

Empirical Analysis of the Performance of AAU Workers/ Farmers Multi-Purpose Co-operative Society in Ekpoma, Edo State

¹Mamudu, Zebedee Udo; ² Prof. Okosodo, Lawrence A

Department of Economics
Faculty of Social Sciences,
Ambrose Alli University, Ekpoma, Edo State, Nigeria

Corresponding Author: Mamudu, Zebedee Udo

Abstract

This paper empirically examined the performance of AAU Workers/Farmers Multi-Purpose Co-operative Society in Ekpoma with the application of the Phillips-Perron test statistics, Johansen Cointegration techniques and the Error Correction mechanism on a multiple regression framework. Annual time series data from 2004 to 2019 on Net Profit after Charges (NPC); Thrift, Savings and Loans interest (TSL); Business Centre/ Hire of Bus (BUS); Trading/Commodities (TCE); Electronics, Inverter and Tobita (EIT); Restaurant (RES); Petrol Station (PSE); Banner Gas (BNG) used in this work were obtained mainly from secondary sources and in particular from AAU Workers/Farmers Multi-Purpose Co-operative Annual Reports and Accounts (various issues). The Phillips-Perron test statistics results showed that all the variables (NPC, TSL, BUS, TCE, EIT, RES, PSE and BNG) were stationary at first difference. In other words, they were found to be stationary at order one $I(1)$, while the Johansen unrestricted cointegration rank test results showed the existence of a longrun relationship between NPC, TSL, BUS, TCE, EIT, RES, PSE and BNG, as both Trace and Max-Eigen statistics revealed three cointegrating equations respectively. The empirical results from the short run error correction model showed that the entire explanatory variables in AAU Workers/Farmers Multi-Purpose Co-operative Society met their expected signs except Business Centre/ Hire of Bus (BUS) and Banner Gas (BNG). The results also revealed that Business Centre/ Hire of Bus; Trading/Commodities; Electronics, Inverter and Tobita; Restaurant and Petrol Station had direct and significant impact on Net Profit after Charges on AAU Workers/Farmers Multi-Purpose Co-operative. This means that 1 per cent increase in TSL, TCE, EIT, RES and PSE increases Net Profit after Charges on AAU Workers/Farmers Multi-Purpose Co-operative Society in Ekpoma by 0.649904, 0.353630, 0.586366, 0.313426 and 0.630798 per cent respectively. The error correction mechanism (ECM) results which was -0.795252 was statistically significant and had the appropriate sign. It suggested however, that there was a high adjustment process in the practice of the AAU Workers/Farmers Multi-Purpose Co-operative in Ekpoma, since the speed of adjustment is 79.5 per cent approximately. Finally, the Diagnostic and stability tests confirmed the robustness of the model over time. The study therefore, recommended that the Cooperators should make policies that will attract more Thrift, Savings and Loans into the Cooperative Society to further boost Net Profit after Charges on AAU Workers/Farmers Multi-Purpose Co-operative Society in Ekpoma. Also, the executive committee members of the Cooperative Society should encourage members to increase their savings with the Cooperative society regularly. This will significantly influence the performance of Business Centre/ Hire of Bus and trading of commodities in the Cooperative Society.

Keywords: Cooperative, Cooperator, Investment, Thrift, Savings and Loans

INTRODUCTION

Ambrose Alli University (AAU) is a state owned university established in 1981 in Ekpoma, Edo State, Nigeria by Professor Ambrose Folorunsho Alli the then governor of Bendel State (now Edo and Delta States). Ambrose Alli University was firstly named Bendel State University before it was changed to Edo State University and later changed to its present name in commemoration of Professor Ambrose Folorunsho Alli. The first Vice Chancellors of Ambrose Alli University from the year of establishment was Prof. M.I. Ogbiede

(1981-1982) Ag.VC.; followed by Prof. V.E. Aimakahu (1982-1983) Ag.VC.; Prof. D.O. Aihe (1983-1984) Ag.VC.; Prof. P.A. Kuale (1985-1988) VC.; Dr A. Maduemezia (1989-1992) VC.; Prof. J.E.A. Osemeikhian (1992-1995) VC.; Prof. (Mrs) A. Udubo (1997-1999) Ag.VC.; Prof. D.E. Agbonlahor (2000-2004) VC.; Prof. D.O. Aigbomian (2004-2009) VC.; Prof. E.F. Alufokhai (2009) Ag.VC.; Prof. S.O. Uniamikogbo (2009-2011) VC.; Prof. (Mrs) C.A. Agbebaku (2011-2016) VC.; and the current Vice

Chancellor is Prof. A.I. Onimawo (2016-Date) [1]; [47].

Cooperative society is the voluntary coming together of individuals with similar interest with the aim of achieving common economic or social needs of members[35]. The International cooperative Alliance defined cooperative society as an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically controlled enterprise [32].

The establishment of the AAU Workers/Farmers Multi-Purpose Co-operative Society Ltd came first into Ambrose Alli University (AAU) on the 31st day of July, 1990 with a registration number 01494. AAU Workers/Farmers Multi-Purpose Co-operative Society was founded or pioneered by 7 members namely Dr. Unomah, J.I; Dr. Omogbai, B.E.; Mr. Agbi, D.O.; Mr. Okoiruele, A.I.; Prof. Ukala, S.C.; Mr. Aimuan, C. and Mr. Ehimemem, D.S. The first president of the AAU Workers/Farmers Multi-Purpose Co-operative Society was Dr. Unomah, J.I. [6].

Membership of the AAU Workers/Farmers Multi-Purpose Co-operative Society is voluntary and opened to staff members of the Ambrose Alli University[3]; [4]. It comprises of academics and non-academics staff (both junior and senior staff) of the university[5]. The membership strength of the cooperative society increased from the 7 pioneer members in 1990 to 1,378 members in 2009[7]. The AAU Workers/Farmers Multi-Purpose Co-operative Society currently have 2,610 membership strength and every member has a cooperative identity card that contains his/her membership information. The information contained in the membership card includes: name, department, cooperative number, computer number and oracle number. The cooperative identity card is given to members to easy identification, smooth transactions and transparency during members' cooperative transactions. The principal activities of the Co-operative society is to engage in co-operative activities such as trading, thrift savings and loans to registered members [17].

The AAU Workers/Farmers Multi-Purpose Co-operative Society is managed by executive committee headed by the president[9]. The election to the office of the executive committee is democratic and open to members on 2 years in the first instance and subsequently single tenour with the understanding of the rotation of the office of the president for another two years and treasurer from academics to non-academics staff respectively[13]. The names of all the past presidents of the cooperative society who diligently piloted the affairs of the cooperative society

includes: Dr. Unomah, J.I.; Prof. Ukala, S.C.; Mr. Ehimemem, D.S.; Mr. Ezimokhai, S.O.; Engr. Ohilebo, G.A; Mr. Idialu J.U.; Mr. Ufuah, P.E.; Mr. Akhidue, C.I.; Prof. Ekpu A.O.O.; Mr. Ogbejiele, A.E. and the current president of the cooperative society is Prof. Okosodo, L.A.[6]; [8]; [10]; [13];[16].

There is a low level of awareness of the importance of cooperative societies in Nigerian Higher Institutions. Some have flourishing and vibrant co-operative societies with active participation of members while others do not have for reasons best known to them. Despite some challenges faced by most of the cooperative societies in Nigeria, Aigbomian[19] revealed that many of the cooperators now owned houses and that management of the same Universities at one time or the other relied on its cooperative for some financial needs. Ufuah[50] in corroboration with the above, emphasized that in attempt to assist its members, the Cooperative Society in his University had granted loans through the loan scheme, established business centres, trading/commodity stores, fast food restaurant, as well as assisted cooperators to acquire land to build their respective houses [7].

LITERATURE REVIEW

Conceptual Issues

Cooperative has been given different conceptual definition by various authors. The term cooperative is derived from the Latin word co and opera, where the word co means with and opera means to work, thus cooperative means working together. So those who want to work together with some common economic objective can form a society, which is termed as cooperative society. It is a voluntary association of persons who work together to promote their economic interest[43].

Okechukwu[41] defined cooperative as incorporated association in which persons join (come) together on their own freewill to obtain some economic service which would either be too difficult, or too costly for each to obtain by working alone. Ebonyi and Taiwo[23] defined cooperative as a form of enterprise or organizational arrangement which fosters cooperation in economic activities e.g. production, distribution, marketing, etc. aimed at enhancing mutual and self-help to promote the economic interest of the participating members. According to Ward [51] cooperative is a movement of factory workers who unite on the basis of their mutual interest in reducing living expenses and benefiting from the ownership and control of production facilities and of accommodations shared by all.

