

## Capital Concentration and financial performance of listed firms in the East African Community: An Exploratory study

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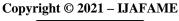
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#### Abstract

The objective of this paper is to investigate the relation between ownership concentration and performance of listed companies in the East African Community (EAC). The EAC is a community of six countries located in the East Africa : Rwanda, Kenya, Uganda, Tanzania, Burundi and South Sudan. Among this Community, all of the countries excepted Burundi and South Sudan own a financial market. These countries decided in 2010 to create the East African Stock Exchanges Association (EASEA). The EASEA has many purposes : the increase of attractiveness and liquidity of its financial markets to encourage foreign investments and the economic development of the region. The study of the relation between ownership concentration and performance is particularly necessary to identify the main levers to be activated to enable the EASEA to achieve its objectives. On the one hand, ownership concentration is represented by the level of capital concentration by the principal shareholder and the type of controlling shareholder. On the other hand, performance is represented by the rate of return on equity (ROE) and the rate of return on assets (ROA). An econometric analysis using panel data was carried out on a sample of 290 observations. Even if the main problem of the study is the unavailability of some data, our results show the existence of a significant positive relation between the concentration of capital by the first shareholder and the economic performance of firms. A significant negative influence was found between the number of shareholders and the financial performance of the firms studied. Concerning the type of controlling shareholder, the research highlights a significant positive relation between the presence of a foreign principal shareholder (i.e. a shareholder outside the East African Community) and the economic performance, whereas the presence of a controlling institutional shareholder is negatively correlated with the financial performance.

**Keywords:** Shareholder Concentration, Financial Performance, Listed Companies, EAC **JEL Classification:** G32 **Paper type:** Empirical research



## 1. Introduction:

The objective of this research is to investigate the relationship between the ownership concentration and the financial performance of listed companies in the East African Community (EAC). The EAC is a community of six countries: Rwanda, Kenya, Uganda, Tanzania, Burundi and South Sudan, which recently joined the Community. In the latest DoingBusiness ranking (validity: June 2017) which classifies 190 world economies based on criteria related to the ease of doing business there, these countries face lots of disparities. Indeed, Rwanda reaches the 41<sup>st</sup> place, Kenya the 80<sup>th</sup>, Uganda the 122<sup>nd</sup>, Tanzania the 137<sup>th</sup> and Burundi the 164<sup>th</sup>. However, among these six countries, four have developed a financial market: Rwanda, Tanzania, Uganda and Kenya. These countries decided in 2010 to create the East African Stock Exchanges Association (EASEA) with the aim of standardizing the architecture of their respective capital markets in order to be able to:

- Increase the attractiveness of these markets and encourage foreign investment;
- Increase the liquidity of these markets;
- Promote the economic development of this region.

According to Mezui (2014 : 166), this regional integration of financial markets is a real necessity for all African countries in general and eastern African countries in particular so that the latter can pursue their economic growth. It appears of crucial interest to study in depth the relationship between ownership structure and performance of listed companies in the East African Community (EAC). This interest is reinforced by the fact that Burundi is currently one of the only two countries in the East African Community that do not have functional capital markets, but which has already initiated the procedures for its establishment.

This paper is organized into four sections. The first section suggests a review of the literature regarding the relationship between the ownership concentration and the firms' performance. The second section presents the data and the methodology. The third section presents and discusses the results. Finally, the conclusion highlights the most important aspects of the research, the limitations of the study and the future research's proposals.

## 2. Literature review:

The review of papers which studied the relation between ownership concentration and performance shows that the conclusions vary a lot between the countries but also over time. We present the literature in three parts. The first part reviews the main theorical and empirical studies in the area. These studies are mainly European and Anglo-Saxon studies. The second part reviews specifically African studies. But due to the poverty of the African literature review on the subject, we choose to integrate a third part which focus on the recent literature review in emerging economies. The objective is to compare our results with those of research carried out in a relatively similar economic context.

## 2.1. General Background

In general, the relationship between ownership concentration and performance is analysed thanks to the Agency Theory of Jensen & Meckling (1976) whose conclusions show that the presence of major shareholders would improve the efficiency of governance. This would result in an increase in the value of the firm. These conclusions extend those initially highlighted in the pioneering work of Berle & Means (1932) on the large American corporation. This is also the theorical point of view defended by Shleifer & Vishny (1986) and La Porta et al. (1999). In contrary, Demsetz (1983) shows no relationship between the structure of ownership and the performance of firms.

The extensive Anglo-Saxon and Western empirical literature review leads to non-consensual results concerning the relationship between the ownership concentration and the performance

of firms. Several studies found a positive linear relationship. This is particularly the case for the studies of Hill & Snell (1988) carried out in the American context, of Leech & Leahy (1991) carried out on English firms, and of Gorton & Schmid (2000) carried out on German firms. The studies of Lehmann et al. (2000) and Pedersen & Thomsen (2003) report a positive relationship between the concentration of ownership in the hands of financial institutions and the performance of German firms. This is also the finding of Agrawal & Mandelker (1990) who conclude that the presence of major institutional investors in the capital of listed American companies would increase the control of managers and, in so doing, improve the performance of these firms.

