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Social Capital and Saving Behavior in Ethiopia: Evidence from the Amhara National Regional State

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Abstract: The paper analyzes the impact of social capital on the saving behaviour of members of financial cooperatives in the Amhara Regional State, Ethiopia. Explanatory and mixed research methods were employed using a cross-sectional study of 348 stratified and randomly selected financial cooperative members. Primary data was collected through structured questionnaires, focus group discussions, and personal interviews. The data was further analyzed using Probit regression and multiple linear regression models. Three types of social capital dimensions: cognitive, relational, and structural were operationalized and measured in terms of members' understanding of shared mission and goals, cooperation, and trust. The results revealed strong evidence that the dimensions of social capital affect the amount of savings and the decision to save voluntarily in a way that yields a return. Our findings suggest that structural and relational social capital, particularly through formal networks, effectively increase both the amount saved and the decision to save. However, the lack of cognitive social capital does not encourage saving behaviour. Therefore, it is essential to strengthen the dimensions of trustworthiness, cooperation, and understanding of the shared mission and goals within financial cooperatives. This can be achieved through efficient service delivery, financial workshops, and training programs to guide members toward suitable saving instruments.

Keywords: Social Capital, Savings Behavior, Financial Cooperatives, Economic Development

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1. Introduction

Saving refers to a portion of income not consumed currently but deposited for future consumption, investment, or unforeseen contingencies; people should save and utilize savings when necessary in the future (Wango, 2022). Household savings are an important determinant of welfare, and promoting savings at the household level is crucial for economic development. As Lewis (1954) explained, the central fact of economic development is that income distribution shifts in favour of the saving class. Furthermore, capital formation, which is determined by the amount of domestic savings, helps a country's long-term economic growth (Halefom, 2015). This is why Todaro and Smith (2012) highlighted that savings for capital formation are critical for economic growth, implying that countries with a high level of savings—and hence a high level of investment—experience faster economic growth rates. For instance, according to Feyissa and Gebbisa (2021), as cited in Asfaw et al. (2023), Ethiopia's savings rate declined from 24.1% of gross domestic product (GDP) in 2018 to 9.8% of GDP in 2021. Households saved an average of 875 ETB[3] per year in financial institutions, which is insufficient to sustain the country's economic growth and development.

In the literature on economic development, much of the interest in saving has focused on the relationship between saving and growth. However, saving is not only about accumulation; it also helps to smooth consumption in the face of volatile and unpredictable income, ensuring the living standards of poor people whose lives are difficult and uncertain (Deaton, 1989). As Gurun and Booth (2024) illuminated, trust and information are important in financial market participation. Furthermore, social pressure leads to higher saving and repayment rates (Ban et al., 2020) because networks, mutual support, and norms facilitate cohesive support between individuals and organizations governed by standards and trust, enabling them to pursue shared goals for mutual benefit (Wango, 2023). Moreover, networks enable activities for common problem-solving and provide a more efficient flow of knowledge, information, and development activities for the rural population (Mikulcaka et al., 2015).

In Ethiopia, where the majority of people live in rural areas with widespread poverty, there is a development of heterogeneous patterns across the country (OECD/PSI, 2020). Under such circumstances, a regional approach plays a key role in improving development. Social capital may correct information failures in financial markets in Ethiopia, particularly in the Amhara National Regional State. An assessment of the economic conditions of Ethiopian residents studied by Afrobarometer (2021) revealed that 57% of Amhara regional state residents describ-

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[3]ETB is the Ethiopian currency Birr.

-ed the present economic condition of the country as bad, ranking third behind Tigray regional state (72%) and Addis Ababa City Administration (71%). These regions feel the brunt of ever-increasing inflation pressure. However, according to the Amhara Region Planning and Development Commission (ARPDC) (2019), financial institutions collected 41,844,491,928 ETB in savings and disbursed 23,987,358,912 ETB in loans in 2014/15. In 2015/16, the collected savings increased to 52,848,576,456 ETB, and the loans disbursed amounted to 25,789,250,014 ETB in Amhara. This shows a mismatch between saving and investment or capital formation. At the national level during the same years, domestic savings were 286,849,469,400 ETB (22.1% of GDP) and capital formation was 511,618,000,000 ETB in 2014/15, and in 2015/16, domestic savings reached 351,253,840,000 ETB (22.4% of GDP) and capital formation was 585,665,000,000 ETB (NBE, 2020). Capital formation has greatly exceeded domestic savings at the national level, whereas in the Amhara region, the reverse is true; the region is a net saver and needs to address this mismatch. Commercial banks gather savings from the local economy but often invest them outside the region, such as in government bonds or faster-growing urban areas. As Stiglitz (2012) explained, highly unequal societies do not function efficiently, and their economies are neither stable nor sustainable in the long term.

However, financial cooperatives foster local economic development by mobilizing savings and lending these funds to individuals, families, farmers, and small businesses in their working areas. They play a crucial role in fostering local economic development (Hakenes, Hasan, & Molyneux, 2015; Coccorese & Shaffer, 2018). A financial cooperative has a comparative advantage over banks because it is locally formed, targeting a small geographic area, and its members often share homogeneity and previous social relations (Guinnane, 2001), enabling the cooperative to serve agents who were previously credit-rationed by banks. The provision of banking services in less populated areas helps stabilize the local economy by discouraging emigration. Financial cooperatives contribute to financial deepening, offering banking services to low-income individuals who would otherwise lack access. Without a safe place to save and the chance to borrow, the poor are trapped in the same cycle of poverty that challenged Raiffeisen and Schulze in 1840s Germany. As Novkovic (2013) stated, networks are the foundation of cooperative development and facilitate the transfer of information among members in rural areas. Social capital induces the maximization of cooperative members' interests (Westlund & Adam, 2010). Furthermore, cooperatives allow networking between farmers, retailers, processors, and other stakeholders in the supply chain, which is seen as a crucial asset of cooperatives (Hogeland, 2006). Cooperative board members and managers play significant roles in maintaining social capital levels (Murray, 2004). The effectiveness of cooperatives is influenced by managers' characteristics, their ability to motivate members, and the level of trust they cultivate (Forgács, 2008). These factors affect not only the cooperatives themselves but also the local economy. Collective efforts such as participation in cooperative development require the support of high social capital (Agustina, 2021).

Despite their importance, research on cooperatives' social capital and its impact on regional economic development is limited. Additionally, few studies explore the three dimensions of social capital (structural, relational, and cognitive) and their role in saving behavior at the regional level. Specifically, there is a significant gap in the literature regarding cooperatives' social capital and its impact on members' saving behavior, particularly in the Amhara region. This study aims to fill these gaps by examining the impact of the dimensions of social capital on members' saving behavior in the region. Recognizing the importance of social capital for economic development, this thesis contributes to the existing literature and addresses the research question: What is the impact of social capital on the saving behavior of financial cooperative members in Ethiopia, specifically in the Amhara National Regional State?

