

UNIVERSITY OF CO-OPERATIVE AND MANAGEMENT, SAGAING
DEPARTMENT OF ECONOMICS
MASTER OF REGIONAL DEVELOPMENT

ANALYSIS OF HOUSEHOLDS INCOME AND EXPENDITURE
OF GOVERNMENT STAFFS IN SELECTED UNIVERSITIES,
SAGAING TOWNSHIP

HNIN WAI WAI MAW
DECEMBER, 2022

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2 MRD -1

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**A thesis is submitted to the Board of Examiners in partial fulfillment of the
requirements for the degree of Master of Regional Development.**

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ACCEPTANCE

This is to certify that this paper entitled “**Analysis of Households Income and Expenditure of Government Staffs in Selected Universities, Sagaing Township**” submitted as a partial fulfillment towards the degree of Master of Regional Development has been accepted by Board of Examiners.

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ABSTRACT

The study is concerned with household income and expenditure of government staffs among different income groups of households. The aim of the study is to analyze the household income and expenditure of government staffs in selected universities, Sagaing township. The descriptive statistics method and multiple regression analysis are used in the study. The primary survey is used two stage sampling method. The sample size of 239 staffs is selected from 595 population in two universities. The survey found that most of households are low level of income groups. The low-income group of households are spending much money on basic necessity goods and less spending on saving. The higher income group of households are spending less on basic necessity goods and more saving. In the food expenditure model, the dependent variable is monthly food expenditure and independent variables are gender, family size and monthly total income which are positive relationship but there are not significant. According to the multiple regression model, dependent variable of monthly total expenditure and independent variables of education of household heads, motorcycle, family size and monthly total income are positive relationship at 1% level of significant. Among the independent variables, family size is the most influence variable on monthly total expenditure. The food expenditure and age of household heads are negative relationship. Most of government employees are living in government housing. Some government employees are living in rent housing and their parent's houses. And the government should upgrade and expand the construction of government housing as RC housing in the university campus. Moreover, Government should be raised the income level of government employees especially low level of income because of current inflation rate and higher prices of goods and services.

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LIST OF ABBREVIATIONS

HH	=	Household Head
APC	=	Average Propensity to Consume
MPC	=	Marginal Propensity to Consume
NPP	=	Normal Probability Plot
VIF	=	Variance Inflation Factor
GEC	=	Government Employee Cooperative

CHAPTER 1

INTRODUCTION

Every person must consume goods and services in order to survive for their life. People need income to consume goods and services. Income is generally defined as the amount of money, property and other transfers of value received over a period of time in exchange for services or products.¹ People have to supply their productive resources, such as land, labor and capital and they receive income earned in the forms of wages, salaries, rent, profit, interest and dividends for their factors of production. They spend their income in order to fulfill their needs and wants and in exchange for their wants or goods and services or buy various commodities for their daily consumption. On the other hand, people's wants are unlimited, but income of people is limited. Therefore, people spend on goods and services under their limited income. Generally, if income rises, consumption of the people will increase. Consumption mainly depends on disposable income that is the remaining income after deducting taxes and social security charges from total income, which is available to be spent or saved. Consumption is related to current income, future income, wealth and saving. Saving is the difference between income and consumption expenditure that is used to consume in the future or to invest in their businesses.

In the world, income of people is different due to their livelihood. Consumption expenditure of a household is influenced by the characteristics, such as family size, age and gender of household head, preference, knowledge, and family income. Although the household income may be the same, consumption expenditure of the household can be different. The above situation is a very interesting condition so, income and consumption expenditure of the household is selected in this study.

Household consumption expenditure in the developed and developing countries are different. In spite of the affluent households consuming durable luxury goods and nutrition goods, the majority of poor households consume basic necessary goods depending on their disposable income. High income earner households spend more money for the consumption of more expensive goods than middle and low-income earner households. Increasing household income leads to an increase in consumption expenditure and saving of the household. As income increases, consumption expenditure and saving increase, but not in the same proportion.

¹ <https://www.investopedia.com>

Household consumption expenditure consists of total spending by households for durable goods, non-durable goods and services. Durable goods include such items as car, motorcycle, bicycle, appliances, furniture, television, and etc. Non-durable goods comprise milks, vegetables, food, soap, petrol, and etc. Services, which are non-tangible products consist of hair dresser, health care and education, electric power utility, the entertainment, telecommunication, internet, donation of social affairs, and, etc.

Household consumption expenditure can vary because their income is divergent. The standard of living in a household can be seen through their income and consumption. If households have a higher income level, they will spend more qualified, comfort and luxury goods. If households have a substantial level of income, they will spend more on the normal goods. If households have lower income or if they are low income earners, they will consume inferior goods or cheaper or lower quality products.

Nowadays, the cost in terms of human life is high around the world. Myanmar is a developing country and it is facing inflation. Inflation reduces the value of money and purchasing power of money, especially, it affect the fixed income earners. Thus, fixed income earners have to consume less amount of goods and services. Fixed income earners are government staffs, company staffs, sales clerk, and etc. who have regular stream of income from their occupation. Among them, Fixed income earners are chosen to analyze in the study. Households of government staffs are mainly selected for the survey.

Therefore, this paper is to review how household income is interrelated with expenditure, and analyse how to distribute government staff household's expenditure in universities, Sagaing Township.

1.1 Rationale of the Study

Consumption is the most important component in human life. Consumption can vary among households due to the different income level. People spend their income to satisfy their needs and wants and to buy various commodities for daily consumption. They consume many commodities to get the optimum utility. More rich households consume the choice for nutritional food, while poor households consume basic necessity food.

Consumption can be increased by raising the average and marginal propensity to consume in order to increase income and employment.² As the income increases, consumption expenditure and saving increase, but not in the same proportion. The change in the proportion of consumption expenditure and saving depends on the level of income. This situation is more common in developing countries than in developed countries. Nowadays in Myanmar, the prices of goods and services are increasing every day. In order to meet households' needs, their income has to be sufficient income. When the price of goods rises, it has a greater impact on household spending of fixed income earners.

Because the government staffs have fixed income earners, they do not fairly on their consumption spending, saving and investment. Most of government employees who have fixed income earners face many constraints when the general price level is rising. Therefore, this study aims to examine the household income and expenditure of government staffs in two universities of Sagaing Township.

1.2 Problem Statement of the Study

In this research, household income is the sum of fixed income and variable income of household members. When the income of government staffs is remained unchanged, if the price of goods rises, they will reduce their expenditure, depending on their income level. The question of how income levels of fixed income earners or government staffs will be allocated to their household expenditure depending on their fixed income level is analyzed in the study. Thus, this study was focused on how government staffs allocate their income based on their income level to the household expenditure in two universities of Sagaing Township.

1.3 Objective of the Study

The objective of the study is to analyze the household income and expenditure of government staffs in the selected universities, Sagaing Township.

1.4 Methods of Study

The sources of data is collected primary survey based on the questionnaire that is used by two stages sampling method. Two universities are selected among five universities in the first stage with simple random sampling method. Two three nine

² Advanced Economic Theory. M.L. JHINGAN, P.893

government staffs are selected among 595 government staffs in the second stage with the proportional allocation of stratified random sampling method. The primary survey is done by the cross sectional analysis. The sample size is calculated with Taro Yamane formula. Descriptive method is used for demographic factor of households. The data analysis are used simple and multiple regression analysis for factor affecting of household income and consumption expenditure in this study. The secondary data are collected from in books, journal, article and internet websites.

1.5 Scope and Limitations of the Study

The scope of the study is limited to collect the income and expenditure of the households of government staffs in universities, Sagaing Township. There are five universities in Sagaing Township. Among them two universities are selected in Sagaing Township. These are University of Co-operative and Management, Sagaing and Sagaing University of Education. The data were collected in August, 2022 with the random survey method.

1.6 Organization of the Study

This paper is organized in five chapters. Chapter 1 is Introduction in which it consists of a rationale of the study, problem statement of the study, the objective of the study, the method of study, the scope and limitations of the study. Chapter 2 is for literature review. Chapter 3 is about the historical background of two universities. Chapter 4 presents the data analysis of income and consumption expenditure. The last chapter 5 is the conclusion of the study.

CHAPTER 2

LITERATURE REVIEW

This chapter presents the theory and concept of household income, consumption, household saving and empirical studies. Income theory studies the relative levels of income, output, employment, and prices in an economy. The income theory is a major aspect of macroeconomic theory. It studies about the performance of the economy as a whole and not of any individual firm or business and households. It aims to determine the national income and employment levels in the country.

2.1 Theoretical Review

Keynes's "General theory", published in 1936, laid the foundations of modern macroeconomic. According to the Keynes's theory of consumption, the concept of consumption function is one of the most important role. Keynes mentioned several subjective and objective factors which determine consumption of a society. However, it is the current level of income that determines the consumption of an individual and also of society. Since the absolute size of current income as a determinant of consumption is more stressed, Keynes theory of consumption is also known as absolute income theory of consumption. It is also revealed that marginal propensity to consume is less than one. ($1 > \Delta C / \Delta Y > 0$)

In the statement about consumption behavior, Keynes points out three points about consumption behaviors. First, consumption expenditure depends mainly on absolute level of current income. Secondly, Keynes points out that consumption expenditure does not have a proportional relationship with income. Thirdly, Increase in income does not lead to either less saving or less spending than before.

According to him, as the income increases, a smaller proportion of income is consumed. The proportion of consumption to income is called average propensity to consume (APC). Thus, Keynes argues that average propensity to consume (APC) falls as income increases. The Keynes' consumption function can be expressed in the following form

$$C = a + b Y_d \quad \text{-----(i)}$$

where C is consumption expenditure and Y_d is the real disposable income which equals gross national income minus taxes, a and b are constants, where a is the intercept term, that is, the amount of consumption expenditure at zero level of income.

