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Analysis of Correlates of Saving Habit at Household Level in Jimma Zone, Ethiopia

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Abstract
This study focused on identifying the correlates of the complex saving habit at the household level in Jimma Zone, Mana district. Saving decisions of a proportion of personal income are varied and depends on different socio-economic parameters that are associated with someone's motive to use his/her income. In fact, developing countries experienced low income and saving rate and perpetuate in the poverty traps and vicious circle of poverty. Along with low saving rate and the existing resource gaps to invest in developing countries, the demand for more foreign assistance like FDI is enormous. However, merely through this, it could be difficult to overcome problems of low saving rate unless it is coupled with improvement in saving motives of households. As such, in Ethiopia little effort has been done to improve saving habit of their people. To address this identified gap, this study focused on assessing saving habits and identifying factors that inhibit saving habits of rural farmers in Jimma zone, Manna districts. The study was employed multi-stage sampling and used 100 households. The study was also augmented both primary and secondary data obtained from various sources. Both descriptive and inferential methods of data analysis of statistical techniques such as, mean, percentage, chi square and t-test and Econometrics model, Tobit model were applied. From the survey result 68(68%) of them currently save whereas the remaining 32(32%) of them not saved at all from their personal income during the course of this study. The major factors that affect annual saving rate was their expenditure and farm input price with negatively influence saving capacity and whereas Educational level, average annual income, the existence of other source of income (on and off farm) engaged with other types of work (occupation) had positive impact on saving habit. To this end, both government and non-government organization should give due attention to the rural households and support different income diversification strategies and established well devised institutional settings to get rid of potential problems in the area and need to support and improve the livelihood of the people so as to boost domestic saving and geared towards to investment.
Keywords: Saving Habit, Foreign saving, Domestic saving, personal Income, Investment, Small and Micro financial Institution, Economic Growth & Development

1. INTRODUCTION

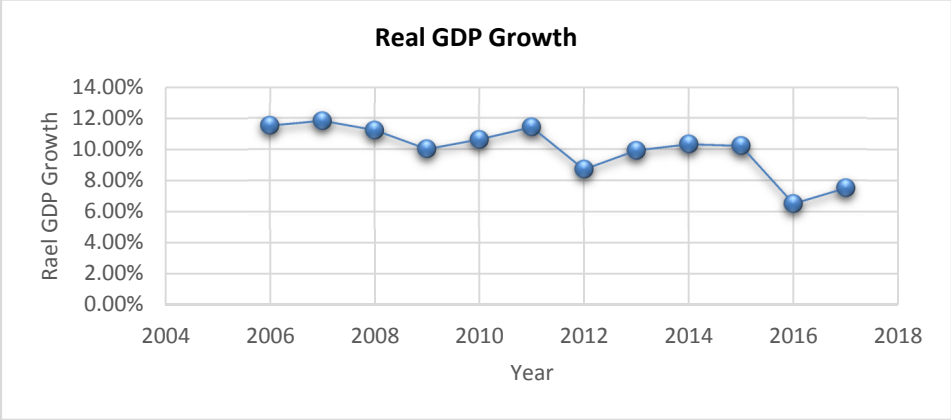
Nowadays, many countries in the globe gives much more emphasis in achieving sustainable and robust economic growth. In fact, developing countries experienced low income and low level of domestic saving and perpetuate in the vicious circle of poverty and *poverty traps*. Hence, saving rate and the required rise in capital stock create a resource gap. To fill this gap fewer developing countries have been looked foreign assistance like FDI (Abeba, 2002).

According to Cronjé and Roux (2010), those countries under low income categories still struggling either in traditional society or pre-condition to take off had only to follow certain set of rules of development to follow take off in their turn in to self-sustainable economic growth. This can backed by foreign saving in to generate sufficient investment in accelerating economic growth.

The rate of national (domestic) saving in Ethiopia, particularly the individual saving is very low and this low level of national saving is expected to limit the expected growth rate of the economy.

