ. They focus to the poor people with approximately 600 within three provinces in the southern part of Laos are being the sample of the study. The result clearly shows that Lao people are lack basic numerical skills especially women with a lower level of education. They point that financial bookkeeping is rear among this target group, and they suggest that a financial



literacy is needed to improve and raise awareness of financial products among the target population (GIZ, 2015).

These literature reviews provide the idea that guide author to outline this research, it summarizes a needed definition, clarify the advantages and disadvantages of being financially proficiency, provides the appropriate methods, and supports strong evidence of the financial literacy assessment across the globe. The reviews also reveal the gap that need to fulfill, as the result author attempts to apply model which develop by OCED to be the tool to measure the level of financial proficiency among Lao people.



## Chapter 4: Research Methodology

### 4.1. Research Design

This section focuses on two phases, firstly, provides the data retrieved from journals, publications, official reports, research and working papers, academic textbooks, and other printed materials. Secondly, analyses the primary data which collected from field survey. This study employs mixed-methods (qualitative and quantitative) to explore the level of financial proficiency among adults in Vientiane, Laos.

This study attempts to investigate only in Vientiane Capital (the Capital city of Lao PDR), the main population target on adult people in the range of 18 years old and above, according to “*the 4<sup>th</sup> Population and Housing Census 2015*”, the population in Vientiane capital is approximately 820.940 people (LSB, 2015). The sample size is defined by using the following formula which suggested by Toro Yamane (1967).

$$n = \frac{N}{1 + N(e)^2}$$

Where:

n – The sample size

N – The population size

e – The acceptable sampling error

95% confidence level and p = 0.5 are assumed

$$n = \frac{820.940}{1 + 820.940(0.5)^2}$$

$$n = 399$$



As above mentioned, Taro YAMANE is used to calculate the number of respondents, approximately 400 people are determined to be our sample by random sampling method which represent to adult people over 18 years old and above in Vientiane capital, Laos. However, because of time and sources limitation, we randomly selected four districts (out of nine districts in total) in Vientiane capital to be the scope of study, Laos. Which consist of Chanthabury, Sisattanak, Nasaythong and Pak Nguem district.



*Figure 4.10 Map of Vientiane Capital, Laos*

Source: Adopt from Vientiane Health Department, 2015.

*Table 4.1 Selected districts*

District	Frequency	Percent (%)
Chanthabury	110	27.5
Sisattanak	110	27.5
Nasaythong	120	30
Mai Pak Nguem	60	15
Total	400	100

Source: Author 2018.



As above mention, this study employs the field survey data, which is obtained by conducting a face-to-face interview, for the secondary data is gathered from several sources such as governmental papers, ministries' annual reports, research and working papers of international organizations, especially the WB, ADBI, OECD, GIZ, BOL and from the previous studies as well.

This study employs the structured questionnaire for gathering data from individual people. In order to ensure the comparability to other study especially the international study such as OECD/INFE (2016b). We employ questionnaire from OECD/INFE, (2015) so-called '2015 OECD/NIFE Toolkit for Measuring Financial Literacy and Financial Inclusion' to be our measurement tool. The author translates those questionnaire into the Lao language before conducting a survey. The questions attempt to capture: firstly, the general characteristic of the respondents (e.g., gender, age, place of living, marital status, educational background, type of occupation, and monthly income). Secondly, the questions emphasis on the three main aspects of financial literacy which consist of financial knowledge, behavior, and attitude. Within three aspects, the financial knowledge question is divided into eight questions which design to capture different aspects of financial such as understanding on time value of money, interest paid on a loan, calculation of interest plus principle, compound interest, risk and return, inflation and diversification. These questions are recognized to be appropriate to capture some crucial



aspects of the basic numeracy skills of individual people. Financial behavior, the questions design to capture the respondents' information on personal financial behavior. For example, the ways people manage their money such as whether people have household budget, or about people saving and borrowing habits, considering before purchasing, timely bills paying, financial monitoring, setting future financial goals, and how they choose their financial products. And for the financial attitude, the three statements are well-developed to capture the underlying attitude of the respondents such as whether the people have a short-term satisfaction or long-term attitude in their financial stability.

#### **4.2. Data collection and analysis methods**

The field survey is conducted by author with the supporting of four staff members, the survey teams are technically trained and pilot survey is organized. The field survey is conducted in thirteen villages within four districts in Vientiane capital, Laos during August-September 2017.

This study follows the guideline from OECD/INFE, (2015a) to determine and calculate the financial literacy score. In which, The Financial knowledge score is calculated from the correct response to financial knowledge questions and the scoring at least 70% of those questions are recognized the required target score of financial



knowledge measurement, and it could range between 0 and 7 scores. For The behavior assessment, we count the score by computing the amount of “financial savvy’ behaviors. It ranges between 0 and 9 scores. And the financial attitudes scoring is calculated from the summary of the three-statements questions, then divide by three. It could range from 1 to 5 scores. Finally, the overall score of financial literacy is resulted from the combination of the score of the three ingredients as mentioned above (knowledge (7 scores), behavior (9 scores), and attitudes (5 scores)). Which It could come out with any value in between 1 to 21 scores and the score can be normalized into percentage or 1 to 100 for easily report by multiplying the score by 100 then divide by 21.

In addition, for analyzing the obtained primary data from the field survey, the corrected data is properly coded, and the Stata 14 program for Window has been administered for statistics summarizing such as frequency, percentage, mean, standard error, and the statistically significant level of the independent variable.

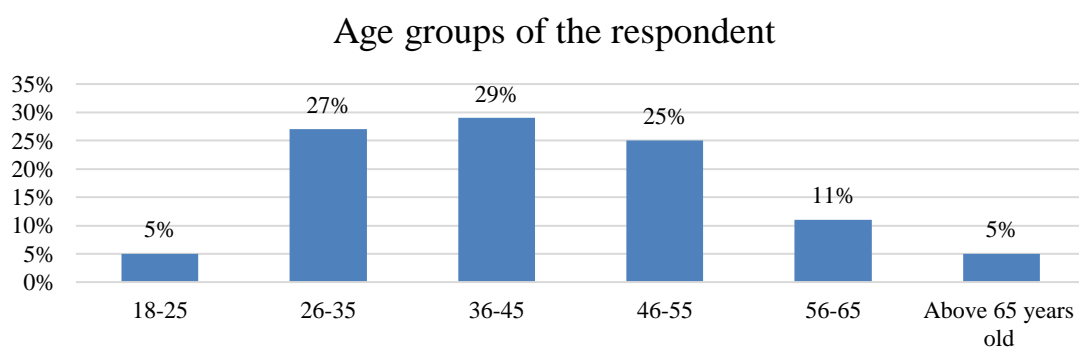


## Chapter 5: Survey Result Analysis

### 5.1. General Characteristics of Respondents

Data is collected through field visit interview (face-to-face) during August–September 2017, with approximately 400 of respondents in four districts in Vientiane, Laos. In this section, the attribution of the obtained data will be presented.

The majority of the respondents are male with 56% and the rest 44% are female. The age group is spread between the ages of 18 to above 65. Respondents with age's group between 36-45 is slightly higher cover 29%, follow by age's group between 26-35 and 46-55 cover 26% and 25% respectively. Female are more represented in the age group 18-26 with 8% and the group of 56-65 with 11%. While the proportion of male are more represented in the age group between 36-45 with 33% and 46-55 with 32%.



*Figure 5.11 Age distribution of the respondents*

Source: authors' collection from survey data during Aug-Sep, 2017

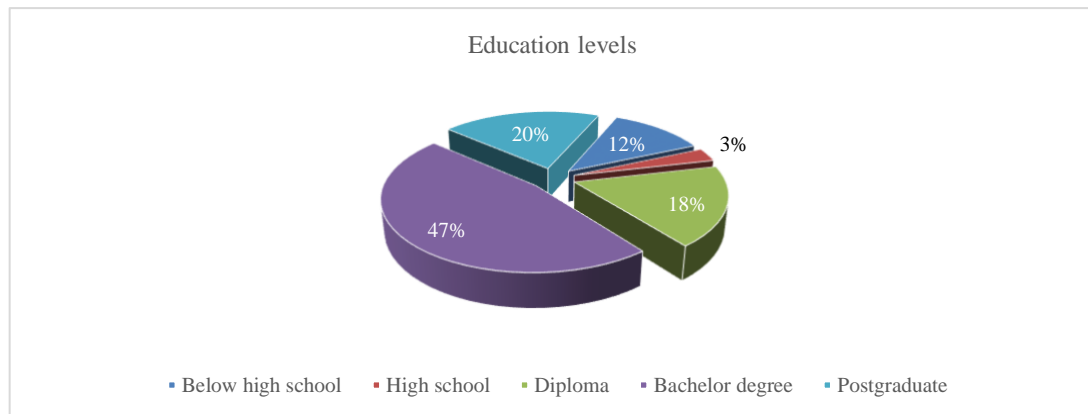


*Table 5.1 Age group of respondents by gender*

Age group	Male	Female
18-25	0%	8%
26-35	24%	23%
36-45	33%	18%
45-55	32%	13%
56-65	7%	11%
Above 65	4%	4%

Source: authors' collection from survey data during Aug-Sep, 2017.

The educational level of the sample population is relatively low. Up to 20% of the respondents report that they completed or some dropped out between secondary school. Less than half 47% complete bachelor's degree, only 12% complete postgraduate. Follow by the proportion of complete special vocational or diploma level cover 18%. While the proportion high school level is 3%.



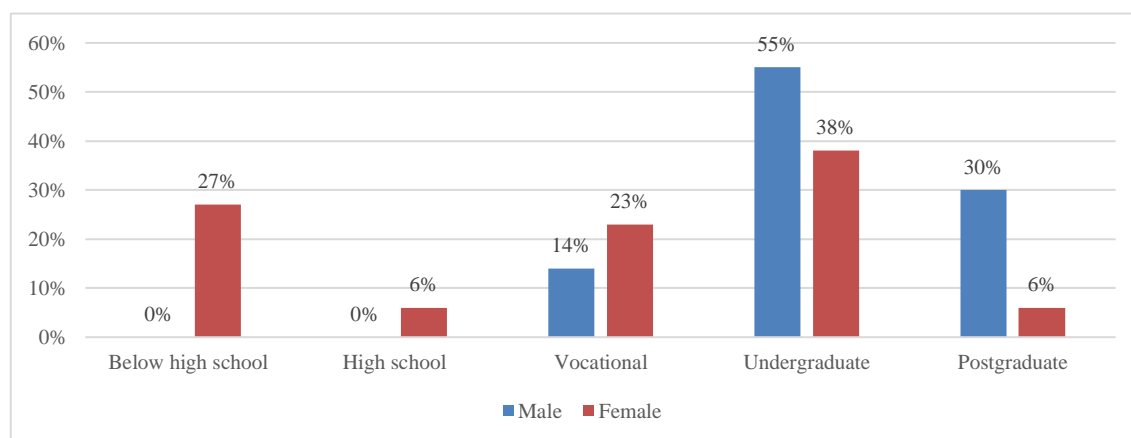
*Figure 5.12 Level of Education attainment*

Source: authors' collection from survey data during Aug-Sep, 2017

In addition, most female' respondents have lower levels of education than male. As shows in figure 3, the proportion of respondent with lower than high school level cover



27%, while the male is zero, in high school level 6% of female (zero in male). In contrast, the high percentage of male achieved undergraduate level cover 55% and postgraduate cover 30% compare to female are 38% and 6% respectively.