The International Labour Organization (ILO) defines cooperative societies as an association of persons usually of limited means who have joined together to

achieve common economic goals through the formation of democratically controlled business organization, making equitable contribution to the capital required and accepting a fair share of risk and benefit of undertaken [31]. Helms [30] also defined cooperative society as a voluntary association of persons having mutual ownership in providing themselves with some needed services on nonprofit basis usually organized as a legal entity to accomplish objective through joint participation of its members. He gave a further clarification that co-operative society is an association of persons who have voluntarily joined together to have a common end through the formation of a democratically controlled enterprise, making equitable contribution to the capital required and accepting a fair share of the risk and benefit of the undertaking in which the member activity participate.

Cooperative society is an organization of people who come together voluntarily for the purpose of contributing their wealth in terms of cash and ideas to solve their socio-economic and cultural problems accepting to bear the risk together and enjoying the proceeds by themselves [51]. Okolie [42] made a clarification that cooperative is a free and voluntary business organization jointly owned by the people with identical economic needs and having equal voices in its management and deriving proportionate benefit and services from it. Okoli [43] see cooperative as a voluntarily association of persons having mutual ownership in providing themselves some needed service on non-profit basis usually organized as a legal entity to accomplish objectives through joint participation of its members. As it is, the problems faced by youth in Nigeria today are complex.

Momoh [39] noted that there are several types and forms of co-operative society, however five are commonly found in Edo State. They are: (a) Producers' Co-operatives: These include farmers' traders' and craft men's co-operatives, which have helped in the areas of agricultural produce and marketing especially in export crops etc. (b) Consumers' Co-operatives: These are organized by consumers and are engaged in retail trade such as supermarkets, restaurants, filling stations, etc. Examples are workers' productive and labour contracting cooperatives. However, Yahaya [53] opines that these types of cooperatives have not been very successful because of the agrarian nature of the country. (c) Thrift and Loan Co-operatives: These are the most common in the state. Members of these societies are usually from low income group and it includes semi-skilled and unskilled workmen, petty traders, etc. They encourage thrift and savings among members. Funds accumulated are given to members as loan at low interest rates for trade and investment. This is also known as *Osusu* and *Agio* in some Edo dialects. (d) Thrift and Savings Co-operatives: These are

similar to the thrift and loan cooperatives. The difference is that certain amount is collected from members on 'pay as you can' basis and then given to members in rotation weekly, or monthly. It is what 'A' pays to 'B' that 'B' pays back when it is 'A's' turn to receive and (e) Craft men Co-operatives: Members of these societies are usually people within the same trade and craft. Resources are pooled together to obtain the necessary implement, equipment, and raw materials for the wellbeing of the workers.

The types of cooperative societies mentioned above operates as single-purpose co-operatives. However, most of the cooperative societies available in our Higher Institutions in Edo state includes AAU Workers/Farmers Multi-purpose Co-operative Society Limited, Ekpoma; ACADA AAU Ekpoma Multi-purpose Co-operative Society, Ekpoma; ISTH Multi-purpose Cooperative Society Limited, Irrua; Auchu Polytechnic Multipurpose Co-operative Society, Auchu; Uniben SSA Multipurpose Co-operative Society, Benin City etc. [36].

Multi-purpose cooperative society is the type that is formed for many purposes. It performs several functions. In other words, it is legally qualified to perform more than one function as contrasted with the single purpose co-operative society. Thus, a multi-purpose co-operative society may combine marketing, consumer, supply, agriculture, thrift and credit operation together [21]. Ebonyi and Jumbo [23] reported that multi-purpose co-operative societies are those formed for many purposes as well as perform several functions. They are legally qualified to perform more than one function as contrasted with the single purpose cooperative societies. Thus, Berko (2001) noted that they can combine marketing, consumer, supply, agriculture, thrift and credit operations together.

The benefits of the AAU Workers/Farmers Multi-purpose Co-operative Society to her members are in conformity with the benefits of cooperatives reported by Okoli [43] which are: a) Encouragement of Savings:- the cooperative society encourages its members to save their money; b) Democratic in Nature:- AAU Workers/Farmers Multi-purpose Co-operative Society members have equal rights to say how the society should be organized. Every member has the rights to vote and be voted for, and each member has one voting right; c) Goods are sold at friendly prices:- AAU Workers/Farmers Multi-purpose Co-operative Society buy goods directly from the producers or companies and in turn resell to her members at low prices that are more friendly than the conventional market prices; d) The cooperative prevent price fluctuation:- this is as a result of the fact that the main motive of the cooperative is not to make profit but to promote the welfare of her members; e) Education of

members: the cooperative educates her members on the availability of goods, distributions channel, buying and selling rates of goods and services rendered; f) Members received dividends:- at the end of a given accounting period, usually one year. Members of the AAU Workers/Farmers Multi-purpose Co-operative Society are paid dividends calculated on the basis of the capital contributed and total purchases made from the society; g) Encourages inter-personal relationship:- AAU Workers/Farmers Multi-purpose Co-operative Society has established brotherly, sisterly, friendly etc., relationship among members of co-operative society; h) The Cooperative encourages economic development:- this is because; the activities of AAU Farmers Multi-purpose Co-operative Society encourages massive investment, savings, loan facilities, acquisition of properties, distribution and consumption. I) Increase in standard of living:- AAU Workers/Farmers Multi-purpose Co-operative Society increase her members standard of living as a result, its make goods available to members at reduced rates, encourage them to save, give the needy ones loans with little interest etc.

McCarthy [38] added the following as several benefits accruable to a multi-purpose co-operative society: a) reduction in cost per unit produced as the association costs are reduced by spreading them over several activities; b) increment in the viability of the activities of the co-operative societies; c) Co-operative potential are in a given area not splinted but concentrated in one society; d) the risk of operation is spread over several activities; e) it promotes better trained management and staff to increase revenue from several activities of the society; f) easy access to credit facilities since the society is big and acceptable to any financial institution; g) reduced burden on the part of members; h) members contributions are limited to only the co-operative society.

Cooperative society have numerous key competitive advantages over other types of organization in meeting and satisfying human needs. Briscoe and Ward [24] listed these competitive advantages as follows: a) the different varieties of cooperatives earlier mentioned empower groups or stakeholders often marginalized by big companies; b) they help build social capital and a vigorous community life, by developing opportunities for significant decision-making and effective action at the local level; c) they provide opportunities for mutual aid and cost effective service provision tailored precisely to people's needs, d) they encourage local and individual self-reliance and thereby offer significant alternatives to globalised, investor-driven businesses; e) they lead to self-conscious redesigning of organisations around users' needs; f) they have a positive impact on the environment, by placing less emphasis on strategies such as short-term profit

maximization; g) they encourage sustainable development by helping communities build a better life from their own local resources; h) all over the world, cooperative have often proved to be extremely efficient and cost effective in circumstances where other forms of business find it hard to survive.

Despite the numerous benefits of multi-purpose co-operative, Amahalu[21] and Erhurun[28] reported some drawbacks or disadvantages associated with multi-purpose co-operative society: a) the burden on the part of management is heavier unlike the management of a single purpose co-operative society. Thus proper control and supervision of the society may be difficult as a result of increased activities; b) initial capital may be higher when compared with a single purpose co-operative society; This might lead to apathy on the side of the members; c) inadequate/ lack of proper book-keeping system by the workers of the cooperatives. This is a major drawback because several activities in the society requires several accounting books to be maintained and kept properly; d) conflict of interest among cooperators and management of the cooperative; e) co-operative effect are shared by many members.

Some of the challenges and constraints identified to bedevil cooperative societies in Nigerian higher institutions are not too different from those enumerated by Chilokwu[26] which include shortage of skilled personnel, inadequate training, low turnout of trained cooperators, undue government's influence, faulty credit system, lack of good accounting and record keeping system, corruption, competition from other private sector enterprises, inadequate members' loyalty, etc. Ogbomo[40] added that there exist peculiar problems faced by cooperative societies in institutions of higher learning such as strike actions occasioned by industrial unrest, unstable secretariats for operation, unsuitable remittance of check-off dues by the parent institution, diversion of cooperative funds by cooperative staff, take-off strength and competence, erratic power supply, problems associated with recovery of debts, indiscriminate guarantorship, among others.