Thus, a is autonomous consumption. The parameter b is the marginal propensity to consume (MPC). Since the average propensity to consume falls as income increases, the marginal propensity to consume (MPC) is less than the average propensity to consume (APC).

How much consumption changes in response to a given change in income depends upon the average and marginal propensity to consume. Average propensity to consume is the ratio of the amount of consumption to total income. Therefore, average propensity to consume is calculated by dividing the amount of consumption by the total income. Thus, $APC = C/Y$, where APC stands for average propensity to consume, C for amount of consumption, and Y for the level of income.

Marginal propensity to consume is the ratio of change in consumption to the change in income. Thus, $MPC = \Delta C / \Delta Y$ where, MPC stands for marginal propensity to consume, ΔC for change in consumption, and ΔY for change in income.

Saving Function

Saving is defined as the part of income which is not consumed because disposable income is either consumed or saved. Thus,

$$Y = C + S \text{ ----- (ii)}$$

$$S = Y - C \text{ ----- (iii)}$$

Where Y = Disposable income, C = Consumption, S = Saving

Like consumption, saving is also a function of income. Thus, saving function can be written as $S = f(Y)$. Saving function is a counterpart of a consumption function.

Now, substituting the above Keynesian function for C in (i)

$$\begin{aligned} S &= Y - (a + bY) \\ &= Y - a - bY \\ &= -a + Y - bY \\ &= -a + (1 - b)Y \text{ -----(iv)} \end{aligned}$$

Note that $(1 - b)$ is the value of marginal propensity to save where b is the value of marginal propensity to consume.

2.1.1 Household Income

Household income consists of all receipts whether monetary or in kind (goods and services) that are received by the household or by individual members of the

household at annual or more frequent intervals, but excludes windfall gains and other such irregular and typically one-time receipts.³

Income is defined as household disposable income in a particular year. It consists of earnings, self-employment and capital income and public cash transfers, income taxes and social security contributions paid by households are deducted. The income of the household is attributed to each of its members, with an adjustment to reflect differences in needs for households of different sizes.

Household income may be defined to cover: (i) income from employment (both paid and self-employment), (ii) property income; (iii) income from the production of household services for own consumption; and (iv) current transfers received.

Income from employment comprises receipts for participation in economic activities in a strictly employment-related capacity, as defined in the resolution adopted by the Thirteenth International Conference of Labor Statisticians (1982) concerning statistics of the economically active population, employment, unemployment and underemployment. It consists of: (a) employee income; and (b) income from self-employment.

Employee income comprises direct wages and salaries for time worked and work done, cash bonuses and gratuities, commissions and tips, directors' fees, profit-sharing bonuses and other forms of profit-related pay, remuneration for time not worked as well as free or subsidized goods and services from an employer. It may include severance and termination pay as well as employers' social insurance contributions. These items should be reported separately, when included. Employee income may be received in cash (monetary) or in kind as goods or services.

Income from self-employment is income received by individuals, over a given reference period, as a result of their involvement in self-employment jobs as defined in the resolution concerning the International Classification of Status in Employment adopted by the Fifteenth International Conference of Labor Statisticians (1993). In particular, income from self-employment concerns primarily owners of unincorporated enterprises who work in these enterprises.

It excludes profits from capital investment of partners who do not work in these enterprises ("sleeping partners"), dividends and directors' fees paid to owners of

³ The conceptual definition of household income established by the ICLS, and adopted in this Handbook, is as follows (ILO, 2004).

incorporated enterprises. Income from self-employment includes the estimated value of goods and services produced for barter as well as goods produced for own consumption, less expenses.

Property income is defined as receipts that arise from the ownership of assets (return for use of assets) that are provided to others for their use. These are returns, usually monetary, from financial assets (interests, dividends), from non-financial assets (rents) and from royalties (return for services of patented or copyright material). Interest receipts are payments received from accounts with banks, building societies, credit unions and other financial institutions, certificates of deposit, government bonds/loans, securities, debentures and loans to non-household members.

Dividends are receipts from investment in an enterprise in which the investor does not work. Pensions and annuities in the form of dividends from voluntary private insurance schemes are also included. Rents are payments received for the use of both unproduced assets (i.e. natural resources), such as land, and for produced assets, such as houses. Rents should be recorded net of expenses. Royalties are receipts from writings, right to make use of inventions, etc. (i.e. patented or copyright materials).

Income from household production of services for own consumption consists of the net estimated value of housing services provided by owner-occupied dwellings, of unpaid domestic services and of services from household consumer durables. These are services that fall under the general production boundary of the system of national accounts.

Transfers are receipts for which the recipient does not give anything to the donor in direct return for the receipts. Transfers can consist of cash (in the monetary sense), of goods or of services. Current transfers are those that usually recur regularly (relative to the reference period used for income), tend to be small and are also mostly available for use during the reference period. Regarded as income are all current transfers received in cash and as goods as follows:

- a) social security pensions, insurance benefits and allowances generated from government sponsored social insurance schemes (compulsory/legal schemes) such as pensions (including military and overseas pensions), unemployment benefits, sickness benefits;
- b) pensions and other insurance benefits from employer-sponsored social insurance schemes not covered by social security legislation (both funded and unfunded) such as education allowance, medical expenses;

- c) social assistance benefits from governments (universal or means-tested) which provide the same benefits as social security schemes but which are not provided for under such schemes;
- d) current transfers from non-profit institutions (e.g. charities, trade unions, religious bodies) in the form of regular gifts and financial support such as scholarships, union strike pay, union's sickness benefits, relief payments;
- e) current transfers from other households in the form of family support payments (such as alimony, child and parental support), regular receipts from inheritances and trust funds, regular gifts, financial support or transfer in kind of goods.

Transfer of housing services between households should be considered as income for the recipient household. Although income includes current transfers received in the form of services from governments and non-profit institutions (social transfers in kind) and in the form of other services from households, the operational definition of income should exclude such transfers until methods exist for valuing them that are widely acceptable.⁴

2.1.2 Consumption

Household consumption expenditure is defined as the sum of the whole household consumption expenditure and the non-consumption expenditures of the household. The latter are those expenditures incurred by a household as transfers made to government, non-profit institutions and other households, without acquiring any goods or services in return for the satisfaction of the needs of its members. Household expenditure represents the total outlay that a household has to make to satisfy its needs and meets its "legal" commitments.

Household consumption expenditure is the value of consumer goods and services acquired, used or paid for by a household through direct monetary purchases, own-account production, barter or as income in-kind for the satisfaction of the needs and wants of its members. Consumption expenditure may be measured in terms of: (i) the purchase values of the goods and services (referred to as the acquisition approach); (ii) the cash outflows resulting from ownership of the goods or benefiting from the services (referred to as the payment approach); (iii) the estimated values of

⁴ Organization, I. L. (2003). Household Income and Expenditure Statistics. Geneva.

the services flow from the goods and the values of the actual services (referred to as the consumption costs approach).⁵

2.1.3 Household Saving

Household saving is the main domestic source of funds to finance capital investment, which is a major impetus for long-term economic growth. Household saving rates vary considerably between households because of difference of institutional, demographic and socio-economic factors. In the national income accounts, household saving is subtracting household consumption expenditure from household disposable income plus the change in net equity of households in pension funds since this component is also a determinant of household disposable income but with an opposite sign.⁶

In the Keynesian model, saving depended on disposable income.⁷ The total value of saving must equal the total value of investment. There are two types of saving : private saving and public saving. Private saving is the amount of income households have left over after consumption and taxes, plus any transfer payments such as social security and unemployment insurance payments the household may receive. Public saving is the amount of government income has left over after paying for its spending.

Saving simply is defined that it is the excess of income overall expenditures where the expenditures are also mentioned as consumption, which is life contributions and insurance. Saving is the surplus income left over after deduction of all monthly expenses planned from total income of all sources. Out of those savings, they have to account for unplanned expenditures and investments. Unexpected expenses include healthcare related, travel, unsecured loans, accidents or other events which could not be planned in advance, (Seinn, A. K. , 2019).

2.2 Empirical Studies

Gizem A. D and Hursit. G (2021) studied household consumption expenditure in Turkey. The aim of the study is to analyze the relationship between household consumption expenditure and some household characteristics in Turkey. The method

⁵ Organization, I. L. (2003). Household Income and Expenditure Statistics. Geneva.

⁶ <https://www.oecd.org>

⁷ <https://link.springer.com>

of the study is quantile regression method. The dependent variable is consumption expenditure. The independent variables are income, schooling, age, gender, and marital status. The result found that households who used credit cards and online shopping are associated with a higher level of consumption expenditure compared to those who do not use these opportunities.

REBERO, P. (2021) determined modeling household expenditure in Rwanda using Neural Network. The objectives of the study are to analyze the influence of demographic and socio-economic factors on household expenditure levels, to investigate the influence of the independent variable's effect for each household residence area, for estimating household expenditure patterns and to compare neural network model with regression model in terms of estimation. In this study the dependent variable is household expenditure. The independent variables are age, education level, residence area, household size, occupation, health insurance, education cost, non-food, food and household asset. The method of the study are used neural network and multiple linear regression models. The results found that household characteristics are essential factors in deciding household expenditure patterns. Households' different characteristics are expected to have different levels of household expenditure.

Zehiwot H. and Senapathy M. (2019) studied determinants of household consumption expenditure in Debremarkos Town, Amhara Region, Ethiopia. The objectives of the research study are to assess the consumption pattern of the household in Debre Markos town and to investigate the major determinants that affect the household consumption expenditure. The dependent variable is household consumption expenditure. The independent variables are disposable income, family size, age, education level and saving. The method of the study are the descriptive method and multiple linear regression model. The sample size is 100 sample households. The result found that most of the households consumed around 5000 Birr monthly in the study Keble, with food ranked first, disposable income and family size are directly related to consumption as expected and saving amount is negatively related with consumption, disposable income is the most determinant factor of the household consumption and education level is not significant but it may have effect on daily life decisions.

