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Business concentration and inclusion strategies

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Abstract

Inclusive and sustainable economic growth is a fundamental objective of development, and one which seeks to address inequality. Working from this premise, this article sets out to determine the characteristics of the companies with the highest wealth concentration in Ecuador, as well as to identify the variables that affect business inclusion, and to propose alternatives for inclusive growth with the participation of MSMEs. This article employs the Gini coefficient to determine the level of economic concentration and to study companies' financial management models. The findings revealed high inequality indexes: profitability over assets, indebtedness, age, and financial leverage as predictors of the probability of belonging to the most successful category. There is therefore a clear need to implement public policies aimed at promoting productivity and socially responsible behavior.

Keywords: Ecuador; economic growth; firms; financial management; wealth concentration.

1. INTRODUCTION

Wealth can be defined as the total number of goods, services, labor, and natural resources that an economy possesses. The emergence of economic groups able to exert a high degree of influence on government decision-making has made wealth distribution a controversial issue.

On the other hand, social equity can be understood in various terms, such as social justice, equal opportunities, equal rights, equitable public benefits, adequate distribution of wealth, to name a few; in turn, all of these dimensions must be approached from different perspectives, given that inequality is the constant that they all share.

According to Calvo *et al.* (2016), economic and political institutions, combined with the legal framework, provide the context in which markets operate, establishing incentives and restrictions for various actors. For its part, the World Bank (2000) asserts that policies aimed at the search for equity translate into fiscal, economic, labor, and social policies, with which governments and local corporations attempt to address poverty and exclusion; government and business policies therefore have the potential to contribute to a more just and equitable society at the local level. There are global indexes of inequality. In Latin America and the Caribbean, for example, the richest 1% of the population hold 37% of the wealth, while the poorest 50% only have access to 3.5% of the region's total wealth (Oxford Committee for Famine Relief, 2018). This inequity can be reduced via the introduction of strategies that allow for greater equality of income distribution, known as inclusion.

According to the United Nations Educational, Scientific, and Cultural Organization (UNESCO), inclusion can be defined as a process that ensures that everyone is "part of" and does not remain "separate from" (United Nations Educational, Scientific and Cultural Organization [UNESCO], 1989); essentially, this means that the systems in place should provide access to and reciprocal participation in any sphere.

Despite global aggregate economic growth, there are countries and regions, such as Latin America and the Caribbean, whose economic growth, labor productivity, and generation of decent employment have slowed down, significantly lowering the population's standard of living and wages. In addition to reversing the trend towards reducing the informal economy, data for 2015 and 2016 show an increase in informal non-agricultural employment, affecting almost 47% of the region's labor force (International Labor Organization [ILO], 2017).

According to Apetrei *et al.* (2019), inclusion can be understood not only in economic terms, but also from social and labor perspectives. Privileging these dimensions allows a country's productivity to increase in general terms, achieving economic growth and increased sources of employment. The determinants of inequality and entrenched poverty in developing economies include deficiencies in human capital formation, lack of investment, low gross domestic product (GDP) growth rates, and low trade openness (Nguyen *et al.*, 2020).

When discussing disparities in wealth distribution, it is crucial to reflect on the existing gulf between those living in extreme poverty and the minority who possess the majority of the wealth, as well as the exclusion of sectors that do not generate significant added value or that have low levels of development, whether due to technological, market, or even political factors. Latin America is a region that illustrates this inequality in wealth distribution.

An economy's degree of wealth concentration can be quantified. The Gini index is one valuable tool that can be used to measure wealth concentration. This phenomenon has been the object of inquiry in Ecuador, given the severity of the situation there; in 2000, inequality in Ecuador had a Gini coefficient of 0.76 (Solimano, 2015). Similarly, a more recent study found the Gini index to be 0.68 (Deere and Contreras, 2011), demonstrating that, despite technological advances and globalization, wealth remains concentrated in a small percentage of the population. In the current economic

context, organizations exist not only for the purpose of production or service, but fundamentally as social actors making use of financial, material, human, and technological resources; therefore, businesses impact wealth distribution, access to employment, opportunities, training, and the population's personal and professional development, thereby aiding the establishment of true intercultural and social equilibrium.

Thus, a business enterprise must also be understood as a community seeking equilibrium across all its various actors, and tackling problems of exclusion, unemployment, and discrimination by generating fair and equitable work, providing sources of income, and offering opportunities and access to competency development, thus contributing to equality and improved living conditions; understood in this way, business equity contributes to greater social equity.

Businesses, as active subjects of a country, impact on various economic, political, or cultural processes in the society in which they operate, becoming thus one of the main managers that promote inclusion in the search for social equity. Analyzing the economic behavior of the business sector reveals the existence of concentrations of income, wealth, and power that threaten a country's potential for development.

