

Corporate Governance and Return on Assets of Selected Cooperative Societies

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Abstract

Cooperative societies are business models formed by their members as a result of failure of the market to provide needed goods and services at affordable prices and acceptable quality. Hence, the absence of good governance had resulted in financial failure of these business models. This study, therefore ascertained the impact of corporate governance practices on return on assets (ROA) of selected Cooperative Thrift and Credit Societies (CTCS) in Lagos State, Nigeria. The research design adopted was Ex-post facto and data were analysed using descriptive and inferential statistics. The results of the study showed that there is significant effect of corporate governance on the return on asset (Adjusted $R^2 = 0.279$; $p = 0.000$). there is evidence that training of board members and policy compliance have significant relationship with the return on asset (TR = 0.100, z-test = 4.167, $p < 0.05$ and PC = 0.657, z-test = 5.298, $p < 0.05$). Conversely, there is evidence that members participation, accountability, and gender composition have no significant relationship with the return on asset (MP = -1.086, z-test = -0.866, $p > 0.05$; AC = 0.564, z-test = 0.937, $p > 0.05$, and GC = -0.115, z-test = -0.929, $p > 0.05$). The study concluded that there was a statistically significant effect of corporate governance on return on assets and suggests that the regulatory authority should promote the practice of corporate governance by the management committee and ensure compliance with regulatory directives.

Keywords: Corporate governance, Training, Members' participation, Policy compliance, Accountability, Gender composition, Return on assets

1.1 Introduction

Financial performance is the empirical measurement of the financial strength of any business. It is critical to the continued existence of every business. Every business wants to continue as a going concern hence the need to make constant positive returns. Financial metrics assess, monitor and enhance organizational performance measured by profitability and growth. Good financial performance may be expressed in terms of better surplus reported, improving dividends, better use of the assets of the firm, increasing deposits, meeting loan demands of members amongst others.

Financial performance assesses the monetary outcomes of a firm's activities by evaluating how the firm meets its financial targets (Mohamud, 2014). Financial performance of cooperative societies manifests in constantly reporting surplus, recording increasing members' savings, constantly meeting members' loan demands, having improving returns on the assets of the societies as well as good returns to members on their deposits and patronage amongst others, as member-owned, member-managed organisations. As business models, they are formed by their members as a result of failure of the market to provide needed goods and services at affordable prices and acceptable quality. The current forms of cooperatives stem from the business idea which is fragmented among investors, management and customers, each after its own interest.

Governance of a cooperative, if established properly, may help safeguard the mission of the cooperative at the same time allowing the management team to meet the demands of the variety of stakeholders, including cooperators, employees, clients or beneficiaries, as well as to comply with public policies and regulations. It also ensures that the composition of the board is of a sufficient size relative to the scale and complexity of the society's operations in such a way as to ensure diversity of experience without compromising independence, compatibility, integrity and availability of members to attend meetings (Oyewole & Oseni, 2019). Good governance requires adherence to the operating principle of an entity and part of the key issues in ensuring good governance includes training. Corporate governance sets a firm's objectives, the means of attaining those objectives and monitoring performance (Lambe, 2014). Unlike corporate entities, the operations of cooperative societies lack some fundamental elements of corporate governance: representation on the board is not according to the numbers of shares held; knowledge of the business of the society is not a prerequisite to board membership; mandatory gender representation is not compulsory and tenure for directorship are not clearly defined (Oyewole & Oseni, 2019).

ROA measures the efficiency of an entity in using its assets to generate net income. It is one of the financial ratios in accounting used for business financial analysis. High ROA results from high basic earning power while the converse holds true (Akinyi & Oima, 2019). Where a CTCS generates a higher ROA, it implies that the cooperative is efficient in the use of its total assets to generate its net income and further suggests that the business of the CTCS is more profitable for that period. Also, ROA is one of the measures of financial stability of an entity.

2.1 Statement of the Problem

Return on assets (ROA) is an accounting-based measure of performance. It relates the profit made in a given period to the assets of the entity under study. ROA is one of the measures of financial stability of an entity. Several studies used ROA as dependent variable though with differing results. There have been mixed findings from the studies of various authors on the concept of corporate governance as well as return on assets of different organisations (Danoshana & Ravivathani, 2019; Hakim, 2019; Setiawan, 2017; Rostami, Rostami, & Kohansal, 2016; Wilar, Mangantar, & Tulung, 2018; Zabri, Ahmad, & Wah, 2016). Nevertheless, these scholars have not been able to clearly establish the linkage between corporate governance and return on assets especially as it relates to cooperative societies in Lagos State Nigeria. The results of many empirical studies conducted in other countries suggest that the establishment of a good governance system leads to the better performance (Buallay, 2019; Haris, Yao, Tariq, Javaid, & Ain, 2019). Despite the numerous studies on ROA as dependent variable on financial, non-financial and cooperative entities, there

are differing results from these studies. Also, none of these studies used the corporate governance variables intended to be used in this study hence this study will be filling a gap in knowledge in this respect. Although one of the big problems with return on assets is that it does not take into consideration intangible assets. Many cooperatives in today's market rely heavily on intangible assets to provide a great deal of value to the cooperatives. These intangible assets can be patents on products, ideas in the heads of employees and strategic relationships with other cooperatives. Many times, cooperatives can hold a great deal of intangible assets and this will not be accounted for in return on assets. If it is accounted for in assets, it may not have the proper value assigned to it. Valuers might end up valuing a cooperative much too low, and making a poor investment decision (Rostami, Rostami, & Kohansal, 2016).

Specifically, the study aims to establish the effect of corporate governance (training, members' participation, accountability, gender composition and policy compliance) on return on assets (ROA) of the selected cooperative societies and provide answer to the research: Does corporate governance affect the return on assets (ROA) of the selected cooperative societies?

3.0 Review of Related Literature

3.1 Conceptual Review

3.1.1 Corporate Governance

Aktan, Turen, Tvaronavičienė, Celik and Alsadeh (2018) view corporate governance as the means to organize and control firms and aiming to drive firms based on sound governance principles professionally. Adopting a stakeholders-wide context, Clarke (2007) defines corporate governance as means of balancing complex interests towards value creation for the benefit of a wider constituency. Mohan and Chandramohan (2018) define corporate governance as the processes and structures through which a firm is being managed by protecting the interests of the stakeholders. It consists of both internal and external controls and direction.

Corporate governance arises in reducing agency costs that arise from the agency problem in principal-agent relationship. The management often sets the goals and interests that conflict with the main objectives of the company and ignores the interests of the shareholders. Different interests result in a conflict called the agency conflict. It is therefore necessary to protect the varying interests in an organization. Governance structure specifies how rights and responsibilities are shared among the Board, Managers, Shareholders and other Stakeholders. It dictates the rules and procedures for making corporate affairs decisions. The structure sets company's objectives, the means of attaining those objectives and monitoring performance (Lambe, 2014). Corporate governance requires legal, regulatory and institutional environments of corporate businesses. Its mechanisms focus on how to attain effective corporate controls to make sure that executives act in the best interest of concerned parties (Awotundun, Kehinde, & Somoye, 2011). It involves more than having board processes and procedures, it also includes relationships between the boards, management, shareholders and other stakeholders such as employees and the community (Bain & Band, 1996; Chowdary, 2002) and firms having strong good corporate governance are capable of sustaining high standards of quality services (Mbiriti, 2020).

Cooperative societies as limited liability entities have their corporate governance challenges like the composition of the committees that are to discharge oversight functions on the management staff, knowledge and experience of the committee members and the conduct of meetings (Oyewole & Oseni, 2019). Governance can be seen as the instrument of the effectiveness of a society's institutions (Puri & Walsh, 2018). Governance of a cooperative, if established properly, may help safeguard the mission of the cooperative at the same time allowing the management team to meet the demands of the variety of stakeholders, including cooperators, employees, clients or beneficiaries, as well as to comply with public policies and regulations. It also ensures that the composition of the board is of a sufficient size relative to the scale and complexity of the society's operations in such a way as to ensure diversity of experience without compromising independence, compatibility, integrity and availability of members to attend meetings (Oyewole & Oseni, 2019).

This study defines corporate governance as the processes of decision-making and effecting the decisions made giving cognizance to responsibilities of individuals, groups and structures in the organization toward ensuring the long-term survival of the organization.

The sub-variables of corporate governance in the study include: training, members participation, policy compliance, accountability and gender composition.

3.1.1.1 Training

Informed leadership is the very basis of a cooperative movement and superior organizational performance is not a matter of luck (Lemmi, 2020). Organizations are currently undergoing deep internal changes while they adapt to the major developments taking place, such as economic and social globalization, information and communication technology (ICT) (Chacón, 1996)). Adaptation to new development is achieved by training. It is the process of inculcating new ideas and refreshing old ones in individuals and groups for better performance. This assures the organization of utmost commitment from directors, managers and employees and such commitments are investment in the firms which may be applied to improve performance of the firm.

Training enhances job satisfaction among employees, in addition to commitment and collective empowerment. Mehta and Bhatt (2014) assert that training assists in enhancing the efficiency and effectiveness of a person at work by improving and updating his professional knowledge, skill relevant to his work, cultivating appropriate behavior and attitude towards work and people. Training helps to up-skill the directors, managers and employees especially in making them aware of new regulations and their applicability, inculcating new business ideas and refreshing them on the existing ones. Training has implications for productivity, commitment to the work and personal development (Sudhakar & Basariya, 2018). Training increases knowledge and skills for doing a particular job; bridges the gap between job needs and employee skills, knowledge and behaviours, focuses attention on the current job; it is job specific and addresses particular performance deficits or problems, concentrates on individual employees; changing what employees know, how they work, their attitudes toward their work or their interactions with their co-workers or supervisors and tends to be more narrowly focused and oriented toward short-term performance concerns.

Training can contribute to higher production, fewer mistakes, greater job satisfaction and lower labour turnover. This is the position of Franken & Cook (2017) in a study of cooperatives in the US which observed that training of directors enhances financial performance. Franken & Cook (2017) findings support the study of Hakelius (2013) which reports that educating cooperative directors and a high degree of cooperation between the directors and CEO had a beneficial effect on performance of Swedish cooperatives. Also, it can enable employees to cope with organizational, social and technological change. It is believed that the success of a cooperative is to a large extent due to education and training, and that if the ICA principle of cooperative education were applied among all the groups concerned, this could be a strategic weapon empowering them with cohesion – something difficult for other organisations to imitate and/or learn to implement. In the ICA (1995) core cooperative principles, Education, Training and Information for elected officers, members, managers and employees is the fifth of these principles. Cooperatives managers need training in core social enterprise values assisted by appropriate training courses in educational institutions and codes of conduct. This is evident by the establishment of Federal Cooperative colleges managed by the Federal ministry of commerce for certificated courses and special short-termed courses organized by cooperative regulatory agencies.