THEORETICAL LITERATURE

Theory of Collectivism

Collectivism is the opposite of capitalism or free enterprise, in which the means of production are owned by private individuals and production is primarily for sale and distribution is determined by free trade and considerations of personal profit. Collectivism arose from the social reformers' utopia idea that the best human characteristics are usually developed by cooperation, in place of competition; by services, instead of private or individual accumulation of capital, otherwise known as individualism. It is a theory

based on the principles of universality, fraternity, democracy, liberty, honesty, fairness, equity, unity, justice and self-help [48].

This is where cooperative is a system of economic action and business enterprise, characterized by the absence of the profit motive and involving, as its primary function, the distribution of goods and services, come in. Traditionally, it is a movement of consumers who unite on the basis of their mutual interest in reducing living expenses and benefiting from the ownership and control of production facilities and of accommodations shared by all. It involves a kind of communal Living, which is the voluntary sharing of a way of life by a small group of people who believe that they can live better together than they can alone. In a commune, the welfare of the group is more important than the comfort of the individual. Communal groups sometimes strive to build durable institutions that will maintain utopian values. Utopian communities are based on the principles that people can achieve an ideal society by living and working together [49].

According to Woodin[52] cooperative is devoid of egoism, attitude that one's own interests are of greater importance than any other consideration or thing, including the group's objectives and interest. Cooperative societies, owned and controlled by the people who use their services represent a radically different way of running the businesses of the world, a strategy that is engaging the active commitment and creativity of more and more people world-wide. Briscoe and Ward [25] see cooperative as an approach to meeting our needs that gives the ordinary people the chance to get involved in shaping the world they live in.

Theory of Democracy

The principal objective of this theory is to make co-operative an easy and profitable organization in which their aims and objectives are achieved. The theory provides at least some of the materials required to enable us to make a realistic assessment of decisionmaking in retail co-operatives. An appraisals, however requires more than facts. If we desire to make some judgment about how democratic co-operatives really are, we need first of all a clear conception of the meaning of the term Democracy. Although there is no agreed definition of democracy, even though a cursory study of the uses of the term by modern writers and politicians shows that there is no agreed meaning. Some equate it with the rule of the majority, others emphasis the importance of protecting the rights of the minority. Some regard it as a system, which maintains certain valued institution, such as freedom of speech and association, while others said a way, which totalitarian democracy[33].

Theory of democracy in Co-operative could be view as the democratically control in the co-operative set-up, that is, democracy within co-operatives. The concrete elements in a co-operative democracy may of course, be different from those in a state democracy. For example, in a cooperative, the members take the place of the citizens and the Board of Directors take the place of the Government of the state. But these substitutions do not involve a change in the meaning of democracy. And any conclusions, which hold good democracy within the states, will apply equally well to democracy within cooperative societies[33].

EMPIRICAL LITERATURE

Several empirical studies have been carried out on cooperative societies in Nigeria. These studies concluded on their findings that cooperative activities have contributed significantly in financing members' investment in Nigeria[18]; [22]; [29];[37]; [45];[46]. In a study carried out by Alufohai[20] examined the sustainability rate of co-operatives and NGOs in farm credit delivery in Edo and Delta states in Nigeria. The subsidy Dependence Indices (SDI) and the capital formation rate were determined using both primary and secondary data obtained from 80 and 20 purposely selected cooperatives and NGOs respectively, based on their involvement in farm credit delivery using descriptive and quantitative statistics for analysis and the results showed low capital formation rate of 0.1815 and 0.123 for cooperatives and NGOs respectively. Cooperatives had zero SDI having no subsidies throughout the period while NGOs had an SDI of 0.7642 which is considered too high for them to sustain the credit delivery function on the withdrawal of subsidies. Though with low loan volumes, the study showed cooperatives more likely to sustain the credit delivery function than the NGOs, but they may need to improve their capital formation rate.

lawal[34] assessed how cooperatives have contributed to increasing selling and marketing agricultural development in Ojo Local Government Area of Lagos State, Nigeria, it was discovered among other things that cooperatives assisted in the provision of basic amenities and social services in this area.

Mammud[35] analyzed the performance of Multi-purpose Cooperative societies in higher institutions in Edo State, Nigeria using the Newton-Raphson Interactive autoregressive method and the results revealed that tradable commodity (TCE), restaurant (RESE), electronics (ELE) and transport line (TPE) had statistical and economic significance in explaining the performance of the co-operative society in higher institutions in Edo State. He concluded that loan (LNE) advanced to members had a direct impact on the cooperative surplus while petrol Station (PSE) had negative effect on the surplus base of the society. He

recommended that staff of higher institutions should be encouraged by the benefits accruing to members of cooperatives, to form, and belong to co-operative societies with active participation of members, while managers need to put in place effective loan recovery system by ensuring that members are well guaranteed before loans are advanced, as problem of loan recovering was found to be militating against the growth and sustainability of the co-operatives societies.

Kareem, Arigbabu, Akintaro and Badmus[33] examined the impact of co-operatives societies on capital formation using a case study of Temidere-cooperative and Thrift- societies, Ijebu-ode, Ogun state, with the objectives to determine the extent cooperatives have benefited members in financing their investments using a non-parametric method of analysis which involved Chi-Square method, descriptive statistics and correlation analysis. The study revealed that the total amount deposited enhances the capital available to cooperators while credit services increased co-operators capital formation and thereby reduces poverty rate in Nigeria. They recommended that the government should assist co-operative societies to improve their capital base through substantial allocation of money to the co-operative societies like the other sectors of the economy.

Mande and Lawal[37] reported the transformation of cooperative marketing societies and the shortcomings inherent in the cooperative marketing operations, management which dampen their achievement and potentials to achieve sustainable economic development in Nigeria. They advocated for cooperative marketing Board/Agency, improved returns on shares, democratic and transparent leadership for cooperative societies to be able to impact significantly on the society for sustainable economic growth and development in Nigeria. Although cooperative societies in Nigeria have impacted significantly on encouraging commercial activities, savings mobilization, communal development and contributing generally to economic growth.

Onah[46] studied the Performance of Farmers' Multipurpose Cooperative Societies (FMCS) in Enugu North Agricultural zone of Enugu State, Nigeria using analytical techniques involving both descriptive and inferential statistics. The multinomial logit regression analysis showed that cooperative years of existence (i.e. cooperative age) and years of formal education of the chairmen had positive and significant relationship with good/high performance at ($p < 0.001$) and ($p < 0.05$) respectively, while Government assistance had negative and significant relationship with poor/low performance of the FMCS at ($p < 0.05$). He concluded that any assistance in form of training and other support from government and NGOs should be based on the

issue of years of existence of the FMCS in the study area.

Gomina[29] appraised the impact analysis of savings and credit cooperative societies in combating poverty among crop farmers in three Local Government Areas of Niger State, Nigeria using Foster-Greer-Thorbecke indices, double difference estimators, paired test and multiple regression techniques. The results from multiple regression analysis revealed that household size, farm income, non-farm income, educational level and interest rate charged on credit were the significant factors that influence the level of participation in SACCOS at 1% and 10% levels of significance respectively while 39% of the beneficiaries and non-beneficiaries ranked high cost of farm inputs such as fertilizer and agrochemical as the foremost constraints. He therefore recommended that the Savings and credit cooperative societies should link –up the farmers with sources of quality input for bulk purchase as these will enable the groups to buy inputs at factory cost thereby helping to reduce cost of production.

Anigbogu, Taiwo and Nwachukwu[22] assessed the performance of farmer's multipurpose cooperative societies (FMCSs) in Benue State of Nigeria. Specifically the study evaluated the capacity of FMCS in delivery effective marketing services to its members and ascertains the marketing functions performed by FMCS towards effective marketing services to farmers (members) in Benue state. Their findings revealed that FMCS performed various functions that facilitate marketing of their members' farm produce as most of these marketing functions are performed to a great extent, but advertising and awareness campaign as well as market survey and market research are not properly delivered as part of marketing functions. They concluded by recommending that the government should endeavor to partner with FMCS by providing them with expertise and supply them with productive resources.

Ademu, Aduku, Elesho and Nweke[18] examined the contributions of cooperative societies to economic development in Kogi State, Nigeria and the findings of the study revealed that cooperative societies have been faced with the problem of inadequate financing to loan and equipping their members. They also revealed that the major setbacks in establishing and running co-operative societies are lack of appropriate leadership and suitable management control. The study recommended that cooperative societies in Nigeria should make optimum use of all resources and strive continuously to enhance productivity of resources with highest efficiency while providing services to members.