Manza et al., (2019) studied the analysis of income and expenditure pattern of rural households in Jema'a Local Government Area of Kaduna State, Nigeria. The

objectives are to compare the income of household primary farmer with those of secondary farmer, to examine the expenditure pattern among the rural households and analyze the factors influencing the consumption pattern of rural household in Jema's Local Government Area of Kaduna State, Nigeria. The method of the study is used the descriptive statistics, Regression Analysis and Duncan range test. The dependent variable is income. The independent variables are food, education, transport, farm inputs, house maintenance, health, social, and miscellaneous expenses. The results found that comparing the income and expenditure of both groups that there were significant differences suggesting that the households spent more than their declared incomes. The highest expenditure was on foods followed by education, social, health and farm. The income of primary farmers was lower than that of secondary farmers.

War, H. H., (2018) studied the household income and expenditure conditions of Dalla Township. The aim of the study is to analyze the sources of income and expenditure patterns of households in Dalla Township. Descriptive method used in the study. The independent variables are sex, age, education level, marital status, family members, income earners and dependence in family. The dependent variables are income and expenditure. The sample size is 200 sample households. The results found that each group consumed more when they have more income. The allocation of expenditure depends on the level of income. Households spent on food at the first place, other expenditure at the second one and third is water and electricity respectively.

Lazíková,Z. (2017) studied the development of income and expenditure in Slovak households. The objective of the study is to monitor the development of household income and expenditure in Slovakia. The method of the study is time series analysis. The dependent variable is household income. The independent variable is consumption expenditure. The result found that the net expenditure increased faster than the net income of households. Therefore, the saving rate decreased. There is still a high difference of the net household income mainly between the Bratislava region and the Presov region.

Mercy E. N. and Governor E. O. (2016) analyzed household consumption expenditure on selected staple foods in Ika North East Local Government Area of Delta State, Nigeria. The aims of the study are to investigate household consumption expenditure levels on selected staple foods and determine the effect of socio-economic characteristics variables on the food consumption expenditure in Ika North

East Local Government Area of Delta State. The method used simple random sampling and analyzed descriptive statistics and ordinary least squares and multiple regression models. The dependent variable is expenditure. The independent variables are the household head, sex and age, household size, major occupation, level of education, marital status and income of household head. The result found that households spent more income on meat than rice, yam and beans while expenditure on garri and plantain were low. The positive sign of income level of households which is a determinant of consumption that as the household income level increase, the expenditure on consumption also increased.

Nicklaus, C. (2015) determined the effect of household income on household consumption in China. The aim of the study is to assess the effect of income on the consumption behavior of the China on a household level. The method is ordinary least squares (OLS). The dependent variable represents household expenditure and the independent variables are income, urban rural status, distance to city center, education, safety net, social health insurance, job, sex, age, household member. The result showed that there is a positive effect of a household's income on its expenditure, especially in the lower income groups. A higher degree of education is strongly positively connected to the household consumption.

Hamad, S. (2015) studied econometric analysis of household's expenditure and consumption patterns in ERBIL-IRAQ. The objective of the study is to estimate expenditure elasticities for consumption categories of households in Erbil. The author compared the consumption patterns of urban and rural households. The method used the regression analysis in this study and Working-Leser model. The dependent variable includes households' expenditure. The independent variables are household income, household size, education, working status. The result found that income elasticities for durables and transporting expenditure categories were highly elastic, while income elasticities for food and health categories were elastic.

Zin & Nabilah. (2015) studied Malaysian households' income and consumption expenditure rural vs urban. The objective of this study is to identify the determinants of household consumption expenditure in both the urban and rural areas in Malaysia. Ordinary least squares method (OLS) and quantile regression (QR) methods are used in this study. The dependent variable is the total household expenditure per month and independent variables such as age, gender, ethnic, marital status, education level, work status and household size. The result showed that

increases in the educational consumption expenditure of the urban area significantly whereas in the rural area, the household size and the work status of family head are the more important determinants of the household spending in respectively.

Pradhan H. K. (2012) studied patterns of consumption expenditure in rural household: a case study of select villages of Sundargarh District of Odisha. The objectives in this study are to examine the impact of income and occupation on consumption expenditure among the rural population of Sundargarh district of Odisha, to analyze the factors influencing the rural consumption pattern. The method of the study is Engel ratio. Sample households have been grouped into different expenditure/ income class. The dependent variable is household monthly income. The independent variables are occupation, consumption expenditure of food and non-food, sex, level of education and age groups. The study found that the levels of living of the rural households have improved than before, but accordingly the prices of goods and services in the market have also increased, so the degree of improvement is not much high in comparison as it is visible. Households have belonged to different income levels, education levels, occupation categories and size of the family.

Rashid, N. K. et al., (2011) studied analysis of income and expenditure of households in the East Coast of Pennisular Malaysia. The objective of the research is to analyze levels of household income and patterns of expenditure among the East Coast Population. The method of the study is used descriptive and inferential analysis. The dependent variable is income and independent variables are food, education, health, saving and loan. The study found that income and total expenditure are strongly relationship means that once the income level increased, the total expenditure tends to be higher with proportionately.

Mustapha, N. H. et al., (2011) studied household income and expenditure relationships: a simultaneous approach. The aim of the study are to analyze households' income and expenditure patterns among the east coast population and to identify major components of households' expenditure as the percentage of total income for food, education, health and others. The method of the study is two stage least squares method. The dependent variable is household monthly total income and the independent variables are loan, cloth, food, saving, education, family size. The finding revealed that total expenditure varied slightly between the three states but most of their income were utilized for housing loan, automobile loan and expenditure on food and education.

CHAPTER 3

HISTORICAL BACKGROUND OF THE STUDY

This chapter presents history of Sagaing Township, and profile of two universities in Sagaing Township.

3.1 Historical Background of Sagaing Township

Sagaing Region is an administrative region of Myanmar, located in the north-western and 93704 km² area part of the country. It is divided into eleven districts which consist of 37 townships. Naga is one of the Self-Administrative Zone in Sagaing Region. It consists of three townships, Leshi, Lahe and Nanyoon.

According to the history of HmanNann, AD 677, Athinkayar Saw Yoon was established in Sagaing ward and called the AtuLaWadi. Sagaing Township is located on the besides of Ayeyarwady River, 20 km southwest of Mandalay city. It lies between north latitude 21°52' to 22°13' and east longitude 95°37' to 96°13', with an area of 485 square miles. Sagaing is bordered at the east of Ayeyarwady River, Mattaya, PatheinGyi, Amarapura Township, on the south by Tatar Oo and Ngazon townships, on the north by Wet Let Township and on the west by Myinmu Township and Mue River. Sagaing Township has benefited from the vicinity two main bridge for transportation, communication and trade.

Sagaing Township has two cities and is composed of 76 village tracts with 177 villages. The two cities are Sagaing city and Sadoung city. In 2019, the total population of Sagaing Township is 285050. Most of people live in rural area (194917) and (79944) live in urban area. There were one of (200) bedsteads hospital, four of (16) bedsteads hospitals and forty seven health care centers in this township. Thirteen Basic Education High Schools, seventeen Affiliated Basic Education High Schools, twenty six Affiliated Basic Education Middle Schools, seventy six Basic Education Primary Schools and three Basic Education Post Primary Schools are in this township. The city leaders upgraded Sagaing to become an educational capital with universities. These universities are University of Co-operative and Management, Sagaing and Technological University, Sagaing.

Sagaing is an area of religion where it have famous pagodas and many historical buildings. Among the famous pagodas and buildings, it is the most obvious of Buddhist Museum, MinGun Bell, Mya Thein Tan Pagoda. International Buddhist

Educational Centre (IBEC) and Sitagu International Buddhist Academy are famous of the monastic education schools. This Township has the peaceful under the shadow of Buddha.

Sagaing Township has worked as cottage industry such as crock, handicraft of silver and copper, jade, loom weaving, basketwork, guitar workshop and other. In addition to cottage industry, there are also factories and workshops in Sagaing Township. There are two industries, Padamyar and Nilar industries in this township. Sagaing is a central for traveling to Mandalay and Monywa and it is also a convenient for business activities.

3.2 Profile of the Study Areas

There are five universities and two colleges in Sagaing Township. They are University of Co-operative and Management, Sagaing, Sagaing University of Education, Sagaing University, Technological University ,Sagaing, University for the Development of the National Races of the Union, Sagaing Education Degree College and Nationalities Youth Resources Development Degree College. Among them two universities were selected simple random sampling method. These two universities are University of Co-operative and Management, Sagaing and Sagaing University of Education.

3.2.1 Profile of University of Co-operative and Management, Sagaing

The University of Co-operative and Management, Sagaing is located at Shwe Thamar Ward, near Ywar Htaung Train Station, Sagaing. The total area is 26.052 acres. In 1982, Co-operative Training School was originally founded in Kachin State, Chin State and Sagaing Region. In 1996, it was upgraded as Co-operative College, Sagaing. Co-operative College was upgraded as Co-operative University Sagaing according to the guidance of President of the Republic of the Union of Myanmar on 12th February 2012. The name of Co-operative University, Sagaing was changed as University of Co-operative and Management, Sagaing on 25 November 2021.

In the organization structure of University of Co-operative and Management, Sagaing, there are mainly two departments, Administrative and Academic Departments. Under the Administrative Department, there are Administration Branch, Finance Branch and Engineering Branch. Under the Academic Division, there are

eleven teaching departments, Department of Training and Department of Research and Development.

The eleven teaching Departments are Department of Economics, Department of Commerce, Department of Co-operative Studies, Department of Management Studies, Department of Statistics, Department of Myanmar, Department of English, Department of Mathematics, Department of Information and Communication Technology, Department of Law and Department of Economic Geography. Under the Department of Training, there are Students Affairs Branch, Examination and Graduation Branch, International Relation Branch, Library Branch and Sport Branch.