This study adopts training as the process of inculcating new ideas and refreshing old ones in individuals and groups for better performance.

3.1.1.2 *Members' Participation*

Participation is one of the defining features of a cooperative society. Member participation is the essence of cooperatives and lack of such engagements would make them lose their true identity (Ponka, 2018). It is enshrined in the ICA 1995 principles, particularly as the third principle, requiring members' economic participation through equitable contribution to cooperative capital and allocation of surpluses to cooperative development activities, reserves and members based on the proportion of their transactions with the cooperative.

Participation are of three types: input participation such as making capital contributions; process participation which entails participation in decision-making and output participation which involves patronage of the cooperative business (Woldeyes, 2019). Participation in decision-making is done by members at the levels of attendance at General assembly meetings and serving as elected or co-opted director on the board of the cooperatives.

Participation requires attendance at meetings called by the board, including annual general meetings and other statutory meetings, to deliberate on the annual financial statements and other regulatory decision. Members' are also expected to participate in meetings called to exercise their democratic control through elections and accountability of elected officers to the whole members. This is to ensure that the board of directors is alert to its responsibilities thereby enhancing the governance of the cooperative society. Members are to participate in cooperative activities, use of cooperative facilities and services according to cooperative regulation and are eligible to obtain all legitimate information relating to the cooperative. Also, membership participation as both owners and customers attracts financial returns as benefit to the members of a cooperative society

(Woldeyes, 2019). This is reflected in the dividend payable to members. Basis of the dividend include patronage of the cooperative business and level of savings.

A strong membership base is the foundation for the success of a cooperative. Harun et al; (2012) asserted this by stating that the new approach of cooperative movement in strong membership contributes to the growth of cooperative performance. A higher degree of the members cohesiveness contributes to better organizational performance of the cooperatives. High levels of participation results in strong group action that consequently benefit members that may not be feasible through individual action (Ogunleye, Oluwafemi, Arowolo, & Odegbile; 2015). Therefore, more cooperatives take extra efforts to build a strong membership such as getting their members to participate in the activities of the cooperatives.

This study agrees with the concept of members participation as posited by Woldeyes (2019) that members participation include: input participation such as making capital contributions; process participation which entails participation in decision-making and output participation which involves patronage of the cooperative business.

3.1.1.3 Policy Compliance

Cooperative societies are governed by law, rules, policies, and regulations. These policies and operating procedures aid strategy implementation by aligning actions and behavior with strategy in the organization thereby limiting independent actions and channeling individual and group efforts along intended path. Regulations ensure that cooperatives are competitive and perform sustainably through strategic management (Kinyuira, 2017). Cooperatives are implementing controls with monitoring tools that can help them align strategic initiatives which serve as documentation sources, and support ongoing compliance, monitoring and reporting, hence promoting financial performance. Both the Nigerian Cooperative Societies Act of 2004 and Cooperative Societies Law CAP C14 of the Laws of Lagos state, 2015, made provisions for Bye-law for each cooperative society. Governance guidelines address areas such as authority and duties of members, roles of the board and management, values and strategies, communication and monitoring performance of the board (Kobia, 2011).

The provisions of the Bye-law and that of the main law are expected to be complied with in the operations of each cooperative society. Compliance requires that the group is aware of the rule and understand it, be willing to comply and able to comply. These are the levels that the reasons for non-compliance can be located and where the regulatory policy can be made ineffective. Compliance also requires that all those involved are familiar with the rules and procedures as stipulated in the guiding law and regulations. These regulations made from time to time by the regulatory body must be complied with as this plays pivotal role in paving way for the development of cooperative movement that is independent (Mwanja, Marangu, Wanjere, Kuria, & Thuo, 2014).

Compliance ensures fund utilization complies with society's policies. Policy adjustment helps in introducing new methods of offering quality services to members (Kobia, 2011). Compliance with policy leads the organization towards better performance through effective and efficient resource management and productivity. Compliance is central to maximizing productivity and

organizational performance and this is supported by Das (2014) and Peterson (2013) who provided insight into the relationship between compliance and organizational performance.

Non-compliance will defeat the overriding objectives of the regulations to deliver economy and efficiency in the use of public funds, value for money, quality of services, goods, and works. Violations of regulations are punished with either monetary or nonmonetary sanctions and in some instances both. Sanctions can be monetary or non-monetary; monetary sanction takes the form of fines and penalties while non-monetary sanctions range from suspension from certain activities to revocation of licence. When regulations are violated, firms come under investigation or are subject to legal actions. Such firms experience a decrease or contraction in their market value that is much higher than the amount of settlements or penalties paid (Yusuf & Ekundayo, 2018).

Compliance in this study requires the management committee to abide with the operating regulations as contained in the Nigerian Cooperative Societies Act of 2004, Cooperative Societies Law CAP C14 of the Laws of Lagos state, 2015, and their respective Bye-laws.

3.1.1.4 Accountability

Accountability is the process through which an organization makes a commitment to respond to and balance the needs of stakeholders in its decision-making processes and activities and delivers against this commitment (Saleh & Hamzah, 2017). It is also, the rendition of stewardship to the principal by the agent. It has also been defined as being responsible to an audience with reward or punishment power (Brandsma & Schillemans, 2013). Khafid and Nurlaili (2017) define accountability as the embodiment of obligations to account for the successful or failed implementation of organization missions in achieving the predetermined goals and targets. Accountability is a legal obligation in the context of agency relationship.

Managerial/administrative accountability is related to a person's position in a hierarchy whereby the superior calls a subordinate to account for his or her performance of delegated duties (Christensen & Lægreid, 2014). The superior in the cooperative society is the members while the subordinate is the elected directors. This may also be likened to managerial accountability. Managerial accountability means that managers are on the one hand granted additional autonomy but on the other hand made more directly accountable for their ability to produce measurable results. It is also the liability to give a satisfactory account of the exercise of the power of discretion vested in some authority to which it is due, failing which, some kind of punishment may follow. Keay (2015) however argues that accountability is a process and that there are four stages to it: first, the board is required to provide accurate information concerning its decisions and actions, so that shareholders are informed as to what has been done; second, the board explains and justifies its actions, omissions, risks, and dependencies for which it is responsible. The third stage entails the questioning and evaluating of the reasons provided for what has been done by the board while the final stage is that there is the possibility, but not the requirement, of the imposition of consequences.

Forms of accountability may be based on source, namely 'accountability to', such as political, legal, professional and hierarchical accountability, and 'accountability for' or the accountability-based content, such as financial accountability and performance accountability. Both forms are

part of an integrative process. Legal accountability refers to the relationship between the accountability actor's compliance, and external supervision through strengthening the performance mandate, reflecting detailed external supervision of the accountability actor's performance that aims at regulating contractual relations (Manafe & Akbar, 2014). This is the accountability relationship relevant to cooperative governance. The external parties make the regulations and policies, while the accountability actors are required to implement them.

From cooperative societies' perspective, accountability is a control measure to guide the activities and behavior of the directors and managers of cooperatives to better performance and long-term survival of the societies. The implementation of accountability could improve the cooperative's relationship with its members and to make its reputation and credibility better (Khafid & Nurlaili 2017). Accountability in cooperatives is ensured through regular elections of board members, regular meetings of the general assembly of members to ensure members' participation, maintenance of accurate and updated records, presentation of audited account to members for deliberations, establishing code of conduct and best practices for directors, delegation of duties and recruitment of professionals with clear job description.

3.1.1.5 Gender Composition

Though we live in a world where the social, political, economic power are owned by men, the notion that a male or female-dominated group contributes better to the group strengthens gender-imbalanced groups. Popular wisdom and women's self-reports often identify distinct leadership styles and characteristics associated with gender while empirical studies on gender and leadership such as that of Eagly & Johnson (1990) often show that men and women leaders behave more alike than different when occupying the same positions. In examining differences between how men and women lead, it is often less of what they do than in the different experience they face when they lead.

Having a gender-balance in groups, on the other hand, enhances women's influence and weakens the inequality of influence between the genders. A gender balanced board is more likely to perform better given the diverse views and background of either gender in decision making and perception on various corporate issues (Ahmed & Rugami, 2019). This consequently leads to a change of the nature of the group members' interaction, creating mutual support and agreeableness within the groups. However, cognisance must be given to stereotypical traits of each gender when assessing its contributions to the group endeavours. In this regard, it should also be noted that gender roles are the socially ascribed roles of women and men, which vary among different societies and cultures, classes and ages, and during different periods in history (Adejo, Adejo, & Shaibu, 2017).

Stereotypically, women traits may include agreeableness, extraversion, solidarity display, understanding, helpfulness, selflessness, and nurturance, while males tend to be self-assertive, controlling, aggressive, and dominant. The style of men in group's activities is more autocratic than women i.e. involved giving orders, whereas women's style is more democratic than men i.e. focused on participation. Besides, when comparing all-female versus all-male groups, all-female groups demonstrate more egalitarian behaviours. These elements make cooperation possible,

especially with respect to positive interdependence, face-to-face promotive interaction, and appropriate use of social skills.

Gender roles and cooperative behavior are interdependent and the way men and women cooperate is determined by the gender roles taught by each person since childhood according to the sex they were born. Male and female can form a cooperative society either as a gender group or a combination of both genders. This study examines cooperative societies with the boards of directors comprising both genders. The board of directors provides leadership to the cooperatives hence the quality of leadership provided may determine the level of performance of the cooperatives. A female-dominated cooperative must naturally be led by a female-dominated board but where a cooperative comprises of both genders, it is expected that the board of such cooperative will comprises of both genders and whether its performance will be affected is debatable.

However, this study considers a gender-balanced management committee since the CTCS investigated have both gender as members.

3.1.2 Return on Assets (ROA)

Return on assets (ROA) is the ratio of net income for an accounting year to the average total assets of a business in the same accounting year. The average total assets of a business in a given year is the addition of the total assets at the beginning and end of the year divided by two (2). An Asset is a resource, controlled by an entity as a result of past events and from which future economic benefits are expected to flow to the entity (IASB Framework). An Asset can be non-current that is, those economic resources that aid income generation for more than one accounting period such as land, buildings, motor vehicles, equipment and so on. An Asset can also be current that is, those economic resources of a business which are easily converted to cash or consumed within an accounting period. Examples include cash, bank balances, receivables, inventories and so on. Return on Assets (ROA) is one of the most popular and useful of the financial ratios.

ROA measures the efficiency of an entity in using its assets to generate net income. It is one of the financial ratios in accounting used for business financial analysis. High ROA results from high basic earning power while the converse holds true (Akinyi & Oima, 2019). Where a CTCS generates a higher ROA, it implies that the cooperative is efficient in the use of its total assets to generate its net income and further suggests that the business of the CTCS is more profitable for that period.