This paper builds on long-standing literature on the economic and financial consequences of social capital. The findings of this study make three key contributions: first, they offer novel insights into differences among financial cooperative members; second, they provide a nuanced understanding of the relative value of social capital dimensions for economic development; and third, they highlight the importance of financial cooperative membership in understanding the effects of social capital. Methodologically, this paper adds to the extensive literature on financial cooperatives through a series of empirical approaches, particularly by identifying social capital as a separate channel of financial inclusion. Theoretical frameworks from behavioral microeconomics, particularly behavioral economics, underpin the analysis. Lastly, the paper underscores the role of financial cooperative institutions and their credibility in the effective functioning of savings and credit policies, thus contributing to the literature that emphasizes institutions as the backbone of economic development (North, 1990; Acemoglu et al., 2001, 2005; Acemoglu & Robinson, 2012; Michalopoulos & Papaioannou, 2013).

Finally, this study provides a thorough assessment of the impact of social capital on saving behavior and addresses the research question: "What is the impact of social capital on the saving behavior of financial cooperative members?" By controlling for socioeconomic status and household characteristics, the study presents persuasive evidence that social capital significantly increases access to financial services through financial cooperatives and improves information flow to members. The findings have significant practical implications for cooperative promoters, development practitioners, economists, and policymakers.

In this study, saving refers to a portion of disposable income not consumed currently but kept for future consumption, investment, or unforeseen contingencies. A union is a secondary-level cooperative society formed by primary cooperative societies with similar objectives and a minimum number of members, whereas a primary

cooperative is formed by individuals with similar interests and objectives (Federal Democratic Republic of Ethiopia, Cooperatives Proclamation 985/2016). Social capital refers to social networks, norms, and trust that enable members to act collectively to pursue shared missions and objectives (Putnam, 1995).

2. Literature Review

Social capital influences human behavior in both positive and negative ways. This is because social capital enables both a group and an individual to attain common or individual goals. However, social capital may lead to individuals making suboptimal decisions (Kast, Meier, & Pomeranz, 2018). Previous research indicates that social capital plays a role in improving individual savings (Homan, 2016). This is accomplished by tactics such as goal setting, regular meeting follow-up, peer pressure from others, monitoring others' achievements, symbolic incentives for those who perform well, and guidance on how to attain one's goals. Social influence comprises the effect of others' behaviors based on their social environment.

According to Zaihan (2016), social capital is defined as the degree to which family, friends, and colleagues influence a person's state of mind, thinking, and behavior. Zaihan (2016) found that even when parents instill positive financial behavior in their children, peer socialization still plays a role in an individual's savings behavior. This is because individuals' savings behaviors can be influenced by social activities, such as spending exercises during social time and exchanging ideas about financial management with their peers. Savings decisions are complex and require extensive economic understanding and information. As a result, parents with a certain level of financial literacy may try to pass on these abilities to their children to equip them with money management skills for the future. In turn, children and young adults may inherit their parents' financial attitudes. Saving decisions made in childhood influence attitudes toward finances later in life, which has implications for saving activities taken in adulthood (Brown & Taylor, 2016).

Similarly, Narayan (2002) and Levy and Razin (2012) argue that informed solidarity and cooperation among congregation members can provide an informal guarantee against poverty and allow members to harmonize efforts for mutual benefit. The relationship between institutions and economic performance has been long considered by many economists, who found that institutions and development are characterized by reciprocal response mechanisms that make the demand for religion partly determined by factors of economic development (Tu et al., 2011). For instance, Berman (2000) explained that members of the congregation benefit from social interactions, leading to an extraordinarily large mutual insurance network based on faithfully motivated charitable actions.

Empirical studies show that the relationship between social impact and saving behavior is facilitated by financial literacy, thus providing new information in the research literature on developing economies where social influence does not always encourage saving behavior. As a result, these economies need to adopt financial literacy measures because finance scholars must recognize the central role of financial literacy through financial seminars/workshops and training to encourage individuals to use appropriate saving instruments (Mpaata, Koskei, & Saina, 2021). However, a study of social influence on savings behavior in a developing country, using life cycle and economic theories and reviewing relevant articles, found that social influence positively affects savings behavior in developed countries. This is not the case for developing economies, where social influence has a negative impact on savings behavior. Therefore, individuals are advised to save during their productive years, and this can be facilitated by compulsory deductions for those who are formally employed (Mpaata et al., 2020).

Carol, Finn, and Katleen (2012) examined the extent to which social networks in rural Vietnam can play a role in increasing savings in formal financial institutions where knowledge gaps exist. Active membership in women's unions and the quality of networks were measured by the level of formal savings observed among group members, and the study found that membership in high-quality networks leads to higher levels of savings in formal financial institutions.

A study on the role of social capital in household saving mobilization in Ethiopia used secondary data obtained from the Central Statistical Agency (CSA) survey of 3,830 national-level representative households selected from all regions of the country. The Tobit regression model results showed that the total wealth index, education, household size, social networking, social trust, participation in Edir and/or Equb, and participation in local associations (Mehaber) had a significant positive influence on the status and extent of saving in Ethiopia. However, the distance from banks and microfinance institutions had a negative effect on the status and extent of household savings (Shimeles, 2021).

Solomon et al. (2017) investigated the development of financial products and members' saving behavior in financial cooperative societies in Ethiopia's Tigray region. Using cluster random sampling of 96 selected members from financial cooperatives, data were collected through focus group discussions and structured questionnaires. Binary logistic regression was employed to identify and analyze the determinants of members' voluntary savings. Results showed that voluntary savings were significantly affected by age, marital status, educational level, number of dependents, access to training, household size, safety, and years of membership in financial cooperatives. The study concluded that financial cooperatives and concerned authorities regarding the development and promotion of financial cooperatives need to consider the aforementioned factors when

designing policies and strategies to enhance the voluntary savings of financial cooperative members.

Liang et al. (2015) researched social capital, member participation, and cooperative performance in China's Zhejiang region. The study sought to develop a framework to describe various characteristics of social capital and examine the effects of social capital on members' participation in collective actions and the economic performance of farmer cooperatives. Using three dimensions of social capital as indicators, a statistical model was applied to a database of 147 farmer cooperatives. The results indicated that there is a positive relationship between certain dimensions of social capital and members' participation in general meetings and training sessions. Moreover, each social capital dimension had a positive and significant impact on the cooperatives' economic performance. As Shao (2014) explained, member participation can be categorized into saving and share participation, transaction participation, and management participation.