Under the Department of Research and Development, there are Information and Communication Technology Branch and Teaching-Learning Branch, Research and Development Branch. In 2022, there are 279 government staffs at the university.

After the upgraded University, the students will obtain a Degree in B.BSc (Business Science). In 2014-2015 Academic Years, Co-operative University has expanded five major Bachelor Degrees. These five majors are B.BSc (Regional Development), B.BSc (Social Enterprise Management), B.BSc (Applied Statistics), B.BSc (Accounting and Finance), B.BSc (Marketing Management). Starting from the 2018-2019 Academic Years, Post Graduate Diploma and Master's Degree courses have been opened. These are Post Graduate Diploma in Regional Development, Post Graduate Diploma in Social Enterprise Management, Post Graduate Diploma in Applied Statistics, Post Graduate Diploma in Accounting and Finance, Post Graduate Diploma in Marketing Management, Master of Regional Development, Master of Social Enterprise Management, Master of Applied Statistics, Master of Accounting and Finance and Master of Marketing Management.

The university administration has provided the government housing for their employees and arranged dormitories for the students. The GEC has also been set up for employees and students to be convenient. The administrator has been placed sport equipments for employees and students to healthy and happy in the school campus. The cooperative saving and credit society has been established to convenience the livelihood of employees. The government awards grants to the teachers who have completed their master and doctorate degrees. For some employees from the position of associate professor, the government subsidized the gasoline costs and also provides the housing expenses for those who live in rent houses. In addition, the university

holds the special occasions such as Dhamma Sat Kyar recitation, pagoda festival, sport competitions and even festival of Hta-ma-ne (Glutinous Rice).

The vision of University of Co-operative and Management, Sagaing is to become a university that brings up qualified human resources for socio-economic development. The mission of University of Co-operative and Management, Sagaing are (i) to develop specific programs through regional development, social enterprise management, accounting and finance, marketing management and applied statistics, (ii) to bring up attentive and cooperation minded human resources who are qualified in respective field and (iii) to apply research practically by sustainable performing. Nowadays University of Co-operative and Management, Sagaing is producing qualified human resources for socio-economic development. The objective of University of Co-operative and Management, Sagaing is to become a University that creates sustainable good environment for teaching, learning and research in accordance with quality assurance for socio-economics.

Table (3.1) Number of Government Staffs in University of Co-operative and Management, Sagaing

Sr.No	Department	Male	Female	Total
1	Administrative	50	108	158
2	Academic	10	111	121
Total		60	219	279

Source: University of Co-operative and Management, Sagaing, 2022

3.2.2 Profile of Sagaing University of Education

Sagaing University of Education is located in Sagaing, Sagaing Region. It is one of two senior universities of education in Myanmar. Primarily, Mandalay Institute of Education was founded in November, 1992. In 2000, June 17 it was moved to Padamyar quarter in Sagaing. The total area is 152.38 acres. In 2014, its name was transformed from Institute to University. And then, it becomes Sagaing University of Education.

In the organization structure of Sagaing University of Education have mainly two departments. There are Administrative Department and Academic Department. Under the Administrative Department, there are Administration Branch, Finance

Branch, Computer Branch and Engineering Branch. Under the Academic Division, there are thirteen teaching departments, Department of Training.

The thirteen teaching Departments are Department of Educational Theory, Department of Educational Psychology, Department of Educational Methodology, Department of Myanmar, Department of English, Department of Mathematics, Department of Physics, Department of Chemistry, Department of Biology, Department of Economics, Department of History, Department of Geography, and Department of Physical Education. Under the Department of Training, there are Students Affairs Branch, Examination and Graduation Branch, Correspondence Branch, Library Branch and Sport Branch. In 2022, there are 316 government staffs at the university.

The university administration has provided the government housing for their employees and arranged dormitories for the students. The government awards grants to the teachers who have completed their master and doctorate degrees. The government subsidized the gasoline costs from the position of lecturer.

Sagaing University of Education offers degrees. These degrees are B.Ed (Bachelor of Education), M.Ed (Q), M.Ed (Master of Education), PhD (Doctor of Philosophy). Sagaing University of Education offers the distance learning courses. The vision of Sagaing University of Education is to become a source of producing honest, upright and faithful professionals with academic excellence and innovation. The mission of Sagaing University of Education are (i) to become a high level professional university for teacher education and continuously produce human resources to support education, (ii) to review and prepare the curriculum and syllabus so that it is up to date with international standards. (iii) to perform the quality of teaching and learning with opening the capacity building and training of trainers on pedagogy. Nowadays Sagaing University of Education is producing graduated educational person for primary education sector.

Table (3.2) Number of Government Staffs in Sagaing University of Education

Sr.No	Department	Male	Female	Total
1	Administrative	40	125	165
2	Academic	27	124	151
Total		67	249	316

Source: Sagaing University of Education, 2022

CHAPTER 4

ANALYSIS ON THE HOUSEHOLD INCOME AND EXPENDITURE OF GOVERNMENT STAFFS IN SELECTED UNIVERSITIES

This section presents Data Analysis and Interpretation based on descriptive method and multiple regression method. Descriptive method is used to present the government staffs' demographic factors and multiple regression method is used to analyze household income and expenditure of government staffs in the selected universities in Sagaing Township.

4.1 The Study Area, Methods and Variables

The study area consists of two Universities in Sagaing Township. They are University of Co-operative and Management, Sagaing and Sagaing University of Education.

Two stage sampling method was used in the study. The first stage is simple random sampling method that are selected two universities from the five universities in Sagaing Township. The second stage of the selecting is the proportional allocation of stratified random sampling method. The sample size of government staffs was calculated based on Taro Yamane's formula of sample size with an error 5% and with a confidence coefficient of 95% (Yamane,1967). The sample size is 239 staffs from population 595 of the two universities. Descriptive method and multiple regression method were used in the study. Multiple regression method is a method of taking into account the relationship between all variables when two or more independent variables are to be used in making estimates of the dependent variable.

Table (4.1) shows the population of University of Co-operative and Management, Sagaing and Sagaing University of Education. There are mainly two departments, administrative and academic departments. Two seven nine of total government staffs in University of Co-operative and Management, Sagaing and 316 of total government staffs in Sagaing University of Education. There are 595 total population in these two universities. Among them, 239 government staffs selected the proportional allocation of stratified random sampling method.

Table (4.1) Number of Government Staffs in University of Co-operative and Management, Sagaing and Sagaing University of Education

Sr. No	University	Department		Total	
		Academic	Administrative	Population	Sample Size
1	University of Co-operative and Management, Sagaing	121	158	279	112
2	Sagaing University of Education	151	165	316	127
Total				595	239

Source: Survey Data (2022)

4.2 Descriptive of Socio-Economic Status of Government Staffs Households in Universities, Sagaing Township

This sections show demographic factor socio-economic condition of households, property of households, income group and expenditure of households.

4.2.1 Demographic Factors of Household Head

As the demographic factors of study area in Sagaing Township, the information about gender of household head, age of household head, education of household head, occupation of household head, number of family member, number of earners, number of students. Following table (4.2) show the demographic factors of government employees.

According to the table (4.2), most of household heads are male (70.7%) and female heads of household are (29.3%). The most 32.7% of household head age is between 38-52. The most 105 (43.9%) of household head are graduated level education and 53 (22.2%) of household head are high school level education. The occupation of household head are government employees 64 (26.8%) and merchant 36 (15.1%). It is found that 23 (9.6%) household heads are dependent. The most of family member is 2-4 (148) members, it is 62% and the number of earners in the family is 1-2 (205) earners, it is 85.7%. The most number of students are 62 (25.9%). 144 (60.3%) have no students in the family.

Table (4.2) Demographic Factors of Household Head

Variables	Frequency	Percent (%)
HH head gender		
Male	169	70.7
Female	70	29.3
Total	239	100
HH head age		
23-37	73	30.5
38-52	78	32.7
53-67	59	24.7
68-82	26	10.8
83-97	3	1.3
Total	239	100
HH head education		
Primary School	15	6.3
Middle School	16	6.7
High School	53	22.2
Graduate	105	43.9
Master	31	13.0
Ph.D	19	7.9
Total	239	100
HH head occupation		
None	23	9.6
Government Employee	64	26.8
Company Employee	18	7.5
Construction	27	11.3
Farmer	29	12.1
Carpenter	15	6.3
Weaver	10	4.2
Phone Service & Shop	17	7.1
Merchant	36	15.1
Total	239	100
Number of Family Members		
Only one	40	16.7
2-4	148	62
5-7	51	21.3
Total	239	100
Number of Earners		
1-2	205	85.7
3-4	33	13.9
5-6	1	0.4
Total	239	100
Number of Students		
None	144	60.3
1	62	25.9
2	27	11.3
Total	239	100

Source: Survey Data (2022)

4.2.2 Occupation of Household Head

The income level of households depends on the occupation of household heads. The income level of households can measure the living standards of family as well as community. Table (4.3) shows the occupation of household head which can be divided by nine categories according to their works in daily life. They are government employee, company employee, construction employee, farmer, carpenter, weaver, phone service & shop, merchant and none.

Table (4.3) Occupation of Household Head

Occupation	Frequency	Percentage (%)
None	23	9.6
Government Employee	64	26.8
Company Employee	18	7.5
Construction Employee	27	11.3
Farmer	29	12.1
Carpenter	15	6.3
Weaver	10	4.2
Phone Service & Shop	17	7.1
Merchant	36	15.1
Total	239	100

Source: Survey Data (2022)

According to the above data, most of the household heads' occupations are government employees and its percentage is 26.8%, while the least of household heads are weavers and it is 4.2%. When studying the occupation of household head, it was found that 9.6% of household heads are old people and are kept as the head of the household out of respect for the family. The majority of household heads are working people and their income lead to support the family's expenditure.

