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Effect of Collective Entrepreneurship on Financial Inclusion Among Cooperative Members in Osun State, Nigeria

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Abstract
Over the years, both concepts of collective entrepreneurship and financial inclusion have been separately studied without a single effort to establish a significant relationship between the two concepts. The researchers were able to identify this existing gap and determined to bridge this gap with their work. This study establishes a link between collective entrepreneurship and financial inclusion among members of cooperative societies in Osun State. A multistage sampling technique was used to obtain data from 864 members of CICSL in Osun state. Data obtained were analyzed with descriptive and analytical statistics models. Results from the data analyzed revealed that the result descriptive statistics obtained established a positive and strong relationship between collective ownership of cooperative enterprise and members' usage of loan facilities. Evidence from the result also revealed that a correlation coefficient of .857 with a probability (P) value of 0.024 indicated that there is strong evidence that a positive relationship exists between collective ownership of enterprise and how often or how many times the cooperative members use loan facilities of the CICSL. Collective ownership of enterprise strongly influenced financial inclusion especially the usage of loan facilities. Then the cooperative members should jointly pool their resources together to diversify their investments and identify the innovative business enterprises that are economically viable. This will enable the cooperative society to have multiple sources of income (surpluses) which will also facilitate financial inclusion among members especially access to loan facilities; and regular use of financial products and services as well as the quality of financial services.

Keywords: Collective Entrepreneurship, Financial Inclusion, Cooperative members. Cooperative Investment and Credit Society Limited

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1.0. INTRODUCTION

A distinctive combination of collective entrepreneurship and financial inclusion is often needed to reach traditionally disadvantaged populations. Collective entrepreneurship and financial inclusion are important vehicles for representing, serving, and mobilizing economically excluded groups and Cooperative societies in Nigeria are effective and efficient platforms for achieving this. In this regard, building collective entrepreneurship abilities among cooperative members is vital to gaining their insights and commitment to sustaining financial inclusion. According to Triki and Faye (2013), financial inclusion refers to all initiatives that make formal financial services available, accessible and affordable to all segments of the population. Collective entrepreneurship is the ability of several individuals to jointly innovate and create business opportunities capable of enhancing their livelihood within an organization (Taiwo, 2018).

According to the CBN (2016) report, many households have been excluded financially from the mainstream economy due to the lack of investment, and viable innovative enterprise where they can generate meaningful income and save their surplus. As a result of this, women, youth, minorities, and informal sector operators are underrepresented when it comes to access to financial products and services. The best way to get them included financially is to involve them collectively in the design of entrepreneurship activities within a group like a cooperative society which enables them to diversify their livelihood, while at the same time building their enterprises and networks for inclusion.

Collective entrepreneurship engagement among cooperative members supports and facilitates demand-driven financial inclusion, and allows interested groups to productively participate in an enterprise that changes and improves their access and usage of financial services like loans and savings. Collective entrepreneurship is also necessary to ensure that cooperative members' effective demand for financial services and products is sustained. There is a need to harness the untapped potential of those individuals and businesses currently excluded from the formal financial sector or underserved and enable them to develop their creativity capacity, business ideas strengthen their human and social capital to enable them to engage in income-generating activities and share risks associated with the joint enterprises. Financial inclusion goes beyond improved access to credit, to include enhanced quality, usage and access to savings and risk mitigation products, a well-functioning financial infrastructure that allows individuals and groups of people to engage more actively in the economy, while protecting users' rights (Triki and Faye, 2013). Raising the interest of cooperative members in cooperative entrepreneurship is essential to fostering financial inclusion. Cooperative members must align creative skills acquired in their cooperative society with the needs and demands of the markets.

The focus of this discourse is the Cooperative Investment and Credit Society Limited (CICSL), which may also be practically related to the credits and thrift co-operative or the thrift and loans co-operatives. The core function of CICSL is to improve access to credits at critical moments or more succinctly, financial intermediation. Principally, this type of cooperative aims at making it easier for people (especially people with low income) to save, thereby increasing the amount of money available for lending to members. Loans and credits are provided to members with easier conditions when compared with other formal and informal financial institutions. In the same vein, Cooperative Investment and Credit Society Limited (CICSL) in Osun State constitutionally create funds to be lent to their members for productive purposes (State of Osun CICSL Bye Law, 2016).

The idea of collective entrepreneurship in a cooperative society is not a new concept, but, the potential and success of the cooperative in facilitating financial inclusion have not yet been widely recognized as there is a lack of empirical evidence that establishes the nature and extent of the relationship that exists between collective entrepreneurship and financial inclusion among members of CICSL. As such, this makes collective entrepreneurship and financial inclusion look like a new idea which has never been researched. Over the years, the cooperative with special reference to CICSL in Osun State has been thriving in strengthening the financial inclusion among their members through their potential in collective entrepreneurship.