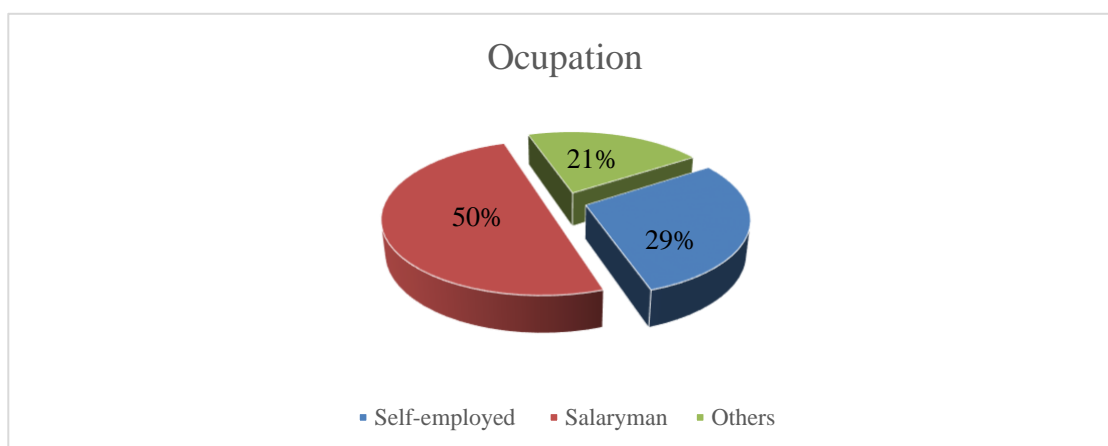
*Figure 5.13 Proportion of education level by gender*

Source: authors' collection from survey data during Aug-Sep, 2017

Most of the respondents are married 85%, while single people are only 10%, and the divorced or separated<sup>16</sup> person are 5%. Regarding the occupation of respondents, 50% of all the respondents serve as the government officer and full-time employee which author group into employee, 29% are consisted of freelance and own-business which are grouped into self-employed, and 21% are grouped into others which comprise of students, retired people, and no job people.

<sup>16</sup> The percentage of the divorce or separated might be higher because it is uncommon to provide this personal information in Lao culture, particularly for women.



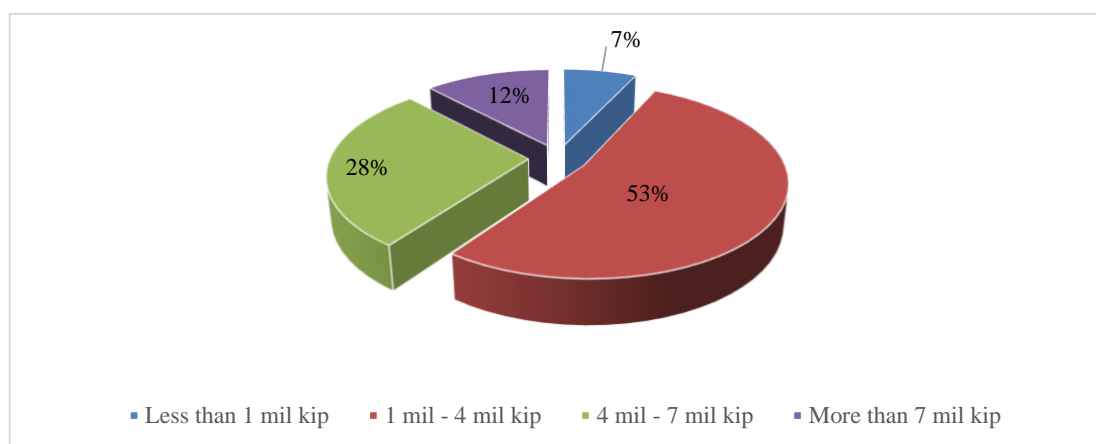


*Figure 5.14 Proportion of occupation of the respondents*

Source: authors' collection from survey data during Aug-Sep, 2017

According to the pie chart above, half of the respondents are white-collar worker, which reflect to their income, that is, 53% are classified into the middle-income people in between 100\$-500\$ per month, for respondents who earn 500\$-800\$ per month cover 28% and only 12% report that they make more than 800\$ per month which is the highest category in this study, while only 7% report that their income is less than 100\$ per month which is considered to lowest income. The result is consistent with Lao Statistic Bureau which report that the average wage of Lao people is approximately 200\$ per month (LSB, 2016).





*Figure 5.15 Proportion of income of the respondent*

Source: authors' collection from survey data during Aug-Sep, 2017

## **5.2. The Financial Literacy Assessment**

This section attempts to investigate the financial literacy level in Lao PDR. Using data obtained via field survey during August-September 2017, the OECD/INFE (2016b) is employed to determine the financial knowledge score, behavior score, attitude score, and the overall of financial literacy score.

### **5.2.1. Financial Knowledge**

Financial knowledge focuses on the response to the seven questions, which designs to capture the different parts of financial. Those questions are recognized and widely used to capture personal financial proficiency. Financial knowledge is the main ingredient personal financial competency which helps them to make choices make appropriately decision in financial products and services. The basic concepts of financial knowledge,



and the personal capability in numeracy skill are considered to guarantee that consumers could perform independently, appropriately to their financial management and the reaction to some incidents that might affects to their financial well-being.

The financial knowledge score computes from the correct response across the seven questions. and it could range between 0 and 7 scores.

*Table 5.2 Financial knowledge questions*

	Question	Possible responses	Purpose
Division	Five brothers are going to be given a money of LAK 1 million in total to share between them	Open response (correct response LAK 200.000)	To test ability to undertake basic mental arithmetic in financial context
Time-value of money	Now imagine that the brothers have to wait for one year to get their share of LAK 1 mil. and inflation stays at 5 percent. In one year's time will they be able to buy	Multi-choice (correct response depends on inflation used)	To test ability to understand how inflation impacts on purchasing power
Interest paid on loan	You lend LAK 100,000 to a friend one evening and he gives you LAK 120,000 back the next day. How much interest has he paid on this loan	Open response (correct response LAK 20.000)	To test understanding of interest without difficult arithmetic
Calculation of interest plus principle	Suppose you put LAK 100,000 into (no fee, tax free) saving account with a guaranteed interest rate of 2% per year. You don't make any further payments into this account and you don't withdraw any money. How much would be in the account at the end of the first year, once the interest payment is made?	Open response (correct response LAK 102.000)	To test ability to calculate simple interest on saving
Compounding interest for 5 years	And how much would be in the account at the end of five years	Multi-choice (correct response more than LAK 110.000)	To test whether respondent is aware of the additional benefit of compounding
Risk and return	If someone offers you the chance to make a lot of money it is likely that there is also a chance that you will lose a lot of money	True/False (correct response is true)	To test whether respondent understands the typical relationship between risk and return
Definition of inflation	High inflation means that the cost of living is increasing rapidly	True/False (correct response is true)	To test understanding of the meaning of the term inflation
diversification	It is less likely that you will lose all of your money if you save it more than one place	True/False (correct response is true)	To test whether respondent is aware of the benefit of diversification

Source: (OECD, 2015)



The proportion of respondents in Laos which provide correct respond to the time value of money question cover 66%. Which means that they likely to know what would happen to the purchasing power of money if inflation stay at the same rate for one year. Looking at Thailand the result is slightly lower at 52%. Compare to the result of the average across all country participating countries<sup>17</sup> and economies; and the average across participating OECD countries are quite the same at 63%, and 66% respectively. This suggests that Lao people are somehow understood enough in the time-value of money concept.

We look into some concept of interest, shows that only 38% of the respondents in Lao understand about interest and give the correct response that how much they would pay on a loan, compare to Thailand 83% respond correctly to this question. The average higher in across all participating countries and economies cover 85%, and also, the average across OECD countries is much higher at 89% give answer to this question correctly. Which identify that the ratio correctly answer of Lao respondents are extremely low than other countries on how to determine or calculate the basic interest pay on a loan.

We ask further question to seek whether they could do calculate the simple interest, the result shows that calculation in simple interest on saving seem to be a big problem for

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<sup>17</sup> All participating countries included: Albania, Austria, Belarus, Belgium, Brazil, British Virgin Island, Canada, Croatia, Czech Republic, Estonia, Finland, France, Georgia, Hong Kong, Hungary, Jordan, Korea, Latvia, Lithuania, Malaysia, The Netherland, New Zealand, Norway, Poland, Portugal, Russia Federation, South Africa, Thailand, Turkey, and United Kingdom.



the respondents in Laos only 32% provide correct answer to this question. While half the respondent in Thailand 53% be able to do this calculation, over than half of the respondents in across all participating countries and economies 58% give a correct response, while 65% in across OECD countries can do so.

Then more complicated question is asked to detect whether they could understand about the concept of compounding interest, the result suggests that not only the respondents in Laos (35% correct) are poor in this concept but also Thailand only 20% answer correctly. The Similar tendency to the average across all participating countries and economies 42% give correct respond, and 48% across OECD countries respectively.

Moreover, the basic concept of risk and return, most people seem to be well-understand, the ratio of correct answer to this question is the same between respondents in Laos and the average of all participant countries at 81%, slightly higher of those in across OECD countries at 83%, and highest in Thailand 86%. For the question about the definition of inflation is reasonably easy understand to all countries 66% in Laos, 63% in Thailand, and high percentage for the average across all countries and economies, and the average among OECD countries, which is 78% and 81% could do the answer correctly.

And the last question to measure financial knowledge is the understanding about risk diversification concept. The result suggests that fewer than half of respondents in Laos 54% seem to understand to diversify the risk, less than half in Thailand with 42%.



While on average of respondents across all participating countries and economies 64% and across OECD countries 65% give a correctly respond to this measure.

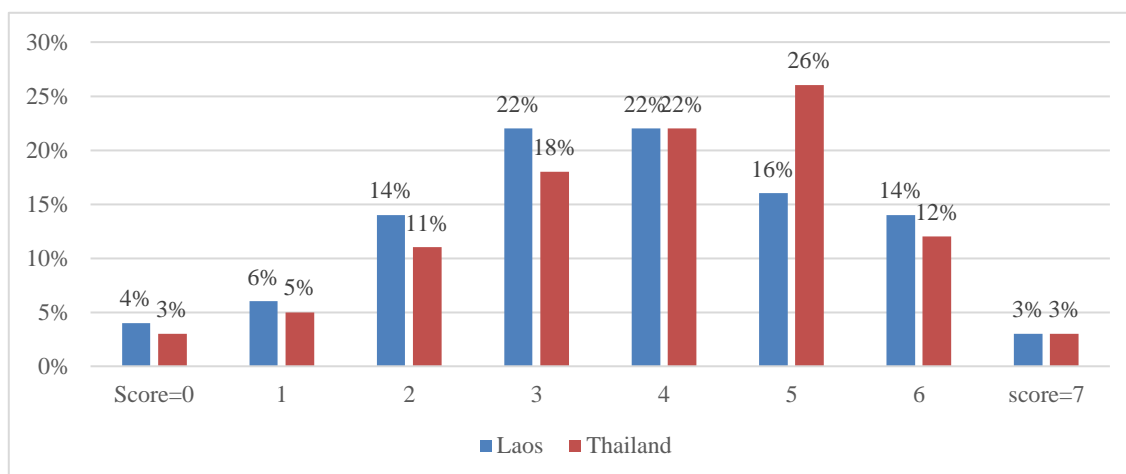
*Table 5.3. Financial knowledge*

	time- value of money	interest paid on loan	calculation of interest plus principle	compound interest for 5 years	risk and return	Definition of inflation	diversifica tion
Laos	66%	38%	32%	35%	81%	66%	54%
Thailand	52%	83%	53%	20%	86%	63%	42%
Avg. all countries	63%	85%	58%	42%	81%	78%	64%
Avg. OECD countries	66%	89%	65%	48%	83%	81%	65%

Source: OECD (2016), and authors' collection from survey data.