According to the nation development plan of Ethiopia that states promoting export led approach of industrialization, and focus on light manufacturing sector but the contribution of this sectors to GDP growth, employment opportunity and export remain below expected (African economic outlook report 2017). Along with, one of the major challenges in the process of economic growth and development process encountered in the past five years was low domestic savings but huge demand for investment and eradicating poverty(MOFED, 2010). The national saving was 9% of GDP at the beginning of the growth and transformation plan starting from 2010. Thus, because of this low saving level, the country's national investment become dependent on FDI rather than relying on domestic investment. In this upfront, FDI has paramount contribution to Ethiopian economic growth and development but still its importance is less than the domestic investment in spreading out per capita terms. In Fig 1. The growth of real GDP in the past six/seven years moves around on average 10% growth rate, in the decomposition the agriculture and service contributed more this growth rate, but sill the industry and manufacturing sectors needs more attention and increasing the domestic saving rate should be forgotten.

Fig 1: Real GDP growth of Ethiopia



Source: IMF World Economic Outlook 2016

In 2016 and 2107 * is the estimated growth of real GDP of Ethiopia

This growth of can be decomposed in to agriculture: 36.2%, industry: 17%, services: 46.8% (world fact book, 2016)

From the classical economist point of view where economic growth gives much more emphasis for the productive investment and capital accumulation. According to Adam Smith (1776) pointed out that supply side driven growth model and puts functional form as stated; Y = f (L, K, T); where output growth(Nation output), Labor, Capital accumulation and Technological know-how respectively). In addition, taking function of capital accumulation it is also a function of investment and investment is further itself is a function of saving.

Moreover, in neoclassical growth model empathized the role of saving and economics growth as direct relationship. According to Harrod - Domar growth model, with insignificant domestic saving, a country should look for foreign aids and debt(Todaro, 2000). Under the influential Harrod-Domar Model which gives more emphasis to the saving rate for the economic growth of countries, that is explained by

$$S = sY = k\Delta Y = \Delta K = I$$

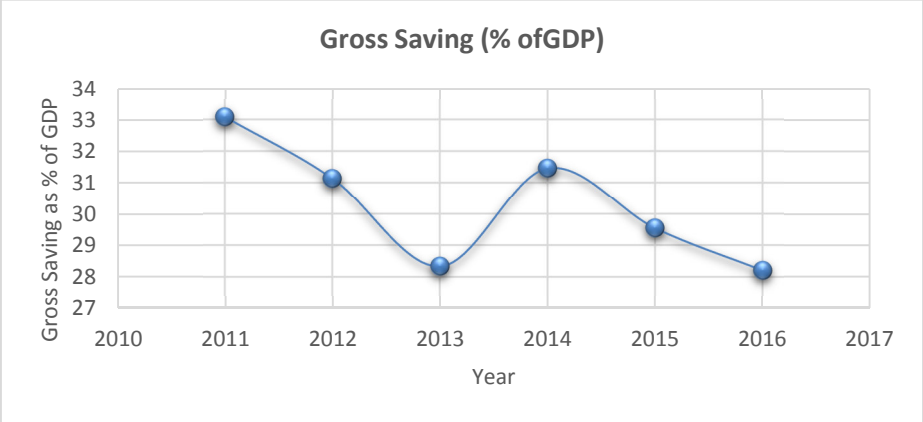
$$SY = K\Delta Y$$

$$\frac{\Delta Y}{Y} = \frac{s}{k}$$

Growth rate of GDP = saving rate/ capital output ration, to increase GDP growth, increase saving rate (or foreign saving, S). The model in more detail states the level of savings (s) = Average propensity to save (APS) – which is the ratio of national savings to the given national income. In addition, the capital-output ratio = 1/marginal product of capital (MPK). Thus, from this the capital-output ratio is the amount of capital needed to increase output level in the economy that means a higher capital output ratio means investment is inefficient since the output is lower as compared with the given accumulated capital stock. This ratio also needs to take into account the depreciation of existing capital stock in the economy.