Okoli[43] centered on the assessment of the contribution of cooperative societies in the

development of the youth in Dunukofia Local Government Area of Anambra State Nigeria and the study revealed that there is a positive relationship between the effect of the activities of the cooperative societies and youth development. It was also revealed that the society provided limited loans and savings and thereby recommended that members should participate and be more active for a stronger and stable society, while there should be judicious use of funds to strengthen the financial level of the society.

Olumese and Onemolease[45] conducted a research on the analysis of agricultural cooperative society and economic development in Ovia South West communities of Edo State, Nigeria using descriptive statistics such as frequency tables, percentages, mean dispersion and standard deviation for analysis. The result showed that the mean ($y=3.71$) of respondents agreed that cooperative society had contributed meaningfully to agricultural development, while a mean ($y=3.43$) of respondents agreed that cooperative society created opportunities to job seekers in agricultural enterprises. They concluded that cooperatives should undergo regular trainings and workshops on management and administration of cooperatives to be able to contribute positively to economic and agricultural development, while regular changes of the executive officers of the cooperatives will help to solve the problem of incompetent leadership after annual general meetings on three years tenure.

Performance Assessment on AAU Workers/Farmers Multi-Purpose Cooperative Society

The performance of AAU Workers/Farmers Multi-Purpose Cooperative society has been enormous and satisfactory to the cooperators for the period under review with an unequal performance recorded in the year 2019 compared to any other year since the inception of the Cooperative society with the below clarifications: a) The total assets of the cooperative in December, 2004, 2008, 2013, 2018 and 2019 were ₦246,137,491.00; ₦482,889,609.72; ₦831,815,462.11; ₦1,152,094,297.31 and ₦1,181,776,840.81 respectively. On the reserve of the cooperative, there was growth or steady increase recorded in the above mentioned years of ₦18,515,211.00; ₦54,069,406.33; ₦57,287,673.80; ₦69,250,182.72 and ₦71,563,233.84 respectively [2]; [6]; [11]; [16]; [17].

Positive development were also recorded on the members' savings and net profit after charges. Members' savings increased tremendously in December, 2004, 2008, 2013, 2018 and 2019 from ₦52,389,874.53; ₦113,708,000.00; ₦764,894,788.31; ₦975,852,547.15 to ₦1,004,944,550.97 respectively. The positive continuous members' savings increments

is as a result of the continuous campaign and advice to cooperators on the need to reduce the rate of withdrawals while sounding to their hearings that members' savings is the first gratuity on retirement. The Cooperative Society recorded a net profit of ₦25,928,738.00; ₦40,413,557.22; ₦47,257,450.13; ₦63,361,263.62 and ₦67,258,073.10 respectively for the period under review [2]; [6]; [11]; [16]; [17].

The operating environment of the cooperative society is Ambrose Alli University Ekpoma, while the external environment is regarded as government policies and undesirable elements in the society [3]; [5]. If the university is peaceful, the cooperative business activities are viable against when there are local and national strikes embarked by the various staff unions on campus, which adversely affects the cooperative business activities. Another factor that affected the cooperative business activities is non-release of check-off dues as at when due by the university management. In addition, the heavy financial fraud of the exposed three staff of the AAU Workers/Farmers Multi-Purpose Cooperative society in first quarter of 2018 also affected the business activities [17].

The various executives for the period under review did her best to run the Cooperative Society as transparently as possible. Fair play and equity as far as possible were guaranteed. The Cooperative as an organization had its trying moments and these are derived from events that happened in the university. During the period, we came to a point where all cooperators were apprehensive of what would become of the Cooperative Society. It got to a point where net salaries to staff were paid without the accompanying deductions including our monthly check-offs. Integrity was brought to bear on the running of the society as cooperators or individual members knew what they gain from the society in enhance members investment [12]; [16].

The dividends, interests, bonuses and honoraria to the executive committee were paid into bank accounts of cooperators who were interested in collecting his/herafter filling the form attached at the last pages of the AAU Workers/Farmers Multi-Purpose Cooperative Reports and Accounts Brochure while others that did not fill the request form have their accounts with the Cooperative Society credit. The payments of the dividends, interests, bonuses and honoraria were done in batches and in the order of cooperators' numbers [14]; [15].

Looking at the present financial status of the Cooperative Society, the current president of the AAU Workers/Farmers Multi-Purpose Co-operative Prof. Okosodo L.A. at the 28th abridged Annual General Meeting (AGM) of the Cooperatives held at the Cooperative Society building on Tuesday, 4th August,

2020 reported to Cooperators, Stakeholders and Business partners that the Cooperative Society was financially buoyant and very strong inspite off all odds. He added that with measures in place now, the Cooperative will make more profits in the next few years with the conclusion that the Cooperative have a reserve of ₦112,302,000.00 which would be utilized by the Cooperative society when it became necessary[44].

RESEARCH METHODS

Theoretical Framework

Theory of Collectivism

This study is based on the theory of Collectivism which denotes a political or economic system in which the means of production and the distribution of goods and services are controlled by the people as a group. The theory of collectivism was derived from the social theory, holding that the interest and welfare of the collective group are of greater importance than the interest and welfare of any individual. Craig [27] stated that the goal of the cooperative society is to have a society whose members feel personally responsible for its functioning and who are mutually supportive – a society in which humans care for each other.

It is logical to state that the concept of cooperative is hinged on the theory of collectivism, and according to Chilokwu[26] the message of cooperative is to obliterate the oppression and evils of capitalism, and to demonstrate that people can do business without exploitation and at the same time raise the income and standard of living of the people as it is, in the case of cooperatives all over the world, specifically those in the higher institutions in Edo State, Nigeria.

Model Specifications

Some of the variables used in this model were identified in the literature. The specification by Mammud[35] was adapted and his model is presented as follows:

$$Y = f(LNE, TCE, ELE, PSE, RES, TPE) \quad 1$$

$$Y = b_0 + b_1LNE + b_2TCE + b_3ELE + b_4PSE + b_5RES + b_6TPE + \mu t \quad 2$$

Where: Y = SPL=Surplus, LNE = Loans (Special/Normal loans)expressed in Naira, TCE=Trading commodities (supermarkets) expressed in Naira, ELE= Electronics expressed in Naira, PSE = Petrol Station expressed in Naira, RES= Restaurant expressed in Naira, TPE = Transportation Line (vehicle used for commercial purposes) expressed in Naira, μt = Error or disturbance term, b_0 = Intercept or constant and $b_1 - b_6$ = Coefficient of the independent variables.

The current study modified equation 1 by including Thrift, Savings and Loans interest (TSL); Business Centre/Hire of Bus (BUS); Electronics, Inverter and Tobita (EIT) and Banner Gas (BNG). The

reason for the modification of equation 1 to include these variables (TSL, BUS, EIT and BNG) in the current model specification to empirically capture the performance of AAU Workers/Farmers Multi-purpose Co-operative Society limited, Ekpoma, Edo State.

$NPC_t = f(TSL_t, BUS_t, TCE_t, EIT_t, RES_t, PSE_t, BNG_t)$ 3
Equation 3 above is expressed more specifically for the purpose of statistical test as:

$$NPC_t = \beta_0 + \beta_1TSL_t + \beta_2BUS_t + \beta_3TCE_t + \beta_4EIT_t + \beta_5RES_t + \beta_6PSE_t + \beta_7BNG_t + U_t \quad 4$$

(Apriori expectation $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7$ and $\beta_8 < 0$).

Where, NPC = Net Profit after Charges expressed in millions of Naira; TSL = Thrift, Savings and Loans interest expressed in millions of Naira; BUS = Business Centre/ Hire of Bus expressed in millions of Naira; TCE = Trading/Commodities expressed in millions of Naira; EIT = Electronics, Inverter and Tobita expressed in millions of Naira; RES = Restaurant expressed in millions of Naira; PSE = Petrol Station expressed in millions of Naira; BNG = Banner Gas expressed in millions of Naira; U_t = Disturbance term or error term, β_0 = Intercept, $\beta_1 - \beta_7$ = Coefficient of the independent variables and t is the time trend.

The error correction specification of equation 4 is presented as equation 5:

$$\Delta NPC_t = \beta_0 + \beta_1\Delta TSL_t + \beta_2\Delta BUS_t + \beta_3\Delta TCE_t + \beta_4\Delta EIT_t + \beta_5\Delta RES_t + \beta_6\Delta PSE_t + \beta_7\Delta BNG_t + \beta_8ECM_{t-1} + U_t \quad 5$$

The ECM in equation 3.5 is the error correction mechanism which indicates the speed of adjustment to equilibrium whenever disequilibrium occurs in the cooperative society.