Cooperative societies are becoming more successful as they collectively promote the wealth of their members through risk sharing; creative and innovative training, joint ownership, as well as social capital. The presence of collective entrepreneurship in CICSL can offer the cooperative the opportunity to capitalize on members' talents together with innovative business ideas and collective energy.

1.1. Hypothesis of the Study

The hypothesis was formulated to ascertain the extent to which collective entrepreneurship facilitates members' access to loan services; usage of loan services and the quality of loans accessed from CICSL. The hypothesis is stated as follows.

Ho: Collective ownership of enterprises has not significantly influenced members' access, usage and quality of loan facilities in CICSL

Ha: Collective ownership of enterprises has not significantly influenced members' access, usage and quality of loan facilities in CICSL

2.0. LITERATURE REVIEW

2.1. Concept of Collective Entrepreneurship

The concept of collective entrepreneurship can be used when the decisions about the deployment of assets are taken not by an individual but by a group of people. Linara (2017) define collective entrepreneurship as persons conducting business together with at least one partner, sharing ownership with them. Collective entrepreneurship can be, in our opinion, one of the means of risk diversification and fund-raising. Miles et al. (2005) used the term collective entrepreneurship to define collaboration among entrepreneurial firms in a community or network of firms. In their view, collaborative entrepreneurship is the matching of underutilized resources with unexplored market opportunities to commercialize a constant stream of innovation in a community of networked firms. Also, Jos and Bart (2015), think that collective entrepreneurship comprises of three types of relationships. First, the jointly-owned venture is an economic entity, with economic relations between co-founders, who provide resources such as labour, skills, knowledge, experience and capital, in exchange for some share of the return to the enterprise. Second, there is an organizational relationship among co-founders, and between co-founders and the joint venture. Finally, collective entrepreneurship involves interpersonal relationships. Some works of literature were cited in the work of Panagiota and Nastis (2011), these studies revealed that many new directions explore the idea that entrepreneurship emerges as a function of collective action (Schoonhoven & Romanelli, 2001) and how group dynamics influence collective entrepreneurial action (Burress & Cook, 2009; Felin & Zenger, 2007; Ruef, Aldrich, & Carter, 2003; West, 2007). These researchers consider the role of multiple actors when analysing the entrepreneurial function, exploring variables like entrepreneurial opportunities, community dynamics, path dependence, social context and local origins (Burress & Cook, 2009). Additionally, they provide precious interpretations of the term “collective entrepreneurship”. Soriano and Urbano (2008) opined that entrepreneurial organizations can form collaborative relationships. In collaborating, each party accepts responsibility for its inputs, as well as for the equitable sharing of returns on outputs. In this sense, the origin of this collaborative phenomenon can be seen in cooperative societies (Miles et al. 2005).

It is therefore an important domain to explore, and it is fundamentally different from the aggregation of firms in collaborative communities. On the contrary, the collective perspective represents a bridge between individuals in a team and actions taken about team decisions. In this sense, Johannisson (1998) presented entrepreneurship as a collective phenomenon that is as much the outcome of a joint effort as an individual endeavour. He further pointed out that a better understanding of entrepreneurship will be achieved if all enterprising and organizing, including entrepreneurial venturing, are recognized as generically collective; a collective image of venture projecting applies from the gestation period and throughout the existence of the firm.

The concept of collective is well above individuals and refers to a joint effort of an association of individuals to further a common interest or secure a goal. It is an idea of every individual's recognition of new opportunities and thereafter entrepreneurship becomes collective when opportunities are acted upon because new venture creation requires joint collective action. Collective entrepreneurship occurs when an individual takes some elements out of strict privacy and makes an intentional choice to focus others' attention on it.

2.2. Concept of Financial Inclusion

Many definitions of financial inclusion have been suggested, based on characteristics that are symptomatic of broad access to financial services. Common elements of these definitions include “universal access” to a “wide range of financial services” at a “reasonable cost” (Bhaskar, 2013). To facilitate the discussion, we need to go beyond definitions to something that is easily quantifiable. Let’s look at individuals first. The primary focus is on the share of adults with access to the formal financial sector (Demirgüç-Kunt & Klapper 2013). They evaluate access to a range of financial services, including owning an account, saving at a financial institution and borrowing from one.

Financial inclusion has been defined in the literature in the context of a larger issue of social inclusion in society. One of the early attempts by Leyshon and Thrift in Sarma (2010), defined financial inclusion as referring to those processes that serve to prevent certain social groups and individuals from gaining access to the formal financial system. For this paper, we define financial inclusion as a process that ensures the ease of access, availability and usage of the formal financial system for all members of an economy. This definition emphasizes several dimensions of financial inclusion, viz., accessibility, availability and usage of the financial system. These dimensions together build an inclusive financial system. The definitions of financial inclusion have evolved from classifying individuals and enterprises according to a dichotomous division as either included or not, to viewing financial inclusion as multi-dimensional. To define a more complete concept of inclusion, the Financial Inclusion Data Working Group of the Alliance for Financial Inclusion, cited in Triki, and Faye (2013) agreed on three main dimensions of financial inclusion that provide the underpinning for data collection: access, usage and quality.