4.2.3 Income Group of Government Employee Households

Table (4.4) Income Group of Government Employee Households

Level of Income (Kyats)	Frequency	Percentage (%)
Less than 300000	31	13
300000-600000	126	52.7
600000-900000	56	23.4
900000-1200000	14	5.9
1200000-1500000	6	2.5
Above 1500000	6	2.5
Total	239	100

Source: Survey Data (2022)

Household income include the sum of fixed income and variable income of household members. The household income is the most important variable of

household expenditure and determine the family members of living standard. Table (4.4) shows household income of government employee households.

According to the above table, 31 households earn income less than 300000 kyats and its percentage is 13%. 126 households earn income between 300000 and 600000 kyats and it is 52.7%. 56 households earn income between 600000 and 900000 kyats and it is 23.4%. 14 households earn income between 900000 and 1200000 kyats and it is 5.9%. 6 households earn income between 1200000 and 1500000 kyats and it is 2.5%. 6 households earn income above 1500000 kyats and it is 2.5%. According to this data, among the total of 239 households, most of households have the income between 300000 and 600000 kyats. The least of households' income above 1200000 kyats. It is indicated that most of households' income less than 600000 kyats. It can be assumed that the economic condition of household is fairly condition.

4.2.4 Relationship between Household Head Education and Income Groups

Education level of household heads are important for the family's living standard. Higher education level is usually associated with knowledge, health, distribution of family income. In this table, education level can be divided by undergraduate level and graduated level.

Table (4.5) Relationship between Household Head Education and Income Groups

Income Group \ Education	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Total
	%	%	%	%	%	%	%
Under Graduate	2.5	19.7	8.8	2.1	0.8	1.3	35.1
Graduated	10.5	33.1	14.6	3.8	1.7	1.3	64.9
Total	13	52.7	23.4	5.9	2.5	2.5	100

Source: Survey Data (2022)

When analyzing the relationship between household head education and income group, 19.7% of household head have the income group 2 at the undergraduate level and 33.1% of household head have the income group 2 in the graduated level. Among the income groups, high income group of households have equal 1.3% of undergraduate and graduated level. Although 1.3% of households have

the undergraduate level, they have the level of high income group. Likewise, 1.3% of household heads in the graduated level have the high income group. In the found that undergraduate and graduated of household heads have the same level of income. Even though household heads are educated person in the graduated level, there income level is low. Therefore, the governments should be increased the salaries of government employees.

4.2.5 Relationship between Occupation of Household Head and Income Groups

From the data of household survey, it can make the relationship table between occupation of household head and income groups. Monthly total income group is divided by six income group, income group 1 is less than 300000 kyats, income group 2 is between 300000 and 600000 kyats, income group 3 is between 600000 and 900000 kyats, income group 4 is between 900000 and 1200000 kyats, income group 5 is between 1200000 and 1500000 kyats and income group 6 is above 1500000 kyats. Income group 1 and group 2 can be defined low income groups, group 3 and group 4 are middle income groups and group 5 and group 6 are high income groups.

Table (4.6) Relationship between Occupation of Household Head and Income Groups

No.	Income Group Occupations	Low Income Group		Middle Income Group		High Income Group		Total %	Total Count No.
		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6		
		%	%	%	%	%	%		
1	None	1.7	5	2.5	0	0.4	0	9.6	23
2	Government Employee	1.3	15.1	6.3	2.1	1.3	0.8	26.8	64
3	Company Employee	0.4	3.3	2.5	0.4	0.4	0.4	7.5	18
4	Construction Employee	7.5	2.9	0.8	0	0	0	11.3	27
5	Farmer	1.3	5.9	2.9	1.3	0.4	0.4	12.1	29
6	Carpenter	0.8	3.8	1.3	0	0	0.4	6.3	15
7	Weaver	0	3.3	0.8	0	0	0	4.2	10
8	Phone Service & Shop	0	5	1.3	0.4	0	0.4	7.1	17
9	Merchant	0	8.4	5	1.7	0	0	15.1	36
10	Total %	13	52.7	23.4	5.9	2.5	2.5	100	239
11	Total Count No.	31	126	56	14	6	6	239	

Source: Survey Data (2022)

By studying the occupation of household heads, most of household heads are government employees. Government employees are 16.4% of low income group and 8.4% of middle income group because most of government employees are junior and new appointment employees. Two point one percent of government employees are professor ranks, doctor and sailor are included, they are in the high income group.

Household heads of company employees are 3.7% of low income group, 2.9% of middle income group and 0.8% of high income group and they are middle class, driver. Household heads are working in the construction are 10.4% of low income group and 0.8% of middle income groups because they are contractor, masons and painters.

Household heads of farmers are 7.2% of low income group and 4.2% of middle income group. In the low and middle income groups of farmers are working in farm. Zero point eight percent of farmers are high income group and they are working in orchard such as mangoes and bananas.

Household heads of carpenters are 4.6% of low income group, 1.3% of middle income group and 0.4% of high income group. Most of them are in the low and middle income groups because they are the rank of ordinary craftsman, and only the skilled carpenters who make furniture are in the high income group.

Household heads of weavers are 3.3% of low income group and 0.8% of middle income group because they only do ordinary handloom work.

Household heads working in phone service are 5% of low income group, 1.7% of middle income group and 0.4% of high income group. Most of them are low and middle income group because they are working in mobile shops and only those with the high income group open their own second mobile shop.

Household heads of merchants are 8.4% of low income group and 6.7% of middle income group. Household heads of merchants are not in the high income group, but only in the lowest and middle income groups. Household heads are not merchants but people who trade and sell goods on a daily basis.

Nine point six percent of household heads don't have any occupation because of their old age. They are 6.7% of low income group, 2.5% of middle income group and 0.4% of higher income group as they are retired employees. It is found that most of household heads are government employees and they are in the lower income group because they have a fixed income earners.

4.2.6 Property of the Government Employee Households

Household property means all movable property owned by the spouses and in their control or possession within the dwelling or property in a family unit. This would include motor vehicles and excludes personal property.

Table (4.7) Property of the Government Employee Households

No.	Households' Property		No.	Households' Property	
	Essential Goods	Percentage (%)		Luxury Goods	Percentage (%)
1	Motorcycle	85.8	1	Car	18.4
2	Rice Cooker	100	2	VCD	41.4
3	Phone	100	3	Satellite	16.7
4	Electric Pan	98.3	4	Radio	27.2
5	Electric Pot	89.5	5	Generator	11.7
6	Refrigerator	69.9	6	Fan	79.1
7	TV	71.1	7	Aircon	28.9
8	Bicycle	35.6	8	Air cooler	36.4
9	Iron	95	9	Wi-Fi	33.1
			10	Washing Machine	29.7
			11	Tricycle	1.7
			12	Pump	35.1

Source: Survey Data (2022)

Table (4.7) shows the property of the households. In this table, it is divided into two parts of household's property. They are essential goods and luxury goods. It is found that most households own essential items, while only a small number of household's own luxury goods. In terms of essential goods, all households own rice cooker and phone and then 35.6% of households own bicycle. Likewise, in terms of luxury goods, 79.1% of households own fan and 1.7% of households own tricycle. Essential goods are important for households, but luxury goods are also necessary for a high standard of living.

4.2.7 Relationship between Family Size and Expenditure Groups

Table (4.8) shows the relationship between family size and expenditure group. It is the total number of household members and the major determinants of consumption expenditure in the household. The more the number of people in a household, the more food consumed causing an increase in the share of expenditure for food.

Table (4.8) Relationship between Family Size and Expenditure Groups

Expenditure Group Family Size	Group 1	Group 2	Group 3	Group 4	Group 5	Total
	%	%	%	%	%	%
1	16.7	0	0	0	0	16.7
2	9.2	6.3	0	0	0	15.5
3	7.1	13.4	2.5	0	0	23
4	4.6	13.4	4.6	0.4	0.4	23.4
5	1.7	7.5	3.8	1.7	0.4	15.1
6	0.4	1.3	2.5	0.4	0.4	5
7	0	0.4	0.8	0	0	1.3
Total	39.7	42.3	14.2	2.5	1.3	100

Source: Survey Data (2022)

In this table, monthly total expenditure group is divided into five expenditure groups, group 1 is less than 300000 Kyats, group 2 is between 300000 and 500000 Kyats, group 3 is between 500000 and 700000 Kyats, group 4 is between 700000 and 900000 Kyats and group 5 is between 900000 and 1100000 Kyats. The sample households have one person to seven persons in a family. One family member use the 16.7% of expenditure group. Two family members of households use the 15.5% of expenditure group. Three family members of households use the 23% of expenditure group. Four family members of households use the 23.4% of expenditure group. Five members of households use the 15.1% of expenditure group. Six family members of households use the 5% and seven family members of households use the 1.3% of expenditure group. In this table, it is found that when the number of family members increase, the expenditure increase. However, the household with 7 family members has less consumption on group 2 and group 3 of expenditure groups. Based on this finding, the seven family members of households have the economize although they are largely family members.

4.2.8 Allocation of Income Distribution of Total Household by Expenditure and Income Group

Income and expenditure are interrelated according to the theory of consumption. Expenditure of households is individuals or households spend on goods and services to satisfy their needs and wants. The purchasing power to goods and services express a household's economic well-being. The more goods and services can be consumed, the higher the level of economic well-being. Therefore,

consumption expenditure can vary according to the level of household income. Table (4.9) illustrates the allocation of income by the level of household income group.