This study focuses on the business sector, as this sector is responsible for generating products and services, as well as opportunities and employment. This reality, reflected in the income these economic units receive, thus necessitates the development of strategies that afford businesses adequate insertion and inclusion within the sector in which they operate. Economic inclusion combines macro- and micro-economic areas which can contribute to the business innovation necessary to achieve a new distribution of wealth, thus decreasing the Gini coefficient.

This study aims to illustrate the characteristics of the businesses possessing the highest level of wealth concentration, which in turn makes it possible to identify the main variables which result in a business belonging to the group of highest concentration. Furthermore, the present article proposes alternatives aimed at inclusive growth in which micro-, small- and medium-sized enterprises (MSMEs) actively participate.

The present article also addresses several other aspects. The analysis of economic concentration of the industrial sectors, supported by empirical data, casts light on a reality that indicates developing economies' lack of competitiveness, in addition to the power of certain economic groups to establish barriers that impede the competitive development of MSMEs. The findings will be useful for designing public plans and policies aimed at reducing economic concentration and promoting social equity through the equitable participation of social agents in economic activities. The application of the Gini index to the business sector allows the focal points of inequality to be measured, with a view towards gaining a deeper understanding of equity, by reflecting on inequality and business action on its financial activities to promote a fairer and more equitable society.

This article consists of a first, introductory section which emphasizes the importance of the debate on distribution and generation of wealth in an economy; the second section reviews the literature on our object of inquiry; the third section then presents the data and the methodology used to obtain the findings, which are then analyzed and discussed in the fourth section. The final section offers some conclusions.

2. LITERATURE REVIEW

Sustainable development can be defined as the outcome of equilibrium between factors such as economic growth, environmental care, and social equity; this last criterion, however, is usually omitted in development practice (Trudeau, 2018). There is no consensus on how to measure social equity, as it can be approached from different perspectives, such as economic, health, transportation, urban planning, gender, to name a few (Ballet *et al.*, 2020).

This article approaches social equity from an economic and business perspective, conceptualized as the ability of agents to participate equitably in economic activities and share in the income generated by them (Ncube *et al.*, 2019).

In terms of entrepreneurial activities, social equity can be analyzed in various ways. The recent literature tends to privilege assessment of corporate social responsibility and stakeholder actions; however, these approaches do not address the root problems of social equity in terms of sustainability. Addressing social equity at the company level, in terms of income inequality, makes visible organizations' impact on overall systemic income equality and thus to social equity. This approach affords clearer insight into the policies that companies and governments should implement to manage and improve social factors (Husted, 2011).

In a competitive economic environment, reducing imbalances in corporate income has a positive influence on social equity via the generation of economic growth and added value, which allows for more equitable distribution of economic wealth. This increases sources of formal employment with better wage conditions, thanks to the growth of labor demand and a greater and more diverse supply of goods and services available to consumers, which they would probably not be able to access under conditions of a market with high business concentration. These conditions allow the benefits of economic growth to reach all sections of the population (Carneiro *et al.*, 2015). Ncube *et al.* (2019) present empirical evidence that relates an equitable share in income higher on the part of MSMEs with economic growth, more women in formal employment, and lower infant mortality.

One way to measure the distribution and concentration of wealth is via income or profits generated by organizations. This approach has been the subject of debate concerning the analysis of economic sectors and their equilibrium, as it has been clearly established that there are disparities in this distribution, and also that it can be approached from an "inclusion" perspective, which implies introducing or increasing the underrepresented groups' economic share. According to Infante and Sunkel (2009), this analytical framework should be applied from a long-term perspective to generate inclusive and impartial development, thus reducing income inequality and improving quality of life.

Disparities exist regarding the availability of economic resources between individuals, which generates social and economic inequality, thereby increasing the gap between rich and poor and their respective economic opportunities (Oxford Committee for Famine Relief, 2018). To achieve effective

economic inclusion, both the public sector and the private sector must offer their support, collaborating to elaborate various tools aimed at promoting inclusivity between companies and sectors, thus promoting economic growth and equitable income distribution in a country.

Looking first at the entrepreneurial sphere, here, inequality takes the form of a relatively low number of participants controlling the market and the direction of economic activity; in a worst-case scenario, this results in a monopoly situation; however, entrepreneurship itself can contribute to improved economic growth and prosperity when inequality and exclusion are reduced, thus privileging the relationships between new businesses and inequality reduction via mechanisms in which entrepreneurial processes contribute to productive and social transformations (Apetrei *et al.*, 2019).

Abosede and Onakoya (2013) demonstrate that the process of new enterprise creation introduces and develops various innovative products, processes, and organizational structures across the economy; that is, this process fosters economic inclusion and reduces market power and wealth accumulation structures such as monopolies.