In fact, the rate of domestic saving in developing countries including Ethiopia is believed to be insignificant. However, reliance on foreign aid and debt is not always imperative due to different socioeconomic and political reasons. Therefore, it is believed that the pattern of domestic saving, particularly individuals' saving in the country should change if higher rate of saving is required Capital formation is an important factor in economic growth countries that would able to accumulate higher levels of investment to achieve a faster rate of economic growth and development. To finance, investment required economic growth. The economies need to generate sufficient saving. Therefore, the domestic saving is necessary for economic growth because it provides the domestic resources need to found the investment effort of the country (IPUMBU, 1999.) Personal saving has two primary functions. First saving provides the economic security of safety net by transferring resources from present to the future via saving individuals would be prepared to face unexpected and irregular financial circumstance. Second, saving leads to accumulate of wealth that enables individuals to improve their living standards and to respond new opportunities (Kelley & Williamson, 1968).

Fig 2. Gross national saving % of GDP in Ethiopia



Source: world Bank (2018)

Gross National saving rate as percentage of GDP of Ethiopia shows ups and down moments and has a decreasing trends in recent years. The rate of domestic saving rate were 33% of GDP during 2011 and also reported at 28.34% of GDP in 2013, 28.20% in 2016, according to the World Bank (2018)

Moreover, domestic saving within the country can be calculated after paying income taxes and consumption. There is both private and public savings. Private one is the amount of income that households have it after taxes and left from consumption. Private saving = (Y – T – C). Public saving is the amount of tax revenue that the government has left after paying for its spending. Public saving = (T – G) (Mankiw, 2003).

According to (Schreiner et al., 2001), highlights the features of most developing country having low saving rate, so that improving the attitudes of saving habit is their primary goal. Since saving plays a crucial for combating or meeting any emergencies accrued by the individuals or the households or any corporate agencies. So that improving saving habits based on increasing awareness provided from governmental and other non-governmental agencies as well as institutions plays a pivotal role. Saving is meant for meeting contingencies but sometimes it also acts as a form of investment. But sometimes people would not inclined towards to have more saving either in pecuniary or in other forms and the very delicate reason is lack of awareness. To advocate appeals for saving there is a need to know about the saving motives of the individuals. An understanding of the saving preferences also helps in calculating the saving instruments which can efficiently arouse saving capacities.

Saving more and spending more simultaneously has become the basic and conflicting factor for the economy. Also having a very poor access to the saving need which really has made a great interest in the minds of looking at the perspective as a whole(Subhashree, 2013). There is a growing recognition of the importance of financial education as it is relates to the saving and asset accumulation.

As few studies may be available on saving in Ethiopia, this study would intend to fill this gap focus on Manna districts. This region found in Oromia region of Ethiopia with total population of 149,661, rural farmers(Macro, 2006). Taking saving is one of the crucial issues when we think growth and development. However, there are not many studies conducted or available relating to what determines the dynamic saving pattern of the rural people of Ethiopia at the micro level. Most of the studies on saving Pattern of rural people is based on secondary data which sometimes does not prove to be adequate for the study. Thus, This study may be help in solving problems related to saving mobilization by easily identifying factors and issuing useful directions on how rural farmers saving and awareness on saving will be improved. Thus, it is important both private and public financial institutions such as banks and microfinance to broad their outreach and give more emphasis to saving mobilization.

1.3 Objectives of the Study

The objective of this study was to assess a saving habit and identify factors that influence saving habits of rural dwellers. More specifically

- To assess the current status of saving practices of rural dwellers.
- To examine factors affecting saving habit in household level.

1.4 The scope and Limitations

Saving by its nature is a very broad concept and it is not only micro issue but also macroeconomic issue. It will be possible to combine both cross section and temporal variation of saving behavior and see the trends in the given dimension. Here, the research will try to fetch a cup of water from an ocean even though it is good to include other regions and zones. This is used to make the work more manageable, feasible, and applicable and to set it briefly. Thus, this paper research will be delimited to the study of factors affects rural farmers saving habit

at micro level using cross sectional data.