Other studies such as those of Morck et al. (1988) and Mc Connell & Servaes (1990) carried out on American firms found a non-monotonic relationship between concentration of capital and performance. This is also the conclusion of Kirchmaier & Grant (2005) who analysed the shareholder structure and its influence on the performance of 500 large European firms located in five European economic powers (France, United Kingdom, Italy, Germany and Spain ) and which have shown that the presence of major shareholders in the capital was, beyond a certain threshold, value destroyer for firms. The study of Mard et al. (2014) conducted in the French context also demonstrated an inverted U-shaped relationship between the percentage of ownership of the first shareholder and the performance of firms. Ducassy & Guyot (2017) argued that the presence of a first shareholder with more than 50% shareholding had a positive impact on the performance of French companies listed on the Paris Stock Exchange.

This conclusion is also that of Alonso Bonis & De Andrès Alonso (2007) who focused on a panel of listed companies on the Madrid Stock Exchange between 1991 and 1997 and who showed that the most the percentage of capital held by the first shareholder is important, the better the performance of these firms. The study of André & Schiehll (2004) in the Canadian context showed that there was a negative relationship between the percentage of ownership of controlling shareholders / managers and the performance of the firm. Their main argument to explain this result is the greater risk of rooting of the leaders who are also the main shareholders of the firm.

The studies of Demsetz & Lehn (1985), Cho (1998), and Demsetz & Villalonga (2001) carried out in the American context as well as that of Welch (2003) in the Australian context have not found any impact of the concentration of ownership on performance. The authors pointed out the endogenous nature of the shareholder structure which was itself impacted by performance.

Mard et al. (2014) note that the results of empirical and theoretical studies in this area vary greatly over time, which may explain the lack of consensus in this research topic. Furthermore, the results of these research also depend on the performance measures used as well as the nature of the ownership structure (government, familial, institutional, foreign, etc.).

### 2.2. Specific Background in the East African context

When focusing on the relations between the shareholder concentration and the performance of firms in the specific African context, we notice that the many empirical studies have been carried out in the context of North African countries (mainly Tunisia) where financial markets are the most developed and in Cameroon, which is the largest economy in the Central African Economic and Monetary Community (CEMAC). Omri (2002) shows that the capital held by majority shareholders positively influences the performance of Tunisian companies as well as the percentage shares held by institutional investors. This result is explained by an improvement in the control of managers. Omri (2002) shows also that the managerial ownership has a negative influence on this performance by promoting the rooting of leaders. These results are relatively the same for Lazzem (2017). But Lazzem (2017) shows that the ownership concentration affects positively performance only if there are growth's opportunities within the



Tunisian quoted firms. On the other hand, Madani & Khlif (2010) show that ownership concentration does not have a significant influence on the performance on the Tunisian firms unless the concentration is familial. In this case, the family ownership has a positive effect on the performance.

In the Cameroon context, the study of Wamba et al. (2015) shows that the performance of large Cameroonian firms is positively influenced by the presence of foreign investors in their capital but also by the level of participation held by these investors who would be more inclined to require the transparency of managerial decisions and control managers.

For the other countries of Sub-Saharan Africa and especially those of the East African Community, the literature on the relation between concentration of ownership and performance is at its beginning. That is, it was not until the early 2000s that we noticed in Sub-Saharan Africa more privatization of firms which, until then, were mainly predominantly public firms. An OECD report produced in 2004 under the direction of Berthélémy et al. shows that this wave of privatizations goes hand in hand with the launch of some financial markets in sub-Saharan Africa. This is the case for three of the East African Community countries with financial markets, namely Uganda, Kenya and Tanzania.

So, Okoth Ongore (2011) argued that the performance of firms listed on the Nairobi Stock Exchange is negatively impacted by a high concentration of ownership i as well as by the presence of government shareholders. It is also the main result of Jumanne & Keong (2018). Their study analyses the influence of ownership concentration and foreign shareholding on the ROA of the non-financial firms listed on the EAC markets between 2007 and 2015. Jumanne & Keong (2018) argue that the ownership concentration negatively influences the economic performance of firms. They explain this result by the poor protection of minority shareholders within the emerging countries. Thus, within these countries, the authors (2018: 85) argue that "*the principal-principal conflicts are dominant because of the tunnelling effect created by majority shareholders*". Nevertheless, in these economic contexts, the foreign ownership would play a monitoring role which would avoid the exclusion of the minority shareholding and would have a positive influence on the economic performance of firms. This positive influence would be reinforced by the quality of institutions.

The study of Okiro et al. (2015) shows that economic performance of firms listed on the East African Community markets is positively impacted by the percentage of capital held by the first shareholders.

The main results of these studies are included in Table 1.