Figure 5.6 shows the distribution of basic financial knowledge score of Laos compare to Thailand (ranging from 0 to 7 score). the relatively low percentage of the respondents in both countries scoring out of seven in Laos (3%) and Thailand (3%), and the proportion of the respondents on financial knowledge six out of seven Laos (14%) slightly higher than Thailand (12%). In contrast, the percentage of scoring five out of seven Thailand (26%) is higher than Laos (16%), and relative higher to the percentage of respondents scoring zero in Laos (4%) than Thailand (3%).



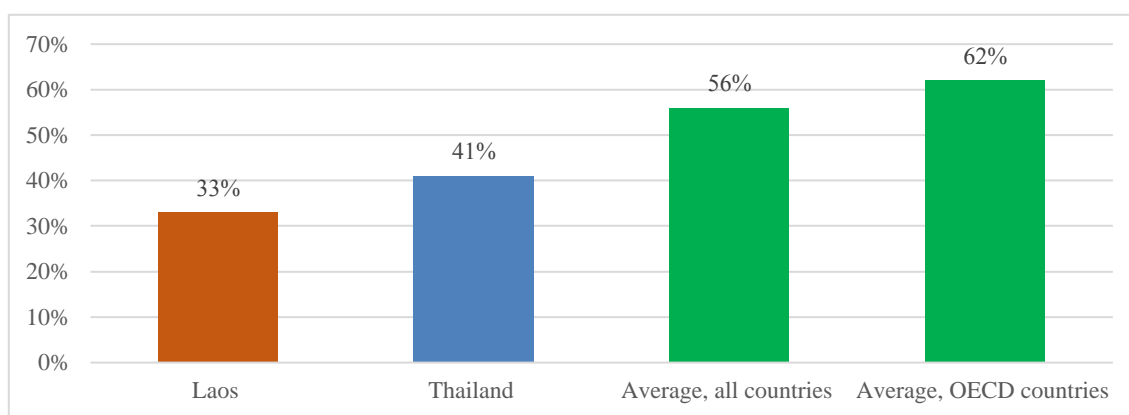


*Figure 5.16 Compared The distribution of financial knowledge scores*

Source: OECD (2016), and authors' collection from survey data.

Figure 5.7 below shows the ratio of the people achieve minimum required score at least five out seven or minimum at 70% on the financial knowledge questions, which shows with the last three bars to the right in figure 5.6 the result shows with only 33% of respondents in Laos achieve the minimum requirement on financial knowledge, indicating that more than half of Lao people find more difficult in numeracy skill, and do not understand enough to the basic concept of financial. Compare to Thailand with 41%, across all participating countries are more than half with 56%; while across OECD countries with 62% of adult, on average achieve the minimum target score. Suggesting that financial knowledge among Lao people are poor. Especially, how to do the calculation of compound interest seem to be more complicated to Lao respondents, even though understanding the concept of interest still limited.



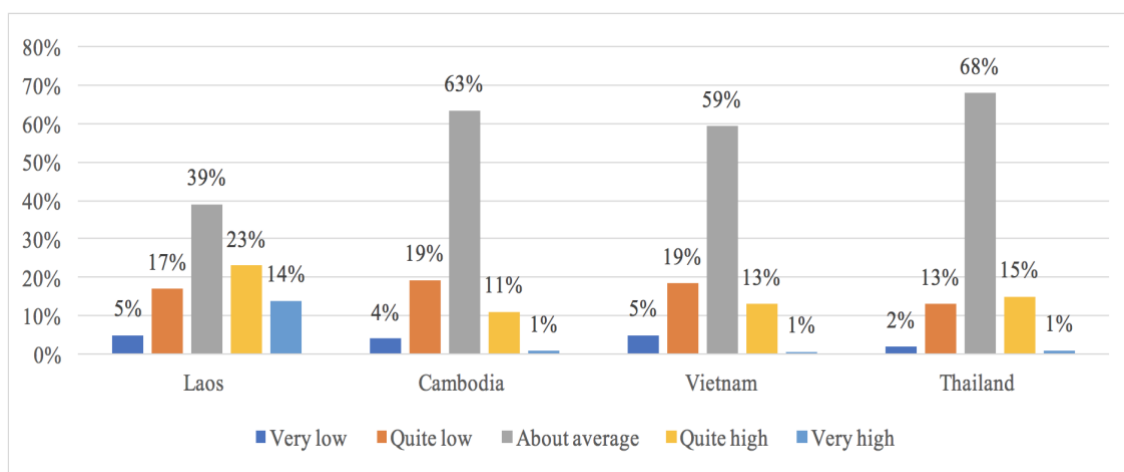


*Figure 5.17 Basic requirement score (5 or more) on financial knowledge*

Source: OECD (2016), and authors' collection from survey data.

Figure 5.8 the respondents are asked to do the self-assessed in financial knowledge compare to the average adults across the country. The result indicates that only 39% (3<sup>rd</sup> column on the scale) report that they have the same level as the average adults in Laos. which is consistent to the tendency of respondents among other three countries in the region, with 63% in Cambodia, 59% in Vietnam and 68% in Thailand. Interestingly, in the 5<sup>th</sup> column, the percentage of the respondents in Laos (14%) consider themselves that their knowledge is higher compare to the average adults in the country. For the other three countries, people also rate themselves as a higher level than the average people but just only (1%). Indicating that Lao people are likely more overconfident that might be a danger to their financial well-being.





*Figure 5.18 Self-reported financial knowledge*

Source: OECD (2016), ADBI (2017), and authors' collection from survey data.

Table 5.4 shows the comparison result of the respondents who value their own knowledge as higher as the average adult people across country, the result suggests that for those who consider themselves as a higher (or greater) are essentially not high (only 3.6 scores), compare to those who consider themselves that they have the same level or lower than the average people in the countries (3.7 scores). This could be concluded that for those who rate themselves as high or very high level are truly overconfident, this might be a problem that could lead them to make an ineffective financial decision or be a victim of financial fraud. Compare to the result in Thailand is also same.

*Table 5.4 Average Financial knowledge score by self-assessed*

Country	High/very high	Average	Low/very low
Laos	3.6	3.7	3.7
Thailand	3.9	4.0	3.4

Source: OECD (2016), and authors' collection from survey data.

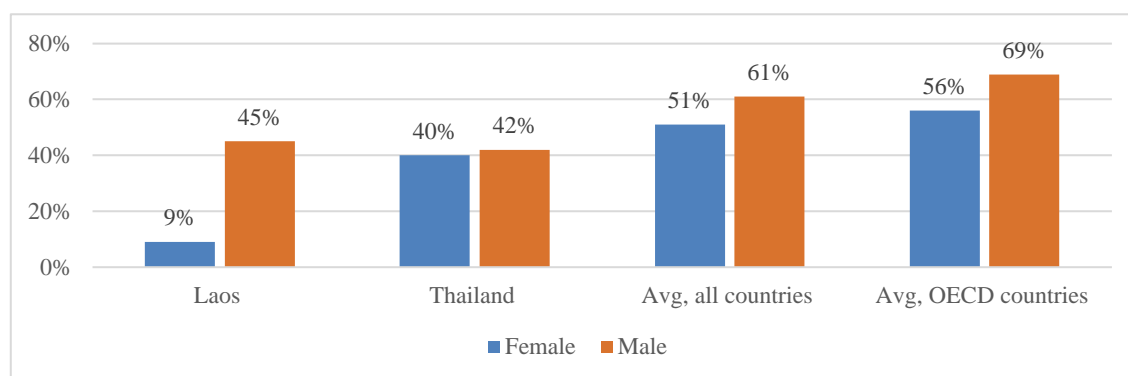


Figure 5.9 shows an extremely gender differences in financial knowledge in Laos. With nearly half (45%) of the proportion of male, whereas only 9% of female succeed the minimum target score of the knowledge assessment questions. In addition, the percentage of female is more likely poor in the concept of interest question. With only 20% respond correctly to interest paid on loan question, 15% to the interest plus principle calculation, and 31% interest compounding respectively. Female are doing better in the risk and return concept; the percentage of correct response shows 67%. Similarity, there is a strong tendency in many countries for the gender gap in the financial knowledge, in Thailand the financial knowledge is not much different, the proportion of male (42%), while female (40%), for the average across all participating countries, 61% of male achieves the minimum needed score whereas the proportion of female shows 51%; and across OECD countries the ratio appears more difference with 69% of male and 56% of female reaching at least 70% of the measurement.

The result we find also consistent with an earlier study which indicates men are more financially literate than women (GIZ, 2015; OECD, 2016; Lusardi and Mitchell, 2011; Bucher-koenen and Lusardi, 2011; Klapper et al, 2012; and Boisclair et al, 2014). It might because of female have lower education attainment than male, and it was the fact in Lao's society, the male (as a husbands) usually work and earn money into the household, while women (as a wife) is responsible for taking care the children at home



and less wide-open to the marketplace. That the reason, female lack of a needed financial awareness and numeracy skills than male. Suggesting that financial knowledge (especially understanding of the interest concepts) need to be emphasized to female in order to minimize a huge gap in financial knowledge and increase gender equality in the financial aspect in Laos.



*Figure 5.19 Basic requirement score (5 or more) on financial knowledge by gender*

Source: OECD (2016), and authors' collection from survey data.

### 5.2.2. Financial Behavior

This section we attempt to explore the level of financial behavior of the respondents, the measurement questions design to detect in some extent, of which people perform in appropriate ways or not. For instance, whether who has responsibility for the household budget, day-to-day decision making, saving and borrowing, choosing and consider before purchasing, bill payment regime, financial checking, and long-term financial goal setting as well. We further seek to compare the result to the neighboring country, and attempt to display the proportion of the respondents who achieving the minimum target score, to this



measure the respondents need at least six out of nine which is considered minimum target requirement on this measure. The financial behavior score is counted from the positive behavior and it will take value from 0 score as a minimum to 9 as maximum scores.

We attempt to find out whether people are actively managing their household budget. We ask whether the respondent is taking some responsibility for day-to-day money decision, and the second question try to seek whether their household has a budget or not.

Table 5.5 shows financial decision making in the large expenses is commonly made cooperatively among family members in Laos cover 94%. Consistent to the tendency of many countries which had a high percentage in decisions making by themselves or sharing with someone else, in Thailand (88%), average all participating countries and economies (88%), and across OECD countries (91%) respectively.