The importance that educators and practitioners place on ROA can be seen in three ways. First, at least one ROA formula is presented in most business textbooks. ROA was the third most frequently presented ratio in a study of business textbooks, appearing in 70 of the 77 textbooks . Only the current ratio and inventory turnover ratio occurred more often than ROA.

Second, at least one version of ROA is used often in failure prediction studies. Jewell & Mankin, (2011) that Z-Score included ROA as one of its five factors used to predict business failure using a version defined as Earnings Before Interest and Taxes / Total Assets (EBIT / TA). (Jewell & Mankin, 2011) also used ROA as one of the six ratios used to predict business failure. The ROA version in the Beaver study was Net Income / Total Assets (NI / TA). Jewell & Mankin (2011)

ranked the popularity of all financial ratios used in studies predicting business failures. Their study included 53 previous studies from 1966 to 2002 and ranked 48 separate ratios. The ROA version Net Income / Total Assets (NI / TA) was the single most common ratio in all the failure prediction studies.

Third, analysts often use ROA in their investigation of a firm's financial position, performance, and future prospects. Jewell & Mankin (2011) survey Chartered Financial Analysts about the importance of many financial ratios. The study included four different versions of ROA, and each version was selected by at least 90% of the CFA respondents as a primary measure of profitability.

This study adopts the ROA version of Gibson (1987) as cited in Jewell & Mankin (2011) survey as a primary measure of performance.

3.2 Theoretical Review

3.2.1 Stewardship theory

Stewardship theory assumes that individuals seek to fulfill higher order needs through pro-organizational behavior and thus will naturally align their interests with those of the organization that is, its principals (Davis, Schoorman, & Donaldson, 1997). Stewards are assumed to be obedient servants/managers and are expected to act in the best interest of the owner/principals. This theory arises as an important counterweight to agency theory. The theory is inherent with trust-based horizontal governance relations in networks, organizations and communities and it is a cornerstone of civilization (Torfinn & Bentzen, 2020) which may be traced back to tribal and clan-based societies (Stout & Love 2018). It stipulates structures that empower the stewards which gives them maximum autonomy built on trust. It posits interest alignment between principal and manager and advocates intrinsic incentives that allow for managerial self-actualisation.

The theory relies on a model of man that describes people as self-actualizing and other-serving rather than self-interested and self-serving. Second, when people hold these attitudes, stewardship theory assumes they will subsume personal interests to those of the principal, placing higher utility on organizational goals than on individual goals. Third, because the goals of individuals are presumed to already be aligned with those of owners and/or the organization, stewardship theory assumes that the use of formal controls such as monitoring and incentive compensation systems are unnecessary and potentially counterproductive.

The principal gives powers to the management in form of information, equipment and power assuming that the best interests of the firm are attained (Al-Mamun, Yasser, & Rahman, 2013). Daily, Malton, & Cannella, (2003) stress the fact that for the employees and executives to protect their reputations, they will take those decisions that will improve performance. This ally with the position of Owolabi (2012) who argues that stewards are expected to behave rationally because if they refuse to take decisions that will improve performance, then the shareholders, operating in a free market system, can switch to a performing firm and the stewards may lose their jobs. Hence

the stewards will act in the best interest of the business owners. This is because stewards are assumed to be collectivists, pro-organizational and trustworthy to manage organizational resources (Wikipedia, 2018). Management should therefore play its part as steward, by merging its own benefit and interest with that of the firm objectives (Darweesh, 2015).

Okoye, Olokoyo, Okoh, Ezeji, and Uzohue, (2020) posit that stewardship theory projects managers as collectivists, pro-organizational, and trustworthy as against the opportunistic, individualistic, and self-serving assumption of agency theory. It can further be contested that the leadership of a cooperative should be a function of the interest of principals, defining principal loosely to include internal and external stakeholders. This implies that the principals without direct ownership rights over a firm are those who have a direct interest in the firm such as employees who rely on the regular wages (Donaldson & Davis, 1991). Also, Umebali, Nwankwo, and Usman (2018) expose that stewardship theorists assume that in given a choice between self-serving behaviour and pro-organizational behaviour, a steward will place higher value on cooperation than defection. Finally, the long-term profitability of the firm requires its leaders to implement strategies and practices that will add value to the organisation (Waduge, 2011) and that management must be selfless for the benefits of the firm and owners (Pelayo- Maciel, Calderon-Hernandez, & Serna-Gomez 2012). The three assumptions are the basis of the functions of the governing board of the cooperative society. The board generally oversees the conduct of administration by the management. The principal should therefore set aside the assumptions from agency theory and build trust with the stewards in order to avoid any monitoring and control structure (Darweesh, 2015). Pierre and Peters (2017) reports that stewardship theory criticizes both the critical diagnosis of shirking advanced by agency theory and Torfing & Bentzen (2020) posits that the control-based cure is offered by performance management and this simultaneously provides the foundation for a new, trust-based management model that nurtures the intrinsic and pro-social motivations of public employees.

Critically, stewardship theory is relatively young and has not undergone systematic empirical testing. The available limited studies concentrate on few governance mechanisms and do not provide a clear picture on the performance implications of governance designs that follow stewardship theory (Dutzi 2005). Regardless of that it can be argued that exceeding given levels of trust may also be a misplaced strategy for designing corporate governance. In some cases, a trusting person may be actually cheated (Beccerra & Gupta 1999). As Sundara-Murthy and Lewis (2003) explain, stressing a collaborative approach, directors and executives seek to become a cohesive 'governing team. If a relationship is entirely built on trust, goal alignment, and cooperation, cohesion may become so strong that it prevents warranted critique of management's course of strategy. Information supplied by top management to the board will not be challenged (McEvil, Perrone, & Zaheer, 2003). Torfing and Bentzen (2020) opine that the corporate performance of the CEOs does not depend on incentive and control schemes but rather on the creation of facilitative and empowering structures that include having the CEO to chair the board of directors, thus concentrating power and authority in one person.

In this study the management committee is the stewards that oversee the affairs and resources of cooperative societies for the overall good of all members. Where this purpose is defeated or left to

pursue personal interests, the cooperative is bound to suffer setback in its focal role and performance.

3.3 Empirical Review

Abdulazeez, Ndibe, and Mercy (2016) using regression to analyze the effect of corporate governance on the financial performance of deposit money banks in Nigeria. and it was found that larger board size contributes positively and significantly to the the financial performance of selected banks in terms of ROA.

Also, Johl et al; (2015) using un-tabulated Pearson correlations for variables in the model suggest that generally the performance variable (ROA) was positively correlated with the test variable board characteristics and this is the same with Awan (2012) who discover a positive relationship between NEDs and firm performance measured using return on asset (ROA).

Hypothesizing on a longitudinal sample of 156 firms listed on New Zealand stock exchange, Bathula (2008) reports that board characteristics which include gender diversity were positively related with firm performance measured by ROA.

Emeka and Alem, (2016) investigated the effects of corporate governance on bank's financial performance in Nigeria, covered years 2004- 2013. They discovered that there were effects of relative size of non-executive directors and the board size on return on investment (ROA). They found that the relationship between corporate governance and bank performance in Nigeria is quite significant as a unit change in the board size and the relative size of non-executive directors increases the return on assets.

Findings from the study of Adekunle and Aghedo (2014) using least square regression to estimate the relationship between corporate governance and performance of selected quoted firms on NSE generally reveals that there is positive and significant relationship between corporate governance as independent variables and firm performance. One of the performance variables is ROA and this ia found to have a negative relationship with ownership concentration.

Sarpong, Gyimah, Afriyie, & Asiamah, A. (2018) investigate the effect of board gender diversity, board independence and size on performance of listed manufacturing firms in Ghana using panel data between the period 2009-2013. The study revealed that both board gender diversity and independence had a significant positive effect on the firms' return on asset (ROA). Board size was however found to have no significant relationship with firm performance as measured in terms of ROA.

The study of Ahmed and Rugami (2019) established that corporate governance was a significant factor in determining performance of the SACCOs in Kilifi county having investigated the influence of board composition, size of the board, board members qualification and gender balance of the board members on the performance of SACCOs in Kilifi county. The study used a sample of 30 SACCOs selected through purposive sampling. The researcher used a semi-structured questionnaire administered to each of the 150 respondents in the sample population. The study further reported that the boards of directors in the SACCOs were moderately representative, diverse, professional and qualified. Also, that lean or small board size but professional and

qualified contributed positively and significantly to the performance of the SACCOs due to their efficiency and effectiveness in decision making, management, communication, coordination, monitoring and in operation cost. The study also concluded that the board members among the SACCOs have the necessary knowledge, skills, experience and ideas to improve the performance of the firms. The study discovered that SACCOs in Kilifi county did not have gender balance in their boards thereby having the male gender dominating. The female gender was not fairly represented and delegated leadership roles. However, there was at least a female board member among the SACCOs included in the study.

In investigating the effectiveness of corporate governance in Nigerian banks during the financial meltdown experienced worldwide, Owolabi (2012) employing ex-post facto survey research design to examine the relationship between governance mechanisms as represented by board composition (BC), capital adequacy (CA), director shareholding (DSH), board size (BS), CEO duality (DUA), audit committee (AC), age (AG) and size (SZ) of banks and their performance expressed in earnings per share (EPS), profitability (NPBT) and Tobin's Q (TQ) of selected 10 listed commercial banks in Nigeria. The study discovered that there was a significant positive relationship between NPBT and BS but no significant relationship between NPBT and BC, CA, DSH, DUA, AC, AG and SZ. Similarly, AC and showed a positive significant relationship with TQ, while SZ showed a negative significant relationship with performance when measured by TQ. No significant relationship was however established between BC, DSH, DUA, AG, and B. It was equally found that there was no significant relationship between EPS and BC, AC, DSH, BS, DUA, AC, SZ and AG. These findings are mixed.

Omolo (2015) examine the effects of corporate governance on the financial performance of deposit-taking SACCO in Nairobi city County, Kenya. The study used primary data from a developed questionnaire and secondary source data collected from the selected SACCOs financial reports. Board independence, board size, gender of the board of directors and number of board committees and Return on Assets (ROA) were used as independent and dependent variables respectively. Using Ordinary Least Squares (OLS) regression model to estimate the relationship between corporate governance and financial performance of the selected SACCOs, the study reveals that there is strong positive association between board size and corporate financial performance. Evidence also exists that there is a positive association between board independence and financial performance. Good positive association was also observed between number of the board committee and gender of the board members, and firm financial performance.