Sources of Data

Data for this study were obtained from secondary sources, which include AAU Workers/Farmers Multi-purpose Co-operative Society Ltd Ekpoma Reports and Accounts (various issues) and Journals on Cooperative Society for various years.

Method of Data Analysis

This study used the Phillips-Perron test statistics, Johansen Cointegration techniques and the error correction mechanism on a multiple regression framework. These techniques used in analyzing the data collected for this research are basically statistical and econometric in nature. The Phillips-Perron test statistics was used to determine the unit root stationarity test. Statistical theory requires that variables be stationary before application of standard econometric techniques. This was done in order to avoid spurious (misleading) results.

The Johansen cointegration test was also employed to determine the existence or otherwise of a long run relationship among the variables in the models. The error correction model was thereafter estimated to determine the speed of adjustment to long run equilibrium. Diagnostic and stability tests were also conducted to confirm the robustness of the model.

DATA PRESENTATION, ANALYSIS AND DISCUSSION OF RESULTS

The data presented in Table 1 are selected AAU Workers/Farmer Multi-purpose Co-operative Society performance indicators expressed in millions of naira at different time trend.

Table 1: AAU Workers/Farmer Multi-purpose Co-operative Society performance Indicators

YEAR	NPC (₦'M)	TSL (₦'M)	BUS (₦'M)	TCE (₦'M)	EIT (₦'M)	RES (₦'M)	PSE (₦'M)	BNG (₦'M)
2004	25.93	26.51	0.03	0.08	0.00	0.00	0.00	0.00
2005	32.94	32.29	0.06	0.26	0.87	0.00	0.00	0.00
2006	33.31	28.43	0.05	0.84	5.69	0.00	0.00	0.00
2007	35.37	27.15	0.29	1.27	8.64	0.66	0.00	0.00
2008	40.41	32.20	0.09	1.90	8.44	0.87	0.00	0.00
2009	31.45	28.02	0.13	5.30	7.52	0.95	4.10	0.00
2010	37.51	22.60	0.33	3.25	9.63	0.41	3.25	0.00
2011	38.58	30.18	0.04	4.28	7.81	0.69	1.01	0.00
2012	48.16	36.86	0.20	4.03	8.45	0.43	0.73	0.00
2013	47.26	37.26	0.06	4.75	6.43	0.46	1.62	0.31
2014	49.34	33.41	0.06	3.94	4.86	1.82	8.03	0.30
2015	35.54	27.80	0.24	4.05	3.33	1.54	0.25	0.56
2016	64.51	67.22	0.18	5.72	2.55	2.58	11.56	0.59
2017	63.36	66.36	0.82	7.11	2.40	3.41	8.41	1.73
2018	67.26	72.87	0.74	4.04	1.27	1.47	9.14	0.98
2019	60.34	58.41	0.79	10.20	1.82	1.04	7.21	0.37

Source: AAU Workers/Farmers Multi-Purpose Co-operative Reports and Accounts,(Various Issues).

Net profit after charges (NPC) on AAU Workers/Farmers Multi-Purpose Cooperative society was observed in Table 1 to maintain a relatively increasing trend from 2004 to 2019. It was observed from the data presented in Table 4.0 that NPC value increased from ₦25.93million in 2004 to ₦40.41million in 2008 with a percentage increase of 35.8%. The value of NPC changed positively in 2013 from ₦47.26million to ₦67.26million in 2018 with a percentage change of 29.7% before decreasing to ₦60.34 million in 2019 with a slight percentage decrease of 11.5%. Continuous increment was also observed on thrift, savings and loans interest (TSL) in Table 4.0 from ₦26.51million in 2004 to ₦32.20million in 2008 representing a percentage increase of 17.7%. TSL further increased from ₦37.26million in 2013 to ₦72.87in 2018 with a percentage increase of 49% before dropping to ₦58.41million in 2019 with a decrease of 24.8%.

Business centre/hire of Bus (BUS) was also observed to maintain an increasing trend from 2004 to 2019. It was observed from the data presented in Table 1 that BUS hiring values increased from ₦0.03million in 2004 to ₦0.09million in 2008 with a percentage increase of 66.7%, while in 2013 the value was ₦0.06million before increasing tremendously to ₦0.74million in 2018 with a percentage increase of 91.9%. The value for Bus hiring later increased slightly to ₦0.79million in 2019 with a percentage change of 6.3%. It was also observed that the trading/commodities (TCE) in the

Cooperative also maintained a relatively rising trend. TCE increased from ₦0.08million in 2004 to ₦1.9million in 2008 with a percentage increase of 95.8%, the growth rate later increased to ₦4.75million in 2013 before reducing to ₦4.04million in 2018 with a negative percentage change of 10.6% while a monumental increment of ₦10.2million was observed in 2019 with a percentage increase of 60.4%.

Electronics, Inverter and Tobita (EIT) of the AAU Workers/Farmers Multi-Purpose Cooperative society started in 2005 with a value of ₦0.87million and later increased to ₦8.44million in 2008 with a percentage increase of 89.7%. The value of EIT dropped drastically in 2013 from ₦6.43million to ₦1.27million in 2018 with a percentage decrease of 406.3% before increasing slightly to ₦1.82 million in 2019 with a percentage change of 30.25%. Positive development were also recorded on AAU Workers/Farmers Multi-Purpose Cooperative society Restaurant (RES), Petrol Station (PSE) and Banner Gas (BNG) for the period under review. Figure 4.1 shows the graphical representation of the trend analysis of the performance of AAU Workers/Farmers Multi-Purpose Co-operative Society in Ekpoma, Edo State.

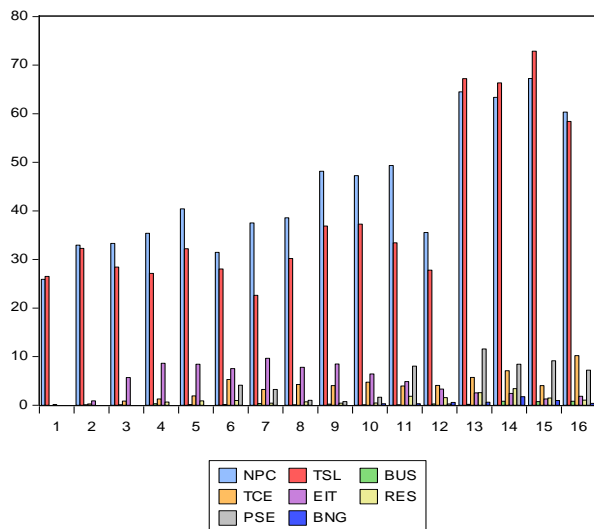


Figure 1. Trend analysis of the performance of AAU Workers/Farmers Cooperative Society

Unit Root Test Results

Prior to the estimation of ECM, a unit root test was conducted on the selected AAU Workers/Farmer Multi-purpose Co-operative Society Indicators (Net Profit after Charges (NPC); Thrift, Savings and Loans interest (TSL); Business Centre/ Hire of Bus (BUS); Trading/Commodities (TCE); Electronics, Inverter and Tobita (EIT); Restaurant (RES); Petrol Station (PSE) and Banner Gas (BNG) using the Phillips-Perron test statistics to determine their stationarity status. The results of the Phillips-Perron unit root test statistics are displayed in Table 2.

Table 2: Unit Root Test Results

Variable	Level	First Difference	Order of Integration
NPC	-1.429228 (0.5400)	-12.93032 (0.0000)	1(1)
TSL	-1.232391 (0.6309)	-4.319895 (0.0057)	1(1)
BUS	-0.776331(0.7966)	-5.768571 (0.0005)	1(1)
TCE	-0.460488 (0.8740)	-10.18617 (0.0000)	1(1)
EIT	-1.728658 (0.3981)	-5.532328 (0.0006)	1(1)
RES	-1.768507 (0.3800)	-3.763438 (0.0154)	1(1)
PSE	-2.217094(0.2085)	-18.74644 (0.0001)	1(1)
BNG	-1.722657 (0.4008)	-3.962005 (0.0108)	1(1)
OTI	-0.776331 (0.7966)	-5.768571 (0.0005)	1(1)
5% C.V	5% = -3.081002	5% = -3.098896	

Source: Author Regression Output from EViews 9.

Note: i. Pro-value are reported in parenthesis, ii. The Philips-Perron statistics are compared to 5 per cent critical value (C.V).