The need for inclusive economic growth not only concerns developing countries; for example, the Europe 2020 strategy aims to expand inclusive entrepreneurship to include 75% of the population between 20 and 64 years of age. Inclusive entrepreneurship aims to incorporate part of the economically active population that is not working, but seeks to do so via the development of new companies in sectors that will contribute to a country's economy and growth. Entrepreneurship must be innovative and can develop across five categories: the introduction of a new product or improvement of the quality of an existing product; a new production method; the opening of a new market; the exploitation of a new supply source of raw materials; and the creation of a new organization in any industry (Abosede and Onakoya, 2013).

Currently, markets are undergoing constant changes, where competitiveness of economies and the sustainability of companies is determined by factors such as company internationalization, comparative advantages in foreign trade, competitiveness, creation and innovation, and globalization (Valbuena and Montenegro, 2019). In this context, MSMEs that do not adapt favorably and promptly to these changes see their competitiveness reduced, resulting in wealth becoming concentrated in a few small firms, given that large companies determine industrial conditions, retaining most of the profits generated (Oxford Committee for Famine Relief, 2018).

On the other hand, is the macroeconomic sphere and economic policy, i.e., the public sector's role in income redistribution. In 2009, a study from Chile found that a shift in public policy focus is a necessary condition for gradually overcoming structural differences across the sectors of the productive matrix, which is the main obstacle to achieving impartial growth. Doing so requires developing four elements: productive convergence, guaranteed social protection, necessary institutional changes, and sustained economic growth with equity (Infante and Sunkel, 2009).

Various authors employ the Gini index and the Lorenz curve to measure inequality and income distribution. Alonso (2010), for example, divides the Lorenz curve into subsectors concerning the manufacturing industry in Spain. Zhao *et al.* (2007) analyze disparities in China's manufacturing industry using the Gini index; Arbeletche and Carballo (2008), meanwhile, study the Lorenz curve while researching Uruguayan agricultural concentration. Dávila (2004) applies a variant of the Gini index and the Lorenz curve to measure the evolution of manufacturing employment concentration in Mexico; while Lee (2007) studies the tourism industry in South Korea using both indicators. These studies demonstrate the importance of analyzing economic behavior in different realities.

In light of this, the power of existing large economic groups could be limited, as in the case of Ecuador, where exploited labor is paid below the living wage and therefore people are unable to access a basic food basket (Tulcanaza, 2010). Within an inclusivity framework, the government should implement policies to encourage and promote entrepreneurship, thus generating positive externalities such as higher incomes to allow innovative businesses to develop, the exploitation of opportunities, increased employment, cost reduction, and technological development.

Albuja (2019), meanwhile, analyzes economic and social inclusion in Ecuador. Working from a definition of social inclusion as the absence of multidimensional poverty, the study found that social inclusion was at 67.2% of the population in 2017; on the other hand, productive inclusion, defined as access to adequate income, employment, and social security, was at 42.1% of the population. The analysis concludes that 35.3% of the population was in a state of dual inclusion.

Studies have made use of various tools to develop economic and social inclusion across all sectors, as well as employing economic indicators to analyze inequality across categories such as income, rent, and employment, among others. However, there is also an additional instrument to improve participation: financing. Financing is a tool that should be expanded to include MSMEs, as the limited availability of financing drives certain vicious cycles that generate conflict and impede development. A common characteristic of this dynamic is the fragility of MSMEs, which becomes an obstacle to inclusive growth. Thus, it is crucial to design mechanisms to promote financial inclusion, thus allowing equal access to economic resources (Fowowe and Folarin, 2019).

When seeking to offset economic concentration and promote entrepreneurial inclusion, strengthening entrepreneurial processes is as important as access to finance, given that start-up businesses must manage several factors that determine their competitiveness and sustainability. These factors include owners' and managers' education levels (Tambunan, 2019); ability to perceive business opportunities rather than engaging solely in necessity entrepreneurship (Chairi *et al.*, 2019); market-oriented strategic management conducive to innovation and continuous learning (Tjandera and Hariandja, 2019); access to and timely use of production, information, and communication technology (Farooq *et al.*, 2020); and the availability of skilled, productive, and efficient personnel (Guzman-Soria *et al.*, 2020).

Economic inequality is a matter of concern not only for governmental bodies, but also for global bodies. Thus, Goal 8 of the United Nations (UN) 2030 Agenda aims to promote sustained, inclusive, and sustainable economic growth, combined with full and productive employment and decent employment (Sustainable Development Goals Fund, 2019).

To achieve the sustainable development proposed by the UN, countries should strengthen institutions and improve the regulatory framework, and thus be able to improve the performance of resources used by companies. Another advantageous development would be the convergence between countries and integration mechanisms to improve the lives of its citizens. The European Union serves as an example of this (Alvarez, 2016).

Trejo (2017) explains that a country's fundamental routes to development are economic growth and industrialization, working from the assumption that a prosperous and quality life can be achieved through economic restructuring and innovation when inclusivity is privileged.