Kanyi, Maina, and Kariuki, (2018) adopt a descriptive research design to determine the effect of corporate governance on the financial performance of sampled 57 Savings and Credit Cooperatives in Embu County, Kenya using primary data collected through self-administered semi-structured questionnaires while secondary data was obtained from financial statements and periodicals using a record survey sheet. The study findings indicated that corporate governance positively affected the financial performance. In specific the board composition and corporate risk management for SACCOs had a positive effect on the financial performances of the SACCOs. The study is beneficial to SACCOs management in improving the performance of Savings and Credit

Cooperatives and enabling them to compete globally. However, Tachiwou (2016) establishes a negative relationship between corporate governance and ROA.

4.0 Methodology

4.1 Research Design

This study adopted Ex-post facto (also called Causal Comparative Research) design. Within the context of academic research, this research design refers to that approach of investigating possible cause and effect relationships by observing an existing condition or state of affairs and searching back in time for plausible casual factors. This method has been adopted in many previous similar researches such as; Adesanmi, Sanyaolu Ogunleye, & Ngene (2018); Omwenga, (2017); Sathyamoorthi, Baliyan, Dzimiri, & Wally-Dima, (2017); Surya, (2016); Onwuegbuchunam, Onwuegbuchunam, & Eboh (2015); Maradi, Navi, & Dasar, (2015); Mwanja, Marangu, Wanjere, Kuria, & Thuo, (2014); Adekunle & Aghedo, (2014); Mushi, (2013); and Owolabi (2012) among others.

Ex-post facto attempts to predict the causes on the basis of actions that already occurred (Salkind, 2010). In this design, the researcher cannot manipulate already occurred actions or it is practicable/ethical to manipulate the independent variables. The research design was found appropriate for the purpose of achieving the objectives of this study because the study made use of secondary data collected from the annual reports and accounts of the selected cooperatives for the study and that the study was not experimental as it investigates the causal relationships between the relevant variables of the study.

4.2 Population

The population of study in this research is the total number of Cooperative Thrift and Credit Society (CTCS) that are registered and validated with the cooperative section of the Lagos state ministry of commerce and cooperatives and selected for this study. The study made use of 256 registered CTCS as at November 2018.

4.3 Sampling Technique & Sample

A sample of 30 CTCS, with 5-year dataset, was selected for this study through purposive sampling technique. The technique was adopted because it allows the researcher to use his discretion to pick the CTCS which will best be suited to provide adequate information. Information based on the study's variables for the sampled CTCS were obtained from the annual reports of the CTCS submitted to Lagos State Ministry of Commerce and Cooperatives

4.4 Method of Data Collection

The data collection was within the context of the research questions and hypotheses. Secondary sources were used for data collection. The secondary data was collected through an information sheet designed by the researcher in accordance with the variables of study. This information was taken from the annual reports supplied by the selected CTCS to the Ministry of Commerce and Cooperatives. Data was also collected from textbooks, articles, and relevant reports/documents

from the internet. Normality and Multicollinearity tests were conducted on the data collected in order to ascertain their validity and reliability.

The data of the study was analyzed, using both descriptive and inferential statistical methods. The descriptive analysis describes the properties of the data showing the variations in responses and opinions with the use of frequencies and percentage denotations as well as other descriptive items such as means and standard deviations. The inferential analysis was done with the use of Panel regression analysis in SPSS software to test the effect of the independent variable (Corporate governance) on the dependent variable (Return on Assets). Panel regression was used for the entire hypothesis in the study.

In order to reduce errors, multi-collinearity test was conducted for the independent variables for the purpose of determining the linear relationship among these explanatory variables. Multi-collinearity can be detected using tolerance or variation inflation factor (VIF). A tolerance of less than 0.20 or 0.10 and/or a VIF of 5 or 10 and above indicates a multi-collinearity problem and this leads to Type II error. For the dependent variables, Jacque Berra test for normality of the dependent variables was carried out to determine if the dependent variables are normally distributed. Dependent variables are assumed to be normally distributed if their p-values are less than 0.05.

The model specification is below:

X = Corporate Governance (CG)

x₁ = Training of Board members (TR)

x₂ = Members Participation (MP)

x₃ = Policy Compliance (PC)

x₄ = Accountability (AC)

x₅ = Gender Composition (GC)

Y = Return on Assets (RA)

The regression equations are as follow:

$$Y = f(X)$$

$$Y_{it} = \alpha_0 + \beta_1 X_{it} + e_{it}$$

$$RA_{it} = \beta_0 + \beta_1 TR_{it} + \beta_2 MP_{it} + \beta_3 PC_{it} + \beta_4 AC_{it} + \beta_5 GC_{it} + e_{it}$$

Regression Model

$$Y = f(x_1, x_2, x_3, x_4, x_5)$$

5.0 Data Analysis & Result

5.1 Descriptive Statistics

Table 5.1: Descriptive Statistics of Corporate Governance and Financial Performance

Variables	Mean	Maximum	Minimum	Std. Dev.	Obs
RA	0.069	0.560	-0.014	0.052	150
TR	1.187	4.000	0.000	0.908	150
MP	74.453	201.000	21.000	34.433	150
PC	1.240	4.000	0.000	0.774	150
AC	1.667	3.000	1.000	0.652	150
GC	166.000	1450.000	20.000	259.280	150

Source: Researcher`s computation (2022)

RA: Return on Assets has the mean value of 0.069 and standard deviation of 0.052. The mean value of 0.069, suggests that on the average the return on assets of the selected cooperative societies in Lagos State, Nigeria grows at around 6.9%. The standard deviation of 0.052 connotes that there is a dispersion of the return on assets from the mean to around 0.502. Thus, the standard deviation value is close to the mean, suggesting that the return on assets is less susceptible to change over time. The minimum value of -0.014 and maximum value of 0.560 indicate that the selected cooperative societies in Lagos State, Nigeria have different levels of return on assets. This further implies that while some of the sampled cooperative societies in Lagos State, Nigeria experienced growth in return on assets, others have negative return on assets.

TR: Training of board members has the mean value of 1.187 and standard deviation of 0.908. The mean value of 1.187, suggest that on the average the training of board members of the selected cooperative societies in Lagos State, Nigeria grows at around 1.187. The standard deviation of 0.908 connotes that there is a dispersion of the training of board members from the mean to around 0.908. Thus, the standard deviation value is close to the mean, suggesting that the training of board members is less susceptible to change over time. The minimum value of 0.000 and maximum value of 4.000 indicate that the selected cooperative societies in Lagos State, Nigeria have different levels of training of board members. This further implies that while some of the sampled cooperative societies in Lagos State, Nigeria have high level of training of board members, others have not engaged in training of board members.

MP: Members participation has the mean value of 74.453 and standard deviation of 34.433. The mean value of 74.453, suggests that on the average the members participation of the selected cooperative societies in Lagos State, Nigeria is around 74.453. The standard deviation of 34.433 connotes that there is a dispersion of the members participation from the mean to around 34.433. Thus, the standard deviation value is far from the mean, suggesting that the members participation is highly susceptible to change over time. The minimum value of 21.000 and maximum value of 201.000 indicate that the selected cooperative societies in Lagos State, Nigeria have different levels of members participation. This further implies that while some of the sampled cooperative

societies in Lagos State, Nigeria have high level of members participation, others have low members participation.

PC: Policy compliance has the mean value of 1.240 and standard deviation of 0.774. The mean value of 1.240, suggests that on the average the policy compliance of the selected cooperative societies in Lagos State, Nigeria is around 1.240. The standard deviation of 0.774 connotes that there is a dispersion of the policy compliance from the mean to around 0.774. Thus, the standard deviation value is close to the mean, suggesting that the policy compliance is less susceptible to change over time. The minimum value of 0.000 and maximum value of 4.000 indicate that the selected cooperative societies in Lagos State, Nigeria have different levels of policy compliance. This further implies that while some of the sampled cooperative societies in Lagos State, Nigeria have high level of policy compliance, others have zero policy compliance.

AC: Accountability has the mean value of 1.667 and standard deviation of 0.652. The mean value of 1.667, suggests that on the average the accountability of the selected cooperative societies in Lagos State, Nigeria is around 1.667. The standard deviation of 0.652 connotes that there is a dispersion of the accountability from the mean to around 0.652. Thus, the standard deviation value is close to the mean, suggesting that the accountability is less susceptible to change over time. The minimum value of 1.000 and maximum value of 3.000 indicate that the selected cooperative societies in Lagos State, Nigeria have different levels of accountability. This further implies that while some of the sampled cooperative societies in Lagos State, Nigeria have high level of accountability, others have low level of accountability.

GC: Gender composition has the mean value of 166.000 and standard deviation of 259.280. The mean value of 166.000, suggests that on the average the gender composition of the selected cooperative societies in Lagos State, Nigeria is around 166.000. The standard deviation of 259.280 connotes that there is a dispersion of the gender composition from the mean to around 259.280. Thus, the standard deviation value is far from the mean, suggesting that the gender composition is highly susceptible to change over time. The minimum value of 20.000 and maximum value of 1450.000 indicate that the selected cooperative societies in Lagos State, Nigeria have different levels of gender composition. This further implies that while some of the sampled cooperative societies in Lagos State, Nigeria have high level of gender composition, others have low level of gender composition.

5.2 Correlation

Starting with the test for multicollinearity, the variance inflation factor for each of the explanatory variables is less 10, the VIF are 1.63, 2.65, 1.28, 1.22, and 1.34, 2.71 for training of board members, members participation, policy compliance, accountability, gender composition. This implies that the explanatory variables included in all the specified and estimated models are not correlated with one another.

Policy compliance and accountability have positive association with the return on assets of the selected cooperative societies in Lagos State, Nigeria with correlation value of 0.104 and 0.020, respectively. This implies that increases in policy compliance and accountability will lead to increase in the return on assets of the selected cooperative societies in Lagos State, Nigeria. Conversely, training of board members, members participation, and gender composition have negative association with the return on assets of the selected cooperative societies in Lagos State, Nigeria with correlation values of -0.212, -0.157, -0.087, -0.155, and -0.140, respectively. This implies that increases in training of board members, members participation, and gender composition, will lead to decrease in the return on assets of the selected cooperative societies in Lagos State, Nigeria, respectively.

5.3 Test of Hypothesis

5.3.1 Research Objective: To reveal the effect of corporate governance (training, members' participation, policy compliance, accountability and gender composition) on return on assets.

5.3.2 Research Question: What is the effect of corporate governance (training, members' participation, policy compliance, accountability and gender composition) on return on assets?

5.3.3 Research Hypothesis: There is no significant effect of corporate governance (training, members' participation, policy compliance, accountability and gender composition) on Return on assets (ROA).