2. METHODOLOGY

2.1 Description of the study area

Manna is one of among different districts of Jimma Zone, Oromia region Ethiopia. Manna is bordered on the south by Seka chekorsa, on the west by Gomma, on the north by Limmu kossa, and on the east by Kersa. It has an area of 480km^2 and one urban centre Yebu town, which is the district capital. It lies between 1,470 and 2,610m above the sea level. Manna District is located 369 km away from the capital city of Ethiopia, Addis Ababa and also manna district classified in to Dega (12%), woinadega (63%) and kola (25%) agro-climatic zones and average rainfall is 1,467mm.

Manna district has five largest ethnic groups among them Oromo (82.6%), Yem (6.16%), Kullo (5.79%), Amhara (2.02%), and Kafficho (1.26%); all other ethnic groups made up 2.17% of the population. The majority of the inhabitants are Muslim (88.9%) followers and 10.63% of the population are Ethiopian Orthodox Christianity (Population and Housing Census of Ethiopia, 2007).

2.2 Sampling Techniques and Sample Size

A multistage sampling procedure technique was employed to selected sample respondents. In the first and second stage Jimma zone and Mana district were selected purposively. In the third stage, out of 27 Kebeles two kebeles (Gube Muleta and lemi lelesa) were selected using simple random sampling. Then Slovin's sampling formula with 90 percent confidence level used to determine sample respondents.Finally a total of 100 households were used to address the correlates of saving issues.

Using Slovin Formula**:** $n = \frac{N}{1+N(e)^2}$

Where: n = sample size, N = total number of household from two kebeles', e = margin of error.

Numbers of households in Lemi Lelesa kebele =1230, Numbers of households in Gube Muleta =1030;

N =1230+1030 =2260 households

Thus, survey population $n = \frac{2260}{1+2260(0.1)^2} = 100$

Proportional sample size based on household is essential to determine the number of respondent from two kebele (using PPS). Table 1 indicates the sample size selected from the target population.

Table 1. Sample distribution of future respondents, Source; personal communication

Kebeles	Lemi Lelesa	Gube Muleta	Total
Number of total population	1230	1030	2260
Sample size selected	54	46	100

2.3 Research Design

The selected design to conduct this research was quantitative and qualitative descriptive survey. Questions were framed in a way that was easy to understand for the respondents using simple words or expressions.

2.4. Data type and Source of data

The assessments of factor affecting saving habit of rural farmers in manna districts were used both quantitative and qualitative type of data. Also, the study was used both primary and secondary sources of data. This study mainly used primary data using structured questionnaire from rural farmers. In addition, separate interview was conducted with officials and experts of OCSI and saving institution at District levels. Generally, primary data were gathered by questionnaire, target group discussion, and interview. This study was also augment by secondary data obtained from various sources (books, occasional papers, journals, proceedings, reports).

2.5 Data Collection Method

Primary data from the households collected by the structured questionnaire that includes both closed and open-ended questions. Parameters like demographic, economic, social, cultural and institutional characteristics of the households are collected. In addition, the questionnaire includes other important parameters such as access and availability inputs. The questionnaire were administered by researcher with them who speak the local language and respect the culture of the society. On the other hand, secondary data were collected by reviewing the relevant reference material such as research document, internet, books, office and other relevant sources.

2.6 Data Analysis Method

For this study both econometric model and descriptive method of data analysis was employed. The data that were obtained from primary source was cleaned, coded, entered and analyzed by STATA. We used descriptive statistics like percentage, tables, charts and graphs, mean, frequency, ratios to examine the demographic and socioeconomic situations. Qualitative data were analyzed by describing, comparison, summarizing and

interpreting for further clarity. The major determinants of the households' saving were primarily figured out using quantitative way of analysis. Empirical analysis was used to explain the major challenges facing individuals saving with possible justifications. Quantitative analysis, limited-continuous dependent model of econometric regression was applied. Specifically, the Tobit econometric regression model was used taking the rate of mean annual, saving of individuals as dependent variable ,whereas the major possible factors which are expected to influence the rate of saving of the individuals were taken as regressors (independent) variables of the model.