Studies	Ownership concentration and nature of ownership	Main results
	variables	
The study of Omri (2002) covers 42 Tunisian firms listed on the Tunis Stock Exchange between 1996 and 2000. This study mobilizes the econometrics of panel data	<ul> <li>Performance variable: Marris ratio</li> <li>Dummy variable appreciating the presence of majority shareholders holding more than 20%</li> <li>Percentages of shares held by institutional investors and by managers</li> </ul>	The capital concentration in the hands of majority shareholders positively influences the performance of Tunisian companies as well as the percentage of shares held by institutional investors. This result is explained by an improvement in the control of managers carried out by majority and institutional

 Table 1: Relation between concentration of ownership and performance - The case of African companies

The study by Madani & Khlif (2010) concerns 30 Tunisian industrial firms located in the economic poles of Sfax, Tunis or Gabès and studied between 2001 and 2004. This study mobilizes the econometrics of panel data	<ul> <li>ROA and ROE</li> <li>Percentage of ownership of at least 20% held by the largest shareholder</li> </ul>	shareholders. On the other hand, managerial ownership has a negative influence on this performance by promoting the rooting of leaders The ownership concentration does not have a significant influence on the performance of these Tunisian firms. Moreover, only the variable studying family ownership has a significant and positive effect on the performance of Tunisian firms
The study of Lazzem (2017) covers 22 non- financial firms listed on the Tunis Stock Exchange studied between 2004 and 2013. This study mobilizes the econometrics of panel data	<ul> <li>Tobin's Q</li> <li>Percentage of shares held by the first shareholder</li> <li>Cumulative percentage of shares held by the managing team</li> </ul>	Ownership concentration negatively affects performance if there is no opportunity for growth. On the other hand, when there is an opportunity for growth, ownership concentration positively affects performance. Managerial ownership negatively influences the performance of firms when there are growth opportunities
The study of Wamba et al. (2015) covers all the large Cameroonian firms listed by the INS in Cameroun in 2011, i.e. 362 firms. This study mobilizes multivariate analysis including linear regressions	ROE, ROA, contribution of added value to the coverage of salary costs, number of paid jobs	The performance of large Cameroonian firms is positively influenced by the presence of foreign investors in their capital but also by the level of participation held by these investors who would be more inclined to require the transparency of managerial decisions and control managers
The study of Okoth Ongore (2011) covers all firms listed on the Nairobi Stock Exchange, i.e. a number of 42 firms and uses non-parametric	<ul> <li>Performance variables: ROE, ROA, Dividend Yield</li> <li>Percentage of capital held by the top 5 shareholders</li> </ul>	The performance of firms listed on the Nairobi Stock Exchange is negatively impacted by a high concentration of ownership in the hands of major



analysis and logistic regressions	a governmental, foreign, managerial and societal shareholder	shareholders as well as by the presence of government shareholders. The other variables are not statistically significant
The study of Okiro et al. (2015) covers 56 firms listed on the East African Community markets studied between 2009 and 2013. This study uses multiple regressions	<ul> <li>Performance variable: ROA</li> <li>Several variables relating to corporate governance have been integrated, including:         <ul> <li>The percentage of capital held by the top 5 shareholders</li> <li>The participation of managers in the capital</li> </ul> </li> </ul>	Economic performance is positively impacted by the percentage of capital held by the first shareholders
The study of Jumanne & Keong (2018) covers 58 firms listed on the East African Community markets studied between 2007-2015. This study used econometric regressions on panel data		Economic performance is negatively influenced by the ownership concentration but positively influenced by the percentage of capital held by foreign investors. This influence is reinforced by the quality of institutions.

Source: Authors

Table 1 shows that there is no consensus in the literature about the influence of the ownership concentration on the performance of African firms. The results vary over time and over the African regions.

### 2.3. Background in other emerging economies

The recent literature on the relationship between ownership and performance of firms in an emerging context can be divided into two parts. First, we can identify the literature about the influence of the foreignness of ownership on the performance. Second, we identify the literature about the differences in terms of performance between state-owned firms and privately-owned firms.

In 2017, Wamba et al. note that most studies on the relation of ownership structure on performance have not sufficiently emphasized the foreignness of ownership. However, the presence of foreign investors in the ownership structure would increase the control of managers and improve the performance of firms. This is the finding of Pervan et al. (2012) on a sample of Czech firms and by Gugler (1998) on a sample of Austrian non-financial firms.

Ciftci et al. (2019) study the relations between ownership, corporate governance, and performance in Turkey. Their results show that ownership concentration and foreign ownership positively affect firms 'performance. It is also the principal result of Yavas and Erdogan (2016). Nevertheless, their study shows that foreign ownership improves firm profitability up to a certain level; however, after this level, foreign ownership starts to deteriorate firm performance.

Carey et al. (2019: 247) indicate that the literature point of view shows that the foreignness of ownership provides an advantage in terms of innovation which can provide a performance advantage in the host market. Nevertheless, it is not always the case in some specific economies

like transitional, emerging and developing economies because the foreign ownership is not always been well integrated in the political environment of the country. This phenomenon could negatively influence the firm's performance.

According to Adu-Danso & Abbey (2020), the innovations supported by a foreign ownership may not be forthcoming because of uncompetitive business environmental. Thus, these innovations would provide any performance advantage within the foreign-owned firms in this environment. It is also the results found by Alabdullah (2018) who examines the relation between ownership structure and performance of the non-financial firms listed in the Amman Stock Exchange in 2012.