Table 5.2: Corporate Governance and Return on Asset

Variables	Coefficient	Robust Standard Error	Z-test	Prob
Constant	0.983	1.517	0.648	0.517
TR	0.100***	0.024	4.167	0.000

MP	-1.086	1.254	-0.866	0.387
PC	0.657***	0.124	5.298	0.000
AC	0.564	0.601	0.937	0.349
GC	-0.115	0.123	-0.929	0.353
Adjusted R ²	0.279			
Wald-Test	21.04 (0.000)			
Hausman Test	1.27 (0.938)			
Breusch-Pagan RE Test	88.02 (0.000)			
Heteroscedasticity Test	6606.93 (0.000)			
Serial Correlation Test	52.347 (0.000)			
Pesaran CSI	-0.393 (0.694)			
Observations	150			

Source: Researcher`s computation (2022)

Hypothesis four was used to determine the effect of corporate governance on return on asset of selected cooperative societies in Lagos state, Nigeria. The Fixed Effect and Random Effect models were estimated alongside the Hausman test to access which of the two models are appropriate. From the Hausman test as shown in Table 4.6, the value is 1.27 probability value of 93.8 per cent suggests that the random effect is more appropriate because of the non-significance of the Hausman test. To validate the use of the random effect model, the Breusch and Pagan Lagrangian Multiplier test for random effect was conducted and the result presented in Table 4.6. shows that the alternative hypothesis that the random effect model is efficient and consistent and it was accepted because the statistic of 88.02 was significant at 1 per cent level. Checking for the assumptions of the error terms concerning the possibility of correlated residuals, the serial correlation test statistics of 52.347 is significant with a probability value of 1 percent. Therefore, the study concluded that the estimated model is not free of autocorrelated residuals.

The Pesaran cross-sectional dependence test was also examined and the test do not reject the null of cross-sectional independence among the thirty selected cooperative societies in Lagos state, Nigeria because the statistics of -0.393 with a probability value of 69.4 percent is not significant. Lastly, the null hypothesis assumption about the constancy of the variance of the error term could not be rejected because the test statistic of 6606.93 is statistically significant at 1 per cent level, thus, the alternative hypothesis that the residuals are heteroscedastic could not be rejected. To correct the autocorrelation and the heteroscedastic of the error term, the cluster option was used and the results is reported in Table 4.6

5.3.4 Interpretation

$$RA_{it} = \beta_0 + \beta_1 TR_{it} + \beta_2 MP_{it} + \beta_3 PC_{it} + \beta_4 AC_{it} + \beta_5 GC_{it} + \mu_{it}$$

$$RA_{it} = 0.983 + 0.100TR_{it} - 1.086MP_{it} + 0.657PC_{it} + 0.564AC_{it} - 0.115GC_{it} + Z_{it}$$

$$t\text{-test} = 1.517 \quad 4.167 \quad -0.866 \quad 5.298 \quad 0.937 \quad -0.929$$

From the results in Table 4.6, there is evidence that training of board members, policy compliance, and accountability have positive relationship with return on asset of the selected cooperative societies in Lagos state, Nigeria, while members participation and gender composition have negative relationship with return on asset of the selected cooperative societies in Lagos state, Nigeria.

Concerning the magnitudes of the estimated parameters, 1 unit increase in training of board members, policy compliance, and accountability will lead to 0.100, 0.657, and 0.564 increases in the return on asset of the selected cooperative societies in Lagos state, Nigeria respectively, while 1 unit increase in members participation and gender composition will lead to 1.086 and 0.115 decrease in the return on asset of the selected cooperative societies in Lagos state, Nigeria respectively.

In addition, there is evidence that training of board members and policy compliance have significant relationship with the return on asset of the selected cooperative societies in Lagos state, Nigeria ($TR = 0.100$, $z\text{-test} = 4.167$, $p < 0.05$ and $PC = 0.657$, $z\text{-test} = 5.298$, $p < 0.05$). This implies that training of board members and policy compliance are significant factors influencing changes in the return on asset of the selected cooperative societies in Lagos state, Nigeria.

Conversely, there is evidence that members participation, accountability, and gender composition have no significant relationship with the return on asset of the selected cooperative societies in Lagos state, Nigeria ($MP = -1.086$, $z\text{-test} = -0.866$, $p > 0.05$; $AC = 0.564$, $z\text{-test} = 0.937$, $p > 0.05$, and $GC = -0.115$, $z\text{-test} = -0.929$, $p > 0.05$). This implies that members participation, accountability, and gender composition are not significant factors influencing changes in the return on asset of the selected cooperative societies in Lagos state, Nigeria.

The Adjusted R^2 which measure the proportion of the changes in the return on asset as a result of changes in training of board members, members participation, policy compliance, accountability, and gender composition explains about 28 per cent changes in the return on asset of the selected cooperative societies in Lagos state, Nigeria, while the remaining 72 per cent were other factors explaining changes in the return on asset of the selected cooperative societies in Lagos state, Nigeria but were not captured in the model.

5.3.5 Decision Rule

The Wald-test Statistic of 21.04 with a probability value of 0.000 is significant at 5 per cent level. This implies that the null hypothesis, there is no significant effect of corporate governance (training, members' participation, policy compliance, accountability and gender composition) on the return on asset of cooperatives was rejected and the alternative hypothesis that there is significant effect of corporate governance (training, members' participation, policy compliance,

accountability and gender composition) on the return on asset of the selected cooperatives was accepted.

5.3.6 Discussion

The fourth hypothesis of the study examines the effect of corporate governance (training, members' participation, policy compliance, accountability, and gender composition) on return on assets of cooperative societies in Lagos State, Nigeria. The hypothesis is estimated using random effect and the result shows that there is evidence that training of board members, policy compliance, and accountability have positive relationship with return on asset of the selected cooperative societies in Lagos state, Nigeria, while members participation and gender composition have negative relationship with return on asset of the selected cooperative societies in Lagos state, Nigeria. In addition, there is evidence that training of board members and policy compliance have significant relationship with the return on asset of the selected cooperative societies in Lagos state, Nigeria. Conversely, there is evidence that members participation, accountability, and gender composition have no significant relationship with the return on asset of the selected cooperative societies in Lagos state, Nigeria. The overall significance of the model shows that the null hypothesis that there is no significant effect of corporate governance (training, members' participation, policy compliance, accountability and gender composition) on the return on asset of co-operators was rejected and the alternative hypothesis that there is significant effect of corporate governance (training, members' participation, policy compliance, accountability and gender composition) on the return on asset of co-operators was accepted.

The findings conform with the result of Abdulazeez, Ndibe, and Mercy (2016) using regression to analyze the effect of corporate governance on the financial performance of deposit money banks in Nigeria and it was found that larger board size contributes positively and significantly to the financial performance of selected banks in terms of ROA. Also, Johl, Kaur, and Cooper, (2015) using un-tabulated Pearson correlations for variables in the model suggest that generally the performance variable (ROA) was positively correlated with the test variable board characteristics and this is the same with Awan (2012) who discover a positive relationship between NEDs and firm performance measured using return on asset (ROA). Hypothesizing on a longitudinal sample of 156 firms listed on New Zealand stock exchange, Bathula (2008) reports that board characteristics which include gender diversity were positively related with firm performance measured by ROA. Emeka and Alem, (2016) investigated the effects of corporate governance on bank's financial performance in Nigeria, covered years 2004- 2013. They discovered that there were effects of relative size of non-executive directors and the board size on return on investment (ROA). They found that the relationship between corporate governance and bank performance in Nigeria is quite significant as a unit change in the board size and the relative size of non-executive directors increases the return on assets. Sarpong, Gyimah, Afriyie, and Asiamah, A. (2018) investigate the effect of board gender diversity, board independence and size on performance of listed manufacturing firms in Ghana using panel data between the period 2009-2013. The study revealed that both board gender diversity and independence had a significant positive effect on the firms' return on asset (ROA). Board size was however found to have no significant relationship with firm performance as measured in terms of ROA.

However, findings from the study of Adekunle and Aghedo (2014) using least square regression to estimate the relationship between corporate governance and performance of selected quoted firms on NSE generally reveals that there is positive and significant relationship between corporate governance as independent variable and firm performance. One of the performance variables is ROA and this is found to have a negative relationship with ownership concentration. Also, in the study of Sathyamoorthi, Baliyan, Dzimiri, and Wally-Dima, (2017) using regression model it was established that gender diversity among other corporate governance variables chosen has no significant impact on the financial performance of listed companies measured with ROA. Using a sample of 39 firms operating within the West African Monetary Union to establish the relationship between corporate governance and firm performance, Tachiwou (2016) establishes a negative relationship between corporate governance and ROA. The governance variable in this connection is ownership concentration.

5.4 Conclusion

In consideration of the empirical findings, this study concluded that there was a statistically significant effect of corporate governance (training, members' participation, accountability and gender composition) on each dimension of financial performance return on assets. However, policy compliance, one of the corporate governance variables have no significant effect on the financial performance of the selected cooperative societies in Lagos state. This generally, indicated that corporate governance has significant effects on the financial performance of selected cooperative societies in Lagos state.

Furthermore, the study findings are in line with anchored theory which is stewardship theory. The theory is selected based on its perspective and ideology which guide this study's variables under investigation. Stewardship theory argues that people are intrinsically motivated to work for others/organisations to accomplish the tasks and responsibilities with which they have been entrusted (Donaldson & Davis, 1991). The theory assumes that individuals seek to fulfill higher order needs through pro-organizational behavior and thus will naturally align their interests with those of the organization that is, its principals (Davis, Schoorman & Donaldson, 1997). The management committee of a cooperative are stewards and are assumed to be obedient servants/managers and are expected to act in the best interest of the owner/principals of which they are part of. The management committee will naturally be inclined to govern the cooperative for better financial performance since they are part-owners and will benefit from the results of good governance of the cooperative. Based on the anchored theory perspective in the findings of the study, it is thereby concluded that corporate governance affects financial performance of selected cooperative societies in Lagos state as moderated by membership size and number of employees.

5.5 Recommendations

Based on the findings of the study, the regulator of the selected cooperative societies should endeavour to increase the level of compliance of the societies with the relevant law, bye-laws and regulations. This helps to ensure the good governance of the cooperative societies and also encourage managers of the societies to practice good governance.

5.6 Suggestions for Further Studies

The study was carried out in Lagos state; further study should be replicated in other states of the federation to see whether there is a difference in corporate governance practices.

The study focused on training, members' participation', policy compliance, accountability and gender composition as corporate governance variables, further studies should be carried out using other variables in governance.

Future researchers could employ survey research design to capture the dynamics of corporate governance and financial performance.