The dependent variable is expected to be censored type which is partly discrete and partly continuous. It is discrete in terms of the two categories of households – who save and who do not save. It is continuous in terms of the categories of households who save with continuously different level of saving. Accordingly, the dependent variable is stated as:

$y_i = 0$ or $y_i > 0$ (1)

Where: y_i is the rate of saving of household I and for $y_i > 0$, the dependent variable is continuous

Functional specification of the Tobit regression

Given the existence of individuals who do not save or with the saving rate of less than or equal to zero, the rate of saving can be categorically expressed as:

y = y* if y* > 0 or if the saving rate is positive and y = 0 if y* ≤0 or if the saving rate is zero or negative

So, if a household has zero or negative saving rate, y*, y = 0. In essence, this gives us the standard Tobit model, which we formalize as follows. (Verbeek, 2004)

$y \quad XB \quad e^* \quad i = 1, 2, \ldots\ldots\ldots\ldots, N$

$$\begin{cases} y = y_i^* & if\ y_i^* > 0 \\ y_i = 0 & if\ y_i^* \leq 0 \end{cases} \qquad (2)$$

Where: xi is vector of factors affecting saving rate of household B is a vector of coefficients of factors affecting the saving rate ei is an error term which is assumed to be NID (0, σ^2) and independent of xi. This model is also referred to as the censored regression model. It is a standard regression model, where all negative values are mapped to zeros.

3. Results and Discussion

As shown below in Table 4.1, from 100 household head in the analysis 32(32%) of the household head have no saving and 68(68%) of the household heads have experienced saving habit. Then from 68 respondents they save both in formal and inform saving institution i.e. bank and walko/Harbu/ are formal saving institution whereas home and facilitator for change or an informal saving institution.

Table 4.1 Current Saving Habit Status of rural farmers HH in manna, 2017

Household who's practicing saving		**HH who do not save**	
No of HHS	Percent (%)	No HHS	Percent (%)
68	68	32	32

Source: Own survey 2017

3.1 Demographic, economic, social and institutional characteristic of the rural farmers

Table 4.2 Demographic, economic, social and institutional characteristic of the rural farmers for discrete variables

Variables	Categorical	Frequency	Percent	Chi^2 value
Sex	Male	39	39%	0.078
	Female	61	61%	
Education level	Illiterate	22	22%	0.69
	1-4	37	37%	
	5-8	40	40%	
	Secondary	1	1%	
Types of Job	Farmer	66	66%	0.156
	Farming and tread (petty) tread	34	34%	
Marital status	Married	78	78%	2.78
	Divorced	10	10%	
	Widowed	12	12%	
Religion	Orthodox	16	16%	0.46
	Muslim	64	64%	
	Protestant	20	20%	
Monetary value of asset	Land	15	15%	1.45
	Land and livestock	82	82%	
	Land, livestock and building & others	3	3%	
saving place Preference	Walko and Harbu	8	11.8%	100.00***
	Bank	33	48.5%	
	Home	18	26.5%	
	Facilitator for Change	9	13.2%	

Source: - Own survey 2017, *** Significant at P<0.01, ** significant at p<0.05

As shown in table 4.2 it summaries the socioeconomics and institutional existences of the surveyed sample. The annual saving habit of rural farmers and institution of saving identified as an important factor in the household head saving behavior. From 68 household, 33(48.5%) of them have experienced in saving in formal saving institution whereas, 9(13.2%) respondents save in informal saving institution. To measure the association between saving habit institution and saving habit, chi-square test was employed. Finally, the result revealed that there is statistically significant relationship between the existences of saving institution and saving habit at 1% level of significant.