It is crucial to emphasize the importance of equity in each of the economic sectors as a contribution to the equity of the economy as a whole. Understood in this way, it becomes necessary to evaluate the distribution of income by area of economic activity, and to look for those factors that allow organizations to participate more fully in them. Companies' economic performance is a predictor of their participation in the economic activity and income of the sector (Chiu, 1998; Lee *et al.*, 1999). Better economic performance allows for greater competitiveness, which is reflected in a better business position from an income point of view (Jung *et al.*, 2018). In light of the above, research must determine certain factors or variables that managers can influence to achieve better performance and, therefore, a better competitive position.

3. METHODOLOGY

To analyze income concentration and inclusion in the Ecuadorian business sector, the unit of analysis consisted of the formal companies that make up the country's 21 economic sectors for 2017. The financial statements that these companies report annually to Ecuador's Superintendency of Companies, Securities, and Insurance served as a secondary data source. The companies studied are companies with legal status that present their financial information to the control entity, with the responsibility of an accounting professional and the legal representative.

To measure economic concentration, the Gini coefficient was calculated for each sector concerning income and net profit. This methodology was adapted according to the premise that the Gini coefficient is a robust and reliable measure of inequality (Bandyopadhyay, 2017); therefore, the Gini coefficient is widely used to measure the concentration in the distribution of different business variables among economic agents (Alonso, 2010; Dávila, 2004; Lee, 2007; Mathews and Schwartz, 2019; Mussini, 2019; Thomas and Kandaswamy, 2019; Zhao *et al.*, 2007).

After establishing each respective sector's level of economic concentration, the analysis shifted to focus on four priority sectors that represent the maximum and minimum level of concentration and those with the highest contribution to the country's GDP.

Given the importance of analyzing economic performance as a determining factor of companies' ability to participate more competitively in an economic sector, it is crucial to define variables for measuring performance. Financial indicators (ratios) concern the accounting information of organizations and reflect a company's business activities, and are commonly used as a management metric (Block and Hirt, 2008). To study the behavior of financial management, a descriptive and comparative analysis of the following financial indicators was carried out: return on assets (ROA), return on equity (ROE), net profit margin (MUN), current ratio, debt ratio, financial leverage, total asset turnover, and asset intensity, all complemented with the Du Pont analysis and company age. The firms were grouped into two units of analysis: the first one consisting of firms belonging to the decile with the highest income concentration, and the second one composed of those below the ninth decile, thus showing the results of the financial measures of each group.

Finally, to estimate what influence these financial ratios had on the probability that a company belongs to the decile with the highest income concentration, a logistic regression analysis (LOGIT) was developed, allowing for a model that shows the main variables involved in the behavior of the sector in terms of income concentration.

To study the probability of belonging to the group with the highest income concentration, the following regression model was estimated:

$$\ln(1/0) = \beta_0 + \beta_1 ROA + \beta_2 END + \beta_3 IAN + \beta_4 APF + \beta_5 Age + u_i \quad (1)$$

Where $\ln(1/0)$ represents the probability that a company is part of the tenth decile of income concentration in its sector; which is explained by the following variables: return on assets (ROA), debt ratio (END), net asset intensity (IAN), financial leverage (APF), and age expressed as the time in years elapsed between the company's incorporation and December 2019 (age).

4. RESULTS AND DISCUSSION

From an economic perspective, an inequitable society is prone to form social and economic groups that defend groups with greater influence, and resist the growth of organizations from the lower echelons of the distributive structure. Given this reality, inclusion becomes a means by which to attain a more cohesive society.

Companies' search for permanent adaptation — a result of globalization and rapid technological progress — causes organizations to deal with these changes under unequal conditions, while simultaneously segmenting the productive sectors. A descriptive analysis of each business sector's behavior is therefore necessary, as this will make visible the most representative sectors in the Ecuadorian economy. These sectors will then become the object of inquiry and will allow the evaluation of pertinent metrics that show their behavior and promote the development of strategies and policies that facilitate business inclusion.

Table 1 presents the number of companies, income, and net profit of the various economic sectors: the Manufacturing (C) and Commerce (G) sectors were clearly the sectors that made the greatest contribution to the production of goods and services in Ecuador, as their income represents 62.4% of the total generated by the Ecuadorian business sector for 2017, as well as 40.4% of the total net profits recorded.