References

- Abdulazee, D. A., Ndibe, L. & Mercy, A. M. (2016). Corporate governance and financial performance of listed deposit money banks in Nigeria. *Journal of Accounting & Marketing J. Account Mark* 5: 153. doi:10.4172/2168-9601.1000153
- Adejo, P.E., Adejo, E.G., Shaibu, U.M., (2017). Assessment of gender access to agricultural loans from cooperative societies in Dekina local government area of Kogi State, Nigeria. *Journal of Asian Rural Studies* 1(2): 123-133
- Adekunle, S A & Aghedo, E M (2014). Corporate governance and financial performance of selected quoted companies in Nigeria, *European Journal of Business and Management* www.ijste.org ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online) 6(9).
- Adesanmi A. D., Sanyaolu O.A., Ogunleye O.O. & Ngene T. W. (2018). Corporate governance and firm's financial performance: A comparative study of manufacturing companies and banks in Nigeria. *International Journal of Contemporary Research and Review*, 9(7). 20940-20950 DOI: <https://doi.org/10.15520/ijcrr/2018/9/07/560>
- Ahmed, A. F. & Rugami, M. (2019). Corporate governance and performance of savings and credit cooperative societies in Kilifi County, Kenya. *International Academic Journal of Economics and Finance*, 3(3), 61-79
- Akinyi, R. T & Oima, D. O (2019). Effect of firm size on financial performance of Sugar firms in western Kenya. *International Journal of Education and Research*. 7(9), 211-218.
- Aktan B., Turen S., Tvaronavičienė M., Celik S., Alsadeh H.A. (2018). Corporate governance and performance of the financial firms in Bahrain. *Polish Journal of Management Studies*, 17(1), 39-58. DOI: 10.17512/pjms.2018.17.1.04
- Al Mamun, A., Yasser, Q. R., & Rahman, M. A. (2013). A discussion of the suitability of only one vs. more than one theory for depicting corporate governance. *Modern Economy*, 4, 37-48. doi:10.4236/me.2013.41005
- Awan, S. H. (2012). Effect on board composition on firm performance: A case of Pakistan listed companies, *Interdisciplinary Journal of Contemporary Research in Business*, 3(10)
- Awotundun, D. A., Kehinde, J. S. & Somoye, R. O. C. (2011). Corporate governance and stakeholders' interest: A case of Nigerian banks. *International Journal of Business & Management*, 6(10), 102-112. doi:10.5539/ijbm.v6n10p102.
- Bain, N. & Band, D. (1996). *Winning Ways through Corporate Governance*. Macmillan
- Bathula, H. (2008). Board characteristics and firm performance: Evidence from New Zealand. (Unpublished Doctoral thesis) Auckland University of Technology.
- Beccerra, M. & Gupta, A. K. (1999). Trust within the organization: Integrating the trust literature with agency theory and transaction costs economics. *Public Administration*, Q 23, 177-203
- Brandsma, G. J., & Schillemans, T. (2013). The accountability cube: Measuring accountability *Journal of Public Administration Research and Theory*, 23, 953-975.

- Buallay, A. (2019). Corporate governance, Sharia'ah governance and performance: A cross-country comparison in MENA region. *International Journal of Islamic and Middle Eastern Finance and Management*, 3(1), 1-14.
- Chacón, L. (1996). Educación y formación ante los retos del siglo XXI. *Situación*, 4:153-166.
- Chowdary, N. V. (2002). *Corporate governance: Principles and paradigms*. ICFAI Press Hyderabad.
- Christensen, T & Lægreid, P (2014). *Performance and accountability: A theoretical discussion and an empirical assessment*. Springer Science + Business Media. New York
- Clarke, T. (2007). *International corporate governance: A comparative approach*. Routledge, London.
- Daily, C. M., Malton, R. D., & Cannella, A. A. (2003). Corporate governance: Decades of dialogue and data. *Academy of Management Review* 28, 371-382.
- Danoshana, S., & Ravivathani, T. (2019). The impact of the corporate governance on firm performance: A study on financial institutions in Sri Lanka. *SAARJ Journal on Banking & Insurance Research*, 8(1), 62-67.
- Darweesh, S. D. (2015). *Correlations between corporate governance financial performance and market value*. (Unpublished Doctoral Thesis) Walden University.
- Das, M. (2014). Effectiveness of quality management practices and domain quality certification in Indian IT companies: A comparative study. *The International Journal of Business & Management*, 2(3), 45-48.
- Davis, J. H., Schoorman, F. D. & Donaldson, L (1997). Towards a stewardship theory of management. *Academy of Management Review*, 22(3).
- Dutzi, A. (2005). *Der Aufsichtsrats Instrument der Corporate Governance*. DUV, Wiesbaden
- Eagly, A. & Johnson, B. (1990). Gender and leadership style: A meta-analysis. *Psychology Bulletin*, 108, 233-256.
- Franken, J. R V. & Cook, M. L. (2017). A descriptive summary of cooperative governance and performance. *Journal of Cooperatives*, 32(24), 23-45.
- Hakelius, K. (2013). Corporate governance and performance of Swedish cooperatives board structure and mode of working. Retrieved from <https://pdfs.semanticscholar.org/b762/73afba038296f7083779224c3b27601752ee>.
- Hakim, L. (2019). Pengaruh return on asset, investment opportunity set dan good corporate governance Terhadap Nilai Perusahaan LQ45. *IQTISHADUNA: Jurnal Ilmiah Ekonomi Kita*, 8(1), 33-42.
- Haris, M., Yao, H., Tariq, G., Javaid, H. M., & Ain, Q. U. (2019). Corporate governance, political connections, and bank performance. *International Journal of Financial Studies*, 7(4), 62-74.

- Harun, M. Z. M. B., & Mahmood, R. B. (2012). The relationship between group cohesiveness and performance: An empirical study of cooperatives movement in Malaysia, *International Journal of Cooperative Studies*, 1(1), 15-20.
- International Cooperative Alliance (1995). Available at :(<https://ica.coop/en/media/news>).
- Jewell, J J & Mankin, J A (2011). What is your ROA? An investigation of the many formulas for calculating Return on assets. *Academy of Educational Leadership Journal*, 15, Special Issue
- Johl, S K., Kaur, S & Cooper, B J (2015). Board characteristics and firm performance: Evidence from Malaysian Public Listed Firms. *Journal of Economics, Business and Management*, 3(2).
- Kanyi, A. M., Maina, K. E. & Kariuki, S. (2018). Corporate governance and financial performance of savings and credit cooperatives in Embu County, Kenya. *International Journal of Finance, Accounting and Economics (IJFAE)*, 1(2), 1-11. ISSN: 2617-135X
- Keay, A., (2015). *Board Accountability and Corporate Governance*. Abingdon: Routledge.
- Khafid, M & Nurlaili, D (2017). The mediating role of accountability in the influence of cooperative characteristics on its financial performance. *International Journal of Economic Research*, 14(5), 191-201. ISSN: 0972-9380. Available at <http://www.serialsjournal.com>
- Kinyuira, D.K. (2017). Influence of cooperative governance on sustainable performance of deposit-taking savings and credit cooperatives in Kenya, *Journal of Strategy & Performance Management*, 5(4), 118-135.
- Kobia, S. K. (2011). *The cooperative movement in Kenya: Challenges and opportunities*. Nairobi: Lukiko Consulting Trust.
- Lambe, I. (2014). Corporate governance and organizational performance in the Nigerian banking industry. *European Journal of Business and Management*, 6(25).
- Lemmi, M. D. (2020). The knowledge of leaders about basic cooperative principles as a key factor for Agricultural cooperatives business performances' in Horo Guduru Wollega zone, Ethiopia. *International Journal in Management and Social Science* 08(02), <http://ijmr.net.in>, Email: irjmss@gmail.com
- Manafe, M.W.N & Akbar, R (2014). Accountability and performance: Evidence from local government. *Journal of Indonesian Economy and Business* Volume 29(1), 56 – 73
- Maradi, M. M., Navi, B. S. & Dasar, P. (2015). Corporate governance practices in selected cooperative banks at Vijayapur City. *IOSR Journal of Business and Management*, (IOSR- JBM). 17(3). Ver. III, 45-55. e-ISSN: 2278-487X, p-ISSN: 2319-7668. www.iosrjournals.org
- Mbiriti, D. M (2020). Corporate governance and performance of selected savings and credit cooperative societies in Nairobi county, Kenya. (Unpublished MBA dissertation), Kenyatta University

- McEvily, B., Perrone, V. & Zaheer, A. (2003) Trust as an organizing principle. *Organisation Science* 14:91–103
- Mehta, T. N. & Bhatt, K. J. (2014). Training effectiveness. *International Journal of Advance Research in Computer Science and Management Studies*, 2(7). Available online at: www.ijarcsms.com
- Mohan, A & Chandramohan, S (2018). Impact of corporate governance on firm performance: Empirical evidence from India. *International Journal of Research in Humanities, Arts and Literature*, 6(2), 209-218. ISSN (P): 2347-4564; ISSN (E): 2321-8878
- Mushi, B.A. (2013). Assessment of the extent of corporate governance adoption in cooperative societies: A Survey of Dar Es Salaam SACCOs. (Unpublished Masters Dissertation) Open University of Tanzania
- Mwanja, B. K., Marangu, W. N., Wanjere, D. M., Kuria, J., & Thuo, K. J. (2014). Effect of corporate governance on performance of savings and credit cooperative societies in Kakamega County. *European Journal of Business and Management*, 6, 123–136
- Mwanja, B. K., Marangu, W. N., Wanjere, D. M., Kuria, J., & Thuo, K. J. (2014). Effect of corporate governance on performance of savings and credit cooperative societies in Kakamega County. *European Journal of Business and Management*, 6, 123–136
- Ogunleye, A; Oluwafemi, Z; Arowolo, K & Odegbile, S. (2015). Analysis of socioeconomic factors affecting farmers participation in cooperative societies in Surulere local government area of Oyo state. *IOSR Journal of Agriculture and Veterinary Science* 8(5), 40-44.
- Okoye, L. U; Olokoyo, F; Okoh, J. I; Ezeji, F & Uzohue, R (2020). Effect of corporate governance on the financial performance of commercial banks in Nigeria. *Banks and Bank Systems*, 15(3), 55-69. doi:10.21511/bbs.15(3).2020.06
- Omolo, J. O. (2015). Corporate governance best practices and performance by deposit taking savings and credit co-operative societies in Nairobi city county. (Unpublished Masters dissertation) University of Nairobi.
- Omwenga, J.O (2017). Effect of corporate governance on financial performance of large-tier savings and credit cooperative societies in Kenya. (Unpublished Masters dissertation) University of Nairobi.
- Onwuegbuchunam, D. E., Onwuegbuchunam, G. N. & Eboh, E. A. (2015). Economic benefits and constraints in management of thrift cooperatives in public organizations. *European Journal of Business and Management* 7(27).
- Owolabi, S. A. (2012). Corporate governance and *firms'* performance of selected banks in Nigeria (2006-2010). (Unpublished Doctoral Thesis). Babcock University, Ilishan.
- Oyewole, T. G & Oseni, M (2019). Gender, equity and corporate governance in cooperative societies. *Specialty Journal of Accounting and Economics*, 5(4), 14-21. ISSN: 2412-7418. Available online at www.sciarena.com