Table 2.1: Dimensions of Financial Inclusion

1.	**Access**	Availability of formal, regulated financial services: Physical, proximity and Affordability
2.	**Usage**	Actual usage of financial services and products: Regularity; Frequency Duration of time used
3.	**Quality**	Products are well tailored to client needs Appropriate segmentation to develop products for all income levels

Source: Adapted from Alliance for Financial Inclusion Data Working Group (2011), cited in Triki and Faye (2013)

The adoption of a broader and multidimensional definition of financial inclusion is crucial in the sense that it helps to move beyond the often erroneous assumption that inclusion will inevitably be achieved by simply offering enough access points. Instead, a more complete understanding of financial inclusion should speak on how frequently clients use products if the products are effectively meeting their needs, and if they are better off as a result. Therefore, as depicted in the above table, defining and measuring usage and quality in addition to simple access would be very useful for analytical purposes. These three dimensions of financial inclusion are broad categories into which indicators can be grouped, without being restrictive (Triki and Faye 2013).

2.3. Collective Entrepreneurship Model in Cooperative Society

Collective Entrepreneurship has been of increasing interest to cooperative studies and social economy researchers of late, especially given the lingering global economic crisis and the search for more robust, community-centred, and member-owned and controlled alternative organizational models (Vieta, Tarhan, & Duguid. 2016). One reason for the turn to cooperatives among researchers is the evidence suggesting that the collective entrepreneurialism inherent to these types of democratically managed organizations undergird their resilience during market failure or difficult economic times, as well as being particularly advantageous for meeting the needs of underserved entrepreneurs (McDonnell et al., 2012; Mook, Quarter, & Ryan, 2012; Novkovic, 2008; Spear, 2010;).

Researchers have been finding that collective entrepreneurship contributes to resilience in the cooperative movement as well (Johnson, 2000; MaRS, 2015; Novkovic, 2008). Collective entrepreneurship merges the collective risk-taking and resource pooling of collective entrepreneurship with the organizational form of cooperatives, which, Vieta, Tarhan, and Duguid. (2016) argue, further catalyzes and guides the type of entrepreneurship that occurs through them. Moreover, the emergent theory of collective entrepreneurship itself draws on and contributes to the still-nascent intersection of collective entrepreneurship and social movement research (Cooney, 2012; Craig, 1993; Develtere, 1994, 1996; Diamantopolous, 2012; Spear, 2010).

Entrepreneurship is considered important for economic development, but not much scholarly attention has been given to the issue of entrepreneurship in jointly-owned firms, such as cooperatives. Entrepreneurship in these types of firms may be called collective entrepreneurship because jointly-owned firm entrepreneurship may be located at the level of the multiple joint-owners and the level of the jointly-owned firm (Jos & Bart 2015). Jos and Bart, (2015) have been one of the researchers to relate the concept of collective entrepreneurship to the cooperative society. They considered collective entrepreneurship as a new phenomenon for cooperatives and defined it as "a form of rent-seeking behaviour exhibited by formal groups of individual cooperative members that combine the institutional frameworks of investor-driven shareholder firms and patron-driven forms of collective action (Jos & Bart 2015). In other words, Cook and Plunkett explore the emergence of jointly-owned firms where entrepreneurial activity takes place at different levels of the organization, notably at the level of the individual member-owners and at the level of the jointly-owned firm.

Traditionally, cooperatives have been established based on the principle that the members are individual and independent entrepreneurs who collectively decide on the activities of the cooperative society. The latter has always been treated as a dependent firm (Bonus, cited in Jos and Bart 2015), that mainly carries out what the members, through the Board of Directors, have decided. Similarly, Van Dijk, cited in Jos & Bart (2015) posits that the double-layer organizational form entails also a two-layer system of entrepreneurship. He then argues that when market conditions for cooperatives change, the lead in entrepreneurial activities should shift from the members of the cooperative to the collective firm, or even to the subsidiaries of the collective firm.

A social movement theory of cooperative entrepreneurship social/collective entrepreneurship closely intersects with and often emerges from social movements. Cooperatives, for instance, are one type of social business that have been understood as emerging from the organizational needs of collective actions to achieve social change (Borzaga and Fazzi, 2014; Craig, 1993; Develtere, 1994, 1996; Diamantopolous, 2012; McPherson, 2009; Spear, 2010). But social movement theory and, in particular, theories of social movement organizations have only recently been tapped for explaining the emergence and organizational structures of co-operatives and social enterprises (Cooney, 2012; Spear, 2010).