We ask respondent whether their family (household) have a budget or not. As estimated, the result shows that only 24% report that they have. Compare to the higher proportion from neighboring country Thailand (77%), across all participating countries and economies on average had a budget with 60%; and up to 57% of the household have a budget in across OECD countries.

In addition, less than half of respondents in Laos with only 22% have both some responsibility and household budget in the same time. In contrast, the high proportion in



Thailand with 70%, while compare to on average in all participating countries and economies cover 54%; and across participating OECD countries with 52% people take some duty in financial decision and have a budget in their household.

*Table 5.5 Household financial decision making and budgeting*

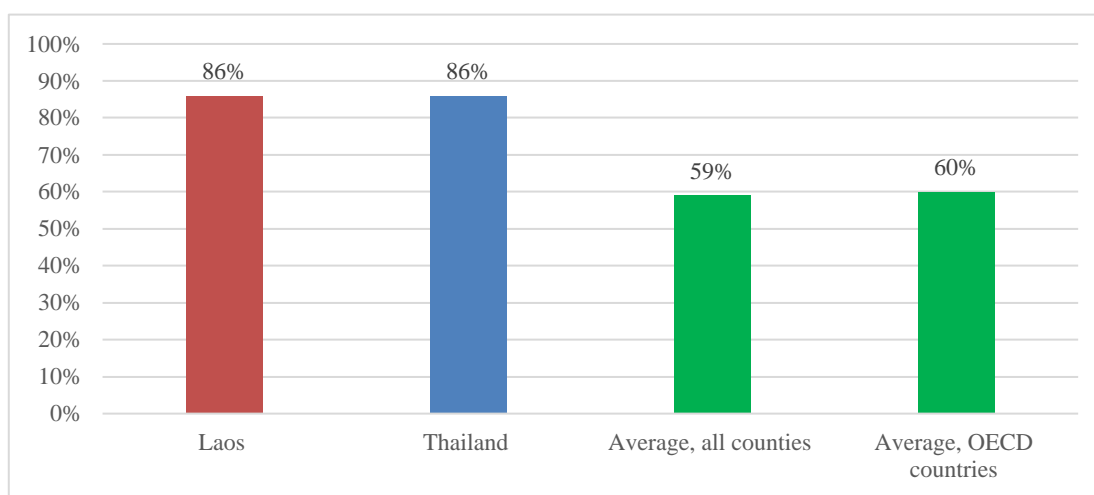
	Who is responsible for making day-to-day decisions in your household	And does your household have a budget?	Respondent is BOTH responsible for financial decisions AND in a household with a budget
	% making decisions by themselves or with someone else	% responding yes	% making decisions and reporting that the household has a budget
Laos	94%	24%	22%
Thailand	88%	77%	70%
Avg. all countries	88%	60%	54%
Avg. OECD countries	91%	57%	52%

Source: OECD (2016), and authors' collection from survey data.

Figure 5.10 shows the majority of adult people in Laos are active saving in some ways cover 86% as same as in Thailand (86%). Relative higher compare to the average across all participating countries and economies at 59%, Similarly, the proportion of the average across all participating OECD countries 60% report that they are active savers in the last 12 months. Moreover, with respect to the saving mechanism, interestingly, we find Lao people prefer to save a cash at home cover 42% than saving in the banks covered 32%, following by buying some assets such as livestock, gold or jewelry and save money with family members accounted 25%, and 14% respectively. This result is



also consistent with the finding from Finmark (2015). The main purpose of their saving, more than half 59% is for the emergency use, nearly half (49%) report that they save for supporting their children's education, 39% is for buying what they need, and 34% for buying houses.



*Figure 5.20 Active savers*

Source: OECD (2016), and authors' collection from survey data.

In addition, high proportion of people do agree or completely agree that they carefully consider before buying somethings. The percentage of people in Laos with 88% slightly higher than Thailand with 84% that they consider before purchase somethings, both countries are higher compare to the average across all participating countries and economies 80%; and across OECD countries 79% of total proportion do so. Also, we attempt to ask about the bill payment scheme. The result shows a slightly lower in Laos (53%) compare to other countries that they do agree with timely bill payment such as



Thailand with 67%, across all participating countries and economies with 79%; and highest percentage on average across OECD countries at 84%.

Table 5.6 shows the high proportion in Laos (71%), and Thailand (70%) saying that they have close monitoring to their own financial activities, while slightly lower compare to the average proportion across all participating counties and economies (72%), and average across OECD countries (73%). We further ask about the long-term setting on financial goal, surprisingly the result shows the high percentage of respondents in Laos at 76% has set their long-term goals and tries to succeed it (Table 5.6, column 4), a little bit lower in Thailand (62%), whereas relative lower in an average across all participant countries at (51%); and across OECD countries (50%) only haft they do so.

*Table 5.6. Agreed with financial behavior statement*

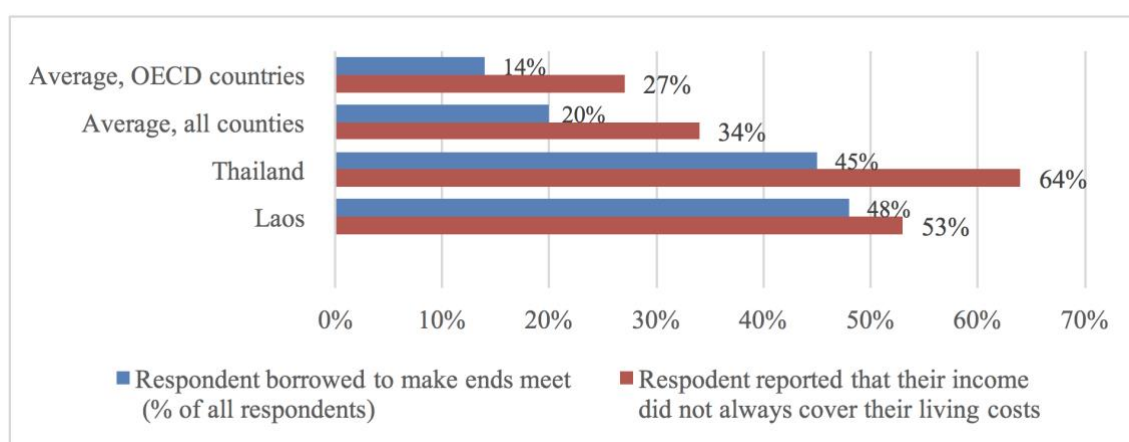
	Column 1	Column 2	Column 3	Column 4
	Agrees: Before I buy something I carefully consider whether I can afford it	Agree: I pay my bill on time	Agree: I keep a close personal watch on my financial affairs	Agree: I set long term financial goals and strive to achieve them
Laos	88%	53%	71%	76%
Thailand	84%	67%	70%	62%
Avg. all countries	80%	79%	72%	51%
Avg. OECD countries	79%	84%	73%	50%

Source: OECD (2016), and authors' collection from survey data.

Figure 5.11 shows the average of respondents in Laos with 53% have encountered a deficiency, also more than half of the respondents in Thailand with 64% have



experienced as well. Compare to across all participating countries and economies the proportion is quite low with 34%, and across OECD countries only 27% that their living cost id greater than income. We further ask to find out how they cope with this problem. The result suggests that majority of respondents Laos (48%) try to borrow from various ways in order to make ends meet, follow by Thailand (45%), whereas relatively low proportion across all participating countries and economies at 20%, and across OECD countries only 14% do this. According to Finmark (2015) people tent to make borrowing from commercial banks, from family member or friends, and also from village bank/ fund, and the main reason of Lao people who make a borrowing, that is, to cope with their living expenses (medical or emergency), buying livestock, starting or expanding business, buying farming equipment, for educational or school fee of their children, even for paying bills (water, electricity, telephone) or even paying off their debt.



*Figure 5.21 Borrowing to Make ends meet*

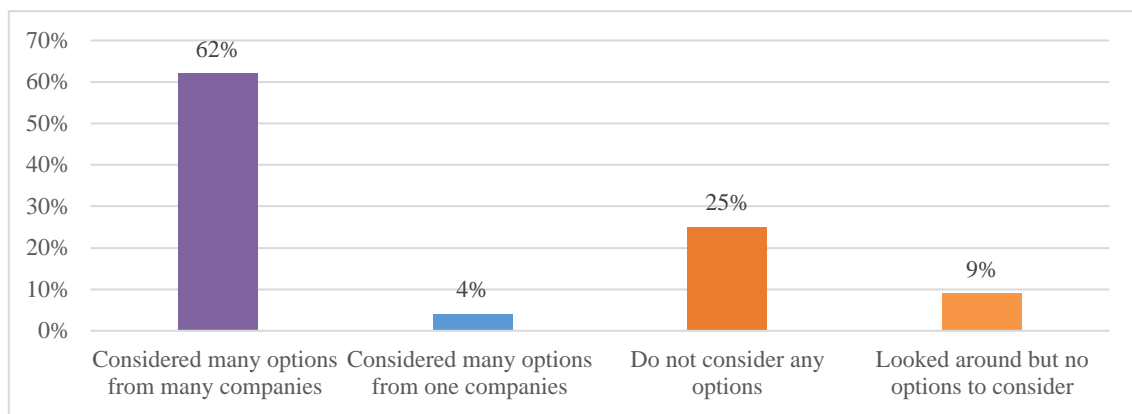
Source: OECD (2016), and authors' collection from survey data.



In addition, we ask the respondents to know how they do shopping on the financial products in order to capture the consumption behavior in financial products. Figure 5.12 shows 62% attempt to shop around by considering many type of products in different firms, 25% report that they do not consider any type of products before purchase nor different service providers. Only 9% report that they have already looked around but did not find thing they need.

We attempt to know ‘the choosing financial products score’ by deriving together the shopping around and choosing financial products question to be the overall of informed decision making score. Which gives 2 scores if the respondents use the independent source of information or advice; and 1 score if the respondents use some others source of information and/or shop around. We find the proportion in Laos 37% achieves 2 score on this measure; follow by Thailand with 14%, while compare to the average across all participating countries and economies with 12%; and average across OECD countries with 11% respectively. suggesting that Lao’s people seem to be more careful for evaluating products and also making choice in a safe way than other countries. Therefore, the rapid increase of financial institutions, the newly, and more complicated of financial products had been announced in last few years in Laos, as a result people are not aware, and do not want to take risk on what they do not familiar. Compare to other countries this kind of products have been existing for decades.



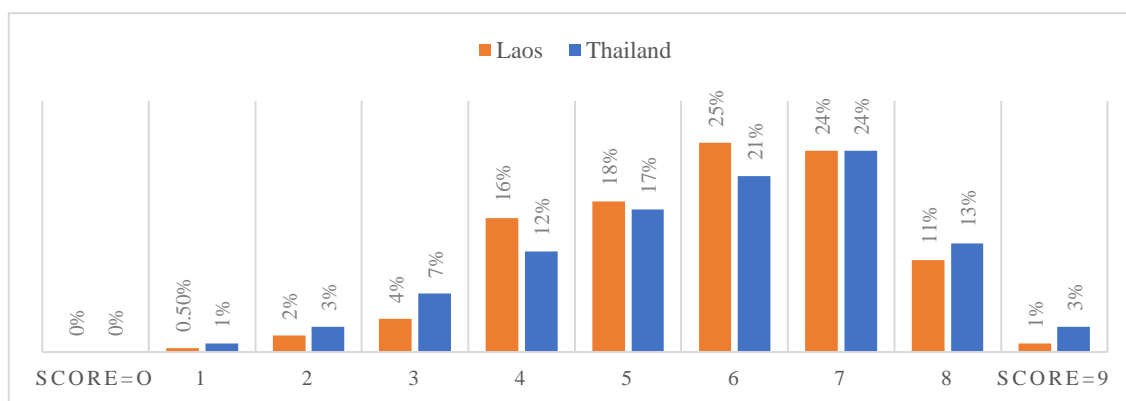


*Figure 5.122 Shopping around on financial products*

Source: Authors' collection from survey data (2017).