Some recent studies explore the differences of performance between stated-owned firms and privatively owned firms on a context of economics changes or in a context of emerging countries.

The study of Laporsek et al. (2021) which examines the relationship between ownership structure and performance of Slovenian joint stock over the 2005-2017 period shows that the state-owned firms are less profitable than the privately-owned firms. According to the authors, this result is the same that the results of former studies carried out in the Central and Eastern European countries. Furthermore, the results of this study show that the ownership concentration does not influence the performance of the firms. The authors explain this result by the absence of agency problem within these firms.

The study of Lazzaini and Musacchio (2018) explores the firm level performance differences between state-owned firms and privately-owned firms between 1997 and 2012 within 66 developed and emerging countries. Their results indicate that the performance gap between the two type of firms increases in case of negative shocks that requires a rapid adjustment. According to the authors, this gap would be more important within emerging economies.

Iwasaki et al. (2018) realise a meta-analysis of studies on the effect of ownership on the performance of Russian firms over 20 years in a context of rapid institutional and economics changes. This meta-analysis shows that the state-owned firms are less profitable than the privately-owned firms. This result is not the same for Din et al. (2021) who study the influence of ownership on the financial performance of 146 listed firms on the Pakistan Stock Exchange. For the authors, government shareholding positively influences the financial performance of these firms.

According to Yaya (2005: 61), « African public organizations early appeared as inefficient "chaotic ungovernable entities" which induce bureaucratic additional costs in terms of control, sanctions and surveillance". Privatization improves the quality of management through increased control, of major shareholders.

The results of these studies carried out in emerging economies ae also mitigated. We note that there is no consensus about the influence of the ownership concentration on firm's performance even if this concentration is analyzed in terms of nature (state-owned firms vs privately-owned firms).

Our paper aims to feed the fledgling literature on the subject by offering a comprehensive approach to the capital structure of companies listed on the EAC markets and its impact on the performance of these companies.

Due to the lack of consensus in the literature, we choose an exploratory study.

## 3. Research method or methodology

### 3.1. Research design

Like the main previous studies, we use panel estimation techniques to identify the impact of the independent variables on the performance variables used. We worked on an unbalanced panel of 290 observations.



#### **3.2.** Sample selection and data description

We used the FactSet database to identify firms listed in November-December 2018 on the East African Community markets (Nairobi Securities Exchange, Uganda Securities Exchange, Dar-Es-Salaam Stock Exchange, Rwanda Stock Exchange) which represents Eighty-six firms listed on four stock exchanges.

Since no existing database makes it possible to extract the financial data of these firms or those related to their shareholder structures, we had to use the annual reports of these firms as the single source of data. The FactSet database allowed us to download the annual reports of sixty-one of these firms for the years 2013 to 2017.

Three firms were eliminated from the study due to lack of data on shareholder structure. Therefore, for each of the fifty-eight firms included in this study, five annual reports were consulted in detail, which represents a final sample of two hunderd and ninety firm-year observations.

Several data were sought in these reports. First, the performance variables. Like many authors (Boubakri et al., 2005; Madani & Khlif, 2010; Sahut & Gharbi, 2010; Okoth Ongore, 2011; Wamba et al., 2015; etc.), financial performance is studied using ROE and ROA. This choice to focus only on accounting performance measures was constrained by the lack of availability of some stock market performance data over the entire period covered by the study. The ROE and ROA variables will represent the dependent variables of the models developed below. We focus on the African literature to identify the explanatory variables. The table 1details the explanatory variables introduced in the econometric models of Omri (2002), Madani & Khilf (2010), Okiro et al. (2011), Wamba et al. (2015) and Lazzem (2017).

The explanatory variables introduced in our econometric models can be grouped into three categories. The first category makes it possible to investigate the concentration of shareholders. As such, four variables are retained. This measure represents respectively the percentage of shares held by the first shareholder (CONC1), by the first two shareholders (CONC12), by the first three shareholders (CONC123) and, finally, by the first ten shareholders (CONC10). Table 2 shows the shareholding concentration of the firms studied.

Concentration variable	Mean	Standard deviation	Minimum	Maximum
CONC1	45,10%	20,70%	7,76%	94,44%
CONC12	57,36%	18,57%	15,38%	94,86%
CONC123	63,69%	17,62%	18,76%	95,04%
CONC10	74,12%	16,39%	37,36%	99,80%

Table 2: Concentration of shareholding in listed companies on the EAC markets

Source: Authors

The variable measuring the percentage of ownership of the first shareholder is a variable frequently encountered in the literature (see Table 1). The figures in Table 2 show that the shareholding of firms listed on the EAC markets is highly concentrated in the hands of the first shareholder with an average concentration above 45%. We also find that on average, the top two shareholders together have majority power in the firm.

Table 3 presents the firms' distribution of the sample for which data is available in the annual reports according to the average percentage of capital held in the hands of the first shareholder. This average percentage is calculated over the five years covered by the study, i.e. from 2013 to 2017.