Collective entrepreneurship is a phenomenon typically present in cooperative societies. Not only are the assets of the cooperative owned by a group of entrepreneurs, formally associated with the cooperative society, also the traditional organizational feature of bottom-up decision-making makes the cooperative an example of true entrepreneurship. However, cooperatives have experienced several restructuring processes in the last decade, which affect the extent of entrepreneurship in the organization (Jos & Bart, 2015).

3.0. METHODOLGY

The parameter of interest was cooperative members, as such, the sampling unit is known (finite population). The study parameter of interest consists of 79,392 cooperative members from the sampling frame of 1,468 CICSL. An online sample size calculator was used to determine the manageable sample size (Survey Monkey, 2017). With this, a total of 79,392 CICSL members with a 99% confidence interval were coded in the online sample size calculator. The resulting output was 951 respondents. As such, Bowler's (1999) method of appropriate proportionate was used to proportionately distribute the sample size among members of the CICSL across the cooperative zones in Osun State. Thus, 951 structured questionnaires were administered to 951 respondents but 864 valid responses were retrieved.

Data were analysed using descriptive and inferential statistics. Descriptive statistics used include mean and standard deviation. The inferential statistics models of Partial correlation were used to ascertain the nature of the relationship that exists between social capital and financial inclusion among CICSL members. Also, Ordinary Least Square Regression (Simple Linear Regression) was used to determine the extent of influence of the independent variable (x) on the dependent variable (y).

Similarly, Hypothesis (H0) was tested with the Multivariate Regression Model (mvreg y1 y2 y3 = x). This was used to find out the influence of the independent variable on more than two or more dependent variables.

The model in the implicit form is specified as:

$$y_1 + y_2 + y_3 = \beta_0 + \beta_1 x + e_i$$

Where

x	**= Independent variable (Collective Ownership of an enterprise)**
$y_{1,}\ y_2\ \&\ y_3$	**= Dependent variables (Financial Inclusion indicators (Access; Usage & Quality))**
μ	**= Error Term (unexplained variables)**
β_i	**= Coefficient of *xi* input (*x*i = Independent Variables)**
β_0	**= Constant term**

The explicit form of the model is:

$Acc_1 + Usu_2 + Qua_3 = \beta o + \beta_i\, COE + \mu$

Where

COEi	**= Collective Ownership of an enterprise**
$Acss_1$	**= Access to loan facilities (loan timely approval & approval; interest rate etc)**
Usu_2	**= Usage (number of times using loan facilities)**
Qua_3	**= Quality (estimated amount loan obtained)**
μ	**= Error Term (expectation of unexplainable variables)**
βi	**= Regression Coefficient of Independent Variables)**
β_0	**= Constant term**

4.0. RESULT AND DISCUSSION

4.1. The Influence of Collective Ownership of Cooperative Enterprises on Members' Access, Usage and Quantity of Loan Facilities in CICSL

Table 1: Distribution of Responses on the Jointly-Owned Enterprises/Investments of the CICSL

S/N	Jointly-Owned Enterprise Indicators	Mean ($\bar{x}$)	Implication
i	Farm/agricultural enterprise e.g fish farm, livestock farm, farm produce processing, farm equipment hiring; cash crop farm; plantain & potatoes chip; processing & packing of foods like garri; etc	3.683	Great Extent
ii	Hiring of event and ceremony equipment and materials like canopy; chairs; tables; cooling van and refrigerator; cooking utensils; coolers; DJ equipment; speaker; etc	3.464	Great Extent
iii	Consumer and Trading shop e.g food stuff & provision store; cement business; stationeries shop; wood & plank business; plumbing materials shop; spare parts shop; electronics & electrical shop; etc	4.827	Great Extent
iv	Housing and estate management and other landed property business e.g construction; renting and leasing of shops; rooms; flats and duplexes; buying and selling of plots of land to members and non-members; etc	3.417	Great Extent
v	Manufacturing and production of goods and services like block industry; sachet pure water production; laundry and dry cleaning services; printing press services; paint production; etc	2.668	Low Extent
vi	Transportation services e.g sale; hiring and higher purchase services of buses, cars, tricycles, motorcycles; shuttle buses etc	3.117	Great Extent
vii.	Oil & gas business e.g Filling station business; engine oil sales; cooking gas refill & sales etc	1.800	Low Extent
	Grand Mean (x) =	***3.2822***	

Source: Field Survey July, 2017

Table 2: Distribution of Responses on the Member's Access to Loan Facilities of the Cooperative