Despite financial cooperatives encouraging saving among members by providing a safe, convenient, and attractive medium for investment, a lack of saving habits has been identified as a key problem (Benson, Bartholomew, & Kazungu, 2013). However, the majority of financial cooperative members deposit their savings exceeding compulsory savings in commercial banks and microfinance institutions (Ebisa, 2012; Sinha, Viswanathan, & Narayanan, 2015; Yamori, 2015). Indeed, most members of financial cooperatives only save part of their compulsory savings regularly. Voluntary savings are those that members willingly make in society, whereas compulsory savings are savings accounts that members are forced to deposit into the cooperative society regularly. If members save only what is compulsory in their financial cooperatives and place their excess funds in other financial institutions, the scope of operation of Savings and Credit Cooperatives (SACCOs) will be limited, and their continuity will be in question. This raises a very important question: Why are members of financial cooperatives saving in other financial institutions rather than their financial cooperatives?

Fentahun (2014) assessed the impact of religion on household saving behavior in the western sub-region of the Amhara National Regional State. In a cross-sectional study, both quantitative and qualitative data were collected from a randomly selected sample of 384 religious households. The data were analyzed using ordinary least squares (OLS) and probit models. The results revealed that religious affiliation affects household saving behavior. Specifically, the study found that Christians are more likely to save than non-Christian believers, with Orthodox Christians saving more than Muslims. However, frequent religious attendance had a negative effect on money-saving decisions.

In terms of social capital measurement, Okunmadewa et al. (2005) and Yusuf (2008) used social capital indices, including a structural index, a relational index, and a cognitive index. Liang and Hendrikse (2013) measured the structural dimension of social capital using members' communication with financial cooperative board members, managers, other cooperatives, government officials, and other institutions. The relational dimension was measured using mutual trust between members and managers, while the cognitive dimension was measured by shared vision and mission, which accelerate collective actions and organizational understanding. As Putnam (2000) explained, the most important outcome associated with high levels of social capital is that it allows citizens to resolve collective problems more easily. Through increased cooperation, social capital "greases" the wheels that allow communities to advance smoothly via increased levels of trust and solidarity. It also widens the collective awareness of how interconnected our fates are and functions as a conduit for the flow of information that facilitates the success of individual and collective goals.

2.1. Summary of Previous Studies and Knowledge Gaps

The summary of previous research on social capital and economic development particularly financial cooperatives' social capital and savings behavior and also research gaps are shown below.

Previous studies have shown that social capital enhances personal savings. For example, Homan (2016) demonstrated that social influence positively impacts saving behavior in developed nations but not in developing economies (Mpaata et al., 2020). Carol, Finn, and Katleen (2012) found that social networks in rural Vietnam can contribute to higher savings in formal financial institutions. Similarly, Shimeles (2021) discovered that social capital has a positive effect on savings in Ethiopia, while greater distance from formal financial institutions negatively affects household savings. In contrast, Mpaata, Koskei, and Saina (2021) investigated how social impact affects saving behavior and found that social pressure does not promote saving behavior; instead, it is facilitated by financial literacy. This study enhances current knowledge on the relationship between dimensions' of social capital and saving behavior by filling a theoretical gap that previous research has overlooked specifically, the impact of social capital on saving behavior in terms of economic development.

Furthermore, this study addresses a contextual research gap by focusing on specific social capital that varies based on cultural backgrounds and financial conditions, unlike the prevailing literature that mainly examines generalized social capital. Limited research has been conducted on the connection between social capital in cooperatives and the saving behavior of members (Solomon et al., 2017). Nonetheless, current empirical studies lack an understanding of the extent and applicability of their results.

Finally, there is a methodological gap because previous studies have solely focused on generalized trust as a substitute for social capital (Lu et al., 2020). In this context, the literature did not consider how social capital is measured at a micro level. By acknowledging the limitations of previous studies, this paper examines how social

capital influences members' saving behaviors. Specifically, this study investigates social capital and its impact on the saving behavior of members of financial cooperatives in Amhara National Regional State as a show case.

3. Materials and Methods

3.1. Research Approach, Sampling, and Data

To examine the impact of social capital on members' saving behavior, we used an explanatory and mixed research approach, incorporating both primary and secondary data. The primary data was obtained through questionnaires, personal interviews, and focus group discussions. We chose cooperative savings and credit unions (hereafter referred to as unions) in the Amhara region because they are present in all zonal administrations (except the Oromo special zone), and all types of primary cooperatives are eligible to become members of these unions. Additionally, they have a large number of members and member affiliates.

Statistical analysis was conducted on randomly selected chairpersons/respondents from financial cooperatives within 3,719 primary cooperatives that are members of the 27 unions registered in the Amhara region of Ethiopia. Out of the 3,719 member primary cooperatives, 21% are financial cooperatives, while the remainder are agricultural and non-agricultural cooperatives, collectively representing 2,318,581 individual members, 22.6% of whom are female as of the end of 2020. We selected these union members to control for general member development status with limited variability.

The study employed a random sampling technique to select union member primary cooperatives and purposively selected the chairpersons as respondents across the chosen primary cooperatives. Stratified and proportional sampling techniques were used to select participants from different groups in the research area. The composition of the research participants included chairpersons, Board/Committee members, staff, government officials, and community leaders.

To determine the sample size, Kothari's (2004) formula was used:

In determining the sample size, Kothari's (2004) formula was employed as $n = \frac{Z^2 * p * q * N}{(N-1)(e)^2 + Z^2 * p * q}$, Where n = the sample size; N = the total number of households; p = 0.5 the sample proportion reliability and q = 1 − p; e = 5% the margin of error/acceptable error considered; Z = 1.96 is the critical value for a 95% confidence interval.$n = \frac{1.96^2 * 0.5 * 0.5 * 3719}{(3719-1)(0.05)^2 + 1.96^2 * 0.5 * 0.5} = 348$

Face-to-face interviews were conducted with the chairpersons of each selected union member's primary cooperative. Data collected included the chairpersons' personal information, measures of the social capital dimensions (structural, relational, and cognitive), members' collective actions, demographic information (age, family size, gender, religion, education, health status, monthly income), saving participation, physical and family labor, and other relevant factors.

3.2. Member's Saving Participation

Members participate in various activities within financial cooperatives in the Amhara region. Member participation can be categorized into saving and share participation, transaction participation, and management participation (Shao, 2014). We used members' mandatory and voluntary saving participation decisions in their respective financial cooperatives as the amount of savings deposited monthly to measure saving behavior. A dummy variable was used for the measurement of members' participation, assuming members are informed at the time of membership, including all training and meetings.

3.3. Social Capital Measurement

Social capital was measured using indices adopted from Okunmadewa et al. (2005) and Yusuf (2008). The social capital (SC) variables used include a structural index, a relational index, and a cognitive index.

- The structural dimension was measured by examining communication between members and the management of financial cooperatives, board members, managers of other cooperatives, government officials, and other institutions, due to the dominant role of chairpersons in cooperative operations (Liang and Hendrikse, 2013).
- The relational dimension captured mutual trust between members and managers, as well as trust among members.
- The cognitive dimension refers to a shared vision and mission, which accelerates collective understanding and coordinated actions within an organization.