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	CONC1 mean < 20%	20% < CONC1 mean < 50%	CONC1 mean > 50%	
Number of firms	5	30	23	58
Frequency	8,62%	51,72%	39,66%	100%

**Table 3:** Distribution of firms according to the average concentration of capital of the first shareholder calculated between the years 2013-2017.

Source: Authors

Note also that there are very few changes in the annual evolution of the percentage of capital held by the first shareholder over the period studied. Figures presented in Table 3 therefore show a high concentration of capital in the hands of the first shareholder. In fact, more than 91% of the firms analysed in this study have a first shareholder holding at least 20% of the capital. This threshold of 20% ownership by the first shareholder is often retained in the literature to understand the dominant character of this first shareholder (Laporta et al., 1999). However, in this case and regarding the average level of capital concentration in the hands of the first shareholder, we have chosen to measure the latter's power of dominance at the 50% threshold. Indeed, nearly 40% of the firms in the database have in their capital a first shareholder at the threshold of 50% between 2013 and 2017. The variable MAJ integrated in this study therefore makes it possible to understand the existence of such a shareholder in the capital of companies listed on the EAC markets.

We add the natural logarithm of the total number of shareholders within the ownership structure of each firm (NA) to these concentration variables. This variable coupled with the concentration variables gives an idea of the importance of minority shareholders in the capital of each firm. The second category relates to a bigger extent to the type of concentration. Among the available data, we have succeeded in isolating the nature of the first shareholder based on a single criterion, whether or not he/she is an institutional investor. We were also able to isolate the foreign or domestic origin of this first shareholder.

Finally, the control variables integrate the third category. The control variables are necessary to avoid omitted variable bias (Carney et al., 2019). Nevertheless, there are many microeconomic and macroeconomic variables which can also influence firms' performance. Their choice depends on the objective on the research (Carney et al., 2019). In this study, we choose to integrate four control variables: the size of the firm, its age, its business sector, and its leverage. Two reasons explain our choice. First, these variables are the most used control variables in the academic literature on firms' performance (Ciftcy et al., 2019). Second, the information about these variables is available in the company's reports which are our principal sources to compute the data base.

In the academic literature, the influence of the size of firm, its age, and its leverage on the performance is ambiguous. The size of firms is often measured by the natural logarithm of total assets (Mard et al., 2014). According to Jensen & Meckling (1976), the size negatively influences the firm's performance. Larger firms would imply larger boards and thus a more important probability to generate greater agency costs. In contrary, according to Jumanne & Keong (2018), the size of the firm could positively influence their performance. Larger firms would have more possibilities to exploit economies of scale. Furthermore, the size of the firm would facilitate the access of external sources of financing.

The influence of leverage on the performance is not clear in the academic literature. Jensen (1986) argues that the leverage positively influences the firms 'performance by reducing agency costs of debts. Higher level of leverage could also be a positive signal sent to the market regarding the quality of the management (Ross, 1977).



But the performance can be negatively influenced by the leverage which could lead to a growing of financial distress costs (Warner, 1977).

Ciftci et al. (2019) note that the effect of firm age is also ambiguous. Younger firms could be more performant because of their newer assets relative to mature firms. In contrary, mature firms could easily take benefit from their knowledge of the country and their market to improve their performance.

The business sector is a common control variable used in the literature. Mallinguh et al. (2020) review the literature about the relation between the business sector and the firms' performance. Their review shows that several arguments can be used to explain differences performance between manufacturing and service firms. The first argument is linked to the innovation process more developed in the manufacturing firms than in the service firms. In contrary, the more important corporate diversification within services firms could explain their better performance. The authors show that there is no consensus in the literature regarding the relation between business sector and performance. In this study, we use dummy variables for business sector.

Table 4 defines and measures the variables used in this study and Table 5 presents the repartition of the firms within their business sector. The business sector is based on the NACEBEL code (4 digit code). The firms have been regrouped according to the title of the activity in relation with the NACEBEL code. Fourteen sectors have been identified.

Variables	Definition	Measure
ROA	Return on Assets	Net income / total assets
ROE	Return on Equity	Net income / equity
CONC1 ; CONC 12 CONC123 CONC10	Concentration of ownership by the first (one, two, three and ten) shareholder(s)	Cumulative percentage of capital held by the first (one, two, three and ten) shareholders.
МАЈ	Existence of a major shareholder	Nominal variable taking the value 1 if the first shareholder holds more than 50% of the capital and 0, otherwise.
NA	Total number of shareholders in the capital	Natural logarithm of the number of shareholders
PPAII	Nature of the first shareholder	Nominal variable taking the value 1 if the first shareholder is an institutional investor and 0 otherwise
PPAE	Origin of the first shareholder	Nominal variable taking the value 1 if the first shareholder has a foreign origin, i.e. an origin outside the EAC and 0 otherwise
SIZE	Size of the firm	Natural logarithm of total assets
END	Financial leverage	Debt / equity

**Table 4:** Definition of variables

AGE	Age of the firm	Number of years of existence since the foundation
SECTOR	Business sector	A set of dummy variables (1,2,3,4,5,6,7,8,9,10,11,12,13 – the financial sector is the referent sector)