Table 1. Number of companies, revenues, and net income according to sphere of economic activity

Letra	Sector	Income			Net profit		
		Number	Value (in thousands \$)	Percentage	Number	Value (in thousands \$)	Percentage
A	Agriculture, livestock, forestry, and fishing.	3 038	8 989 315.0	6.1	2 173	371 690.7	0.9
B	Mining and quarrying.	428	4 344 854.1	4.1	251	729 779.2	10.9
C	Manufacturing industries.	3 972	23 266 740.0	21.9	2 777	1 222 146.7	18.3
D	Electricity, gas, steam, and air conditioning supply.	183	199 445.7	0.2	140	28 330.4	0.4
E	Water distribution, sewerage, waste management, and sanitation activities.	209	502 328.9	0.5	150	30 872.3	0.5
F	Construction.	3 553	4 783 654.6	0.7	2 578	346 553.3	5.2
G	Wholesale and retail trade, repair of motor vehicles and motorcycles.	11 437	42 958 277.8	40.5	8 153	1 473 086.8	22.1
H	Transportation and warehousing.	7 154	4 403 304.9	4.2	5 387	250 337.2	3.7
I	Accommodation and food service activities.	1 060	1 173 881.5	1.1	604	36 389.9	0.5
J	Information and communication.	2 002	5 322 403.4	5.0	1 398	1 356 866.2	20.3
K	Financial and insurance activities.	1 022	1 581 938.2	1.5	789	539 826.2	8.1
L	Real estate activities.	3 543	1 578 876.8	1.5	2 514	210 623.1	3.2
M	Professional, scientific, and technical activities.	5 709	2 870 107.7	2.7	4 169	237 917.2	3.6
N	Administrative and support service activities.	3 281	2 175 828.0	8.5	2 262	82 755.0	1.2
O	Public administration and defense; compulsory social security plans.	11	2 370.4	0.0	6	407.3	0.0
P	Education.	650	363 344.2	0.3	433	16 827.0	0.2
Q	Human health care and social assistance activities.	921	989 337.0	0.9	637	39 241.1	0.6
R	Arts, entertainment, and recreation.	213	62 665.5	0.1	140	4 885.8	0.1
S	Other service activities.	273	193 436.0	0.2	198	12 095.5	0.2
T	Household activities.	3	390.1	0.0	3	10.0	0.0
U	Extraterritorial.	1	35.4	0.0	1	1.4	0.0
Total		48 663	105 762 535.2	100.0	34 763	6 990 642.3	100.0

Source: compiled by the authors using data from the Superintendency of Companies, Securities, and Insurance of Ecuador, 2019.

Table 2 shows the Gini coefficient by business sector. Here, we can see that all economic sectors present inequality in terms of income and net profit; that is, a small number of companies concentrate the greatest amount of income and profits in the country, showing a significant imbalance in the distribution of resources in the business sector. This situation ratifies the concentration of wealth and inequality for the case of Ecuador, analogous to what has been stated regarding the concentration of wealth worldwide by Tulcanaza (2010), Deere and Contreras (2011), and Solimano (2015), as well as by the Oxford Committee for Famine Relief (2018). The sector with the highest income inequality is the Information and communication (J) sector, in contrast to the Other service activities (S) sector which shows the lowest level of income inequality.

Table 2. Gini index according to sphere of economic activity

<i>Letter</i>	<i>Sector</i>	<i>Gini income</i>	<i>Gini profit</i>
A	Agriculture, livestock, forestry, and fishing.	0.78	0.81
B	Mining and quarrying.	0.86	0.89
C	Manufacturing industries.	0.84	0.87
D	Electricity, gas, steam, and air conditioning supply.	0.76	0.86
E	Water distribution, sewerage, waste management, and sanitation activities.	0.83	0.86
F	Construction.	0.83	0.87
G	Wholesale and retail trade; repair of motor vehicles, and motorcycles.	0.83	0.86
H	Transportation and storage.	0.83	0.88
I	Accommodation and food service activities.	0.77	0.82
J	Information and communication.	0.87	0.90
K	Financial and insurance activities.	0.82	0.86
L	Real estate activities.	0.81	0.85
M	Professional, scientific, and technical activities.	0.79	0.85
N	Administrative and support service activities.	0.79	0.83
P	Education.	0.76	0.82
Q	Human health care and social work activities.	0.78	0.79
R	Arts, entertainment, and recreation.	0.75	0.85
S	Other service activities.	0.73	0.80

Source: compiled by the authors using data from the Superintendency of Companies, Securities, and Insurance of Ecuador, 2019.

The findings obtained from the Gini index, although based on financial information, show the possible existence of social imbalances such as investment risks, employment, entrepreneurship, and permanence in the sector.

The financial analysis of the most representative sectors of the economy is important, as well as those that present extreme disparities concentration levels. Table 3 shows the main indicators that allow visualizing the financial performance of each sector under analysis.