- Pelayo-Maciél, J., Calderon-Hernandez, G., & Serna-Gomez, H. M. (2012). Corporate governance structure and its impact on human resource management and financial performance. *China-USA Business Review*, 11, 1133-1145. Retrieved from <http://www.chinabusinessreview.com/>
- Peterson, E. A. (2013). Compliance and ethics programs: Competitive advantage through the law. *Journal of Management & Governance*, 17(4), 1027-1045.
- Pierre, J. & Peters, B. G (2017). The shirking bureaucrat: A theory in search of evidence? *Policy & Politics* 45: 157–72.
- Ponka, V. (2018). The legal nature of cooperative membership. *Journal of Entrepreneurial and Organizational Diversity*, European Research Institute on Cooperative and Social Enterprises, 7(2), 39-61.
- Puri, D. L & John Walsh, J (2018). Impact of good governance on performance of cooperatives in Nepal. *Management & Marketing*, 16(2), 207-223.
- Rostami, S., Rostami, Z., & Kohansal, S. (2016). The effect of corporate governance components on return on assets and stock return of companies listed in Tehran stock exchange. *Procedia Economics and Finance*, 36, 137-146.
- Saleh, N. M. & Hamzah, N. (2017). Cooperative governance and public interest: Between control and autonomy. *Jurnal Pengurusan*, 51:1-26, Malaysia.
- Salkind, N. J (ed.) (2010). Ex-post Facto: In *Encyclopedia of Research Design*. <https://dx.doi.org/10.4135/9781412961288.n145>
- Sarpong, B., D, Gyimah, P, Afriyie, R., O & Asiamah, A (2018). Corporate governance and firm performance: An empirical Analysis of manufacturing listed firms in Ghana. Retrieved from: <https://www.researchgate.net/publication/325661820>.
- Sathyamoorthi, C. R., Baliyan, P., Dzimiri, M., & Wally-Dima, L. (2017). The impact of corporate governance on financial performance: The case of listed companies in the consumer services sector in Botswana. *Advances in Social Sciences Research Journal*, 422, 63-77.
- Setiawan, A. (2017). Analisis pengaruh tingkat kesehatan bank terhadap Return on Asset. *Jurnal Analisa Akuntansi dan Perpajakan*, 1(2), 130-152.
- Stout, M & Love, J. M. (2018). *Integrative Governance: Generating Sustainable Responses to Global Crises*. Abingdon: Routledge.
- Sudhakar, R. & Basariya, S. R. (2018). Theoretical framework on the effectiveness of training & development: Review of literature. *International Journal of Mechanical Engineering and Technology*, 9(7), 932–943.
- Sundara-Murthy, C. & Lewis, M. (2003). Control and collaboration: paradoxes of governance. *Academy Management Review* 28:397–415
- Surya, B.G. C (2016) Corporate governance and firm performance: Empirical evidence from India. *Journal of Business and Management Research*, 1(2), 48-65. ISSN: 2382-5219 DOI: <http://dx.doi.org/10.3126/jbmr.v1i2.15663>

- Tachiwou, A M, (2016). Corporate governance and firms' performance of listed companies in West African Monetary Union regional financial exchange. *International Journal of Economics and Finance*, 8(8), 212 - 221
- Torfin, J & Bentzen, T. Ø (2020). Does stewardship theory provide a viable alternative to control-fixated performance management? *Adm. Sci.*10(86) doi:10.3390/admsci10040086. Available at www.mdpi.com/journal/admsci
- Udeh, F., N, Abiahu, M., F., C & Tambou, L., E (2017). Impact of corporate governance on firms financial performance: A study of quoted banks in Nigeria. Retrieved from <https://www.researchgate.net/publication/317370735>.
- Umebali, E, E; Nwankwo, F. & Usman, A. U. (2018). Performance of cooperative management committee in Kaduna Polytechnic, Kaduna. *International Journal of Arts, Languages and Business Studies (IJALBS)*, 1(1), 231 – 243.
- Waduge, C S D. (2011). Governance and performance: An Empirical study of Australian universities. (Unpublished Doctoral Thesis). Victoria University, Melbourne.
- Wikipedia (2018). Stewardship theory. Retrieved from https://en.wikipedia.org/wiki/Stewardship_theory
- Wilar, F. F., Mangantar, M., & Tulung, J. E. (2018). Pengaruh corporate governance terhadap return on asset (ROA) pada Lembaga Pembiayaan terdaftar di BEI tahun 2012-2016. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi*, 6(4).
- Woldeyes, Z. E (2019). *Members participation and financial performance of Wheat Producers' Cooperative Societies in southern Ethiopia*. (Unpublished Doctoral thesis) University of Agriculture, Tanzania.
- Yusuf, I & Ekundayo, D (2018). Regulatory non-compliance and performance of deposit money banks in Nigeria. *Journal of Financial Regulation and Compliance*. <https://doi.org/10.1108/JFRC-04-2017-0041>
- Zabri, S. M., Ahmad, K., & Wah, K. K. (2016). Corporate governance practices and firm performance: Evidence from top 100 public listed companies in Malaysia. *Procedia Economics and Finance*, 35, 287-296.

APPENDIX 1**DATA SET**

S/N	CTCS	YEAR	x1	x2	x3	x4	x5	Y ¹
			Training	Attendance	Policy	Meetings	Gender (%)	ROA(N)
1	Ijede Staff Schl (1994)	2014	3	161	2	2	70	0.039
		2015	2	172	0	1	60	0.038
		2016	2	201	1	1	60	0.04
		2017	4	182	1	2	60	0.04
		2018	1	192	0	2	60	0.039
2	Igba Otun (1998)	2014	2	114	1	2	40	0.044
		2015	0	120	1	2	40	0.039
		2016	1	98	0	1	45	0.034
		2017	2	113	1	3	50	0.042
		2018	2	106	2	2	50	0.04
3	Igbeyinadun Okeriya (1999)	2014	1	121	1	3	210	0.085
		2015	1	90	2	2	220	0.092
		2016	1	102	2	2	280	0.076
		2017	2	98	1	3	220	0.06
		2018	1	110	1	2	230	0.073
4	Owutu Ire-Akari (2000)	2014	1	48	2	3	50	0.109
		2015	1	58	2	3	50	0.105
		2016	1	70	2	3	50	0.1
		2017	1	50	2	2	50	0.099
		2018	1	68	2	3	45	0.083
5	Egbin Thermal Staff (2001)	2014	2	101	2	2	280	0.046
		2015	3	98	1	3	270	0.04
		2016	3	102	1	2	320	0.048
		2017	3	110	1	3	300	0.059
		2018	3	108	1	2	310	0.06
6	NEPA Interest-free Staff (2004)	2014	1	76	0	2	960	0.016
		2015	2	65	2	3	1450	0.021
		2016	2	78	1	3	1400	0.018

		2017	3	66	0	2	1400	0.02
		2018	1	74	0	2	1400	0.018
7	AN-NUR (2006)	2014	0	102	2	1	50	0.055
		2015	1	98	1	1	50	0.022
		2016	1	111	1	3	20	0.033
		2017	2	107	0	2	20	0.023
		2018	1	118	0	1	20	0.013
8	OMICOM (2006)	2014	2	122	2	2	80	0.032
		2015	3	98	2	2	70	0.038
		2016	2	131	0	1	70	0.022
		2017	1	116	1	1	80	0.025
		2018	2	126	0	1	70	0.033
9	Itesiwaju (2008)	2014	0	136	2	2	45	0.083
		2015	1	152	2	1	45	0.086
		2016	2	108	3	1	55	0.085
		2017	3	122	2	1	55	0.08
		2018	3	92	1	1	40	0.061
10	Zeekay Staff (2009)	2014	0	46	2	2	55	0.043
		2015	2	35	1	1	40	0.041
		2016	2	33	0	1	40	0.03
		2017	1	45	0	1	40	0.039
		2018	2	40	0	1	40	0.042
11	African Steel Snr Staff (2011)	2014	2	82	2	3	950	0.117
		2015	3	55	1	3	850	0.13
		2016	3	62	0	2	650	0.082
		2017	2	74	1	1	700	0.074
		2018	3	70	1	2	700	0.066
12	Monife (2011)	2014	1	94	2	1	260	0.051
		2015	0	72	1	1	160	0.057
		2016	1	61	1	1	140	0.052
		2017	1	66	1	1	100	0.051
		2018	1	43	1	1	300	0.065
13	Diligent (2012)	2014	0	36	2	1	90	0.15
		2015	0	32	1	1	80	0.172

		2016	1	38	0	1	80 171	0.064
		2017	1	41	2	1	90	0.041
		2018	1	39	2	1	90	0.026
14	NASRULLAH (2012)	2014	0	58	1	2	100	0.035
		2015	2	66	1	2	140	0.032
		2016	2	60	1	2	40	0.02
		2017	2	63	1	1	60	0.028
		2018	2	70	0	1	60	0.031
15	Next Level (2012)	2014	1	125	2	3	90	0.099
		2015	2	124	2	2	45	0.062
		2016	3	102	2	2	200	0.061
		2017	2	108	1	1	200	0.032
		2018	2	112	1	2	200	0.045
16	Gbekele Oluwa (2001)	2014	1	55	1	2	70	0.076
		2015	2	69	1	2	70	0.055
		2016	1	68	1	1	70	0.076
		2017	0	92	1	2	70	0.1
		2018	1	98	0	1	70	0.1
17	Ifesowapo Oluye (2014)	2014	0	26	2	1	55	0.062
		2015	0	27	2	1	50	0.066
		2016	1	24	2	2	50	0.068
		2017	1	33	1	2	50	0.034
		2018	1	45	1	2	50	0.038
18	Aduragbemi Ona-Ara (2014)	2014	0	77	2	1	200	0.062
		2015	0	73	2	1	200	0.12
		2016	1	75	2	2	200	0.107
		2017	0	75	1	2	200	0.106
		2018	1	64	1	2	200	0.11
19	Alagbara Ninu Oluwa (2014)	2014	0	47	2	1	50	0.025
		2015	0	44	2	2	50	0.029
		2016	1	46	2	1	50	0.062
		2017	1	52	2	2	50	0.044
		2018	1	74	2	2	25	0.086