S/N	Access to Loan Facilities Indices	Mean (x)	Implication
i	CICSL Timely availability and approval of loan applications	3.2424	Accessible
ii	Approval of the exact amount of loan on the member's application form without reducing the amount	3.8646	Accessible
iii	Attractive and moderate interest rate attached to loan	4.3518	Accessible
iv	Direct disbursement of credit to members' bank accounts as against cash payment	3.9428	Accessible
v	Flexible repayment method and pattern	3.4683	Accessible
vi	little or no stress in filling out the loan application form	4.0477	Accessible
vii.	Timely disbursement of loans to members after the approval	3.3093	Accessible

Table 3: Usage of Loan Facilities of the Cooperative

S/N	Indicators for the Usage of Loan Facilities	Mean ($\bar{x}$)	Implication
i	Making use of Loan facilities Monthly	2.2126	Regularly Use
ii	Making use of loan Facilities Quarterly	2.5641	Regularly Use
iii	Making use of Loan facilities Bi-annual (Twice yearly)	3.6253	Regularly Use
iv	Making use of Loan facilities Yearly (annually)	4.4422	Regularly Use Regularly Use
v	Making use of Loan facilities once in 2 Years	3.5688	
vi	Making use of Loan facilities once in 3 Years	2.2263	Rarely Use
vii.	Making use of Loan facilities only at times of urgent needs or issues	3.3197	Rarely Use

4.4 Table 4: The Quantity (Amount) of Loan Facilities Available

Estimated Amount (₦aira) Benefited Over the Years		2012		2013		2014		2015		2016	
		Freg. n=864	*% (100)*	*Freg. n=864*	*% (100)*	*Freg. n=864*	*% (100)*	*Freg. n=864*	*% (100)*	*Freg. n=864*	*% (100)*
1	Less than ₦ 100,000	276	31.94	208	24.07	126	14.58	110	12.73	74	8.564
2	₦ 100,001 – ₦ 500,000	319	36.92	415	48.08	372	43.05	239	27.66	231	26.73
3	₦ 500,001 – ₦ 1,000,000	254	29.39	179	20.07	311	35.99	319	36.92	346	40.04
4	₦ 1,000,001 – ₦ 2,000,000	17	1.967	51	5.902	34	3.935	106	12.26	147	17.01
5	₦ 2,000,001 – ₦ 5,000,000	--	--	11	1.273	21	2.430	87	10.06	64	7.407
6	₦ 5,000,001 – ₦ 10,000,000	--	--	--	--	--	--	03	0.347	02	0.231
7	Above ₦ 10,000,000	--	--	--	--	---	--	--	--	--	--
	Average (x) Values	**₦ 78,200.8**		**₦ 75,040.6**		**₦ 920,200.8**		**₦ 1,310, 833.6**		**₦ 1,291,167.5**	

Table 5: Summary of Available Data from the Responses on Collective Ownership of Cooperative Enterprises (Table 1), Members Access (Table 2), Usage (Table 3), and Quantity of Loan Facilities (Table 4), in CICSL

S/N	**Mean (x) Scores for Collective Ownership Indicators**	**Mean (x) Scores for Access to Loan**	**Mean (x) Scores for Usage of Loan Facilities**	**Mean (x) Values for Quantity of Loan in Naira (₦) for 5 Years**
1	3.6832	3.2424	2.2126	78,200.8
2	3.4644	3.8646	2.5641	75,040.6
3	4.8271	4.3518	3.6253	920,200.8
4	3.4174	3.9428	4.4422	1,310, 833.6
5	2.6685	3.4683	3.5688	1,291,167.5
6	3.1174	4.0477	2.2263	--
7	1.8004	3.3093	3.3197	--
Grand Mean (x)	3.2822	3.7467	3.1084	₦ 735,088

The results in Tables 1; 2; 3; and 4 were summarized in Table 5. The finding from Table 1 showed that the cooperative members are very much (Grand Mean (x) = 3.2822) involved and committed to various enterprises that are jointly owned. In the same vein, the result obtained from Table 2 revealed that loan facilities are highly accessible (Grand Mean (x) = 3.7467) to the members of CICSL. The indicators that made loan facilities highly accessible include timely availability of loans (3.24); moderate interest rate (4.3); direct payment into members' bank account (3.9); flexible repayment method (3.4), little stress in filling application forms (4.04) as well as timely disbursement of loan (3.03). The result on the usage of loan facilities in Table 3 indicated that the respondents regularly (Grand Mean (x) = 3.108) make use of the loan facilities of the cooperative society but, the majority (4.4422) of the respondents make use of loan facilities once in a year (Annually), while some (3.30) of them make use of the loan facilities only when they have urgent and pressing needs. Finally, the results of the quantity amount of loan in Table 4 showed that a reasonable amount of loan is usually disbursed to the cooperative members every year but on the 5-year average, the cooperative disbursed N 735,088 which is reasonably okay to invest in any innovative start-up enterprise.