Table 4. 3 Demographic, economic, social and institutional characteristic of the rural farmers for continuous variables

Variables at HH level	Obsevn	Mean	STD. Dev.	Minimum	Maxim	t- test value
Age of HH	100	2.64	1.50	20	70	0.72
Family size	100	4.33	1.99	2	9	0.02**
Land size	100	1.39	.599	0.25	2	0.66
Livestock ownership	100	4.64	1.66	2	8	0.03**

Source: - Own survey 2017 ** Significant at P<0.05

Family size of the household head is one of the major factors that affects saving habit of the household head and most of the family size of manna district distribution is found between 2-9 range covered with the mean of 4 and with standard deviation of 1.99. The independent t-test result shows that there is significant mean difference between households who save and those households who do not save with p<0.05 probability level. This implies as family size increase the number of persons to be fed obviously increases and the amount of savings decreases which share available income to consume. On the other hand, if the majority of the manna district members are productive their level of income will be increased. This result is in line with the finding of(Teka & Tekle, 2008).

4.2 Challenges that inhibit individual saving

In order to figure out the major challenges that impede individuals' saving, different techniques were used in the sample respondents to specify their judgmental in both qualitative and quantitative level. The Level has six categories which include: level of income, absences of saving institution, low level of interest, rent, large family size, lack of awareness and religion perspectives. These parameters are captured using frequency among the respondents those who believed that this inhibit their saving capacity and present systematically in there order of severity as shown in table 4.4.

Table 4. 4 Challenges for individuals saving.

Challenges	Frequency	Percent
Low level of income	49	72.1
Absence of saving Institution	12	17.6
Large Family Size	3	4.4
Lack of awareness	3	4.4
Religion perspective	1	1.5
Total	68	100.0

Source: Own Survey, 2017

Table4.4 indicates that low level of income (49 % of the respondents) is ranked as the first that inhibit their level of individual saving and then followed by lack of sufficient saving institution. Hence, low level of income is expected to have an adverse implication on the rate of saving of individuals for the fact that much of the income is spent on food items. This low level of income problem can also be narrated with the analogy of poorest people in developing countries spend more than 50% of their income on food items which is compared with less than 25% of the rich countries counter parts that spend on food items. So, this low level income coupled with spend more than half of the given income proportion on food items makes the saving level very poor in its existence.

Table 4.5 Tobit regression result

Dependent variable: The probability to save/percentage of average annual savings

Variables	Coefficient	dy/dx	Std. Err.	Z	P>t
Age of HH	-202.03	-0.0125	5.43	-0.37	0.711
Sex of HH	-147.91	-0.0091	1.55	-0.10	0.924
Marital status	-1460.54	-0.0905	9.98	-1.46	0.148
Family size	-130.87	-0.0081	4.38	-0.30	0.766
Education level	1584.95	0.09822	8.165	1.94	0.055*
Religion	-1000.66	-0.0620	1.179	-0.85	0.398
Land size	844.290	0.05232	1.180	0.71	0.477
Types work (occupation)	3367.67	0.20870	1.688	1.99	0.049**
Farm input	-3332.96	-0.2065	1.374	-2.42	0.017**
Annual average income	0.1614	0.00001	0.048	3.31	0.001***
Another source of income	3067.05	0.1900	1.460	2.10	0.039**
Annually expenditure	-0.6406	-0.00004	0.1655	-3.87	0.000***
Constant	7018.95	……	7.316	0.96	0.340

Number of observations	100
Left-censored observation	32
Uncensored observations	68
Right-censored observations	0
LRchi2(12)	38.87
Prob > chi2	0.0001
Pseudo R2	0.0267
Log likelihood	-707.66

Source: Own computation from survey, 2017; Note: *** p<0.01, ** p<0.05, * p<0.1

This table 4.5 indicates the Tobit regression model result that figures out the extent of change in the rate of saving for the given change in expected factors/explanatory variables. This Tobit regression model captured twelve explanatory variables in which six of them have significant impact under the Tobit regression model and found to be significant relationship with saving rate in surveyed population.

The result of the model indicated the level of education of the individuals had statistically significant and positive impact on saving, at 10% level of significance. This implication that, as education level increases there are different factors associated with awareness and new of doing things (know-how) and their income level rises. The saving performance for the literate people is higher than the illiterate counterparts, this is also confirmed under (Chowa, 2006).