20	Nitori Iwo Ni Imolemi (2014)	2014	0	41	2	2	90 ¹⁷²	0.007
		2015	0	40	2	2	60	0.039
		2016	0	56	2	2	70	0.086
		2017	1	55	1	1	200	0.069
		2018	2	62	1	1	300	0.095
21	Oluwa Semi Laanu (2014)	2014	0	42	2	2	60	0.12
		2015	1	41	2	1	70	0.06
		2016	0	52	2	2	60	0.078
		2017	1	61	1	1	60	0.02
		2018	1	71	2	1	60	0.035
22	Ibukun Oluwa Ni (2014)	2014	0	38	2	2	100	0.075
		2015	0	36	2	2	100	0.08
		2016	1	50	2	2	100	0.115
		2017	1	49	1	2	100	0.086
		2018	1	50	0	2	90	0.078
23	Bukunmi Oluwa (2005)	2014	1	21	2	1	90	0.034
		2015	1	28	0	2	70	0.063
		2016	1	41	1	1	70	0.045
		2017	1	52	1	2	60	0.071
		2018	1	61	1	1	90	0.084
24	Ohun Rere Yemi Oluwa (2013)	2014	0	40	1	1	70	0.56
		2015	0	42	0	1	80	0.039
		2016	1	36	1	1	80	0.055
		2017	1	46	1	1	80	0.051
		2018	1	56	1	1	100	0.061
25	Ayo Ni Mofe Temidire (2013)	2014	0	54	2	1	200	0.151
		2015	1	50	2	1	220	0.11
		2016	1	62	1	2	220	0.087
		2017	1	48	1	2	240	0.086
		2018	0	68	0	1	90	0.072
26	Ibukun Adura Mi Gba (2013)	2014	0	62	0	2	45	0.162
		2015	1	73	0	2	80	0.116
		2016	1	82	1	2	60	0.119

		2017	1	81	0	1	45 173	0.124
		2018	2	84	0	1	60	0.085
27	Ife Oluwa Ni (2012)	2014	0	41	2	1	100	0.068
		2015	0	38	2	1	100	0.044
		2016	1	49	1	1	90	0.078
		2017	0	47	1	1	90	-0.014
		2018	1	41	0	1	80	0.058
28	Iranlowo Oluwa Ni (2012)	2014	0	90	2	2	150	0.073
		2015	1	92	2	2	150	0.057
		2016	1	83	1	2	150	0.084
		2017	1	76	1	2	180	0.071
		2018	1	66	2	1	150	0.072
29	Oluwarotimi Ona Ola (2011)	2014	1	72	1	2	120	0.121
		2015	2	70	0	2	120	0.095
		2016	2	84	1	2	100	0.087
		2017	2	86	1	2	100	0.1
		2018	2	92	4	2	100	0.12
30	Oluwa Ranmi Lowo (2009)	2014	1	42	2	2	65	0.081
		2015	0	61	2	2	65	0.07
		2016	1	60	2	2	70	0.092
		2017	0	68	1	1	70	0.083
		2018	1	72	1	1	60	0.09

Descriptive

	RA	TR	MP	PC	AC	GC
Mean	0.068840	1.186667	74.45333	1.240000	1.666667	166.0000
Median	0.062000	1.000000	68.00000	1.000000	2.000000	80.00000
Maximum	0.560000	4.000000	201.0000	4.000000	3.000000	1450.000
Minimum	-0.014000	0.000000	21.00000	0.000000	1.000000	20.00000
Std. Dev.	0.052299	0.907735	34.43340	0.774423	0.651963	259.2795
Skewness	5.643346	0.542625	1.130916	-0.005985	0.458990	3.622161
Kurtosis	53.05866	2.837610	4.511018	2.836791	2.285319	16.29868
Jarque-Bera	16457.87	7.525871	46.24411	0.167378	8.459112	1433.344
Probability	0.000000	0.023215	0.000000	0.919717	0.014559	0.000000
Sum	10.32600	178.0000	11168.00	186.0000	250.0000	24900.00
Sum Sq. Dev.	0.407538	122.7733	176663.2	89.36000	63.33333	10016650
Observations	150	150	150	150	150	150

Correlation

Covariance Analysis: Ordinary

Date: 04/02/22 Time: 07:47

Sample: 2014 2018

Included observations: 150

Correlation

t-Statistic

Probability	RA	TR	MP	PC	AC	GC
RA	1					
	-0.21227	1				
TR	-2.64264					
	0.0091					
MP	-0.15748	0.43595	1			
	-1.94007	5.893034				
	0.0543	0				
PC	0.104025	-0.18827	-0.08716	1		
	1.272423	-2.33212	-1.06444			
	0.2052	0.021	0.2889			
AC	0.01988	0.219249	0.162235	0.159512	1	
	0.241901	2.733801	2.000169	1.965717		
	0.8092	0.007	0.0473	0.0512		
GC	-0.08722	0.290206	-0.00672	-0.11669	0.301147	1
	-1.06513	3.689281	-0.08174	-1.4293	3.84196	
	0.2886	0.0003	0.935	0.155	0.0002	

Model

. eststo: reg ra tr mp pc ac gc

Source	SS	df	MS	Number of obs	=
150					
				F(5, 144)	=
0.27					
Model	76.8279827	5	15.3655965	Prob > F	=
0.9310					
Residual	8318.60333	144	57.7680787	R-squared	=
0.0092					
				Adj R-squared	= -
0.0253					
Total	8395.43131	149	56.3451766	Root MSE	=
7.6005					

	ra	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
	tr	.0562159	.8116416	0.07	0.945	-1.548055
1.660486						
	mp	-1.011784	3.608753	-0.28	0.780	-8.144754
6.121187						
	pc	.6631329	.8452554	0.78	0.434	-1.007578
2.333844						
	ac	.5370434	1.055926	0.51	0.612	-1.550074
2.624161						
	gc	-.1083731	.2635373	-0.41	0.682	-.6292743
.4125281						
	_cons	.9273455	6.33685	0.15	0.884	-11.59792
13.45261						

.
 . eststo: xtreg ra tr mp pc ac gc, fe

Fixed-effects (within) regression	Number of obs	=
150		
Group variable: firm	Number of groups	=
30		
R-sq:	Obs per group:	
within = 0.0132	min =	
5		
between = 0.0006	avg =	
5.0		
overall = 0.0030	max =	
5		
	F(5,115)	=
0.31		
corr(u_i, Xb) = -0.2445	Prob > F	=
0.9080		

	ra	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]

2.895292	tr	.7943163	1.060666	0.75	0.455	-1.306659
19.65403	mp	1.290301	9.27083	0.14	0.890	-17.07343
2.688094	pc	.6320255	1.037995	0.61	0.544	-1.424043
3.711896	ac	1.011354	1.363354	0.74	0.460	-1.689189
2.370204	gc	-.2522837	1.323949	-0.19	0.849	-2.874771
29.93416	_cons	-4.670735	17.4701	-0.27	0.790	-39.27563
	sigma_u	3.5309484				
	sigma_e	7.6161135				
	rho	.17691364	(fraction of variance due to u_i)			

F test that all u_i=0: F(29, 115) = 0.98						Prob > F = 0.5043
(est2 stored)						
.						
. xtcsd, pesaran abs						
Pesaran's test of cross sectional independence =						-0.393, Pr = 0.6943
Average absolute value of the off-diagonal elements =						0.441
.						
. xttest3						
Modified Wald test for groupwise heteroskedasticity in fixed effect regression model						
H0: sigma(i)^2 = sigma^2 for all i						
chi2 (30) =						6606.93
Prob>chi2 =						0.0000
.						
. xtserial ra tr mp pc ac gc						
Wooldridge test for autocorrelation in panel data						
H0: no first order autocorrelation						
F(1, 29) =						52.347
Prob > F =						0.0000
.						
. eststo: xtreg ra tr mp pc ac gc, re						
Random-effects GLS regression						Number of obs =
150						
Group variable: firm						Number of groups =
30						

```

R-sq:                               Obs per group:
      within = 0.0081                  min =
5                                           avg =
      between = 0.0145                  max =
5.0
      overall = 0.0091
5

1.31                                Wald chi2(5) =
corr(u_i, X) = 0 (assumed)          Prob > chi2 =
0.9338

```

	ra	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
	tr	.1004223	.8192087	0.12	0.902	-1.505197
1.706042	mp	-1.085722	3.722148	-0.29	0.771	-8.380999
6.209555	pc	.6573314	.8504109	0.77	0.440	-1.009443
2.324106	ac	.5636218	1.067684	0.53	0.598	-1.529001
2.656245	gc	-.114613	.2744373	-0.42	0.676	-.6525002
.4232742	_cons	.9833316	6.559823	0.15	0.881	-11.87368
13.84035						
	sigma_u	1.2047651				
	sigma_e	7.6161135				
	rho	.02441205	(fraction of variance due to u_i)			

```
(est3 stored)
```

```
.
```

```
. xttest0
```

```
Breusch and Pagan Lagrangian multiplier test for random effects
```

```
ra[firm,t] = Xb + u[firm] + e[firm,t]
```

```
Estimated results:
```

	Var	sd = sqrt(Var)
ra	56.34518	7.506342
e	58.00519	7.616114
u	1.451459	1.204765

```
Test: Var(u) = 0
```

```

          chibar2(01) =    88.02
        Prob > chibar2 =    0.0000.

```

```
. hausman est2 est3
```

```
----- Coefficients -----
```

	(b)	(B)	(b-B)	sqrt(diag(V_b-
V_B))	est2	est3	Difference	S.E.
tr	.7943163	.1004223	.693894	.6737284
mp	1.290301	-1.085722	2.376023	8.490812
pc	.6320255	.6573314	-.0253058	.5951764
ac	1.011354	.5636218	.4477318	.8478121
gc	-.2522837	-.114613	-.1376707	1.295193

b = consistent under Ho and Ha; obtained from
 xtreg
 B = inconsistent under Ha, efficient under Ho; obtained from
 xtreg

Test: Ho: difference in coefficients not systematic
 $\chi^2(5) = (b-B)'[(V_b - V_B)^{-1}](b-B)$
 = 1.27
 Prob>chi2 = 0.9376

```
.
. eststo: xtreg ra tr mp pc ac gc, re cluster(firm)
Random-effects GLS regression           Number of obs   =
150
Group variable: firm                    Number of groups =
30
R-sq:                                   Obs per group:
      within = 0.0081                               min =
5
      between = 0.2945                               avg =
5.0
      overall = 0.2791                               max =
5

Wald chi2(5) =
21.04
corr(u_i, X) = 0 (assumed)
0.0000
Prob > chi2 =
```

(Std. Err. adjusted for 30 clusters in
 firm)

	ra	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]
tr	.1004223	.0240137	4.17	0.000	-.2210386	.4218832
mp	-1.085722	1.254361	-0.87	0.387	-3.544225	1.372781
pc	.6573314	.1241275	5.30	0.000	-.6521746	1.966837
ac	.5636218	.6012513	0.94	0.349	-.614809	1.742053

.1271546	gc	-.114613	.1233531	-0.93	0.353	-.3563806
3.955877	_cons	.9833316	1.516633	0.65	0.517	-1.989214
<hr/>						
	sigma_u	1.2047651				
	sigma_e	7.6161135				
	rho	.02441205	(fraction of variance due to u_i)			
<hr/>						