To evaluate the influence that exists between the Collective Ownership of Cooperative Enterprises (Table 1), Members Access (Table 2), Usage (Table 3), and Quantity of Loan Facilities (Table 4), in CICSL, the most appropriate test statistic is partial correlation. Partial correlation was used to evaluate the nature of the

Table 6: Partial Correlation Output for Relationship Between Collective Ownership of Cooperative Enterprises and Members Access to Loan Facilities of the Cooperative

Control Variables			**Ownership**	**Access**
Usage & Quantity	Ownership	Correlation	1.000	-.463
		Significance (2-tailed)	.	.432
		df	0	3
	Access	Correlation	-.463	1.000
		Significance (2-tailed)	.432	.
		df	3	0

Table 7: Partial Correlation Output for Relationship Between Collective Ownership of Cooperative Enterprises and Members' Usage of Loan Facilities of the Cooperative

Control Variables			Ownership	Usage
Quantity & Access	Ownership	Correlation	.000	.857
		Significance (2-tailed)	.	.024
		df	0	3
	Usage	Correlation	.857	.000
		Significance (2-tailed)	.024	.
		df	3	0

Table 8: Partial Correlation Output for Relationship Between Collective Ownership of cooperative enterprises and members Quantity of Loan Facilities Obtained from the Cooperative

Control Variables			Ownership	Quantity
Access & Usage	Ownership	Correlation	1.000	-.121
		Significance (2-tailed)	.	.846
		df	0	3
	Quantity	Correlation	-.121	1.000
		Significance (2-tailed)	.846	.
		df	3	0

influence of one variable on another when other existing variables are under control.

In result Tables 1; 2; 3 and 4 the mean scores obtained from the tables were further subjected to a partial correlation statistics model to ascertain the extent of the relationship that exists between collective ownership of enterprise and financial inclusion indicators (access; usage and quantity of loan facilities of CICSL). Partial correlation result Table 6 showed that the correlation coefficient (- 463) has a negative sign and the probability (P) value is 432 which is higher than the threshold of 0.05. By indication, there is the existence of a weak and negative relationship between collective ownership of enterprise and members' access to some of the financial services of CICSL. This implied that cooperative members' joint or collective ownership of enterprises has nothing to do with their financial inclusion indicator of access to loan facilities. This finding implies that cooperative members' joint ownership of enterprises has no link or relationship with timely availability and approval of loan applications, approval of exact amount applied for, loan interest rate, direct disbursement of approved loan to members' bank account, repayment as well as timely disbursement which are all indices to measure financial inclusion indicator of access to financial services.

The partial correlation result Table 7 presented the nature of the relationship that exists between collective ownership (x) and members' usage of loan facilities (y). Evidence from the table showed that correlation coefficient .857 indicated that there is strong evidence that a positive relationship exists between variables x and y. The probability (P) value of 0.024 was significant at a 5% level of significance, equally indicating that collective

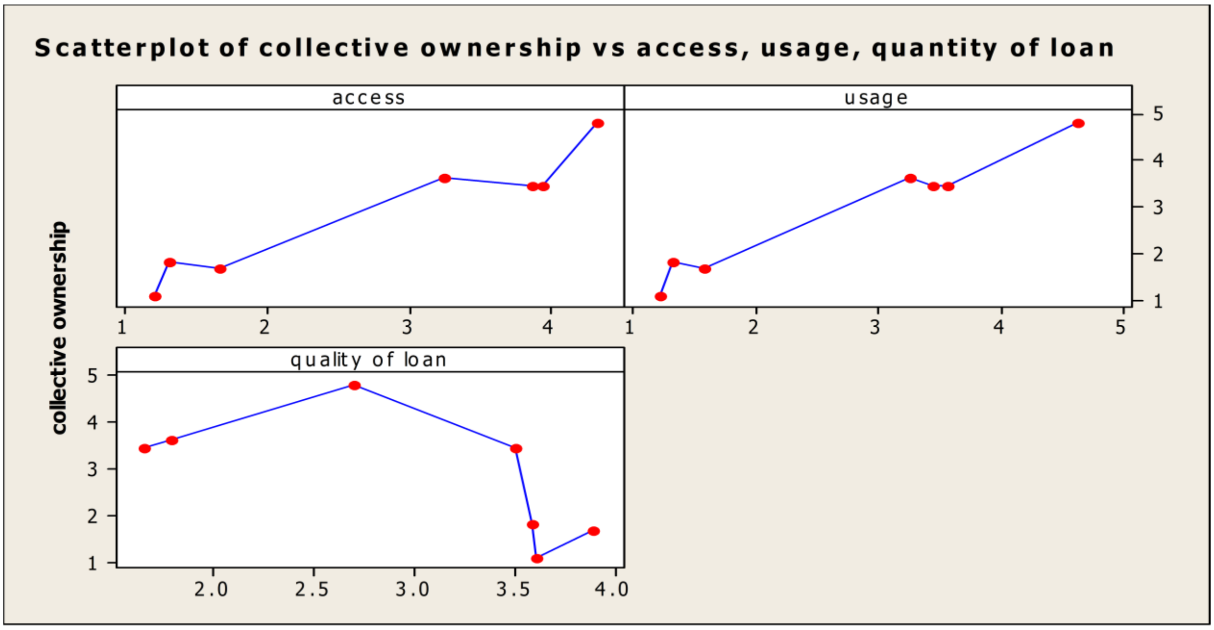

Figure 1: Scatter Plot of the Variables (Graphical Presentation)