Types work (occupation) another important variable that was statistically significant with positive effect of saving habit at 5% level of significance. Rural dwellers who are practicing different on farm and off farm business activities simultaneously generate other source of income likewise petty trade, handicraft and trading with the nearby cities able to cope the harsh off season and able to save more than those who didn't practice such activities in the area. Similar findings can be seen from (Markos, 2015) . On the other hand, average annual income and other sources of income of the respondents had a positive statistically significance impact on saving habit with less than 5% level of significance. The result implied that income source increase by income

generating activates, the level of saving also increase. The same results can be seen from (Sameroynina, 2005) and (HIRPA, 2014), who found that there is a positive trends between the level of income of the households and the saving balance as of increases.

The major factors that affect saving habit of the rural household of manna district is mainly the annual expenditure which is strongly negative impact at 1% level of statistical significance. This showed that unexpected and unwanted extravagancy affect the annual saving habit of the rural farmers. This was agreed with the finding of (Ismail & Bakar, 2012) the overall expenditure-income elasticity increase the annual expenditure increase and that affects annual saving negatively .

Concluding Remarks

Saving is one among the driver factors for economic growth. Saving can be seen as domestic and foreign saving. Domestic saving which can be generated from within the country after paying their income taxes and consumption. There is both private and public savings. Private one is the amount of income that households have it after taxes and left from consumption. Where the public saving are is the amount of tax revenue that the government has left after paying for its spending. Under macro perspective Ethiopia shows some progress taking parameters taking different factors. Nevertheless, in micro level there are different constraints and sectoral imbalances. From these, low domestic saving rate is a major challenge to support the GDP growth rate through expanding investment opportunity within the economy. The rate of domestic saving in the country was found to be very low and fluctuates overtime. Under this micro investigation using households as the major Economic agents or actors of the economic system, development of their individual saving pattern can have significant impact to improve the national saving of the country. Generally, based on the findings of the research out of the total household surveyed 68(68%) of them are currently save even if the amount is insignificant compared to the consumption rate whereas the remaining 32(32%) of them do not practice saving currently and different factors are correlates with rural households saving habits. These factors are excessive expenditure on food and nonfood items and high farm input price have strong significance impact on average annual saving habit in the negative side. In the contrary, educational level, existence of other source of income and types of work (occupation) had positive and statistically significant impact on saving rate in the rural households. Moreover, the availability of sufficient financial institution like banks and microfinance institution is one factor that affects saving. Thus, the researcher reveals that the availability and accessibility of financial institution encourages saving habit and positively influence to the rural people in saving habit.

Future implications

In order to keep sustainability of growth of the Country, the rate of domestic saving in the country has to improve Thus, to encourage saving habits of rural farmers in the village different factors institutional, economic, cultural and social factors should be considered. As a precise policy implication from this study is that ultimate effort has to be made to raise the income level of rural dwellers in a sustainable manner and different income diversification strategy should be devised. Providing access to market, educational facilities, improving the living condition of rural households should be given due attention from governmental and non-governmental organizations. All factors associated with low saving factors like institutional and any constraint that correlates with low saving rate should be addressed and there is a need to urgently develop the financial sector of the country in general and village level in this particular. Both formal and informal financial institutions that works towards helping the poorest of the poor in the community and expand different financial institution branches and services and able to create a very competitive environment in the financial sector. Mobilize the society in creating awareness and providing continuous training on how to enhance saving habit and link with potential financial institutions and service providers in rendering technology support towards the poorest dwellers. Moreover, since increasing earning capacity of the people is expected to enhance the individuals' rate of saving, different on and off farm and different income diversification strategies should be encouraged and supported to look for additional sources of income without jeopardizing their permanent job in the farming practice of the rural people. To this end, further research and development on the spot and identification further problems and intervention practice will play a pivotal role in the process of improving the livelihood of rural households.

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