As Putnam (2000) explained, the most important outcome associated with high levels of social capital is the ability of citizens to resolve collective problems more easily. Through increased cooperation, social capital "greases the wheels," allowing communities to advance through higher levels of trust and solidarity, widening collective awareness, and functioning as conduits for the flow of information that facilitates the success of individual and collective goals.

A 5-point Likert scale, ranging from '1' (least) to '5' (highest) levels of structural, relational, and cognitive

dimensions, was used to evaluate the responses. An exploratory factor analysis of the different variables yielded a one-factor measure for each of the three different dimensions of social capital within the sample.

3.4. Econometric Model Specifications

The choice of a model typically arises when a researcher aims to establish a mathematical expression for the relationship between independent variables and the dependent variable. Some empirical studies used Logit and Tobit models for dependent variables to analyze the impact of social capital on members saving behavior (Solomon et al, 2017) and (Shimeles, (2021) respectively. However, the Tobit econometrics model has its disadvantages; initially, it is used in cases where the dependent variable is not detected for some sample households due to censoring and not due to individual choice. It shows Tobit model of econometric analysis can adopt negative values, but will take zero for certain censored observations. This indicated that all zero amounts of savings are inferred as corner solutions. Secondly, this model is based on a limited assumption that both the decision to save and the amount of saving provided that decision are resolute by the same set of variables which implies that a variable that increases the possibility of households to save decision will also increase the amount of saving. Similarly, Habitamu and Bamlaku (2021) investigated the determinants of household savings participation and the amount of decision independently using cross-sectional data of households in Debre Markos Town, Ethiopia and applied Cragg's double hurdle model. Of course Double-hurdle model for dependent variables that are continuously distributed over the interior of the interval and that take on the endpoints of an interval with positive probability (Garcia, 2013). Yet, the Double-hurdle model is also inappropriate because It allows the researcher to break down the single modeled quantity along two useful dimensions, the "quantity" dimension and the "participation" dimension. Such a limited assumption does not work in financial cooperatives because there is a mandatory saving product that has a minimum threshold amount of savings or non-zero value and a voluntary savings product, these two saving products are distinct. Thirdly, the single uses of binary logistic or probit models have also their drawbacks. Unlike the Tobit model, both Logistic and probit models do not consider the two saving products which are the continuous and bi-response variables responses.

Therefore, we used ordinary least squares (OLS) for continuous variables and a Logit or Probit model for binary response variables as a better alternative to the Tobit or other single modeling approaches in this context. Zero observations could reflect actual outcomes arising from the maximization of economic decisions made by rational economic agents. Ignoring such households in the model estimation stage could result in self-selection bias and, consequently, inconsistent parameter estimates (Cameron & Trivedi, 2005; Wooldridge, 2010).

3.5. Model and Data Analysis

The primary measures of household welfare include per capita income, total expenditure, food expenditures, and savings (Kondo et al., 2007). In this study, the amount of members' savings and their decision to save voluntarily were assessed.

The amount of savings of members is the dependent variable, which is a continuous variable. According to the Federal Democratic Republic of Ethiopia Cooperatives Proclamation 985/2016, to be a member of a financial cooperative, every individual must save a minimum amount of compulsory savings monthly, along with voluntary savings. In other words, it is impossible to have a zero level of compulsory savings. However, voluntary savings, as the name implies, depend on the member's willingness to save.

Therefore, Ordinary Least Squares (OLS) and probit models were selected over other methods. To clarify further, Ordinary Least Squares (OLS) is widely applicable and effective when the residuals closely follow a normal distribution and the response can be predicted by a linear combination of predictors. OLS provides a formula for estimating coefficients, which are straightforward to interpret, and it has proven successful in diverse scenarios. The probit model, on the other hand, assumes a standard normal distribution and a multivariate normal distribution captures the non-linear correlation between independent variables and a binary or dichotomous dependent variable. Predictions are bounded, and heteroskedasticity is addressed by explicitly modeling the variance structure. Probit assumes that errors follow a normal distribution, and its coefficients can be interpreted as the variation in the standardized latent variable for a one-unit change in the independent variable, providing a more meaningful interpretation compared to the linear probability model. These advantages are only achievable with the probit model due to the absence of a multivariate logistic distribution.

We also developed the hypothesis that social capital has a more significant impact on the saving behavior of members of financial cooperatives in the Amhara National Regional State compared to financial literacy. To test this hypothesis, we applied both Ordinary Least Squares (OLS) and probit regression models.

The models used to analyze social capital and its impact on members' saving behavior are shown as follows:

A) Amount of saving, the variable is continuous and we used the Ordinary least square (OLS) model in the form

$$y_i = \alpha_0 + \alpha_i X_i + \varepsilon_i, \quad \text{.....(1)}$$

$$\ln AmSaving = \alpha_0 + \alpha_1 Structural + \alpha_2 \text{ cognitive} + \alpha_3 \text{ relational} + \alpha_4 \ln PCInc + \alpha_5 Age + \alpha_6 Agesqu + \alpha_7 Sex + \alpha_8 Educ + \alpha_9 HSt + \alpha_{10} PCa + \alpha_{11} FLabor + \alpha_{12} RAff + \alpha_{13} RAtt + \alpha_{14} AccIr + \alpha_{15} Accr + \alpha_{16} Exp + \alpha_{17} TrCoop$$

……..…. (2)

B) Members voluntary saving participation decision, the variable is a dummy variable, to select whether we need to use the logit or probit model for social capital impact on voluntary saving participation decision, we compared logit and probit coefficients' in a single table by using Akaike's Information Criterion (*AIC*) (Akaike, 1973) and Bayesian Information Criterion (*BIC*), proposed by Schwarz (1978). According to Verbeek (2004), usually, the model with the smallest *AIC* or *BIC* value is preferred, by doing so the Probit model has the lowest AIC and BIC value and is preferred in the analysis.

$F(X'\beta') = \Phi(X'\beta') = \int_{-\infty}^{X'\beta'} \Phi(Z)dz$ ……...……. (3)

$S^* = \beta + X\alpha + \varepsilon_i$, $\varepsilon \sim N(0, 1)$, If $S^* > 0$, $S = 1$, If $S^* \leq 0$, $S = 0$ ……..…. (4)

$VolSaving = \alpha_0 + \alpha_1 Structural + \alpha_2 cognitive + \alpha_3 relational + \alpha_4 lnPCInc + \alpha_5 Age + \alpha_6 Agesqu + \alpha_7 Sex + \alpha_8 Educ + \alpha_9 HSt + \alpha_{10} PCa + \alpha_{11} FLabor + \alpha_{12} RAff + \alpha_{13} RAtt + \alpha_{14} AccIr + \alpha_{15} Accr + \alpha_{16} Exp + \alpha_{17} TrCoop$……..……..…. (5)

The coefficients of the variables in the probit model are not straightforward in interpretation; we calculated and presented the marginal effects of the variables to facilitate the explanation in the following form.