Table (4.9) Allocation of Income Distribution of Total Household by Expenditure and Income Group

No.	Income Group Income Allocation	Low Income Group		Middle Income Group		Higher Income Group		Average %
		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	
		%	%	%	%	%	%	
1	Rice	7.12	6.79	5.59	3.81	4.34	2.26	4.99
2	Cooking Oil	8.97	6.09	5.14	3.24	3.49	2.25	4.86
3	Kitchen Food	24.68	23.93	18.72	18.68	15.16	11.71	18.81
4	Rent Housing	0	0.13	0	0.35	0	0	0
5	Personal Care	4.82	3.37	2.67	1.52	1.97	1.48	2.64
6	Cloth	6.14	4.07	2.82	2.38	2.64	2.01	3.34
7	Transportation Cost	6.13	6.69	6.06	2.14	4.84	5.76	5.27
8	Electricity	2.04	2.44	2.54	0.7	2.47	1.56	1.96
9	Phone Bill	5.61	3.39	2.63	2.06	1.74	1.45	2.81
10	Basic Necessity Goods	65.51	56.9	46.17	34.88	36.65	28.48	44.68
11	Education	1.92	5.06	6.05	3.11	2.81	5	3.99
12	Health Care	5.13	5.26	4.62	1.83	3.97	5.73	4.42
13	Service Consumption	7.05	10.32	10.67	4.94	6.78	10.73	8.41
14	Donation	3.96	3.45	2.65	1.68	1.70	1.86	2.55
15	Wi-Fi	0.4	1.72	1.74	0.37	1.92	1.22	1.23
16	Traveler Cost	3.14	1.50	0.69	0.94	1.15	1.35	1.46
17	Other Consumption	3.54	3.22	2.43	1.31	3.07	2.57	2.69
18	Saving	19.95	26.21	38.08	57.21	51.80	56.37	41.59
	Total	100	100	100	100	100	100	100

Source: Survey Data (2022)

In this table (4.9), households' expenditure is divided into five groups. There are basic necessity goods, service consumption, donation, other consumption and saving. In the low income group consist of income group 1 and group 2, households spend 65.5% and 56.9% on basic necessity goods. In the middle income group consist of income group 3 and group 4, households spend 46.17% and 34.88% on

basic necessity goods. Likewise, in the high income group comprise income group 5 and group 6, they spend 36.65% and 28.48% on basic necessity goods. On average, households spend 44.68% on basic necessity goods.

In the low income group, households spend 7.05% and 10.32% on service consumption. In the middle income, households spend 10.67% and 4.94% while high income group spend 6.78% and 10.73% on service consumption. On average, they spend 8.41% on service consumption. Low income group households spend 3.96% and 3.45% on donations while middle income group households spend 2.65% and 1.68% on donation. Similarly, high income group households spend 1.70% and 1.86% on donation. On average, they spend 2.55% on donation.

In the low income group, households spend 3.54% and 3.22% on other consumption. In the middle income group, households spend 2.43% and 1.31% on other consumption. In the high income group, households spend 3.07% and 2.57% on other consumption. Generally, households spend 2.69% on other consumption. In terms of saving, the low income group is 19.95% and 26.21%, the middle income group spend 38.08% and 57.21%. The high income group spend 51.08% and 56.37% and on average, households spend 41.59% on saving.

In the observed data, households spend almost half of their income as average for basic necessity goods. Also, households have to save 41.59% of monthly income as average for all income groups. Savings of households is important for future important of each household as well as for society. Because of households included fixed income earners of government employees, they are more saving for future consumption when they are retired.

4.2.9 Relationship between Type of Housing and Housing Occupy

Table (4.10) The Relationship between Type of Housing and Housing Occupy

No.	Types of Housing	Owner-occupier %	Rent %	Government Housing %	Others %	Total %
1	RC	11.7	0.0	14.2	0.0	25.9
2	Brick	17.2	0.0	28.9	3.8	49.8
3	Wood	7.9	0.8	9.2	2.1	20.1
4	Bamboo	4.2	0.0	0.0	0.0	4.2
	Total	41.0	0.8	52.3	5.9	100

Source: Survey Data (2022)

In the study of table (4.10), there are four types of housing and housing occupy of government employee households. The type of housing and housing

property is an important factor which included in the standard of living of the household.

Among four types of housing, most of government employees are living government housing (52.3%) and 41.0 % of government employee households are owner-occupiers that are resident's employee in Sagaing Township. Among the housing occupy, 0.8% of households are rent housing and 5.9% of households are living with their parents. By looking at the above table, it is found that government has provided government housing and other remaining employees should also be accommodated in government housing. Also, the government needs to build RC housing and upgrade the wooden of government housing to high the standard of living.

4.2.10 Type of Drinking Water, Sanitation System and Garbage System

The drinking water, sanitation and garbage system are critical for health in daily life. Table (4.11) shows the type of drinking water, sanitation system and garbage system of government employee households.

Table (4.11) Type of Drinking Water, Sanitation System and Garbage System

No.	Types of Water System	Percentage (%)	Types of Sanitation System	Percentage (%)	Types of Garbage System	Percentage (%)
1	Tube Well	14.2	Water Closet	85.8	Burning	7.1
2	River	5.4	Cover Pit Toilet	10.5	Under Ground	6.3
3	Lake	1.7	Latrine	0.4	Dust Cart	81.2
4	Purified Water	76.2	Others	3.3	River/Stream	1.3
5	Others	2.5			Others	4.2
	Total	100		100		100

Source: Survey Data (2022)

According to the table (4.11), majority of government employees' households are using purified water (76.2%), and the least others drinking water are using (2.5%). When sanitation system of households are studied, most of government employee households are using water closet (85.8%) and least of households are using Latrine (0.4%). According to the table, 81.2% of households use dust cart for wasting,

1.3% of households threw their waste in river/stream. When studying the households of drinking water, sanitation system and garbage system, most of households are using the purified drinking water, water closet system and dust cart system. In the observed data, government employees are health conscious. Households live in government housing and it has been found that government provides water, sanitation system and garbage system. Therefore, they live in accordance with health due to the provision of purified water, sanitation and garbage system.

4.3 Simple Linear Regression Model for The Monthly Food Expenditure

Simple Linear Regression Model is used to investigate the influencing factors on total monthly food expenditure of households of government staffs in selected universities in Sagaing Township. To develop the simple linear regression model, monthly food expenditure of households is used as dependent variable and family size is used as independent variable.

Table (4.12) Results of Simple Linear Regression Model

Independent Variable	Coefficient	Standard Error	Standardized Coefficients	t	Sig.
(Constant)	11.777	0.077		152.360	0.000
Family Size	0.062***	0.022	0.184	2.874	0.004
R square	0.034				
F	8.260***				

Source: Survey Data (2022)

***, **, * indicate statistically significant at 1% level, 5% level, 10% level.

Result shows that F value is 8.260 that is significant at $p = 0.004$, suggesting that regression model have 1% level significantly. R square value of about 0.034 means that only 3.5% of the variation in food expenditure is explained by independent variables. If family size increased by 1 member, expenditure on food goes up by 6.2%. Therefore, increasing the family size of the households cause to increase the monthly food expenditure of households. Therefore, family size is positive relationship with the dependent variable.

4.4 Multiple Regression Model: The Effects of Factors on Monthly Total Expenditure

Multiple regression analysis is applied to investigate the factor affecting of total expenditure of sample households of government staffs in selected universities in Sagaing. To develop the multiple regression model, monthly total expenditure of

sample households is used as dependent variable and education of household head, family size of the household, motor cycle and monthly total household income are used as independent variables.

Multiple Regression Equation is

$$\ln Y_i = \beta_0 + \beta_1 D_{1i} + \beta_2 D_{2i} + \beta_3 X_3 + \beta_4 \ln X_4 + \varepsilon_i$$

In constructing the model, the variables are noted as;

$\ln Y_i$ = Log Monthly Total Households Expenditure

D_{1i} = 1 if household head is graduated

= 0 if household head is ungraduated

D_{2i} = 1 if possessed motorcycle

= 0 if not possessed motorcycle

X_3 = Family Size of the Household

$\ln X_4$ = Log Monthly Total Households Income

ε_i = Error term

Table (4.13) Results of Multiple Regression Model

Independent Variable	Coefficient	Standard Error	Standardized Coefficients	t test	Sig
Constant	6.883	0.491		14.013	0.000
Education of the Household Head	0.100***	0.034	0.110	2.936	0.004
Motorcycle	0.209***	0.046	0.169	4.550	0.000
Family Size of the Household	0.134***	0.013	0.466	10.178	0.000
Monthly Total Income	0.392***	0.039	0.431	9.937	0.000
Adjusted R square		0.699			
F-value		139.374***			

Source: Survey Data (2022)

***, **, * indicate statistically significant at 1% level, 5% level, 10% level.

Multiple Regression Equation is

$$\widehat{\ln Y} = 6.883 + 0.100D_{1i} + 0.209D_{2i} + 0.134X_3 + 0.392\ln X_4$$

According to above table, regression analysis is concluded with household expenditure and independent variables. Adjusted R square value is 0.699. It had been found that education of household head, motorcycle, family size and monthly total

income are statistically significance at 1% level respectively. As a general rule, this model is a goodness of fit as the adjusted R square is more than 50%. Result show that F value is 139.374 that is significant at $p = 0.000 (< 0.01)$, suggesting that regression model have 1% level significant.

If the graduated of household heads are more increasing than the undergraduate of household heads, the monthly total household expenditure is more increasing 10%. If the more increasing motorcycle is possessed, monthly total household expenditure is increased by 20.9%. It is found that the motorcycle possessed of household more expenditure than the motorcycle has not possessed of household.

The multiple regression equation shows that if monthly total income increased by 1%, monthly total household expenditure is increased by 39.2%. The regression coefficient between monthly total household income and monthly total household expenditure is 39.2% ($t = 9.937, p = 0.000$). This shows that there is direct relationship between monthly total household income and monthly total household expenditure. If number of family members increased by 1-member, monthly total household expenditure is increased by 13.4%. The regression coefficient between number of family members and monthly total household expenditure is 0.134 ($t = 10.178, p = 0.000$). This shows that there is direct relationship between number of family members and monthly total household expenditure and the most influence variable (Standardized Coefficients 0.466). Therefore, income, family size, education and motorcycle variables are positive relationship with the dependent variable. The finding indicated that high income family, large family size, possessed motorcycle and graduated household head are high monthly total household expenditure.