Figure 5.13 shows the distribution of the financial behavior score of Laos compare to Thailand (range from 0 to 9 scores). In Laos, the distribution of the financial behavior score is relatively flat compare to Thailand, indicating that adult people in Laos perform financial behavior in different way. The proportion of respondent who scoring out of nine is relatively low in both countries Laos with 1% and Thailand with 3%, while the proportion of the respondent on financial behavior seven out of nine is equal at 14% in both countries, however the percentage of the respondents scoring six out of nine Laos is 25% slightly higher than Thailand at 21%, and none among both countries scoring zero out of nine.

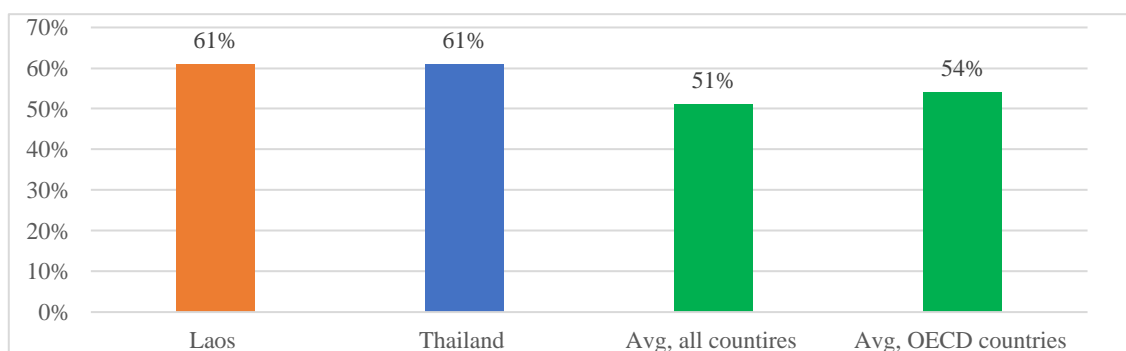




*Figure 5.123 Distribution of financial behavior score*

Source: OECD (2016), and authors' collection from survey data.

Figure 5.14 shows minimum target score on financial behavior six to nine (six and above is considered as the minimum target score). the percentage of respondent achieve financial behavior score of six or more, Laos and Thailand achieve an equivalent score on this measure at 61%, interestingly, compare to the average across all participating countries and economies is 51%; and average across participating OECD countries only 54% achieve minimum target score on financial behavior. Suggesting that the majority of people in Laos and Thailand perform in a proper way.

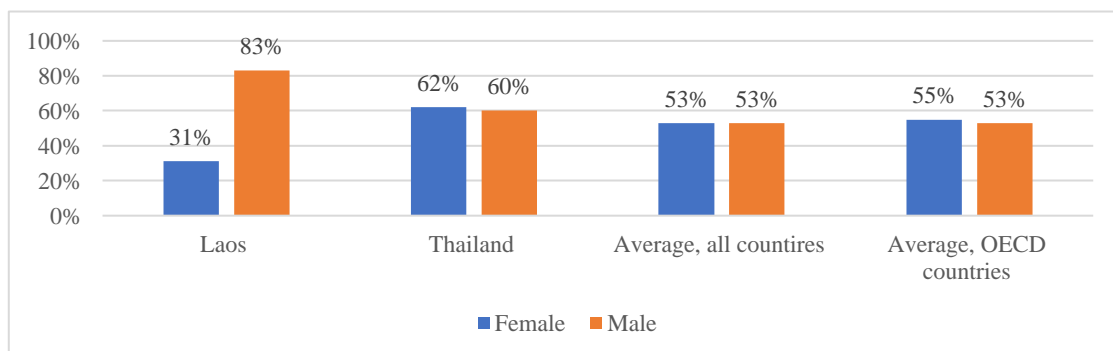


*Figure 5.124 Basic Requirement Score (6 or more) on Financial Behavior*

Source: OECD (2016), and authors' collection from survey data.



Figure 5.15 shows a huge gap to the ratio of male and female achieving the minimum requirement score for financial behavior questions in Laos. With more than four in five (83%) of the male achieve the minimum target score on financial behavior, whereas less than half (31%) of female on this measure. Considering the tendency of other countries, show the opposite direction to the ratio of male and female achieving minimum target of financial behavior score. For instance, in Thailand the proportion of male with (60%), and female (62%) reach the minimum target score, while across all participating countries and economies there is an equivalent ratio at (53%) among male and female; and the average across participating OECD countries is almost the same between male (53%) and female (55%). Indicating the fact that there is a huge gap in financial behavior score between gender in Laos, the reason behind it might because of the different role and responsibility of the society in the earlier time which is male tend to be a household leader and more likely to have full power to dominate in their household including financial aspect, as the result female are less financial behavior than male.



*Figure 5.125 Basic Requirement Score (6 or more) on financial behavior by gender*

Source: OECD (2016), and authors' collection from survey data.



### 5.2.3. Financial Attitudes

This section aims to understand the financial attitude of the respondents. It provides with the three statements to explore the personal attitude whether they enjoy spending or they maintain for long-term using. It illustrates the proportion of the respondents with the long-term attitude, reports the differences between gender, and attempts to compare our result to other finding.

The financial competency assessment includes the three-psychological statements to estimate people' attitude regarding to money saving and planning for future (See table 5.7). We ask the respondents to scale themselves in order to determine if they do agree or disagree with the three-psychological statements provided.

*Table 5.7 Financial attitude questions*

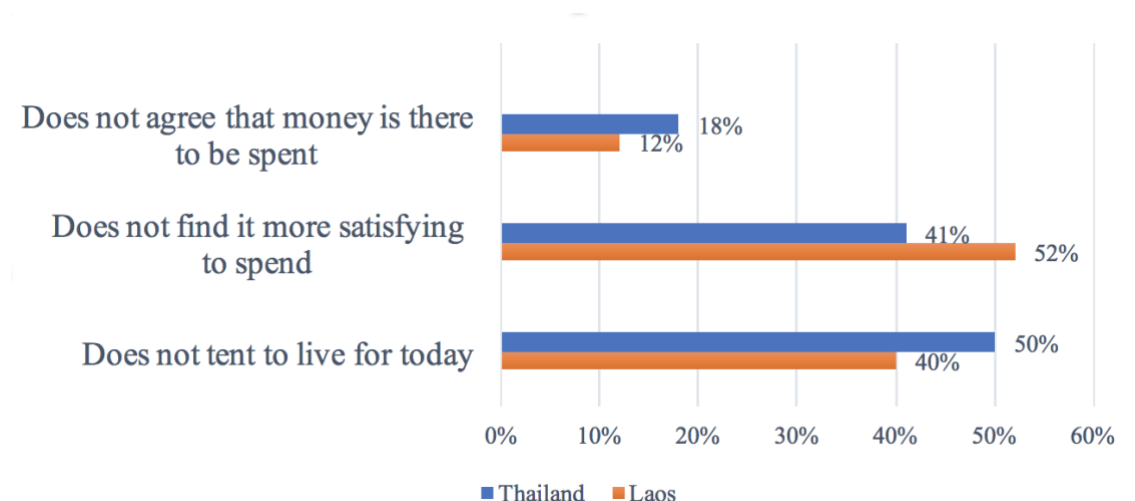
Question	Possible responses	Note
1. I tend to live for today and let tomorrow take care of itself	5-point scale:	These questions are intended to indicate whether the respondent focuses exclusively on the short term (agree) or has a preference for longer-term security (disagree)
2. I find it more satisfying to spend money than to save it for the long term	1 = Completely agree; 5 = Completely disagree	
3. Money is there to be spend		

Source: OECD, 2015.

Figure 5.16 shows the percentage of the respondent who has the positive attitude in financial that consistent to the high level of financial literacy (for whom putting



themselves at agree (4) or completely agree (5) on the five-points scale of the attitude statements which is considered to be the minimum requirement in this measure). The result shows Lao people's do not agree that they tend to live for today (40%) is more financially literate than their attitude about money is there to be spending (12%). Similar to Thailand, people's putting themselves more on not agree that they tend to live for today (50%) than the attitude on money and spending at only 18% respectively. In contrast, the proportion of Lao respondent's' is higher regarding an attitude on spending and saving for long-term at 52%, while in Thailand's was 41% on this attitude.



*Figure 5.126 Does not agree with short-term attitude statement*

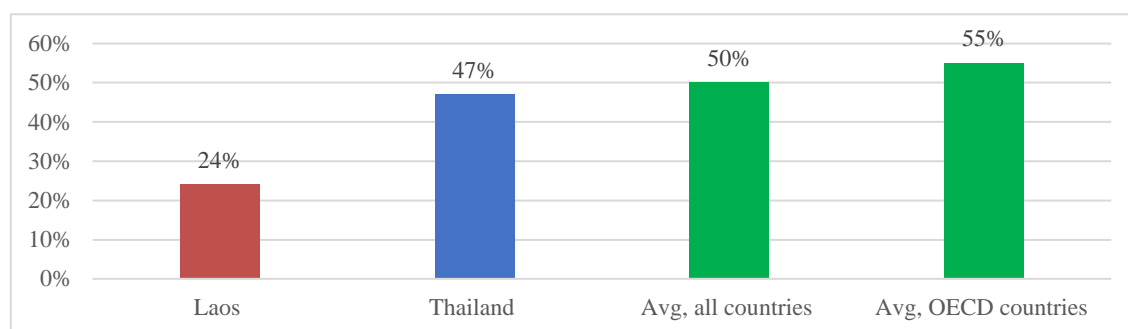
Notes: Percentage of the respondents who give themselves at 4 or 5 on the scale (disagree or strongly disagree with the measurement)

Source: OECD (2016), and authors' collection from survey data.

Figure 5.17 shows the percentage of respondents which reach more than three on the attitude scores (three is the middle point which considers to be minimum target score, meaning that any above to this refers a tendency to disagree with those psychological



statements). The result shows in Laos 24% reach more than three on the average attitude score, indicate that they have positive attitude on the longer-term, similar to Thailand with 47%, while more than half of people across all participating countries and economies; and across participating OECD countries with (50%) and (55%) respectively do so.