## Table 5: Activity sectors and frequencies

Activities	Frequencies	
Banking, insurance and financial services	Sector0	22.40%
Leather, stone, clay and glass products	Sector1	10.30%
Chemicals, petroleum, rubber and plastics	Sector2	8.60%
Extractive Inductry	Sector3	1.70%
Manufacture of food and tobacco products	Sector4	17.20%
Wholesale	Sector5	3.40%
Industrial, electrical and electronic machines	Sector6	5.20%
Business service	Sector7	8.60%
Transportation and warehousing	Sector8	3.40%
Utilities	Sector9	6.90%
Agriculture, horticulture and livestock	Sector10	1.70%
Printing and Editing	Sector11	6.90%
Communications	Sector12	1.70%
Travel, personal and leisure	Sector13	1.70%
Total		100%

Source: Authors

Source: Authors

The most representative sectors are in order the financial sector (22.40%), the manufacturing of food and tobacco products (17.20%) and the manufacturing of leather, stone, clay and glass products (10,30%).

To avoid endogeneity issue due to the structure of the explanatory variables included in the study, several models were tested. For each model, a Wald test and a Breush and Pagan LM test were performed. The results are allowed to validate the presence of random effects. We choose to present the more significant results.

## 4. Results and discussion

First, we estimated the linear regression models on the ROA and the ROE using the concentration variables CONC1, CONC12, CONC123, CONC10 and MAJ, the variables capturing the type of concentration PPAE and PPAII as well as the control variables. To avoid endogeneity between the variables CONC1, CONC12, CONC12, CONC123, CONC10 and MAJ, we tested their impact on the ROA and on the ROE in separate models. By doing so, 10 models were tested. Tables 6 and 7 present the two most significant results obtained on the ROA. Tables 7 and 8 present the two most significant results obtained on the ROE.



Table 6: Refined results of linear regression on the ROA (model 1 with CONC1)
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Number of obs	servations : 282 ;				
Number of groups : 58					
Obs per group	Obs per group : min : 2 ; avg : 4.9; max : 5				
R-sq : within :	0.0001; between : 0.3027; overall	: 0.1566			
	Coefficient (Std.Err)	t	<b>P</b> > t		
CONC1	0.1033836 (0.0556864)	1.86	0.063*		
PPAE	0.0422776 (0.024456)	1.73	0.084*		
SECTOR2	-0.03008987(0.0280393)	-1.10	0.270		
SECTOR3	-0.0697505 (0.0133974)	-5.21	0.000***		
SECTOR10	0.0662961 (0.0140686)	4.71	0.000***		
SECTOR11	0.0909819 (0.0883)	1.03	0.303		
SECTOR12	0.3245252 (0.0159643)	20.33	0.000***		
SECTOR13	-0.0529316 (0.0288305)	-2.75	0.006***		
cons	-0.02489 (0.0288305)	-0.86	0.388		

\*\*\*, \*\*, \* statistically significant at the 1%, 5% and 10% level, respectively. <u>Source:</u> Elaborated by the authors on the software Stata 14

 Table 7: Refined results of linear regression on the ROA (model 2 with CONC12)

Number of gro	Number of observations : 282 ; Number of groups : 58 Obs per group : min : 2 ; avg : 4.9; max : 5				
1 0 1	: 0.0001; between $: 0.3022;$ overal	11:0.1544			
	Coefficient t P> t				
CONC12	0.1160656 (0.0658951)	1.76	0.078*		
PPAE	0.0419212 (0.0243913)	1.72	0.086*		
SECTOR2	-0.0283128 (0.0263934)	-1.07	0.283		
SECTOR3	-0.0740407 (0.0131233)	-5.64	0.000***		
SECTOR10	0.0522261 (0.0122024)	4.28	0.000***		
SECTOR11	0.0857578 (0.09111265)	0.94	0.347		
SECTOR12	0.2979 (0.0201613)	14.78	0.000***		
SECTOR13	SECTOR13 -0.0470729 (0.0188159) -2.50 0.012**				
_cons	-0.0438575 (0.039795)	-1.10	0.270		

\*\*\*, \*\*, \* statistically significant at the 1%, 5% and 10% level, respectively. <u>Source:</u> Elaborated by the authors on the software Stata 14

**Table 8:** Refined results of linear regression on the ROE (model 3 with CONC1)

Number of observations : 259 ; Number of groups : 56 Obs per group : min : 2 ; avg : 4.6; max : 5 R-sq : within : 0.0002; between : 0.2251; overall : 0.0502				
	Coefficient (Std.Err)	t	<b>P&gt; t </b>	
CONC1	-0.1391812 (0.9371332)	-0.15	0.882	
NA	-0.2594043 (0.1372824)	-1.89	0.059*	
PPAE	<b>PPAE</b> -0.8535877 (0.9930302)		0.390	
PPAII	0.9601806 (0.573157)	1.68	0.094*	