4.4.1 Testing for the Assumption about Multiple Regression

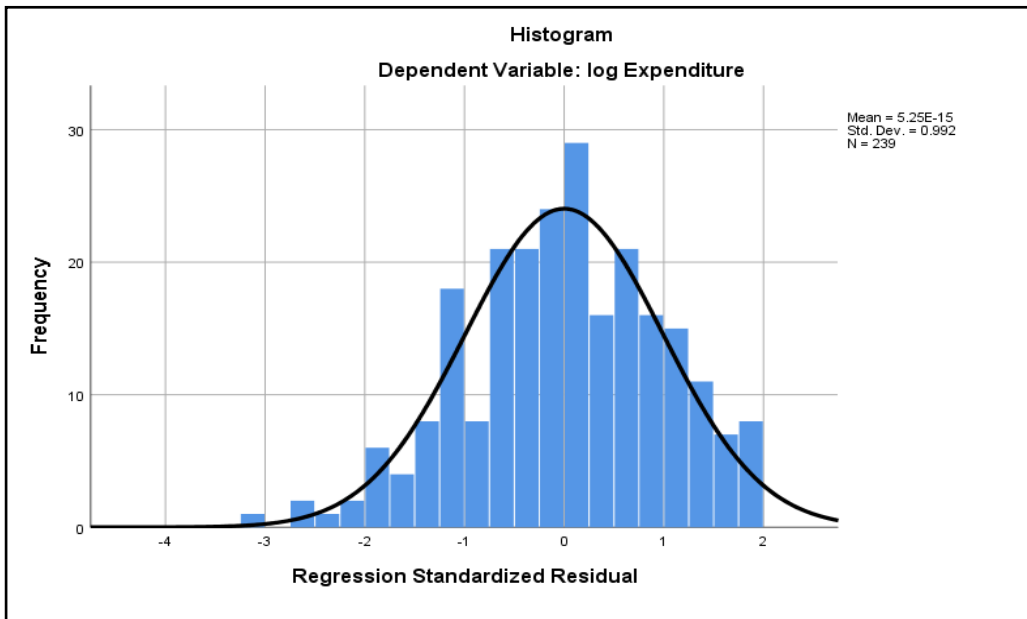
Normality disturbance is applied to determine the violation of required assumption from multiple linear regression models for expenditure of government employees for heteroscedasticity of selected universities in Sagaing.

4.4.2 Testing for Normality of Disturbance

One of the basic assumptions is that disturbance is normally distributed with zero mean and constant variance. Histogram, and Normal P-P plot of the disturbances can be constructed to check whether the disturbances are normally distributed. They are histogram of the standardized residual and Normal P-P plot of the standardized

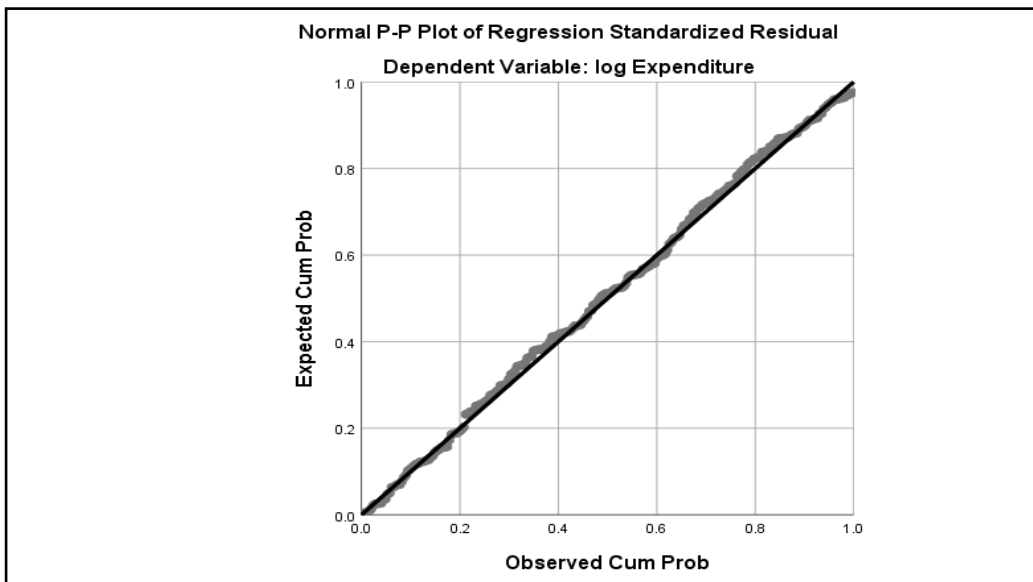
residual for expenditure of government employees for heteroscedasticity of selected universities in Sagaing Township. These plots are shown in figure 4.1 and 4.2.

Figure (4.1) Histogram for Monthly Total Household Expenditure



Source: Survey Data (2022)

Figure (4.2) Normal P-P Plot for Monthly Total Household Expenditure for Heteroscedasticity of Selected Universities in Sagaing



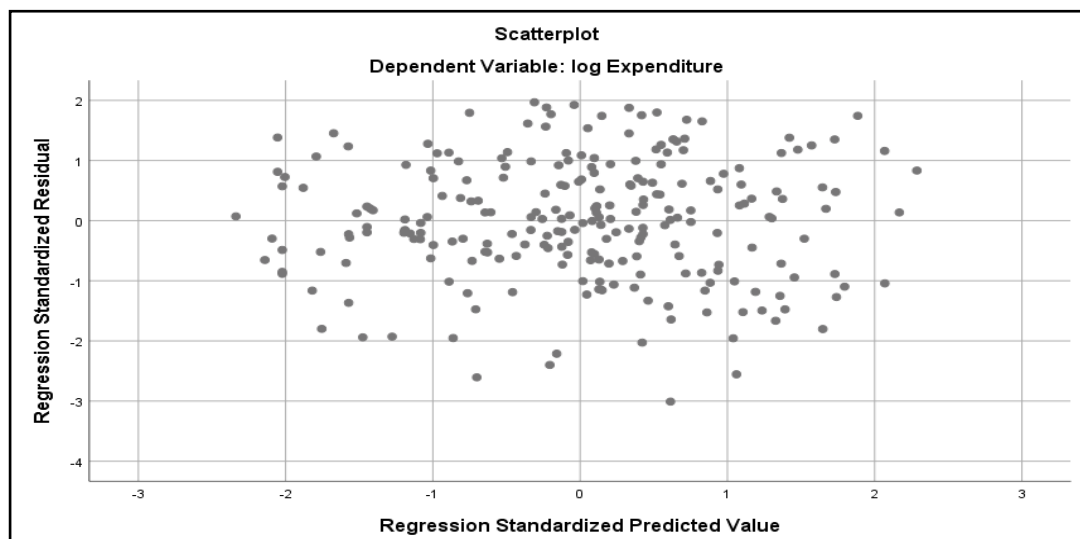
Source: Survey Data (2022)

The histogram in figure 4.1 appears to be pile fashioned. Similarly, The Normal P-P plot is virtually straight line. According to histogram and Normal P-P plot, it can be concluded that the normality assumption appears to be generally reasonable.

4.4.3 Testing for Homoscedasticity of Disturbances

Another basic assumption of multiple regression model is homoscedasticity. In the presence of heteroscedasticity, the regression coefficients become less efficient. Heteroscedasticity can often be detected by plotting the estimated Y values against the disturbances. If any pattern is displayed, heteroscedasticity is likely present. Figure 4.3 represents the predicted total household expenditure on X axis and the residual for total household expenditure on Y axis.

Figure (4.3) Monthly Total Household Expenditure of Government Employees for Heteroscedasticity of Selected Universities in Sagaing



Source: Survey Data (2022)

The figure shows that heteroscedasticity appears to be absent.

4.4.4 Detecting Multicollinearity

Multicollinearity arises when one of the independent variables is linearly related to one or more of the other independent variables. Such a situation violates one of the assumptions for multiple regressions. Specifically, multicollinearity occurs if there is a high correlation between two independent variables.

Table (4.14) Tolerance and VIF of Independent Variables

No	Independent Variable	Tolerance	VIF
1	Education of the Household Head	0.892	1.121
2	Motorcycle	0.916	1.092
3	Family Size of the Household	0.603	1.658
4	Monthly Total Household Income	0.671	1.490

Source: Survey Data (2022)

The variance inflation factor (VIF) is used to detect multicollinearity. It is measuring the degree of multicollinearity contributed by independent variable. In the multiple regression models, the VIF for monthly total household income, family size of the household, education of the household head and motorcycle are 1.121, 1.092, 1.658 and 1.490 respectively. The sum of VIF for these independent variables is 5.361. Since the sum of the VIF is less than 10, then it is concluded that multicollinearity is not serious problem in the multiple regression model for expenditure of government employees.

CHAPTER 5

FINDING AND CONCLUSION

This chapter mention the conclusion of the thesis related to findings, suggestions and recommendations and needs for further study.

5.1 Findings

According to the study, government employee's household in the selected universities in Sagaing township are small family size. Households included the fixed income earners of government employees. As finding of study, when analyzing the occupation of household heads, most of household heads are government employees and they receive fixed income earn. The household income group in the study area, the result can be found that most of households have monthly income between 300000 and 600000 kyats. The least of households have income above 1200000 kyats. Thus, the economic condition of households in the study area is fairly condition.

The relationship between household head education and income group 19.7% of household head have the income group 2 at the undergraduate level and 33.1% of household head have the income group 2 in the graduated level. Among the income groups, higher income group of households have equal 1.3% of undergraduate and graduated level. It was found that undergraduate and graduated of household heads have the same level of income. Even though household heads are educated person in the graduated level, their income level is low. In the property of households, most of households have possessed the essential goods and least of households own luxury goods. Essential goods are important for households as well as luxury goods are also necessary for a high standard of living.