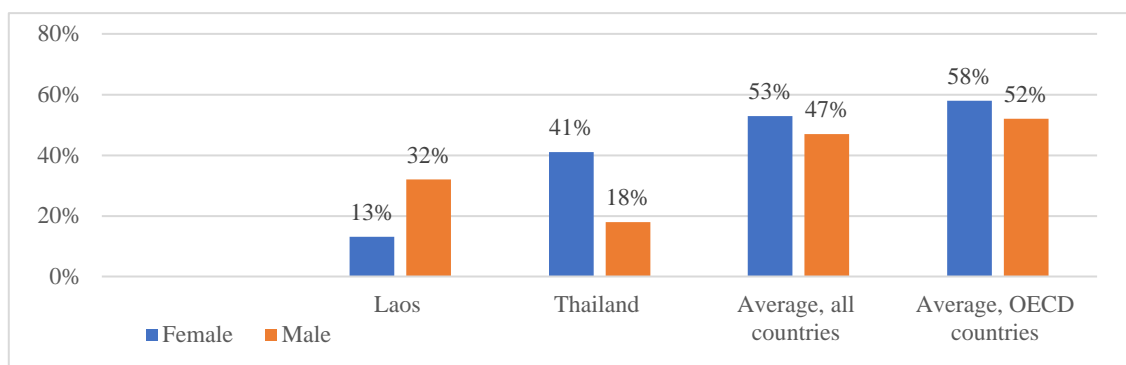


*Figure 5.127 Basic requirement score (more than 3) on financial attitudes*

Source: OECD (2016), and authors' collection from survey data.

Figure 5.18 shows the differences in financial attitude between male and female in Laos, with 32% of the male has positive attitude towards the long-term compare to the female with only 13%. In reverse, the proportion of female with 41% has a positive attitude toward long-term than male just only 18% in the case of Thailand, similarity tendency on the average across all participating countries and economies with 53% of female and 47% of male, whereas the average across participating OECD countries with 58% of female and 52% of male.





*Figure 5.128 Differences in financial attitudes score by gender*

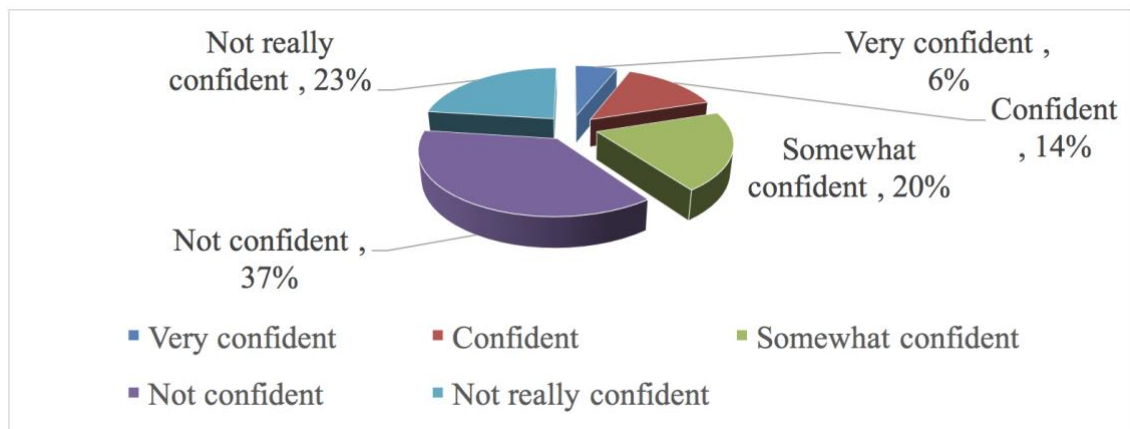
Source: OECD (2016), and authors' collection from survey data.

Moreover, we further look insight to understand in some extents how people feel about their future financing, and also their financial plan after retirement. The respondent is asked to provide some information whether how much they feel confident in order to survive (by not doing additional work) after they retire. The result shows majority of people are not confident at all in their existing life after stop working. Only 20% of the respondents believe that they could survive by not doing additional work after retired, while more than half of those report that they are somehow not confident and not confident at all in their remaining life (See figure 5.19).

we ask respondent to provide information regarding their retirement plan, in this study, however, half of the respondents are classified as the white-collar worker. Surprisingly, we find 41% they will rely on their children or family member to support after they retire, follow by 39% who will draw from government pension or old-age benefit, 29% will draw from workplace pension plan, and 26% will rely on their spouse



to support. Respecting the high percentage of those who feel not (very) confident to their financial situation if it could cover their expense or not; and also, the high proportion of those report that the rest of their life would rely on their children or family members to support after retire. It is the fact that in Lao society is extremely family oriented which means that most parents expect much to their children to nurture/support when they are getting old. Suggesting that financial attitude need to take into consideration and need to be resolved urgently especially the elderly group. The policymakers need to provide timely policies with precisely methods to educate these target groups in order to shift financially literate in Laos.



*Figure 5.129 Retired confident of the respondents*

Source: authors' collection from survey data.

#### **5.2.4. Overall Levels of Financial Literacy**

This section attempts to display the result of financial literacy level by combining three main elements which discuss in the previous section. Financial literacy is the



computation of financial knowledge (7 scores), financial behavior (9 scores), and financial attitude (5 scores), and the total financial literacy score is 21 scores consider to be the highest score.

Figure 5.20 shows financial literacy level in Laos 12.3 out of 21 scores which is relatively higher than other two neighboring low-income countries Cambodia (11.5), and Vietnam (11.6), while the score is lower compare to Thailand (12.8), across all participating countries and economies financial literacy score is (13.2), and across all participating OECD countries (13.7) respectively. we normalize the financial literacy score to 100 by multiply the score by 100 and divide by 21. Figure 5.21 shows Laos achieve 58%, while Cambodia and Vietnam reach 54% and 55% respectively. In contrast Thailand is 61%, for the average across all participating countries and economies is 63%, and average across participating OECD counties is 65% respectively. The overall financial literacy score in Laos might be the lowest. Due to this study focuses only people in Vientiane Capital, which is the capital city of the country and it is the financial center of the country. Thus, people supposed to have more knowledge and more likely to access in financial service easily. If we conduct an across country study, the result (the financial literacy score) might be lower than this.

Suggesting that Lao people need to emphasize on financial knowledge together with improve the financial attitude in order to promote financial literacy in Laos, ensure



that people recognize the basic concept of the interest that need to pay on loan, enhancing the basic interest calculation, and also understanding how to notify the risk of their investment. Regarding the behavior, the further need to emphasize is household budget they need have a bookkeeping for a close tracking to their daily expense and also planning ahead. In addition, the attitude on financial aspects such as money and spending need to be informed in order to minimizing gaps and promoting the sound financially proficiency among adult in Laos.

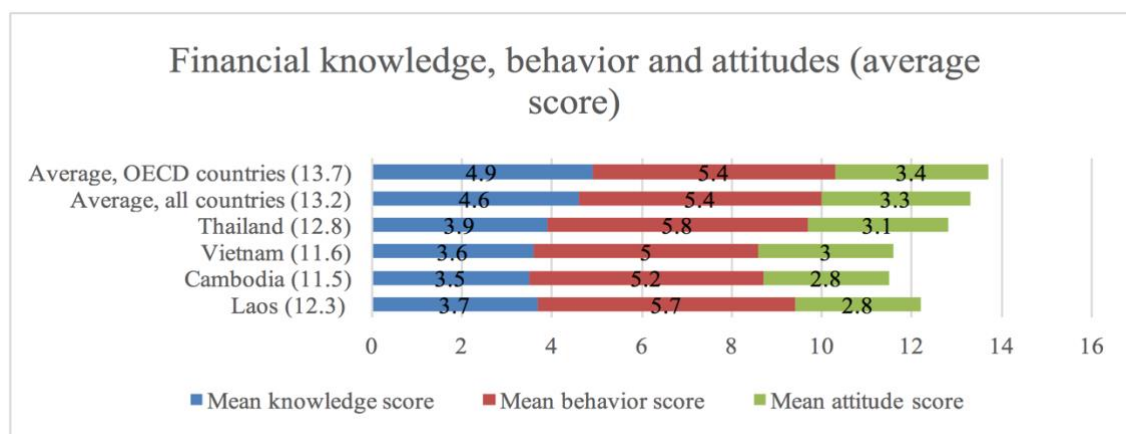


Figure 5.230 Financial knowledge, behavior and attitudes

Source: OECD (2016), Morgan and Trinh (2017), and authors' collection from survey data.

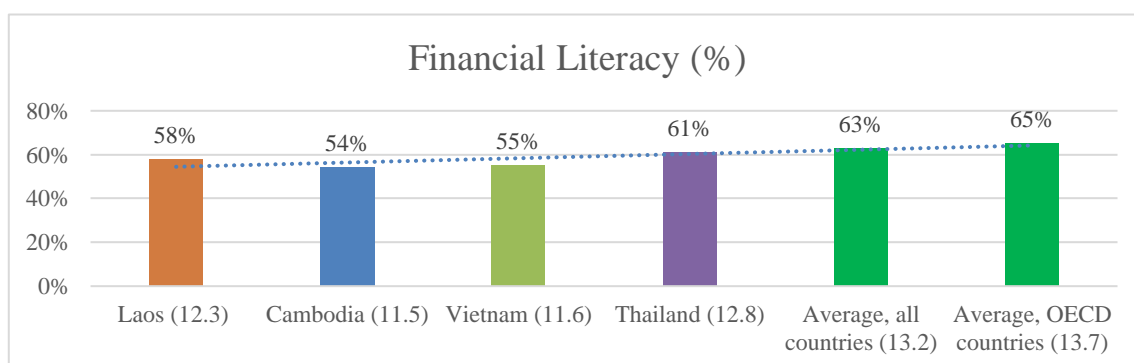


Figure 5.231 Financial literacy level in percentage

Source: OECD (2016), Morgan and Trinh (2017), and authors' collection from survey data.



### **5.3. Determinants of Financial Literacy**

This study employs a linear regression model to determine the determinant factors of the financial literacy, of which the financial literacy is the dependent variable, and the general socio-economic information of the respondent such as gender, age, place of living, marital status, educational level, type of occupation, and monthly income are the explanation variable. The collected data is coded and analyzed by using STATA 14 in order to measure the statistical significant level of the financial literacy which means that if the p-value is less than 0.01, 0.05 and 0.10 is considered to be statistically significant at 1%, 5%, and 10% respectively.

For the coding, gender variable (male are assigned to 1 for female are assigned to 0). For Age is created as ordered variable (1=age group between 18-25, 2=age 26-35, 3=age 36-45, 4=age 46-55, 5=age 56-65, and 6=age more than 65 years old). With respect to the districts consisted of three districts (Sisattanak, Nasaythong, and Mai Pak Nguem) for those who live in Sisattanak are assigned to 1 for otherwise are assigned to 0; for those who live in Nasaythong district are assigned to 1 otherwise are assigned to 0; and those who live in Mai Park Nguem district are assigned to 1 otherwise 0. Marital status, Married people are given to 1 otherwise 0, divorced or separated people are assigned to 1 and otherwise are 0. For education are assigned as the ordered variable (1=Below high school, 2=High school, 3=Diploma level, 4=Bachelor's degree, and 5=Post graduate). The



occupation of the respondent we assigned a group of self-employed to 1 for otherwise is 0, and the also the group of white-collar workers are assigned to 1 otherwise are assigned to 0. For the monthly income of the respondent is created as the ordered variable (1=less than LAK 1 million, 2=between LAK 1 mil. to 4mil., 3=between LAK 4 mil. to 7 mil., and 4=more than LAK 7 million a month) shown in Appendix 1.