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SECTOR1	3.62.865 (2.983973)	1.21	0.225
SECTOR3	-0.2569067 (0.1934105)	-1.33	0.184
SECTOR4	-0.6539064 (0.564927)	-1.16	0.247
SECTOR9	1.773422 (1.654118)	1.07	0.284
SECTOR10	-0.6422206 (0.5061325)	-1.27	0.204
SECTOR12	1.213414 (0.6916575)	1.75	0.079*
SECTOR13	-0.2904973 (0.371034)	-0.78	0.434
_cons	2.617615 (1.717941)	1.52	0.128

\*\*\*, \*\*, \* statistically significant at the 1%, 5% and 10% level, respectively. Source: Elaborated by the authors on the software Stata 14

Table 9: Refined	results of linear	regression on	the ROE (	(model 4 with MAJ)

Number of ob	Number of observations : 259 ;				
Number of gro	Number of groups : 56				
Obs per group	Obs per group : min : 2 ; avg : 4.6; max : 5				
R-sq : within	R-sq : within : 0.0002; between : 0.2251; overall : 0.0502				
	Coefficient (Std.Err)	t	<b>P</b> > t		
MAJ	-0.5146502 (0.4729653)	-1.09	0.277		
NA	-0.2713671 (0.1387664)	-1.96	0.051*		
PPAE	-0.8804351 (0.9877952)	-0.89	0.375		
PPAII	-0.931511 (0.5626969)	-1.66	0.098*		
SECTOR1	3.487536 (2.921479)	1.19	0.233		
SECTOR3	-0.4883804 (0.2792842)	-1.75	0.080		
SECTOR4	-0.7010496 (0.5838568)	-1.20	0.230		
SECTOR9	1.811636 (1.602292)	1.13	0.258		
SECTOR10	-0.8891807 (0.5725492)	-1.55	0.120		
SECTOR12	1.000604 (0.6221115)	1.61	0.108*		
SECTOR13	-0.5061354 (0.409426)	-1.24	0.216		
_cons	2.934646 (1.638639)	1.79	0.073*		

\*\*\*, \*\*, \* statistically significant at the 1%, 5% and 10% level, respectively.

Source: Elaborated by the authors on the software Stata 14

We analysed the correlation matrix between the interest variables integrated in models and the VIF obtained for the coefficients of the interest variables. We observed weak correlations between the interest variables as well as VIFs relatively close to 1. These findings therefore show the existence of a very low probability of multicollinearity problems between the interest variables.

Based on the results of Tables 6, 7, 8 and 9, several elements can be highlighted.

First, we note that the explanatory variables of performance are not the same when the models are tested on the ROA or on the ROE. This finding, previously pointed out by Mard et al. (2014), shows the importance of the performance indicator chosen in studies.

Regarding the results of Table 6 and Table 7, we note that several interest variables are statistically significant at the maximum threshold of 10%. These are the variables CONC1, PPAE and CONC12. The coefficient of these variables indicates a positive influence of these variables on the ROA.

Thus, it appears that the greater the capital concentrated in the hands of the first and the second shareholders, the better the economic performance of companies listed on the EAC markets. This result seems consistent with those previously found in the literature, in particular those of Omri (2002) and Okiro et al. (2015) who have studied the performance of firms listed



on the EAC markets between 2009 and 2013. The influence of the ownership concentration on the economic performance seems to be constant across the time.

Thus, the two first shareholders would play an essential role in monitoring the potentially deviant behavior of managers (Jensen, 1986).

The ROA is also influenced by the foreignness of the first shareholder. The variable PPAE is statistically significant (at a threshold of 10%). This result confirms the previous results of Wamba (2017), Yavas and Erdogan (2016) and Ciftci et al. (2019). The foreignness of the first shareholder would improve the economic performance of the firms listed on the EAC markets. The foreignness of ownership would develop the innovations in the host market. Some authors (Alabdullah, 2018; Carey et al., 2019; Adu-Danso & Abbey, 2020) showed that the advantage of innovation provided by a foreign ownership could not been provide an advantage in terms of performance in the host markets because of an uncompetitive business environmental. In the EAC markets, it seems not the case because beyond the Stock Exchange Association, the EAC is also an economic association which promotes a healthy competitiveness between the associated countries.

The results in Table 6 and Table 8 show that only one control variable is statistically significant. It is the variable SECTOR. The other control variables (AGE, END and SIZE) are not statistically significant. This result could seem, surprisingly. But the lack of statistical significatively of these variables is certainly due to their weak dispersion. Table 10 presents the average and the standard deviation of the variables AGE, END and SIZE.

Control	Average	Standard	Min	Max
variable		deviation		
AGE	58.37 years	30.83 years	3 years	148 years
END	23.18%	2.39%	17.31%	28.56%
SIZE	23.97	2.00	19.70	28.75

Table 10: Control variables - presentation

Source: Authors

So, in terms of age, size and leverage the firms are quite similar. Regarding the dummy variable SECTOR, we note that the belonging to the SECTOR 10 and

12 rather than the financial sector (SECTOR 0) positively influences the economic performance of firms. The contrary is observed for the SECTOR 3 and the SECTOR 13. Nevertheless, we cannot conclude about the influence of the business sector on the economic performance because of the weakness of our sample. The four previously cited sectors are constituted by only one firm. A more deeply study about the influence of business sectors would be necessary to understand their influence on the performance.