Table 9: Summary of Available Data to Ascertain the Influence of Collective Ownership of Cooperative Enterprises on Members' Access, Usage, and Quantity of Loan Facilities in CICSL

S/N	**Collective Ownership (x)**	**Access to Loan (y_1)**	**Usage of Loan (y_2)**	**Quantity of Loan (y_3)**
1	3.6832	3.2424	2.2126	78,200.8
2	3.4644	3.8646	2.5641	75,040.6
3	4.8271	4.3518	3.6253	920,200.8
4	3.4174	3.9428	4.4422	1,310, 833.6
5	2.6685	3.4683	3.5688	1,291,167.5
6	3.1174	4.0477	2.2263	--
7	1.8004	3.3093	3.3197	--

Source: Field Survey July, 2017

ownership of enterprise significantly relates to how often or how many times the cooperative members use loan facilities of the CICSL.

Table 8 partially correlates the relationship between collective enterprise (x) and quantity of loan facilities (y) in terms estimated amount of loan obtained by the members. The correlation coefficient of – 121 indicated that there is the existence of a weak and negative relationship between collective ownership of enterprise and the quantity (amount) of loan facilities.

The results presented in Tables 6, 7 and 8 were further subjected to a scattered plot graph to graphically enhance and affirm the extent of the relationship that exists between collective ownership of enterprise and financial inclusion indicators (access, usage and quantity of financial service/products. Evidence from the graphical presentation in Figure 1 further affirmed that a weak and negative relationship exists between collective ownership and financial inclusion indicators of access and quantity of loan facilities, while there is the existence of a strong and positive relationship between collective enterprise and financial indicator of usage of loan facilities. This was confirmed from the graphical illustration where financial inclusion indicators of access and quantity do not have a perfectly straight line, while usage has a straight line that stretches from the y-axis to the x-axis. From the indication of how often members use loan facilities, CICSL has a positive and strong relationship with collective ownership of cooperative enterprises.

4.2. Test of Hypothesis

Ho: Collective ownership of enterprises has not significantly influenced members' access; usage and quality of loan facilities in CICSL

Ha: Collective ownership of enterprises has significantly influenced members' access; usage and quality of loan facilities in CICSL

To accept or reject the above statement of hypothesis, multivariate regression model analysis was used to ascertain the influences of the independent variable (x) on the dependent variables (y1; y2 & y3). Therefore, data were obtained from the available data in Table 5

Model Specification:

$$y_1 + y_2 + y_3 = \beta_0 + \beta_1 x + e_i$$

Where

x	**= Independent variable (Collective Ownership of an enterprise)**
y_1, y_2 & y_3	**= Dependent variables (Financial Inclusion indicators (Access; Usage & Quality))**
μ	**= Error Term (unexplained variables)**
β_i	**= Coefficient of *xi* input (*x*i = Independent Variables)**
β_0	**= Constant term**

Acceptance or rejection of the hypothesis can be seen in table 10 with the results of the model is as follows:

$$y_1 + y_2 + y_3 = \beta_0 + \beta_1 x + e_i$$

$Acc_{0.9053} + Usu_{0.9689} + Qua_{0.4160} = .0531046 + .982867\ COE$

5.0. DISCUSSION

The multivariate linear regression coefficient table results show that the independent variable (x = collective

Table 10: Hypothesis Stata Software Output for Multivariate Regression Analysis Model ($Acc_1 + Usu_2 + Qua_3 = \beta o + \beta_i$ COE)

Equation	Obs	Parms	RMSE	"R-sq"	F	P
y1	7	2	0.4562986	0.9053	47.82396	0.2010
y2	7	2	0.2584493	0.9689	155.821	0.0001*
y3	7	2	0.7728865	0.4160	3.561744	0.1178
	Coef.	**Std. Err.**	**t**	**P>|t|**	**[95% Conf. Interval]**	
y1						
x	-0.9613426	0.139013	6.92	0.201	0.6039983	1.318687
cons	0.0531046	0.4323415	0.12	0.907	-1.058265	1.164474
y2						
x	0.982867	0.0787375	12.48	0.043	0.7804658	1.185268
cons	-0.0939952	0.2448799	-0.38	0.717	-0.7234791	0.5354887
y3						
x	-0.4443789	0.2354627	-1.89	0.118	-1.049655	.1608971
cons	4.226231	0.7323076	5.77	0.002	2.343774	6.108687

ownership of enterprise) has a positive relationship with the dependent variable y2 (usage of loan facilities) since the probability y2 (P value = 0.0001) value is less than 0.05. The coefficient of independent variable (x) is .982867. This result implies that there is a positive and strong relationship between only the x & and y2. That is, the usage of loan facilities is the only financial inclusion indicator that has positive and strong ties with the collective ownership of cooperative enterprises.