Marginal Effect (mfx), $mfx = \frac{\partial Pr(S*=1|x)}{\partial X}$ ……...…...……...……. (6)

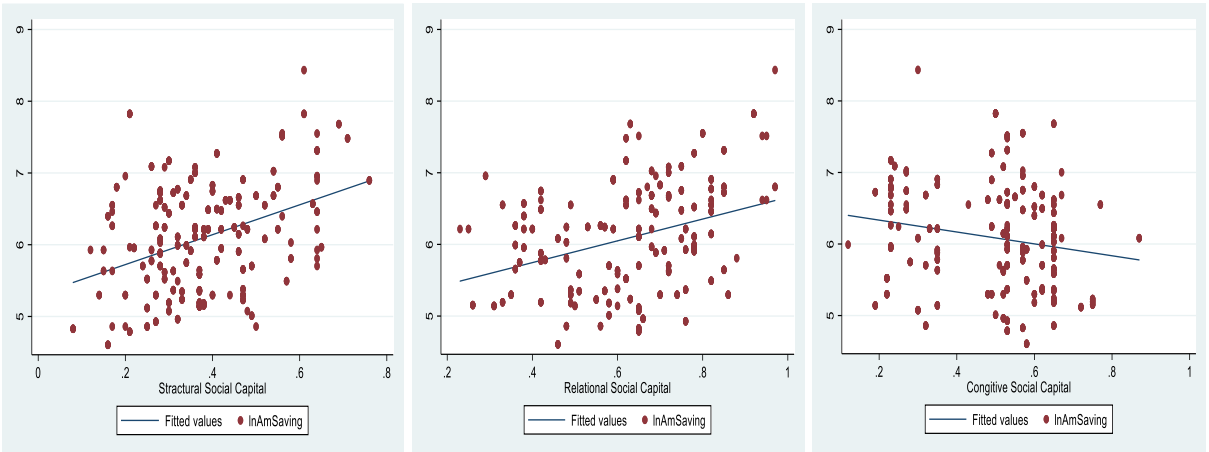
Where social capital is denoted using the three dimensions of social capital as structural, cognitive, and relational respectively; member voluntary saving participation is denoted as VolSaving; the members Saving behaviour in terms of the amount of saving is represented by lnAmSaving; which is the logarithm of Amount of Saving,lnPCInc is the logarithm of per capita Income, Education(Educ), Health Status(HSt), Physical Capital(PCa), Family Labor(FLabor), Religious Affiliation(Raff), Religious Attendance(RAtt), Accepting Interest Payment(AccIr), Access to Credit(Accr), Experience(Exp), Cooperatives Training(TrCoop) and α_i and β_i denote the parameters.

4. Results and Discussions

Saving is one of the most essential elements of household economic activities. It indicates the standard of living and provides resources for households, as well as financial and non-financial investments in the country's economy at large. Savings provide safety in stochastic environments by reducing dependency on income, earning interest, serving as an instrument for wealth accumulation for households, and reducing inflationary pressure by influencing household consumption. The effects of social capital on members' saving behavior were discussed using descriptive and inferential statistics. The analysis examined members' saving behavior, dimensions of social capital, per capita income, age, education, health status, physical capital, family labor, religious affiliation, religious attendance, attitudes towards interest payments, access to credit, experience, and involvement in cooperatives training of members' primary cooperatives' chairpersons. The study results are presented as follows.

4.1. Descriptive Statistics

The two-way scatter relationship between the amount of savings and social capital dimensions in **Figure 1** below shows a positive relationship between saving deposits, structural social capital, and relational networks. However, the relationship between savings and cognitive social capital is negative. This implies that trust and cooperation between financial cooperatives and members improve saving behaviour, whereas a lack of understanding of their mission and goals discourages saving behaviour. Hence, financial cooperatives and other stakeholders should focus on strengthening social capital-building processes to promote economic development at the household level and in the economy at large.



Source: Research results, 2023

Figure 1: Two-way scatter relationship Graphs of Saving Amount and Social Capital Dimensions.

4.2. Econometric Results of Social Capital and Amount of Savings

We conducted a model specification test, beginning with the multicollinearity test using the Variance Inflation Factor (VIF). This test assesses the presence of multiple linear relationships among the regressors in the model. The results indicated no issue with multicollinearity, as the mean VIF was 7.53, which is below the threshold of 10. According to the rule of thumb, a VIF value exceeding 10 suggests a multicollinearity concern. However, our results demonstrate no serious multicollinearity, implying a low correlation among the explanatory variables in the multiple regression model.

The second test was for heteroscedasticity. We employed the Breusch-Pagan test to check for its presence. The Chi-square test statistic was 2.31, with a corresponding p-value of 0.1289. Since this p-value is greater than 0.05, we cannot reject the null hypothesis and, therefore, conclude that there is no evidence of heteroscedasticity in the data. This indicates that the error terms are constant, making the Ordinary Least Squares (OLS) estimators the best linear unbiased estimators.

The econometric results in Table 1 revealed the impact of social capital on members' saving behavior in the Amhara region, analyzed using a linear regression model for the amount of savings and a probit regression model for voluntary saving participation. The multiple linear regression model specifying the relationship between the three dimensions of social capital and members' saving behavior in financial cooperatives showed that the regressors are jointly and statistically significant, as the overall F-statistic of 67.71 has a p-value of 0.000. Much of the variation is explained with an $R^2 = 0.7752$.

The results indicated that social capital significantly affects members' saving behavior. The structural and relational dimensions of social capital positively and significantly affect the amount of savings, while cognitive social capital negatively and significantly affects the amount of savings at a 1% significance level. Strong relationships based on trust and cooperation with financial cooperatives, board members, managers, and government officials build members' confidence and improve their savings.

This finding aligns with Westlund & Adam (2010), who explained that social capital maximizes cooperative members' interests. Cooperatives as networks enable problem-solving and provide an efficient flow of knowledge, information, and development activities (Mikulcaka et al., 2015). Our findings also corroborate those of Carol, Finn, and Katleen (2012), who found that membership in high-quality networks leads to higher levels of savings in formal financial institutions in rural Vietnam.

Contrarily, our findings challenge the conclusions of Mpaata, Koskei, and Saina (2021), who argue that the relationship between social impact and saving behavior is facilitated by financial literacy, not social influence. These scholars emphasized the importance of financial literacy through financial seminars, workshops, and training to nurture individuals into using appropriate saving instruments, especially in developing economies where social influence does not encourage saving behavior.