Table 5.8 summarizes the finding on determinant factors affect to financial knowledge (1<sup>st</sup> column), financial behavior (2<sup>nd</sup> column), financial attitude (3<sup>rd</sup> column), and the overall of the financial literacy in Lao PDR (4<sup>th</sup> column). The R-square 0.7673 demonstrates that the overall validity of the model. The financial knowledge (1<sup>st</sup> column), shows among demographic features such as gender, education and marital status have high impact on financial knowledge considerably. Among the demographic variables, the coefficient of male, and education are as estimated positive and statistically significant at 1 percent level. The result suggests that female and lower-educational respondent are less financial knowledge. Married respondent also has a positive and significant impact on financial knowledge. Its coefficient is statistically significant at 5 percent level. Suggesting that married respondents attain a higher financial knowledge than the single person. Income is as estimated positive but statistically insignificant. We use several economic variables to examine the link between financial condition and financial knowledge. Unexpectedly, the coefficient of age, occupation, and districts (in two



categories) are negative and statistically insignificant, only one district (Nasaythong district) shows a positive but also statistically insignificant.

Regarding financial behavior in the 2<sup>nd</sup> column shows that male, education, and age have effect to financial behavior considerably. The coefficient of male, and education are as estimated positive and statistically significant at 1 percent level. Indicating that male respondent is significantly more financial behavior than female, and more educational people is more proper financial behavior than less educational people. The age is also a significant determinant of financial behavior in Laos, the coefficient of age is as estimated positive and statistically significant at the 5 percent level, indicating that older respondent is more financially behave than younger people. Marital status is not affect financial behavior significantly. The coefficient of occupation is as estimated positive in only one category and negative in the other category, but statistically insignificant in both cases. The coefficient of income is also surprisingly negative and statistically insignificant.

For financial attitudes in the 3<sup>rd</sup> column of the table 5.8 reveals mostly the same result to the 2<sup>nd</sup> column. Gender, education level, and age are significantly affected to the financial attitude. Among the demographic variables, male and education appear to be the most statistically significant, suggesting that male respondents and higher education respondent are significantly more financial attitude. Age is also significant determinant of financial attitude. The coefficient of age is as estimated positive and statistically



significant at 5 percent level. Which could be explained that people have more positive attitudes in financial aspect when they get older.

*Table 5.8 Regression analysis of factors affecting financial literacy*

	Dependent Variables			
	F-Knowledge	F-Behavior	F-Attitudes	F-Literacy
Constants	1.141*** (0.392)	3.175*** (0.364)	2.395*** (0.241)	6.713*** (0.388)
Male	1.153*** (0.166)	1.181*** (0.155)	0.530*** (0.102)	2.864*** (0.165)
Age	-0.080 (0.065)	0.135** (0.060)	-0.084** (0.040)	-0.030 (0.064)
Districts				
Sisattanak	-0.232 (0.176)	0.099 (0.164)	0.025 (0.108)	-0.107 (0.175)
Nasaythong	0.032 (0.186)	0.274 (0.173)	0.059 (0.114)	0.366** (0.184)
Mai Park Nguem	-0.033 (0.210)	-0.234 (0.196)	-0.010 (0.129)	-0.278 (0.209)
Marital Status				
Married	0.544** (0.262)	0.318 (0.243)	0.032 (0.161)	0.894*** (0.259)
Divorced/ separated	0.202 (0.317)	0.378 (0.345)	-0.337 (0.228)	0.243 (0.368)
Education level	0.439*** (0.070)	0.361*** (0.065)	0.127*** (0.043)	0.927*** (0.069)
Occupation				
Self-employed	-0.140 (0.214)	0.006 (0.199)	0.164 (0.132)	0.030 (0.213)
White-collar worker	-0.181 (0.191)	-0.129 (0.177)	-0.018 (0.117)	-0.330* (0.189)
Income	0.137 (0.101)	-0.036 (0.094)	-0.035 (0.062)	0.065 (0.100)
R-squared	0.4002	0.3841	0.1945	0.7673



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**Notes:** To avoid multicollinearity problem, female, Chanthabury, single people, and retirement or student are omitted from gender, district, marital status, and occupation dummy variables, respectively. Age, Education, and Income are created as ordered variable. Figure in parentheses are standard errors. \*\*\*, \*\*, \* the coefficients are statistically significant at 1%, 5%, and 10% level of significant, respectively.

**Source:** Authors' estimated.

As mention earlier, financial literacy is the combination result of three ingredients (knowledge, behavior, and attitudes), the 4<sup>th</sup> column shows the finding on the determinant factors affect to the level financial literacy in Lao PDR. The R-square is 0.7673 which indicates that the overall validity of the model at 76.73 percent. We find the demographic features such as male, districts, married people, high-schooling people, and occupation have affected to the financial literacy considerably. The coefficient of male is as estimated positive and statistically significant at 1 percent level, indicating that male is more financially literate than female. The coefficient of married people is also positive and statistically significant at 1 percent level, which could explain that married people is financially literate than single people. The coefficient of education level is also positive and statistically significant at 1 percent level, indicating that people with higher educational level is more financially literate than people with lower educational level. This finding is also consistent with prior study (Rooij and Lusardi, 2011; Boisclair et al, 2014; Agarwal et al., 2015; GIZ, 2016; Morgan and Trinh, 2017). The coefficient of district is surprisingly negative and statistically insignificant in two categories, and it has a positive and statistically significant at 5 percent level only one district namely



Nasaythong districts. The coefficient of occupation is also surprisingly negative in one category and statistically significant at 10 percent level in one of them. The coefficient of age is negative and statistically insignificant which is also consistent with (Koenen and Lusardi, 2011). Finally, the coefficient of income is as estimated positive, but statistically insignificant that is in line to Agarwal et al. (2015).

Suggesting that financial knowledge, especially, the basic concepts of interest calculation or numeracy skills need to be emphasized to female, young ages, single person, low-educational level, and also low-income people in order to minimize a huge gap in financial knowledge, promote the levels of consumer protection, and to make a sound financially literate in Laos, and strengthen consumer confident in financial services.

In addition, financial attitude need to take into consideration and need to be resolved urgently especially the elderly group. Policymakers need to provide timely policies with precisely methods to inform these target groups in order to improve and develop financially literate in Laos.

Policymaker should provide financial education with an aim to equip Lao people with knowledge such as financial planning, financial right and responsibilities, and well-informed in financial fraud. Those educational contents should deliver repeatedly through variety ways such as face-to-face activities (workshop), exhibitions, lectures and



seminars. Moreover, mass media such as publications, radio and TV broadcasting as well as electronic channels including e-mail, website, and other social media could be used for greater outreach, and enhancing public interest and keeping the target audience updated with current issues.



## **Chapter 6: Conclusion**

This chapter summarizes the result and provide an analytic discussion. It covers a reflection on the study's objective with a summary of methodology together with limitations, a summary of finding includes country situation analysis, informs the level of financial literacy among adult in Vientiane Capital, Laos, and determinant factors affecting to financial literacy. It also provides policy suggestion for the improvement of financial education and financial proficiency in Laos in the future.

The ultimate objective of this study is to assess the current situation of financial literacy in Lao PDR. Furthermore, attempts to figure out what factors are affecting to financial literacy in Laos PDR by study the large sample (400 respondents) in Vientiane Capital, Lao PDR.

This study applies both qualitative and quantitative methods. For qualitative methods, the existing relevant literatures including policies and legal documents are reviewed. For quantitative methods, this study applies a cross-sectional survey with random sampling technique. The information is collected throughout extensive in-depth interview which conduct during July to August 2017, base on a semi-structured questionnaire developed by OECD/INFE (2015). With the great cooperation of the village chiefs, our survey team could achieve the goal by collecting data from 400 adult people



of 4 districts in Vientiane Capital. The data has thoroughly checked whether or not it is usable, then the obtained data are coded, cleaned and entered into STATA program version 14. The data is analyzed to find the frequency, means and standard error in order to measure whether the financial literacy level among adults in Laos is low or high compare to the result in OECD/INFE (2016). In addition, STATA is used to analyze significant level among demographic determinants to the financial literacy.

This study has its own limitations. Firstly, the information on financial education or financial literacy in Lao PDR is limited and also the information from banking sector is difficult to access because some needed information might sensitive for some official. Secondly, this study is based on a sample group which collect in four districts in Vientiane Capital, Laos. Which may not represent the level of financial literacy to the whole country and it might have some sampling errors as well. Therefore, the study is done with the limitation in time and financial resources of the researcher. And lastly, this study with aims to compare the financial literacy assessment result of Laos to an international survey result of OECD/INFE. (2016b), we employ its structure and attempt to analyze in the same way to ensure that our result could be comparable. For this regard, we further seek to find the assessment result from neighboring country especially Vietnam and Cambodia which might have a closely term and condition. We obtain the data (the financial literacy score) of Cambodia and Vietnam just only the final result of the measurement, and we



could not find an in-depth detail of information which analyze in the same structure to OECD/INFE result, so that is why we could make a comparison our measurement (the financial literacy score) to Cambodia and Vietnam only. Due to the limitation of time-frame, this matter might be fulfilled by the further research.

This finding from study could provide evidence about the financial literacy level and determinant affecting to financial literacy among adult in Lao PDR. This study contributes to the areas of financial sectors, focusing on sustainable and financial well-being through financial literacy assessment.

For the general demographic information, the majority of the respondents are male 56%, and female 44%, to the age's group 29% represent to working age between 35-45 cover 29%, follow by a group of 26-35 years old cover 26%, and 46-55 cover 25%. With education level, 47% hold bachelor degree, 12% had completed postgraduate, 18% complete the vocational or diploma level. While the proportion of respondents 20% report that they complete or some drop out between secondary school. Regarding the marital status, 85% are married, while single people are only 10%, and the rest report they are divorce. With respect to the occupation, 50% are the white-collar worker, 21% are self-employed and the rest are unemployed which consists of retired people and students. With income level, 53% earn in between 100\$-499\$ a month, follow by 28% belong to 500\$-



800\$ a month, more than 800\$ a month cover 12%, and the lowest less than 100\$ a month are only 7% respectively.

For the financial knowledge measurement, the empirical result shows that most adult people are poor in knowledge of financial concept, especially they find difficulty with numeracy calculation. The proportion of respondents in Laos provide correct answer to the simple question on interest only 38%, calculate the simple interest only 32%, compound interest cover 35%, and to the risk diversification at 54%. The proportion of the respondents who meet a minimum target requirement (five out of seven) on financial knowledge measurement only 33% compare to Thailand achieve 41%, across all participating countries and economies is 56%, and the average score across all participating OECD counties is higher with 62%. With respect to gender differences, there is a huge gap on financial knowledge between male and female in Laos. The proportion of male achieve the minimum target score cover 45%, while female only 9%.