The results of the Phillips-Perron test statistics in Table 2 showed that all the selected variables (NPC,TSL, BUS, TCE, EIT, RES, PSE and BNG) were stationary at first difference. In other words, they were found to be stationary at 1(1). This implies that the hypothesis of non-stationarity is rejected for all the variables at their first difference.

After the unit root test, the Johansen unrestricted cointegration rank test was conducted and the results showed the existence of a long run relationship between NPC, TSL, BUS, TCE, EIT, RES, PSE and BNG, as both Trace and Max-Eigen statistics revealed three cointegrating equations respectively.

Short-run Error Correction Representation

The results of the short-run error correction representation for the model is reported in Table 3.

Table 3: Short-run Error Correction Representation for the Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.769584	1.098494	0.700581	0.5098
D(TSL)	0.649904	0.119140	5.454939	0.0016
D(BUS)	-0.460669	6.818012	-0.067566	0.9483
D(TCE)	0.353630	0.540660	0.654072	0.5373
D(EIT)	0.586366	0.063912	9.174583	0.0000
D(RES)	0.313426	0.086353	3.629590	0.0169
D(PSE)	0.630798	0.114060	5.530405	0.0015
D(BNG)	-3.265955	4.812206	-0.678681	0.5226
ECM(-1)	-0.795252	0.205741	-3.865306	0.0165

Source: Author Regression Output from EViews 9.

Dependent Variable: D(NPC)

Method: Least Squares

Date: 08/16/20 Time: 14:00

Sample (adjusted): 2 16

Included observations: 15 after adjustments

The short run error correction results presented in Table 3 showed that the entire explanatory performance variables in the AAU Workers/Farmers Multi-Purpose Co-operative Society estimation met their expected signs except Business Centre/ Hire of Bus (BUS) and Banner Gas (BNG). The empirical results also revealed that Thrift, Savings and Loans interest (TSL) had a direct and significant impact on the Net Profit after Charges (NPC) on the AAU Workers/Farmers Multi-Purpose Co-operative Society in Ekpoma for the

sample period. This means that 1 per cent increase in the Thrift, Savings and Loans interest increase Net Profit after Charges on the Cooperative Society in Ekpoma by 65 percent.

The results in Table 3 showed that Business Centre/ Hire of Bus (BUS) is inversely related to Net Profit after Charges (NPC) on the AAU Workers/Farmers Multi-Purpose Co-operative Society in Ekpoma, and a 1 per cent change on Business Centre/ Hire of Bus reduced Net Profit after Charges on the Cooperative Society in Ekpoma by -0.460669 per cent.

The results also revealed that Trading/Commodities (TCE) contributed positively to Net Profit after Charges (NPC) on the AAU Workers/Farmers Multi-Purpose Co-operative Society in Ekpoma. Thus, 1 per cent change in Trading/Commodities increase Net Profit after Charges on the Cooperative Society in Ekpoma by 0.353630 per cent. This is consistent with the work of [35].

The results further revealed that the sales of Electronics, Inverter and Tobita (EIT) had a direct and significant impact on Net Profit after Charges (NPC) on the AAU Workers/Farmers Multi-Purpose Co-operative Society in Ekpoma. This implies that 1 per cent increase in Electronics, Inverter and Tobita increase Net Profit after Charges on the Cooperative Society in Ekpoma significantly by 0.586366 per cent.

Restaurant (RES) activities in the empirical estimation also showed a direct and significant effect on Net Profit after Charges (NPC) on the AAU Workers/Farmers Multi-Purpose Co-operative Society in Ekpoma, and 1 per cent increase in the Restaurant activities raised the Net Profit after Charges on the Cooperative Society in Ekpoma by 0.313426 per cent.

The results also revealed that transactions at the Petrol Station (PSE) had a positive and significant relationship with the Net Profit after Charges (NPC) on the AAU Workers/Farmers Multi-Purpose Co-operative Society in Ekpoma, and 1 per cent increase in the Petrol Station transactions increase the Net Profit after Charges on the Cooperative Society in Ekpoma by 0.630798 per cent.

The empirical evidence from the short run results also showed that the transactions of Banner Gas (BNG) had a negative impact on the Net Profit after Charges (NPC) on the AAU Workers/Farmers Multi-Purpose Co-operative Society in Ekpoma. A unit change in the transaction of Banner Gas (BNG) in the Cooperative Society reduced the Net Profit after Charges (NPC) by -3.265955 per cent.

Finally, The error correction mechanism $ecm(-)$ of -0.795252 is statistically significant and have the appropriate sign. It suggests however, that there is a very high adjustment process in the activities of AAU Workers/Farmers Multi-Purpose Co-operative Society in Ekpoma since the speed of adjustment to the longrun equilibrium is 79.5 per cent.

Diagnostic Test

To confirm the robustness of the model, a diagnostic test was performed as shown in Table 4.

Table 4: Key Regression and Diagnostic Statistics for Model

R-squared	0.936157	Mean dependent var.	2.294000
Adjusted R-squared	0.851034	S.D. dependent var.	9.670162
S.E. of regression	3.732308	Akaike info criterion	5.755640
Sum squared residual	83.58072	Schwarz criterion	6.180470
Log likelihood	-34.16730	Hannan-Quinn criter.	5.751114
Durbin-Watson stat.	2.070490	F-statistic	10.99764
Prob.(F-statistic)	0.004494		

Source: Author Regression Output from EViews 9.

The coefficient of determination R^2 indicates that 94 per cent of the total variation of the Net Profit after Charges of the AAU Workers/Farmer Multi-purpose Co-operative Society limited in Ekpoma is jointly explained by Thrift, Savings and Loans interest; Business Centre/ Hire of Bus; Trading/Commodities; Electronics, Inverter and Tobita; Restaurant; Petrol Station and Banner Gas. The Akaike information criterion, Schwarz criterion and Hannan-Quinn criterion show that the model is correctly specified. F statistic measuring the joint significant of all regressors in the model is statistically significant at the 5 per cent level. Durbin-Watson statistic is 2.070490. This implies absence of autocorrelation among the explanatory variables.

Stability Test

Stability test was performed for the model using cumulative sum (CUSUM) and cumulative sum of square (CUSUM Q) of recursive residuals as shown in figures 2 and 3 respectively. The existence of parameter instability is established for the model if the cumulative sum of the residual goes outside the area between the critical (straight bounded upper and lower) lines.

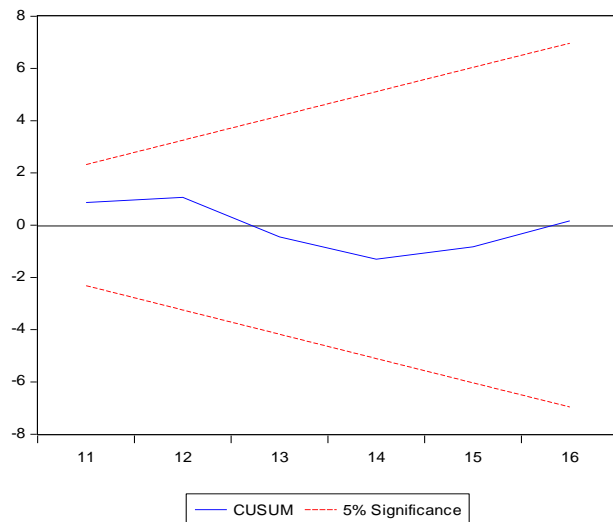


Fig.4.2 Plot of Cumulative Sum of Recursive Residuals

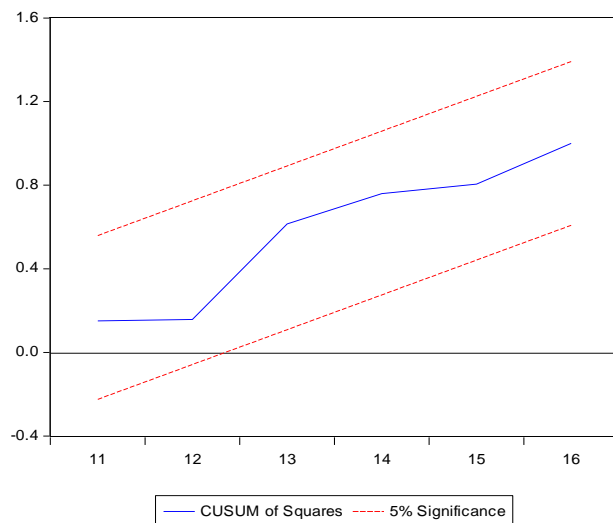


Fig.4.3 Plot of Cumulative Sum of Square of Recursive Residuals

From figure 2 and 3, it was observed that the model at 5 per cent level of significance, CUSUM and CUSUM Q were both stable because the observed bound lied between the upper and lower limit. In conclusion, at 5 per cent critical value both CUSUM and CUSUM Q explain the stability of the model overtime.