Furthermore, the peer socialization angle remains influential in an individual's savings behavior, even when parents instill positive financial behavior in their children, as financial management discussions among peers play a role (Zaihan, 2016). Social capital influences human behavior in both positive and negative ways, enabling individuals to attain collective or personal goals (Kast, Meier, & Pomeranz, 2018). However, social capital may sometimes lead to suboptimal decisions.

In terms of the impact of per capita income, a 1% increase leads to an average 28.7% increase in savings deposits. Additionally, a unit increase in physical capital, family labour, and access to credit leads to a 39.14%, 4.2%, and 54.68% increase in savings deposits, respectively.

Religious identity did not significantly affect savings, but frequent religious attendance positively affected savings by 11.79%. This aligns with Berman's (2000) explanation that congregation members benefit from broad mutual insurance networks based on charitable deeds.

On the contrary, weak health status and lack of experience reduce savings by 18.3% and 0.2%, respectively, at a 1% significance level. These findings underscore that the dimensions of social capital are more critical in influencing saving behavior than other variables in the model.

4.3. Social Capital and Members' Voluntary Saving Participation Decisions

The probit regression model in Table 1 predicted 57.38% of the sample correctly, with a log-likelihood value of -80.986454 and a goodness-of-fit chi-square value of 218.04, which is statistically significant at 1%. The model shows that eight out of sixteen explanatory variables were statistically significant.

The marginal effect prediction results show that structural and cognitive dimensions of social capital significantly affect voluntary saving participation in opposite directions: structural capital positively and cognitive capital negatively. This indicates that organizational trust positively influences voluntary saving participation at a 10% significance level, whereas a lack of cognitive social capital negatively affects participation decisions at a 1% significance level.

In terms of income and physical capital, a 1% increase affects participation in voluntary saving by 87.8% and 165.6%, respectively. Additionally, religious attendance and access to credit affect participation by 21.85% and 99.62%, respectively, at significance levels ranging from 1% to 10%.

As age increases, the probability of voluntary saving participation decreases initially but improves as members grow older, at a significance level of 1%. Physical capital had the largest coefficient, showing that it is the most important factor influencing voluntary saving participation.

Table 1: Social Capital and Members Saving Participation

	OLS Model: Amount Saving (lnAmSaving)	**Probit Model: Members' Voluntary Saving Participation(VolSaving)**	
Variable	**Coef.**	**Coef.**	**Marg. Eff.**
Structural Social capital	0.619***	1.694*	0.232*
	(0.199)	(953)	(0.137)
Relational Social Capital	0.542***	1.577	0.216
	(0.145)	(991)	(0.143)
Cognitive Social Capital	-0.502***	-2.688***	-0.368***
	(0.126)	(0.767)	(0.125)
Logarism Per Capita Income	0.287***	0.878	0.1207***
	(033)	(0.212)	(0.035)
Age	-0.012*	-0.193***	-0.0264
	(0.009)	(0.066)	(0.0.010)
Age Square	0.0001**	0.002*	0.0003*
	(0.0001)	(0.001)	(0.00011)
Education	0.011	-0.012*	-0.0016
	(0.012)	(0.078)	(0.0107)
Health Status	-0.183***	-0.355	-0.0488
	(0.043)	(0.252)	(0.035)
Physical Capital	0.391***	1.656*	0.227*
	(0.123)	(0.913)	(0.131)
Family Labor	0.042**	0.076	0.0104
	(0.021)	(0.097)	(0.0131)
Religious Affiliations	0.202	0.247	0.0337
	(0.039)	(0.214)	(0.0292)
Religious Attendance	0.118***	0.218*	0.03*
	(0.026)	(0.113)	(0.016)
Accepting Interest Payment	0.050	0.194	0.0241
	(0.062)	(0.475)	(0.052)
Access to Credit	0.547***	0.996***	0.1491***
	(0.052)	(0.331)	(0.055)
Experience in Cooperative	-0.033***	-0.063	-0.0086
	(0.0102)	(0.069)	(0.0095)
Experience Square	0.002***	0.002	0.0003
	(0.0004)	(0.003)	(0.0004)
Access to Cooperative Training	-0.0903	-0.372	-0.0572
	(0.056)	(0.28)	(0.049)
Constant	3.332	-5.796	
	(0.314)	(2.281)	
R2	**0.7752**		
Pseudo R2		**0.5738**	
Observation	**348**	**348**	**348**

Source: Regressions Model result

Notes: Probit model includes Coef= Coefficient, marg.Eff.= Marginal Effect and OLS = Ordinary least square, andRobust Standard errors in parentheses. *, **, *** on the coefficient tells significant level at 10%, 5%and 1% respectively.

5. Implications

Theoretical and empirical investigations demonstrate that social capital not only influences members' saving behavior in the Amhara Regional State but also impacts the region's long-term development. Social capital is expected to play a role in boosting saving behavior; however, before any pressure is applied, social capital must be strong, with members trusting one another and sharing a common mission and aim. Our findings suggest the following:

First, this study contributes to the existing literature and empirical findings on the impact of social capital in

strengthening financial cooperative members' confidence, collaboration, and understanding of shared objectives, thereby enhancing their saving behavior.

Second, members who experience great trust and collaboration among members, boards, and management demonstrate higher saving behavior—not only in terms of the amount saved but also in their decision to save voluntarily. Conversely, members lacking knowledge of the shared mission and objectives exhibit lower saving behavior.

Third, increasing social capital among financial cooperative members influences how trust, cooperation, and knowledge of common objectives and goals can be leveraged to boost members' participation in both the quantity saved and the decision to save voluntarily.

This study demonstrates the interconnectedness of the three elements of social capital within the context of saving behavior. It also has implications for understanding the strength of social capital in influencing members' saving behavior and how these factors may improve or worsen over time. Lastly, social capital is directly linked to savings mobilization and management. Social capital has the potential to significantly improve members' saving behavior.

Domestic saving is one of the most critical factors influencing sustainable development. The introduction of social capital can help member households improve their consumption expenditures, such as education and healthcare, escape poverty, enhance their quality of life, and increase their income, thereby contributing to sustainable development in the regional state.

6. Conclusions

The relationship between social capital and economic development is clear: trust and civic norms promote economic development by lowering transaction costs and disseminating knowledge. Economic actors with low levels of social capital face higher transaction costs, search and information costs, bargaining costs, decision costs, and more frequent contractual disputes, as well as challenges with coordination and duplication of efforts.

Financial cooperatives play a crucial role in fostering local economic development (Hakenes, Hasan, & Molyneux, 2015; Coccorese & Shaffer, 2018). The primary objective of financial cooperatives is to enhance the welfare of their stakeholders, including members, employees, customers, and the local community. This research explores the impact of social capital on the saving behavior of members of financial cooperatives in Ethiopia, focusing on the Amhara National Regional State.