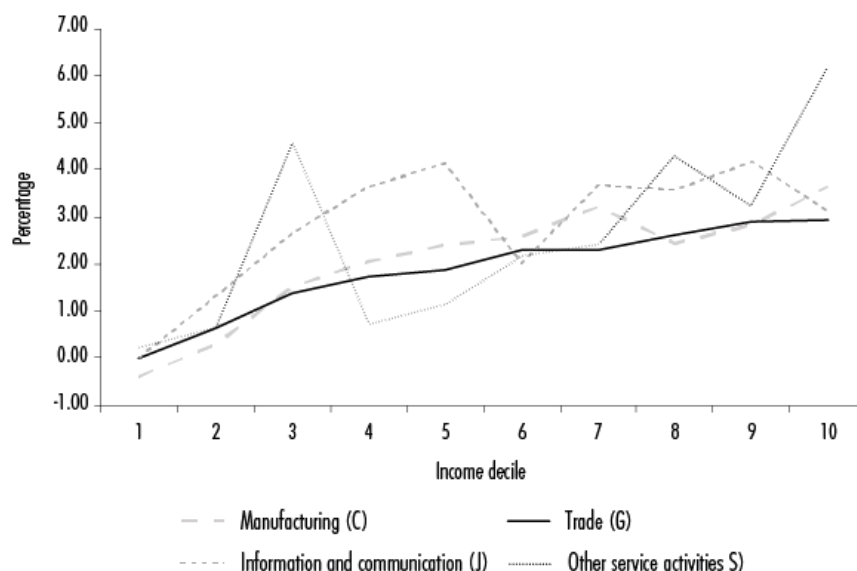
Table 3. Descriptive statistics of financial indicators

<i>Indicators</i>	<i>Manufacturing (C)</i>	<i>Commerce (G)</i>	<i>Information and Communication (J)</i>	<i>Other service activities (S)</i>
	<i>Median</i>	<i>Median</i>	<i>Median</i>	<i>Median</i>
Total asset turnover	1.252	1.499	1.643	1.491
Financial leverage	2.381	2.765	2.004	2.175
Return on assets	0.020	0.017	0.025	0.021
Return on equity	0.081	0.087	0.123	0.098
Net profit margin	0.016	0.012	0.017	0.018
Indebtedness	0.642	0.703	0.621	0.646
Dupont	0.081	0.087	0.123	0.098
Current ratio	1.546	1.554	1.503	1.608
Net asset intensity	0.221	0.070	0.055	0.137
Age	10.000	9.000	6.000	10.000

Source: compiled by the authors using data from the Superintendency of Companies, Securities, and Insurance of Ecuador, 2019.

Figure 1 shows the return on assets data for the different sectors analyzed by deciles of income level. It can be observed that the Manufacturing (C) and Commerce (G) sectors show similar behavior, showing that as the level of income increases, the return on assets increases. In contrast, the Information and communication (J) and Other service activities (S) sectors, which have the most extreme concentration levels, have a much more volatile behavior, presenting pronounced peaks and falls when analyzed by deciles.

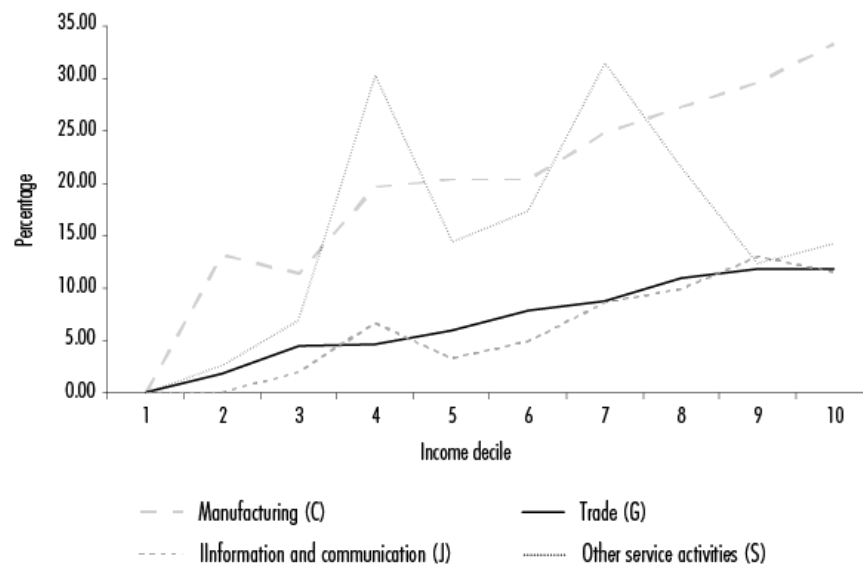
Figure 1. Return on sectors' assets studied by deciles in medians



Source: compiled by the authors using data from the Superintendency of Companies, Securities, and Insurance of Ecuador, 2019.

Figure 2 indicates that companies in the highest income deciles show a higher asset intensity. The Manufacturing sector (C) shows a growth trend in asset intensity, with the last decile having fixed assets 33 times higher than the first decile; on the other hand, the Other service activities sector (S) shows a marked volatility, attributable to the diverse activities carried out by the companies in this sector.