According to the relationship between family size and expenditure groups, the more the number of people in a household, the more food consumed causing an increase in the share of expenditure for food. But the household with 7 family members has less consumption on group 2 and group 3 of expenditure groups. Based on this finding, the seven family members of households have the economize although they are largely family members.

Income and expenditure are interrelated according to the theory of consumption. The result of the allocation of income by the level of household income group, households spend almost half of their income as average for basic necessity goods. Also, households have to save 41.59% of monthly income as average for all income groups.

The type of housing and owner occupier are an important factor that included in the standard of living of the household. Among four types of housing, most of government employee are living government housing (52.3%) and 41.0 % of government employee households are owner-occupiers that are residents employee in Sagaing Township. Among the housing property, 0.8% of households are rent housing and 5.9% of households are living with their parents. The result find that the university's administration has arranged the government housing. Therefore, the government needs to build RC housing and upgrade the wooden of government housing to high the standard of living.

When studying the households of drinking water, sanitation system and garbage system, most of households are using the purified drinking water, water closet system and dust cart system. Government employees are health conscious with health care system and because of government support, government employees get cleaning water, sanitation system and garbage system.

According to the simple linear regression model of monthly food expenditure, the coefficient of family size is positive relationship with independent variable. Therefore, increasing the family size of the households cause to increase the monthly food expenditure of households.

According to the multiple regression analysis, the monthly total expenditure of government employee households and monthly total income of government employee households are direct relation. The monthly total household expenditure is increased by 14%, if monthly total income increased by 40%. If number of family members increased by 1-member, monthly total household expenditure is increased by 13.4%. The family size is more impact on monthly total expenditure (Standardized Coefficient 0.466). The monthly total expenditure of households are influenced by monthly total income, family size, education of household heads and motorcycle. The result find that monthly total income of households is the most influenced factor on the monthly total expenditure of households. Therefore, the study found that income and expenditure of the government employee's households are positively relationship in accordance with income and expenditure theory.

5.2 Suggestions

Households have been using their income for daily consumption. Government employees depend on their fixed income for consumption expenditure. Almost all

people in the study area need to improve the living standard. Government should raise the income level of government employees especially for low level of position because of current inflation rate and higher prices of goods and services.

Government should also provide the social welfare of employees. And the university administration should arrange the government housing for living employees in rent housing. The government should upgrade and expand the construction of government housing as RC housing. If additional government housing is provided, the cost of rent housing will be relief and other expenses may increase.

Government employees should establish other own business enterprises for earning other income to cover households' expenditure and should try part time jobs at other businesses to increase the other income for miscellaneous expenses of households. Government employees should change the households' consumption pattern during the period of Covid-19 pandemic and should economize the miscellaneous expenses during current condition of business cycle i.e; economic recession period.

5.3 Needs for Further Study

This study identifies the households' income and expenditure of government staffs in selected universities, Sagaing Township. In addition, the researchers should study the comparison of consumption expenditure between company employees and government employees.

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APPENDIX (A)

QUESTIONNAIRE

**“ANALYSIS OF HOUSEHOLDS INCOME AND EXPENDITURE OF
GOVERNMENT STAFFS IN SELECTED UNIVERSITIES,
SAGAING TOWNSHIP”**

Sr. No.....

Date.....

1. Respondent's:

- (a) Age..... (b) Gender.....
(c) Education level..... (d) Rank.....
(e) Service..... (f) Relation to the household head
(g) Monthly Income.....

2. Other Income

- (a) Yes (b) No
If have other income.....

3. Household Head's:

- (a) Age..... (b) Gender.....
(c) Education level..... (d) Occupation.....
(e) Monthly Income.....

4. Marital Status.....

- (a) Single (b) Marriage
(c) Divorce (d) Widow/ Widower

5. About Family

Number of Family

No.	Gender	Religion	Age	Education	Occupation	Monthly Income

6. Household Expenditure

No.	Expenditure	Expenditure (Kyats)		
		Week	Month	Year
1	Rice			
2	Oil			
3	Kitchen Food			
4	Education			
5	Health			
6	Personal Care			
7	Clothes			
8	Social Cost			
9	Transportation Cost			
10	Electricity			
11	Phone Bill			
12	Wi-Fi			
13	Traveler Cost			

7. Have you taken a loan?

Yes No

If you have taken a loan, the reason for taking the loan.....

No.	Name of Organization	Amount of Credit	Interest	Duration
1				
2				
3				

8. Do you have a habit of saving money?

Yes No

If you have habit of saving,

(a) Type of saving habit is

(b) Amount of saving for

(c) The saving percent of income.....

9. Condition of Household Asset

(a) Car (b) Motorcycle (c) Tricycle
 (d) TV (e) VCD, DVD, EVD (f) Satellite

- | | | | | | |
|---------------------|--------------------------|--------------------|--------------------------|-------------------|--------------------------|
| (g) Radio/ Cassette | <input type="checkbox"/> | (h) Sewing Machine | <input type="checkbox"/> | (i) Generator | <input type="checkbox"/> |
| (j) Rice Cooker | <input type="checkbox"/> | (k) Iron | <input type="checkbox"/> | (l) Telephone | <input type="checkbox"/> |
| (m) Electric Pen | <input type="checkbox"/> | (n) Fan | <input type="checkbox"/> | (o) Air-Con | <input type="checkbox"/> |
| (p) Air cooler | <input type="checkbox"/> | (q) Refrigerator | <input type="checkbox"/> | (r) Water Pump | <input type="checkbox"/> |
| (s) Electric Pot | <input type="checkbox"/> | (t) Bicycle | <input type="checkbox"/> | (u) Wi-Fi Machine | <input type="checkbox"/> |
| (v) Washing Machine | <input type="checkbox"/> | | | | |

10. Types of Housing

- | | | | | | | | |
|--------|--------------------------|-----------|--------------------------|----------|--------------------------|------------|--------------------------|
| (1) RC | <input type="checkbox"/> | (2) Brick | <input type="checkbox"/> | (3) Wood | <input type="checkbox"/> | (4) Bamboo | <input type="checkbox"/> |
|--------|--------------------------|-----------|--------------------------|----------|--------------------------|------------|--------------------------|

11. Housing Condition

- | | | | | | |
|-----------|--------------------------|----------|--------------------------|------------------------|--------------------------|
| (1) Own | <input type="checkbox"/> | (2) Rent | <input type="checkbox"/> | (3) Government Housing | <input type="checkbox"/> |
| (4) Other | <input type="checkbox"/> | | | | |

12. Sanitation System

- | | | | | | |
|------------------|--------------------------|----------------------|--------------------------|-------------|--------------------------|
| (1) Water Closet | <input type="checkbox"/> | (2) Cover Pit Toilet | <input type="checkbox"/> | (3) Latrine | <input type="checkbox"/> |
| (4) Other | <input type="checkbox"/> | | | | |

13. Source of Drinking Water

- | | | | | | |
|--------------------|--------------------------|-----------|--------------------------|----------|--------------------------|
| (1) Tube well | <input type="checkbox"/> | (2) River | <input type="checkbox"/> | (3) Lake | <input type="checkbox"/> |
| (4) Purified Water | <input type="checkbox"/> | (5) Other | <input type="checkbox"/> | | |

14. Garbage System

- | | | | | | |
|-------------------|--------------------------|------------------|--------------------------|---------------|--------------------------|
| (1) Burning | <input type="checkbox"/> | (2) Under Ground | <input type="checkbox"/> | (3) Dust Cart | <input type="checkbox"/> |
| (4) River/ Stream | <input type="checkbox"/> | (5) Other | <input type="checkbox"/> | | |

15. Other Statements

.....

.....

APPENDIX (B)

REGRESSION

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	log Total Income, Dummy Edu, Cycle, Family Size ^b		Enter

a. Dependent Variable: log Expenditure

b. All requested variables entered.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.839 ^a	0.704	0.699	0.237

a. Predictors: (Constant), log Total Income, Dummy Edu, Cycle, Family Size

b. Dependent Variable: log Expenditure

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	31.399	4	7.850	139.374	0.000 ^b
	Residual	13.179	234	0.056		
	Total	44.579	238			

a. Dependent Variable: log Expenditure

b. Predictors: (Constant), log Total Income, Dummy Edu, Cycle, Family Size

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	6.883	0.491		14.013	0.000		
	Dummy Edu:	0.100	0.034	0.110	2.936	0.004	0.892	1.121
	Cycle	0.209	0.046	0.169	4.550	0.000	0.916	1.092
	Family Size	0.134	0.013	0.466	10.178	0.000	0.603	1.658
	log Total Income	0.392	0.039	0.431	9.937	0.000	0.671	1.490

a. Dependent Variable: log Expenditure

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	11.86	13.54	12.71	0.363	239
Residual	-0.714	0.467	.000	0.235	239
Std. Predicted Value	-2.338	2.286	00.000	1.000	239
Std. Residual	-3.009	1.968	0.000	0.992	239

a. Dependent Variable: log Expenditure

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	Family Size ^b	.	Enter

a. Dependent Variable: log Food Exp

b. All requested variables entered.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.184 ^a	0.034	0.030	0.501

a. Predictors: (Constant), Family Size

b. Dependent Variable: log Food Exp

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.077	1	2.077	8.260	0.004 ^b
	Residual	59.591	237	0.251		
	Total	61.667	238			

a. Dependent Variable: log Food Exp

b. Predictors: (Constant), Family Size

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	11.777	0.077		152.360	0.000		
	Family Size	0.062	0.022	0.184	2.874	0.004	1.000	1.000

a. Dependent Variable: log Food Exp

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	11.84	12.21	11.98	0.093	239
Residual	-1.147	.922	0.000	0.500	239
Std. Predicted Value	-1.494	2.495	0.000	1.000	239
Std. Residual	-2.288	1.840	0.000	0.998	239

a. Dependent Variable: log Food Exp