Primary and secondary data were used to analyze the impact, and the results revealed that dimensions of social capital significantly affect not only members' savings amounts but also their decisions to make voluntary savings in the study area. Additionally, factors such as increases in per capita income, physical capital, religious attendance, and access to credit positively and significantly affect saving behavior. While increasing age reduces the probability of members' savings, as age doubles, it positively impacts the likelihood of savings.

Encouraging members to save is important because it helps their households recover from adverse shocks by smoothing consumption or investing in productive assets. Furthermore, encouraging savings is relevant because these savings generate returns, carry lower risks, and can be used as collateral when members need loans.

Our results suggest that financial cooperatives' social capital can play a vital role in correcting gaps in information about the benefits of saving at the community level in the Amhara Regional State. Cooperation, trust, and shared values can increase both mandatory and voluntary savings. We propose that information sharing through effective product and service delivery, frequent interactions between members and management, and member-relations management are key mechanisms to enhance trust and loyalty.

Strengthening financial cooperatives by fostering cooperation, trust, and shared goals has the potential to significantly impact poverty alleviation in the long term. These cooperatives can solve the issue of providing secure savings and low-cost credit to members, and they can also provide greater access to credit for unbanked individuals, particularly in rural areas, through linkages to microfinance institutions and conventional banks.

Therefore, it is crucial to advocate and promote the establishment and growth of well-functioning local and regional financial cooperatives, rather than merely pushing for more financialization as an end in itself, without considering inclusive prosperity in the Amhara Regional State.

7. Limitations

This study has some limitations. Although the sample size was adequate, it was restricted to financial cooperatives in the Amhara Regional State. Additionally, the findings are based on a cross-sectional research approach, excluding panel and longitudinal surveys. Future research could explore the use of panel and longitudinal research designs, involve additional regions of Ethiopia, and focus on other disadvantaged saving groups, such as women and young people.

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Reference

Acemoglu, D., & Robinson, J. A. (2001). A theory of political transitions. *American Economic Review, 91*(4), 938-963. https://doi.org/10.1257/aer.91.4.938

Acemoglu, D., & Robinson, J. (2012). *Why nations fail: The origins of power, prosperity, and poverty*. Currency. https://doi.org/10.1355/ae29-2j

Asfaw, D. M., Belete, A. A., Nigatu, A. G., & Habtie, G. M. (2023). Status and determinants of saving behavior and intensity in pastoral and agro-pastoral communities of Afar regional state, Ethiopia. *PLoS ONE, 18*(2). https://doi.org/10.1371/journal.pone.0281629

Afrobarometer. (2021). With high prevalence of lived poverty, Ethiopians rate government's economic performance as poor. Dispatch No. 426.

Akaike, H. (1973). Information theory and the maximum likelihood principle. In B. N. Petrov & F. Csaki (Eds.), *Proceedings of the 2nd International Symposium on Information Theory* (pp. 267-281). Akademiai Kiado.

Amhara Region Planning and Development Commission (ARPDC). (2019). *Amhara basic statistical data*. Bahir Dar, Ethiopia.

Agustina, M. D. P. (2021). The role of social capital in developing community-based tourism institutions in Bali. *Eurasia: Economics & Business, 2*(44), 12-30. https://doi.org/10.18551/econeurasia.2021-02.02

Ban, R., Gilligan, M. J., & Rieger, M. (2020). Self-help groups, savings, and social capital: Evidence from a field experiment in Cambodia. *Journal of Economic Behavior & Organization, 180*, 174-200. https://doi.org/10.1016/j.jebo.2020.09.029

Benson, O., Bartholomew, T., & Kazungu, I. (2013). Relationship between sources of funds and outreach in savings and credits cooperatives societies: Tanzanian case. *European Journal of Business and Management, 5*, 188-196.

Berman, E. (2000). Sect, subsidy, and sacrifice: An economist's view of ultra-Orthodox Jews. *Quarterly Journal of Economics, 115*(3), 905-953. https://doi.org/10.1162/003355300554944

Brown, S., & Taylor, K. (2016). Early influences on saving behaviour: Analysis of British panel data. *Journal of Banking & Finance, 62*, 1-14. https://doi.org/10.1016/j.jbankfin.2015.09.011

Cameron, A. C., & Trivedi, P. K. (2005). *Microeconometrics: Methods and applications*. Cambridge University Press. https://doi.org/10.1017/CBO9780511811241

Carol, N., Finn, T., & Katleen, V. D. B. (2012). Social capital, network effects and savings in rural Vietnam. UNU-WIDER, Working Paper No. 2012/39.

Coccorese, P., & Shaffer, S. (2018). Cooperative banks and local economic growth. *Centre for Applied Macroeconomic Analysis Working Paper, Number, 2018*(11). https://doi.org/10.2139/ssrn.3125909

Deaton, A. (1989). Saving in developing countries: Theory and review. *World Bank Economic Review, 3*(suppl_1), 61-96. https://doi.org/10.1093/wber/3.suppl_1.61

Ebisa, D. (2012). The effects of post-1991 era financial sector deregulations in Ethiopia: An inspirational guide for agribusiness. *Basic Research Journal of Agricultural Science and Review, 1*, 81-87.

Federal Democratic Republic Ethiopia (FDRE). (2016). Cooperative societies proclamation No. 985/2016. Addis Ababa, Ethiopia.

Fentahun, A. (2014). Impact of religion on household saving behavior: Evolution of inclusive finance in Ethiopia. In *Proceedings of the 8th Biannual Conference of AEMFI* (pp. 95-128). Hawassa, Ethiopia.

Feyissa, G. F., & Gebbisa, M. B. (2021). Choice and determinants of saving in rural households of Bale zone: The case of Agarfa district, Oromia, South East Ethiopia. *Open Access Library Journal, 8*, e7167. https://doi.org/10.4236/oalib.1107167

Garc´ıa B. (2013). Implementation of a double-hurdle model, *The Stata Journal*, 13, Number 4, pp. 776–794.

Guinnane, T. W. (2001). Cooperatives as information machines: German rural credit cooperatives, 1883-1914. *Journal of Economic History, 61*, 366-389.

Gurun, A., & Booth, G. G. (2024). The importance of trust to financial markets and institutions: Exploring the current literature. *Theoretical Economics Letters, 14*, 27-40. https://doi.org/10.4236/tel.2024.141003

Habitamu Alemayehu, Bamlaku Alamirew. (2021). Household Savings Decision in Debre Markos Town, Ethiopia: An Application of Double Hurdle Model. *International Journal of Scientific & Engineering Research*, *12*(10).

Hakenes, H., Hasan, I., Molyneux, P., & Xie, R. (2015). Small banks and local economic development. *Review of Finance, 19*(2), 653-683. https://doi.org/10.1093/rof/rfu003

Halefom, Y. (2015). Determinants of household saving in Gedeo zone, Southern Ethiopia. *Journal of Economics and Sustainable Development, 6*(7).