When we analyse results of models tested on the ROE in Table 8 and Table 9, we note that the significant interest variables are NA and PPAII.

The NA variable, which captures the number of shareholders in the firm's ownership, has a negative impact on the financial performance. Thus, the greater the number of shareholders in the capital, the more difficult it would seem to implement management control measures due to the greater dilution of the capital. This finding also seems to support the conclusions of previous studies.

The variable PPAII which identifies the institutional nature of the first shareholder is statistically significant at a threshold of 10% presents a negative coefficient. It therefore seems that the financial performance of firms deteriorates when there are institutional investors in their capital. This result is not the same than the evidence found by Agrawal & Mandelker (1990) in the American context, by Lehman et al. (2000) and Pedersen and Thomsen (2003) in the German context, by Omri (2002) in the Tunisian context and by Jumanne and Keond (2018) in the East African context. Nevertheless, the variable PPAII identifies the institutional character

of the first shareholder but several categories of institutional investors can be identified among we find financial institutions or government. Unfortunately, the lack of data does not allow us to clearly identify the nature of the institutional investor for all the years covered by this study.

We cannot compare our results with those of recent studies regarding the influence of stateowned firm on the performance or with the results of Jumanne and Keong (2018) regarding the monitoring role of financial investors.

However, the result for the variable PPAII may lead us to wonder about the behavior of these institutional investors as the first shareholders in the capital of companies listed on the EAC markets. Indeed, according to Pound (1988), conflicts of interest between, on the one hand, profitable business relationships and, on the other hand, profitable investment relationships can appear for institutional investors present in the capital of firms with which they also have business relationships. Thus, to preserve their business relationships, they may lower the level of their control, which can have negative consequences on performance. This underperformance of firms in which the first investor is an institutional shareholder would deserve to be further explored by isolating the precise nature of the institutional shareholder.

### 5. Summary and conclusions:

The relation between ownership concentration and performance is a topic that has already been widely investigated in academic research since the pioneering work of Berle & Means (1932). However, there is a lack of consensual conclusions in the empirical evidence because of the diversity of economic contexts, the diversity of measures of shareholder concentration and the levels of performance used (Mard et al., 2014), the presence of foreign investors (Wamba et al., 2017; Jumanne & Keong, 2018; Ciftci et al., 2019, etc.), the presence of growth opportunities (Lazzem, 2017), the percentage of shares held by institutional investors (Omri, 2002; Madani & Khlif, 2010) or by state (Lazzaini & Musacchio, 2018; Iwasaki et al., 2018; Din et al., 2021; Laporsek et al., 2021).

Nevertheless, this relation is few documented within the EAC's countries which decided in 2010 to establish the East African Stock Exchanges Association. This association is a real economic stake for the whole EAC region. Therefore, understanding the relation between ownership structure and performance has become a crucial objective for this region wishing to increase its economic development by promoting the development and homogenization of its markets to encourage foreign investments. The objective of this paper is to understand the relationship between the concentration of ownership and the performance of listed companies in the East African Community over the period 2013-2017. This paper allows to highlight some particularly interesting aspects of this relation. Results show that the economic performance levels of these firms could undoubtedly be improved by an increase in management control if the first shareholder holds a significant percentage of the capital and / or if the first shareholder is foreign. On the other hand, financial performance levels could be reduced if the number of shareholders in the capital is large and / or if the first shareholder is an institutional investor.

The results reinforce the previous findings of Mard et al. (2014) whose study was carried out in the European context. In fact, our research carried out in the African context points out that the results depend on the performance measure used and on the nature of the ownership structure.

However, this study suffers from some limitations. Some currently important variables such as managerial ownership concentration, CEO's remuneration, board composition, percentage of shares held by governments, etc. are not included in the models due to their unavailability in the financial reports over the studied period.

Information relating to the ownership structure is constrained by the level of informational transparency of the annual reports used. Due to the lack of informational transparency some of the explanatory variables used in our models are imprecise. It is the case of the variable PPAII



which only identifies if the first shareholder is an institutional investor without distinguish the precise nature of this shareholder (financial or state).

Finally, the weakness of our sample limits the power of the econometric tests used and complicates the results comparison with previous studies.

Nevertheless, our results highlight some future research proposals. First it would be interesting to study the report between the minority shareholders and the first shareholder and its influence on firms' performance. Second, the presence of states in the ownership of the EAC's firms would be studied to understand their role in the control of firms. Previous research highlight that there is no consensus about the comprehension of performance differences between state-owned firms and privately-owned firms. However, this comprehension is particularly interesting within the EAC's countries whose objectives are the financial and economic development of their region.

To conclude, the relation between ownership concentration and firms 'performance has been extensively studied in the literature without any consensus. Nevertheless, a better comprehension of this relationship becomes essential in emerging markets and particularly in the African regions in financial and economic transition.

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