The R-Square of 0.9689 is considered very strong which implies that the independent variable (collective ownership of enterprise) can only explain 97% of the fluctuation in the dependent variable (usage of loan facilities). That is, members' regular usage of loan facilities can be influenced by a 97% increase through their involvement in collective ownership of cooperative business. Thus, the coefficient of x (independent variable) was .982867 which implied that a 1 unit increase in collective ownership of enterprise (x) will influence the usage of loan facilities (y2) by .982867. That is, cooperative members' involvement in collective business enterprise will influence their usage of loan facilities in CICSL.

However, the T-test result from the multivariate regression model result shows that the model is significant since the probability (P) value = 0.0001 was significant at a 5% level of significance which is greater than the conventional threshold of 0.05. Conclusively, this can be interpreted as the independent variable having a strong and positive effect on at least one (y2) of the dependent variables as against the proposed hypothesis of all the dependent variables having a negative effect. There was sufficient evidence to reject the null hypothesis while the alternate hypothesis was accepted. That is, collective ownership of enterprises has significantly influenced members' access; usage and quantity of loan facilities in CICSL.

The multivariate linear regression coefficient table results of the hypothesis (Ho) revealed that the collective ownership of enterprise indicators has a positive relationship with the usage of loan facilities since the probability y2 (P value = 0.0001) value is less than 0.05. The coefficient of independent variable (x) is .982867. Ho's result implied that there is a positive and strong relationship between only the x & and y2. That is usage of loan facilities is the only financial inclusion indicator that has positive and strong ties with the collective ownership of the cooperative enterprise.

Contrary to this finding, Aina & Oluyombo (2014) found out from their study that access to financial services and products among the people was very high while the usage of financial services was very low. The implication of their result might be attributed to their failure to link collective ownership of enterprises to financial inclusion.

5.1. Conclusion

Collective ownership of enterprise strongly influenced financial inclusion especially the usage of loan facilities. Then the cooperative members should jointly pool their resources together to diversify their investments and identify the innovative business enterprises that are economically viable. This will enable the cooperative society to have multiple sources of income (surpluses). This will also facilitate financial inclusion among members especially access to loan facilities; and regular use of financial products and services as well as the quality of financial services.

Based on the empirical evidence from the results Cooperative experts and policymakers should encourage robust decisions that will facilitate and enhance the collective entrepreneurship model among cooperative societies and their members. Similarly, Cooperative researchers should use the empirical evidence from this study to further strengthen the work based on the same subject matter.

5.2. Recommendations for Future Research

This current study was conducted to establish a relationship between collective entrepreneurship and financial inclusion but there are other vital areas in which the study did not cover. So to enhance and strengthen the relationship that exists between collective entrepreneurship and inclusion, the area of study should be widened to cover another state of the federation, this enables the researcher to compare the result of this current and future research.

In this study, financial inclusion was studied from a demand approach. Future research should focus on the supply approach of financial inclusion. It will enable us to determine the nature and extent of the relationship which exists between collective entrepreneurship and financial inclusion indicators from the perspective of financial products and financial services providers like deposit money banks and Microfinance banks.

Future research should also consider studying other types of cooperative societies like agricultural cooperatives, multipurpose cooperative consumers, and producers etc, to establish a relationship between collective entrepreneurship and financial inclusion in such cooperatives and compare the result with the existing result.

Finally, future research should also focus their study on collective entrepreneurship, economic inclusion and social inclusion and determine the extent and nature of the relationship that exist between them.

5.3. Contributions to the Knowledge

Over the years, both concepts of collective entrepreneurship and financial inclusion have been separately, studied without a single effort to establish a significant relationship between the two concepts. The researchers were able to identify this existing gap and determined to bridge this gap with this work. This study establishes a link between collective entrepreneurship and financial inclusion among members of cooperative societies in Osun State.

The study was able to contribute to the knowledge based on the evidence from the results that revealed the strong and positive link between collective entrepreneurship and financial inclusion. As such, this study provides empirical evidence for future researchers who might have an interest in further strengthening the work based on the same subject of the matter. Also, the major part of this study will be used as a literature review by future studies relating to the subject of the matter.

The study also contributed to knowledge as the findings and recommendations from this study will be used to enhance financial inclusion through the collective entrepreneurship model in cooperative societies.

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