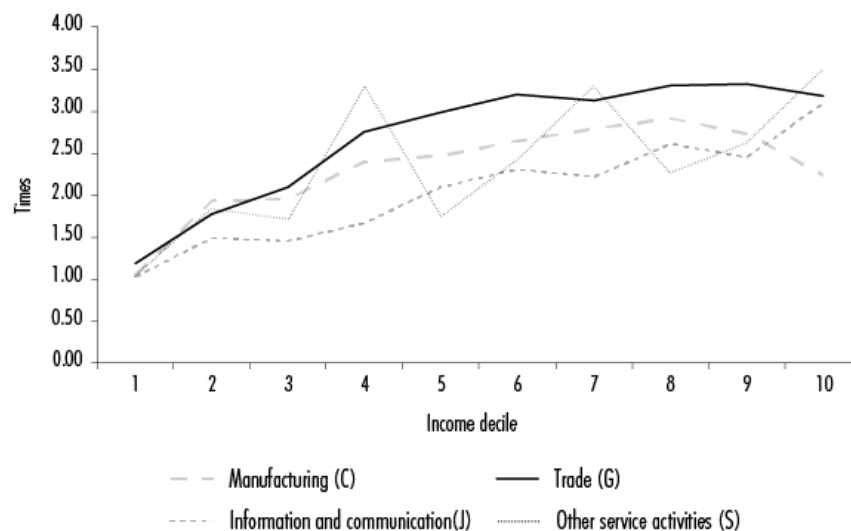
Figure 2. Net asset intensity of the sectors studied by deciles in medians



Source: compiled by the authors using data from the Superintendence of Companies, Securities, and Insurance of Ecuador, 2019.

Figure 3 shows the financial leverage of the companies in each of the sectors studied, showing that the higher the level of income, the more companies choose to finance their activities with resources from third parties or debt. Both the Manufacturing (C) and Commerce (G) sectors show similar behavior in which the trend is increasing; that is, they finance their activities mostly with third-party resources over their own financing until reaching maximum values in decile 8 and 9, respectively; from then on, companies choose to finance their activities with less debt and use more of their own resources. The Information and communication sector (J) has a sustained positive trend; therefore, companies with higher revenues use more debt.

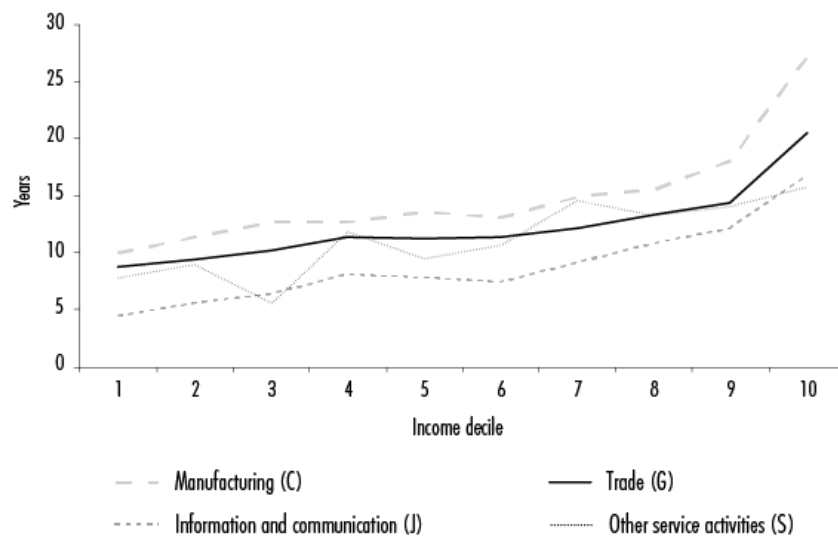
Figure 3. Financial leverage of the sectors studied by deciles in medians



Source: compiled by the authors using data from the Superintendence of Companies, Securities, and Insurance of Ecuador, 2019.

Figure 4 shows company age for each business sector. It is evident in the four sectors analyzed that the companies with the highest average revenues are older than those with the lowest revenues. The Manufacturing (C), Commerce (G), and Information and communication (J) show similar behaviors, with a positive trend that is accentuated in the last decile. The Other service activities (S) sector, which showed the lowest income inequality, shows a volatile behavior, as in previous indicators.