For financial behavior measurement seem to be healthier, the survey result shows the financial decision is made cooperatively in Lao society up to 94%, in the other hand, they seem to be careless in household budget with only 22%. We also find that Lao people are active saver with 86%, and consider before purchase cover 88%, and keep a close watching on their financial affairs 71%. In contrast, we find more than half 53% encounter with deficiency. In overall, the minimum target score on financial behavior seem to be



positive with 61% compare to the average score across all participating countries and economies 51%, and across all participating OECD countries is 54%. The differences among gender in financial behavior, the proportion of male still higher with more than four in five (83%), while less than half 31% of female. It is the fact that in Lao society, that is, male is supposed to have more powerful in controlling or managing the financial aspect in their household, while female has a role to do housework and look after their children at home only. Regarding the financial attitude assessment, about 40% among the respondents do not want to live for today, more than half 52% do not satisfy to spend, while only 12% report that they do not agree with the statement, that is, money is there to be spent. When combining all attitude score (from three out of five), the result reveals that attitude score is relative low only 24%, compare to the neighboring country Thailand achieve 47%, and across all participating countries and economies and average across participating OECD countries is 50%, and 55% respectively. Looking to the differences between male and female, as estimated the same to other measurements with 32% of male and 13% female. In contrast, the tendency of others countries are opposite from Laos, that is, female have a positive attitude than male. Furthermore, we find that more than half of the respondents are not (very) confident with their financial after they retired, and they extremely expect to be supported by their children after their retirement.



According to above components, we can conclude that the empirical overall financial literacy level in Laos is relatively low. with the combination of all three components score, the average score of financial literacy is only 12.3 scores out of 21 or 58% (by multiplying by  $100/21$ ), compare to neighboring countries as the low-income countries Cambodia 11.5 scores (54%), and Vietnam get 11.6 scores (55%), while Thailand gets 12.8 scores (61%), and across all participating counties and economies; and the average across participating OECD countries achieve 13.2 scores (63%), and 13.7 scores (65%) respectively. Indicating that the financial literacy in Lao PDR is high compare to the neighbor low-income countries (Cambodia and Vietnam). In contrast, the financial literacy score is lower compare to others developing and developed countries. The overall financial literacy score in Laos might be the lowest. Due to the study has its own limitation, because this study focuses only people in Vientiane Capital, which is the capital city of the country and it is the financial center of the country. Thus, people assume to have more knowledge and more likely to access in financial service easily. If we conduct a across country study, the result (the financial literacy score) might be lower than this.

In addition, this study suggests that among demographic features such as gender, education level and marital status have high impact on financial knowledge considerably. The coefficient of male and higher education attainment is estimated positive and



statistically significant at 1 percent level, reflecting that male, and higher education have more knowledge in financial aspects. Married respondents also has a positive and significant impact on financial knowledge, the coefficient is statistically significant at 5 percent level means that married people are more financially literate than single people. Income level is estimated positive but statistically insignificant. For Financial behavior, the coefficient of male and education is as estimated positive and statistically significant at 1 percent level. Age is also significant determinant, the coefficient of age is estimated positive and statistically significant at the 5 percent level, with respect to income level is surprisingly negative and statistically insignificant. Indicating that male, high-educational level, and higher age group are more positive perform in financial behavior. For financial attitudes, we find that male and more education attainment have more positive attitude. The coefficient of male and education is positive and statistically significant at 1 percent level. Age group also has positive financial attitudes. The coefficient of age is as estimated positive and statistically significant at 5 percent level.

The combination of all three components shows the total empirical result of the determinant factors affecting to financial literacy level in Lao PDR. The R-square is 0.7673 which represent that the overall validity of the model at 76.73 percent We find demographic features such as Gender (male), districts, marital status, education level, and occupation have affected to the financial literacy level considerably. The coefficient of



male, married people, education level is positive and statistically significant at 1 percent level, the coefficient of occupation is negative in one category (white-collar worker) and statistically significant at 10 percent level in one of them. Finally, the coefficient of income is as estimated positive, but statistically insignificant. Suggesting that financial literacy is predominantly low among female, lower education attainment, and also with single people.

Therefore, this research finding and empirical result have many significant policy suggestions. First, financial knowledge. Especially, in order to minimize a huge gap in financial knowledge, the basic concept of interest calculation or numeracy skill need to deliver to the target group such as female, young ages, single person, low-education level people, and low-income people. Those contents need to deliver repeatedly through a variety of channels such as face-to-face activities, exhibitions, lectures, and seminars. Second, financial attitude among elderly group need to take into consideration and need to be resolved urgently. Policy makers need to provide timely policies with precise methods to educate in order to improve and develop financially literate in Laos. Finally, Policymakers need to provide financial education with aim to equip Lao people with knowledge on financial planning, financial right and responsibilities, and financial fraud. Those educational contents need to deliver repeatedly through a variety of channels.



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## Appendices

### *Appendix 1. Respondents' Demographic*

		N	Percentage
Gender	Male	224	44%
	Female	176	56%
Age	18-25	19	4.75%
	26-35	106	26.50%
	36-45	114	28.50%
	46-55	101	25.25%
	56-65	42	10.50%
	Above 65 years old	18	4.50%
District	Chanthabury	110	27.50%
	Sisattanak	110	27.50%
	Nasaythong	120	30%
	Mai ParkNguem	60	15%
Marital status	Single	40	10%
	Married	338	84.50%
	Divorced/separated/widower	22	5.50%
Education level	Below high school	49	12.25%
	High school	11	2.75%
	Diploma	73	18.25%
	Bachelor's degree	189	47.25%
	Post-graduate	78	19.50%
Occupation	Government officer	125	31.25%
	Employee	76	19%
	Self-employed	54	13.50%
	Freelance	61	15.25%
	Retired	27	6.75%
	Student	14	3.50%
	Others	43	10.75%
Monthly income	Less than LAK 1 million	28	7%
	LAK 1 mil. – 4 mil.	213	53.25%
	LAK 4,000,001 - 7,000,000	111	27.75%
	Above LAK 7 mil.	48	12%



## Appendix 2. Financial Knowledge Score

		Time value of money	Interest paid on loan	Calculation of interest plus principle	Compoun- ding interest for 5 years	Risk and return	Definit -ion of inflatio n	Diversifi cation	Avg (%)
Gender	Male	78%	52%	45%	39%	92%	81%	66%	65%
	Female	51%	20%	15%	31%	67%	45%	39%	38%
Age	18-25	53%	32%	11%	47%	84%	42%	26%	42%
	26-35	66%	36%	29%	27%	85%	65%	42%	50%
	36-45	70%	46%	38%	41%	86%	69%	62%	59%
	46-55	70%	40%	40%	29%	86%	78%	63%	58%
	56-65	55%	36%	17%	52%	57%	43%	50%	44%
	Above 65 years old	56%	11%	22%	33%	56%	56%	56%	41%
Districts	Chanthabury	65%	47%	34%	40%	85%	71%	55%	57%
	Sisattanak	71%	45%	31%	35%	82%	62%	46%	53%
	Nasaythong	68%	25%	33%	28%	74%	65%	62%	51%
	Mai ParkNguem	55%	35%	28%	43%	88%	65%	52%	52%
Marital status	Single	45%	23%	10%	28%	75%	45%	30%	37%
	Married	69%	40%	35%	36%	82%	70%	59%	56%
	Divorced/separated	55%	36%	23%	50%	86%	36%	18%	43%
Education level	Below high school	37%	6%	4%	31%	41%	27%	33%	26%
	High school	55%	18%	27%	45%	82%	36%	36%	43%
	Diploma	59%	27%	27%	30%	79%	64%	58%	49%
	Bachelor's degree	73%	40%	33%	32%	86%	71%	53%	55%
	Post-graduate	76%	68%	51%	51%	96%	82%	68%	70%
Occupation	Government officer	66%	46%	32%	31%	86%	71%	57%	56%
	Employee	67%	36%	38%	33%	85%	68%	41%	53%
	Self-employed	70%	48%	31%	43%	87%	69%	67%	59%
	Freelance	61%	31%	31%	41%	74%	57%	52%	50%
	Retired	63%	22%	30%	37%	67%	59%	44%	46%
	Student	50%	29%	14%	43%	93%	50%	64%	49%
	Others	72%	32%	28%	33%	70%	63%	58%	51%
Monthly income	Less LAK 1 mil.	29%	4%	4%	29%	43%	29%	46%	26%
	LAK 1 mil. – 4 mil.	70%	37%	30%	33%	81%	67%	57%	54%
	LAK 4 mil. – 7 mil.	66%	38%	36%	32%	86%	68%	50%	54%
	More LAK 7 mil. kip	71%	65%	46%	60%	96%	77%	56%	67%
Total		66%	38%	32%	36%	81%	66%	54%	53%



### Appendix 3. Financial Behavior Score

		Respon								
		-sible								
		and has	Active	Consider	Timely	Keeping	Long-	Choo	Borrowi	
		househ	saving	purchase	bill	watch of	term	sing	ng to	Avg.
		old			payment	financial	financial	prod	make	(%)
		budget				affair	goal	ucts	ends	
							setting	meet		
<b>Gender</b>	Male	27%	87%	95%	66%	81%	87%	66%	40%	69%
	Female	16%	85%	81%	37%	61%	63%	39%	61%	55%
<b>Age</b>	18-25	5%	68%	74%	37%	63%	58%	81%	16%	50%
	26-35	22%	86%	84%	46%	61%	71%	98%	47%	64%
	36-45	21%	89%	90%	53%	78%	81%	89%	56%	70%
	46-55	19%	85%	92%	65%	75%	80%	91%	58%	71%
	56-65	38%	86%	95%	45%	79%	83%	89%	52%	71%
	Above 65	33%	89%	89%	67%	78%	67%	98%	50%	71%
<b>Districts</b>	Chanthabury	23%	89%	91%	44%	70%	70%	94%	54%	67%
	Sisattanak	25%	85%	87%	54%	69%	80%	97%	52%	69%
	Nasaythong	22%	88%	94%	61%	78%	82%	83%	54%	70%
	Mai ParkNguem	18%	80%	77%	48%	72%	70%	86%	43%	62%
<b>Marital status</b>	Single	5%	80%	75%	35%	58%	58%	85%	28%	53%
	Married	24%	87%	91%	55%	74%	80%	91%	54%	70%
	Divorced	27%	82%	82%	55%	68%	64%	86%	59%	65%
<b>Educatio n level</b>	Below high school	18%	80%	76%	31%	53%	59%	76%	24%	52%
	High school	18%	91%	82%	36%	64%	55%	91%	36%	59%
	Diploma	27%	86%	88%	63%	73%	74%	85%	53%	69%
	Bachelor's degree	20%	85%	89%	55%	75%	78%	94%	51%	68%
	Post-graduate	26%	91%	99%	56%	79%	90%	97%	72%	76%
<b>Jobs</b>	Gov. officer	15%	84%	87%	49%	73%	76%	93%	46%	65%
	Employee	28%	86%	89%	54%	67%	75%	91%	54%	68%
	Self-employed	28%	87%	85%	59%	81%	81%	89%	56%	71%
	Freelance	20%	85%	90%	49%	67%	77%	92%	64%	68%
	Retired	33%	89%	92%	56%	78%	85%	96%	63%	74%
	Student	7%	93%	99%	50%	71%	64%	93%	36%	64%
	Others	28%	56%	88%	63%	72%	72%	79%	40%	62%
<b>Monthly income</b>	Less LAK 1mil.	14%	93%	75%	46%	61%	61%	89%	39%	60%
	LAK 1 mil.–4 mil.	19%	86%	89%	53%	76%	76%	89%	46%	67%
	LAK 4 mil.– 7 mil.	31%	83%	89%	54%	68%	77%	92%	59%	69%



More LAK 7 mil.	23%	90%	94%	56%	75%	88%	96%	71%	74%
<b>Total</b>	22%	86%	89%	53%	72%	77%	91%	52%	68%