CONCLUSION

In reviewing the Development in AAU Workers/Farmers Multi-Purpose Co-operative Society in Ekpoma between 2004 and 2019, one can deduce from the findings that the significant impact of Thrift, Savings and Loans interest (TSL); Trading/Commodities (TCE); Electronics, Inverter and Tobita (EIT); Restaurant (RES) and Petrol Station (PSE) activities on the Net Profit after Charges (NPC) on the Cooperative Society is as a result of the heavy participations / commitments of the cooperators in the transactions of the cooperative.

The empirical analysis of the Development in AAU Workers/Farmers Multi-Purpose Co-operative Society in Ekpoma, spanning 2004 to 2019, confirms the stationarity of the selected AAU Workers/Farmers Multi-Purpose Co-operative Society variables at first difference 1(1) while the error correction model showed a very high adjustment process in the practice of the AAU Workers/Farmers Multi-Purpose Co-operative Society in Ekpoma since the speed of adjustment to longrun equilibrium is above 50 per cent. It is also a confirmation that indeed Net Profit after Charges; Thrift, Savings and Loans interest; Business Centre/ Hire of Bus; Trading/Commodities; Electronics, Inverter and Tobita; Restaurant; Petrol Station and Banner Gas are cointegrated. It was also revealed that at 5 per cent critical value both CUSUM and CUSUM Q explain the stability of the model overtime.

On a long term prospect, the AAU Workers/Farmers Multi-Purpose Co-operative Society in Ekpoma stand a chance of providing better services to the cooperators that will inturn increase members dividends, interests and bonuses thereby sustaining the society performance.

RECOMMENDATIONS

In order to strengthen the efficacy of the AAU Workers/Farmers Multi-Purpose Co-operative Society performance in Ekpoma, the following recommendations were made:

- a) The executives of the Cooperative Society should encourage members to increase their savings with the Cooperative regularly, as this will significantly influence the performance of the Cooperative Society.
- b) Cooperators should be encouraged by the prompt payment of members' dividends, interests and bonuses, and a day after the Annual General Meeting (AGM) of the Cooperative as this will increase members' confidence in the Society.
- c) Advancement and repayment of loans to cooperators should be properly administered by the staff of the Cooperative Societies inline with the Cooperative principles on credits to members to avoid incidences of bad debt.
- d) Check-off dues should be given by the management of the parent University on monthly bases without delay, to enable the Comparative Society engaged in her regular business of giving out Loans to members, purchase of households' commodities and enhancing the net profitability of the Society.
- e) The executives of the Cooperative Society should encourage her members to buy electronics, inverter and tobita from the Society at a reduced cost, as this will further increase the Cooperative performance.

RESEARCH LIMITATIONS

This study is limited to the data available at hand. Data outside the study scope were not made use of. Other limitations militating against this study are financial constraints and time factor.

CONTRIBUTION TO KNOWLEDGE

This study contributes to knowledge in the following ways:

- (a) The findings of this study confirmed the previous studies which showed that tradable commodity, restaurant, electronics and transport line had statistical and economic significance in explaining the performance of AAU Workers/Farmers Multi-Purpose Co-operative Society in Ekpoma.
- (b) The study is different from previous studies in scope. Other studies stopped at 2009 but this study extended its scope to 2019. This will help to enrich the growing empirical literature on the performance of AAU Workers/Farmers Multi-Purpose Co-operative Society in Ekpoma.
- (c) The addition of thrift, savings and loans interest (TSL), business centre / hire of bus (BUS); electronics, inverter and tobata (EIT) further created a robust estimation and this showed that there is need for policy makers to have concrete framework on the performance of AAU Workers/Farmers Multi-Purpose Co-operative Society in Ekpoma, Edo state.
- (d) Finally, the study also contributes to knowledge by using linear multiple regression framework with the application of different statistical and econometric methodologies (Phillips-Perron test statistics, Johansen cointegration technique and the error correction mechanism (ecm) to capture the performance of AAU Workers/Farmers Multi-Purpose Co-operative Society in Ekpoma.

ACKNOWLEDGEMENTS

Writing a researcher paper of this nature would not have been possible without the Grace of the Almighty God and the support and assistance of God minded persons and institutions. First, we give thanks to God the creator of heavens and earth, and the giver of knowledge and wisdom, for granting us the enablement and good health to embark on this study.

We thank the management of Ambrose Alli University, Ekpoma and all the academic staff members of the Department of Economics, for the opportunity given to us to develop this research paper. Also, the authors whose works were consulted, executives, members of our AAU Workers/Farmers Multi-Purpose Co-operative Society in Ekpoma and other persons or institutions that contributed in one way or the other to the success of this study are well acknowledged.

We cherish sincerely our dearest families for their support and prayers toward the actualization of this study. Finally, we appreciate our spiritual fathers for their prayers

REFERENCES

- [1] AAU Website. History of Ambrose Alli University, Ekpoma, 2020. Available online at home page of www.aaukpoma.edu.ng. Retrieved September 10, 2020.
- [2] AAU Workers/Farmers Multi-Purpose Co-operative Reports and Accounts for the year ended 31st December. A-inno Printing Press, No. 8, Uwen-Odia Street, Ekpoma, Edo State, 1-32, 2004.
- [3] AAU Workers/Farmers Multi-Purpose Co-operative Reports and Accounts for the year ended 31st December. A-inno Printing Press, No. 8, Uwen-Odia Street, Ekpoma, Edo State, 1-33, 2005.
- [4] AAU Workers/Farmers Multi-Purpose Co-operative Reports and Accounts for the year ended 31st December. A-inno Printing Press, No. 8, Uwen-Odia Street, Ekpoma, Edo State, 1-32, 2006.
- [5] AAU Workers/Farmers Multi-Purpose Co-operative Reports and Accounts for the year ended 31st December. A-inno Printing Press, No. 8, Uwen-Odia Street, Ekpoma, Edo State, 1-41, 2007.
- [6] AAU Workers/Farmers Multi-Purpose Co-operative Reports and Accounts for the year ended 31st December. A-inno Printing Press, No. 8, Uwen-Odia Street, Ekpoma, Edo State, 1-36, 2008.
- [7] AAU Workers/Farmers Multi-Purpose Co-operative Reports and Accounts for the year ended 31st December. A-inno Printing Press, No. 8, Uwen-Odia Street, Ekpoma, Edo State, 1-88, 2009.
- [8] AAU Workers/Farmers Multi-Purpose Co-operative Reports and Accounts for the year ended 31st December. A-inno Printing Press, No. 8, Uwen-Odia Street, Ekpoma, Edo State, 1-89, 2010.
- [9] AAU Workers/Farmers Multi-Purpose Co-operative Reports and Accounts, for the year ended 31st December. A-inno Printing Press, No. 8, Uwen-Odia Street, Ekpoma, Edo State, 1-90, 2011.
- [10] AAU Workers/Farmers Multi-Purpose Co-operative Reports and Accounts for the year ended 31st December. A-inno Printing Press, No. 8, Uwen-Odia Street, Ekpoma, Edo State, 1-39, 2012.
- [11] AAU Workers/Farmers Multi-Purpose Co-operative Reports and Accounts for the year ended 31st December. A-inno Printing Press, No. 8, Uwen-Odia Street, Ekpoma, Edo State, 1-128, 2013.
- [12] AAU Workers/Farmers Multi-Purpose Co-operative Reports and Accounts for the year ended 31st December. A-inno Printing Press, No. 8, Uwen-Odia Street, Ekpoma, Edo State, 1-117, 2014.