Hogeland, J. A. (2006). The economic culture of U.S. agricultural cooperatives. *Culture & Agriculture, 28*(2), 67-79. https://doi.org/10.1525/cag.2006.28.2.67

Homan, A. M. (2016). The influence of parental financial teaching on saving and borrowing behavior (Master's thesis). University of Groningen.

Kast, F., Meier, S., & Pomeranz, D. (2018). Saving more in groups: Field experimental evidence from Chile. *Journal of Development Economics, 133*, 275-294. https://doi.org/10.1016/j.jdeveco.2018.01.006

Kondo, T., Orbeta, A., Jr., Dingcong, C., & Infantado, C. (2007). *Impact of microfinance on rural households in the Philippines: A case study from the special evaluation study on the effects of microfinance operations on poor households and the status of women*. Asian Development Bank.

Kothari, C. (2004). *Research methodology: Methods and techniques* (2nd ed.). New Delhi: New Age International Publishers.

Levy, G., & Razin, R. (2012). Religious beliefs, religious participation, and cooperation. *American Economic Journal: Microeconomics, 4*(3), 121-151. https://doi.org/10.1257/mic.4.3.121

Lewis, W. A. (1954). Economic development with unlimited supplies of labor. *Manchester School of Economic and Social Studies, 22*(2), 139-191. https://doi.org/10.1111/j.1467-9957.1954.tb00021.x

Liang, Q., & Hendrikse, G. (2013). Core and common members in the genesis of farmer cooperatives in China. *Managerial and Decision Economics, 34*(3-5), 117-361. https://doi.org/10.1002/mde.2587

Lu H., Tong P., Zhu R. (2020). Does Internet use affect netizens' trust in government? Empirical evidence from China. *Soc Indic Res*. 149, 167–185. 10.1007/s11205-019-02247-0

Michalopoulos, S., & Papaioannou, E. (2013). Pre-colonial ethnic institutions and contemporary African development. *Econometrica, 81*(1). https://doi.org/10.3982/ECTA9613

Mikulcaka, F., Haider, J. L., Abson, D. J., Newig, J., & Fischer, J. (2015). Applying a capital approach to understand rural development traps: A case study from post-socialist Romania. *Land Use Policy, 43*, 248-258. https://doi.org/10.1016/j.landusepol.2014.10.024

Mpaata, E., Koskei, N., & Saina, E. (2021). Social influence and saving behavior among small business owners in Uganda: The mediating role of financial literacy. *Journal of Economics and Financial Analysis, 5*(1), 17-41.

Mpaata, E., Koskei, N., & Saina, E. (2020). Social influence and savings behavior: Evidence from a developing country context. *SEISENSE Journal of Management, 3*(4), 56-67. https://doi.org/10.33215/sjom.v3i4.396

Murray, C. (2004). Social capital and cooperation in central and eastern Europe - A theoretical perspective. *ICAR Discussion Paper 0905*.

Narayan, D. (2002). *Empowerment and poverty reduction: A sourcebook*. World Bank. https://doi.org/10.1596/0-8213-5166-4

National Bank of Ethiopia (NBE). (2020). *Ethiopia: Macroeconomic and social indicators, annual report 2019-2020*. Addis Ababa, Ethiopia.

North, D. C. (1990). *Institutions, institutional change and economic performance*. Cambridge University Press. https://doi.org/10.1017/CBO9780511808678

Novkovic, S. (2013). Reflections on the international symposium of co-operative governance. *Journal of Co-operative Organization and Management, 1*, 93-95. https://doi.org/10.1016/j.jcom.2013.10.001

OECD/PSI. (2020). *Rural development strategy review of Ethiopia: Reaping the benefits of urbanization*. OECD Development Pathways. Paris: OECD Publishing.

Okunmadewa, F. Y., Yusuf, S. A., & Omonona, B. T. (2005). *Social capital and poverty reduction in Nigeria*. Revised report submitted to Africa Economic Research Consortium (AERC), Nairobi, Kenya.

Putnam, R. D. (1995). Bowling alone: America's declining social capital. *Journal of Democracy, 6*(1), 65-78. https://doi.org/10.1353/jod.1995.0002

Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community*. Simon & Schuster. https://doi.org/10.1145/358916.361990

Shao, K. (2014). The analysis on the behaviors of member participation in farmer specialized cooperatives (Doctoral dissertation). Zhejiang University.

Shimeles, B. A. (2021). The role of social capital on household saving mobilization in Ethiopia (Master's thesis). St. Mary's University, Ethiopia.

Sinha, P., Viswanathan, B., & Narayanan, B. (2015). Financial market and growth: Evidence from post-reforms India. *Cogent Economics & Finance, 3*(1), 1-9. https://doi.org/10.1080/23322039.2015.1057417

Solomon, A. D., Tekeste, B., Dereje, G., & Hossein, A. (2017). Financial product development and members'

voluntary saving behavior in saving and credit cooperatives in Tigray: A case study in Endamohoni Woreda. *Cogent Economics & Finance, 5*(1), 1279864. https://doi.org/10.1080/23322039.2017.1279864

Stiglitz, J. E. (2012). *The price of inequality*. Norton.

Todaro, M., & Smith, P. (2012). *Economic development* (11th ed.). Addison-Wesley.

Tu, Q., Bulte, E., & Tan, S. (2011). Religiosity and economic performance: Micro-econometric evidence from Tibetan area. *China Economic Review, 22*(1), 55-63. https://doi.org/10.1016/j.chieco.2010.09.008

Verbeek, M. (2004). *A guide to modern econometrics* (2nd ed.). John Wiley & Sons.

Wango, N. C. (2023). Exploratory on the social capital and private saving theories for integration of voluntary contribution to pension scheme in Tanzania. *European Journal of Development Studies, 3*(3), 156-162. https://doi.org/10.24018/ejdevelop.2023.3.3.283

Westlund, H., & Adam, F. (2010). Social capital and economic performance: A meta-analysis of 65 studies. *European Planning Studies, 18*(6), 893-919. https://doi.org/10.1080/09654311003701431

Wooldridge, J. M. (2010). *Econometric analysis of cross-section and panel data*. MIT Press.

Yamori, N. (2015). Japanese SMEs and the credit guarantee system after the global financial crisis. *Cogent Economics & Finance, 3*(1), 1-18. https://doi.org/10.1080/23322039.2014.1002600

Yusuf, S. A. (2008). Social capital and household welfare in Kwara State, Nigeria. *Journal of Human Ecology, 23*(3), 219-229. https://doi.org/10.1080/09709274.2008.11906074

Zaihan, N. D. (2016). Determinants of saving behaviour among Generation Y students in Universiti Utara Malaysia (PhD dissertation). Universiti Utara Malaysia.

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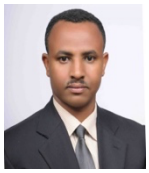

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