- [13] AAU Workers/Farmers Multi-Purpose Co-operative Reports and Accounts for the year ended 31st December. A-inno Printing Press, No. 8, Uwen-Odia Street, Ekpoma, Edo State, 1-116, 2015.
- [14] AAU Workers/Farmers Multi-Purpose Co-operative Reports and Accounts for the year ended 31st December. Aniko Nigeria Services, No 27 1st Circular Road, Benin City, Edo State, 1-115, 2016.
- [15] AAU Workers/Farmers Multi-Purpose Co-operative Reports and Accounts for the year ended 31st December. Aniko Nigeria Services, No 27 1st Circular Road, Benin City, Edo State, 1-117, 2017.
- [16] AAU Workers/Farmers Multi-Purpose Co-operative Reports and Accounts for the year ended 31st December. Aniko Nigeria Services, No 27 1st Circular Road, Benin City, Edo State, 1-108, 2018.
- [17] AAU Workers/Farmers Multi-Purpose Co-operative Reports and Accounts for the year ended 31st December. A-inno Printing Press, No. 8, Uwen-Odia Street, Ekpoma, Edo State, 1-104, 2019.
- [18] Ademu, Y.; Aduku, D.J.; Elesho, T. and Nweke, P.O. Contributions of Co-Operative Societies to Economic Development in Kogi State, Nigeria. *International Journal of Economics and Business Management*, 4(6): 35-46, 2018. Available online at www.iiardpub.org
- [19] Aigbomian, D.O. Address of the Vice Chancellor. AAU Workers/Farmers Multi-Purpose Co-operative Reports and Accounts for the year ended 31st December. A-inno Printing Press, No. 8, Uwen-Odia Street, Ekpoma, Edo State, pg. 1-88, 2009.
- [20] Alufohai, G.O. Sustainability of Farm Credit Delivery by Cooperatives and NGO's in Edo and Delta State, Nigeria. *Educational Research and Reviews Journal*, 1(8): 262-266, 2006.
- [21] Amahalu, A.C. Understanding Cooperation, Don-Ell Printing and Publisher Co, Enugu, 2005.
- [22] Anigbogu, T.U.; Taiwo A.O. and Nwachukwu, O.F. Performance Assessment of Farmers Multipurpose Cooperative Societies (Fmcs) in Marketing of Members Farm Produce in Benue State, of Nigeria. *Cogent Social Sciences Journal*, 2(1): 1-8, 2016.
- [23] Ebonyi, V. and Jimo, B.O. Cooperative Movement – A way out of Poverty in our Society. Prestige Publishing Company, Kaduna, 2002.
- [24] Briscoe, R. and Ward, M. The Competitive Advantage of Cooperative. Litho Press, Middleton Co, Cork, 2000.
- [25] Briscoe, R. and Ward, M. Helping Ourselves-Success Stories in Cooperative Business and Social Enterprise, Oak Tree Press, Cork, 2005.
- [26] Chilokwu, I.D.O. Cooperative and Rural Community Programmes-Readings in Cooperative Economics and Management. Computer Edge Publishers, Lagos, 2006.
- [27] Craig, J.G. Multinational Corporation: An Alternative for World Development, Western Producer, Saskatoon, (1976).
- [28] Erhurun, H. Cooperatives: Principles, Practice and Field Administration. P.A. Anigboro Printers and Publishers, Asaba, 2006.
- [29] Gomina, A. The Impact Analysis of Savings and Credit Cooperative Societies in Combating Poverty Among Crop Farmers in Three Local Government Areas of Niger State, Nigeria. M.Sc. Thesis Presented to the School of Postgraduate Studies, Ahmadu Bello University, Zaria, 1-74, 2015.
- [30] Helms, J.E. Challenging Some Misuses of Reliability in Studying White Racial Identity. In R. Carter (Ed.), Handbook of racial-cultural psychology and counseling, Hoboken, NJ: Wiley. 1: 360-390, 2005.
- [31] International Labour Organization (ILO). Fact Sheet Cooperatives and Rural Employment, 2007. Retrieved November 27, 2019 from <http://www.copacgva.org/puplication/2007-iloruralemloyment-coops.pdf>
- [32] International Cooperative Alliance (ICA) 1995. *Review of International Cooperatives*, 4(1): 85-86.
- [33] Kareem, R.O.; Arigbabu, Y.D.; Akintaro, J.A. and Badmus, M.A. The Impact of Co-Operative Society on Capital Formation (A Case Study of Temidere Co-Operative and Thrift-Society, Ijebu-Ode, Ogun State, Nigeria). *Global Journal of Science Frontier Research Agriculture and Veterinary Sciences*, 12(11): 16-29, 2012.
- [34] Lawal, K.A.A. Analysis of managers' roles on performances of cooperative societies in Ojo Local Government Area of Lagos State Nigeria.-M,sc Dissertation Unpublished, Department of Agribusiness and Farm Mangement, Olabisi Onabanjo University, Ago-Iwoye, Ogun State, Nigeria, 2009.
- [35] Mammud, V.E. (2012). The Performance of Multi-Purpose Cooperative Societies in Higher Institutions in Edo State, Nigeria. Ph.D Thesis Presented to Department of Co-operative Economics and management, Faculty of Management Sciences, Nnamdi Azikiwe University, Awka, Anambra State, 1-116, 2012.
- [36] Mammud, V.E. Repositioning Co-Operative Societies in Nigerian Higher Institutions for Sustainable National Development. *Global Scientific Journals*, 7(5): 460-472, 2019.

- [37] Mande, S. and Lawal K.A.A. Cooperative Marketing Societies and Its Challenges for Sustainable Economic Development in Lagos, Nigeria. *Journal of Research and Method in Education*, 4(6): 24-31, 2014. Available online at www.iosrjournals.org
- [38] McCarthy, O. Micro Credit Strategies for Development. Cork University College and Centre for Cooperative Studies, Cork, 2002.
- [39] Momoh, A.K. Development Administration. Published by A&B Computer Venture, Jattu, 2004.
- [40] Ogbomo, D.N. An Address Delivered by the President at the Occasion of the 8th Annual General Meeting of the Society, Annual Report and Accounts and Statistics for the years ended December 31st, 2002 to 2007, 2009.
- [41] Okechukwu, E.O. Cooperative Business: Principles and Practice, Multipurpose Cooperative Limited, Awka, 2001.
- [42] Okolie, P. Cooperative and Small Scale Business - Readings in Cooperative Economics and Management: Computer Edge Publishers, Lagos, 2006.
- [43] Okoli, E. Assessment of the Contribution of Cooperative Societies in the Development of the Youth: A Case Study of Selected Cooperative Societies in Dunukofia Local Government Area, Anambra State, Nigeria. *Munich Personal RePEc Archive*, MPRA Paper No. 84380:1-69, 2018. Available online at <https://mpra.ub.uni-muenchen.de/84380/>
- [44] Okosodo L.A. Presidential Address. AAU Workers/Farmers Multi-Purpose Co-operative Reports and Accounts for the year ended 31st December. A-inno Printing Press, No. 8, Uwen-Odia Street, Ekpoma, Edo State, 1-104, 2019.
- [45] Olumese, M.I. and Onemolease, E.A. An Analysis of Agricultural Co-operative Society and Economic Development in Ovia South West Communities of Edo State, Nigeria. *Journal of Agricultural Science and Practice*, 3(5): 107-112, 2018. Available online at <http://integrityresjournals.org/journal/JASP>
- [46] Onah, O.G. Performance of Farmers' Multipurpose Cooperative Societies (FMCS) in Enugu North Agricultural zone of Enugu State, Nigeria. M.Sc. Thesis Presented to the Department of Agricultural Economics, University of Nigeria, Nsukka, 1-79, 2014. Available online at <https://www.researchgate.net/publication/324703653>
- [47] Onimawo, A.I. List of Vice Chancellors and Pro-Chancellors from 1981/1982 to Date and List of Office of the Vice Chancellor Ambrose Alli University, Ekpoma, Edo State, 2019.
- [48] Parnell, E. The Role of Cooperatives and Other Self-Help Organizations in Crisis Resolution and Socio-Economic Recovery, Geneva: ILO Cooperative Branch and IFP/Crisis In-focus Programme on Crisis Response and Reconstruction, 2003.
- [49] Simpson, I.H. Communal Living, Microsoft Encarta. Redmond, W.A. Microsoft Corporation, 2009.
- [50] Ufuah, P.E. Presidential Address. AAU Workers/Farmers Multi-Purpose Co-operative Reports and Accounts for the year ended 31st December. A-inno Printing Press, No. 8, Uwen-Odia Street, Ekpoma, Edo State, 1-88, 2009.
- [51] Ward, R. Feeding Ourselves II: Farmers' Coops & Food. Success Stories in Cooperative Business and Social Enterprise, Oak Tree Press, Cork, 2005.
- [52] Woodin, T. Working Cooperatively: Exploring Successful Cooperative Enterprises, East Midlands Cooperative Council, London, 2003.
- [53] Yahaya, I. The Cooperative Movement and the Poverty Alleviation Programme, Nigeria. *Journal of Cooperative Studies*, 1(1), 2001.