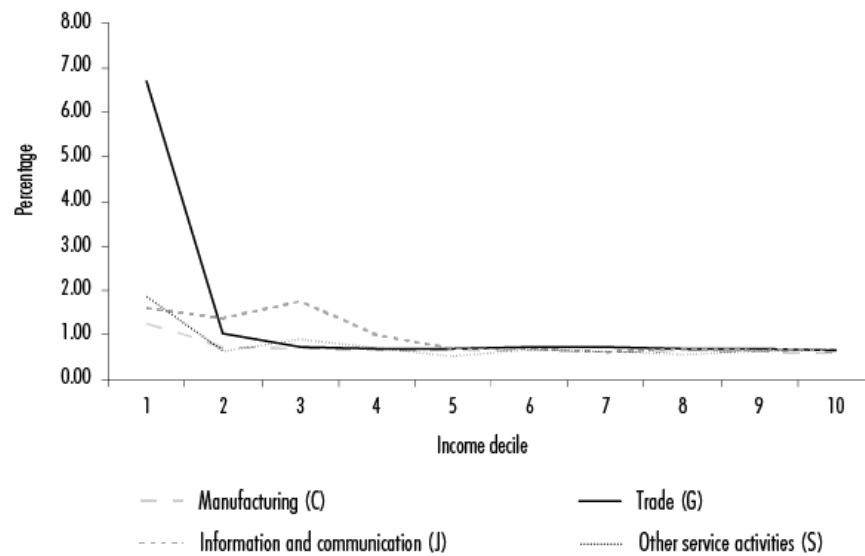
Figure 4. Average company age in each sector studied by deciles



Source: compiled by the authors using data from the Superintendence of Companies, Securities, and Insurance of Ecuador, 2019.

Figure 5 presents the average indebtedness of each sector under study. It is evident that, for all sectors, companies in the first income deciles have higher indebtedness, which decreases as companies' income increases.

Figure 5. Average indebtedness of companies in each sector studied by deciles



Source: compiled by the authors using data from the Superintendence of Companies, Securities, and Insurance of Ecuador, 2019.

Table 4 shows the financial performance of the sectors under study. It is evident that, on average, the Other service activities (S) sector presents higher values of current ratio, intensity of net assets, and financial leverage; additionally, its companies are older on average. Therefore, the statistically significant financial indicators show signs of better corporate governance in the most equitable sector.

Table 4. Average financial indicators of the sectors with the highest and lowest concentrations

<i>Sector</i>	<i>Gini 0.73 Other service activities (S)</i>	<i>Gini 0.87 Information and communication (I)</i>
Total asset turnover	2.19	2.25
Financial leverage	5.89 **	4.09 **
Return on assets	0.02	0.01
Return on equity	0.15	0.20
Net income margin	-0.01 **	-0.05 **
Indebtedness	0.60	0.63
Dupont	0.15	0.20
Current ratio	4.11 **	3.21 **
Net asset intensity	0.24 **	0.19 **
Age	11.14 **	8.90 **

Note: ** statistically significant at 0.05 for Welch's test.

Source: compiled by the authors using data from the Superintendency of Companies, Securities, and Insurance of Ecuador, 2019.

A means test was carried out for each of the economic sectors studied to find statistically significant differences in business performance between companies belonging to the decile with the highest concentration of income and those belonging to the remaining nine deciles (see Table 5). It is worth noting that on average, the companies with the highest concentration of income (group 1) have higher age and profitability over assets, as well as lower levels of current ratio. This is constant across all sectors analyzed.

Table 5. Average financial indicators by sector

<i>Sector/ Concentrated</i>	<i>Manufacturing (C)</i>		<i>Commerce (G)</i>		<i>Information and communication (I)</i>		<i>Other services activities (S)</i>	
	<i>Group 0</i>	<i>Group 1</i>	<i>Group 0</i>	<i>Group 1</i>	<i>Group</i>	<i>Group 1</i>	<i>Group 0</i>	<i>Group 1</i>
Age	13.542 ***	27.202 ***	11.382 ***	20.474 ***	8.014 ***	16.835 ***	8.014 ***	16.835 ***
Total asset turnover	1.734 ***	1.445 ***	2.137 ***	2.733 ***	2.262	2.117	2.262	2.117
Financial leverage	5.342 ***	3.299 ***	6.474 ***	5.554 ***	3.999	4.877	3.999	4.877
Return on assets	0.016 ***	0.051 ***	0.020 ***	0.044 ***	0.007 ***	0.056 ***	0.007 ***	0.056 ***
Return on equity	0.145	0.132	0.146	0.157	0.198	0.193	0.198	0.193
Net income margin	-0.044 ***	0.035 ***	-0.017 ***	0.022 ***	-0.056 ***	0.026 ***	-0.056 ***	0.026 ***
Debt ratio	0.617 ***	0.562 ***	0.635 ***	0.664 ***	0.621 ***	0.687 ***	0.621 ***	0.687 ***
Dupont	0.145	0.132	0.146	0.157	0.198	0.193	0.198	0.193
Current ratio	2.902 ***	1.998 ***	3.600 ***	1.918 ***	3.359 ***	1.936 ***	3.359 ***	1.936 ***
Net asset intensity	0.273 ***	0.338 ***	0.181	0.179	0.186	0.192	0.186	0.192

Notes: Concentration Group 0 = deciles 1 to 9 according to income. Concentration Group 1 = decile 10 according to income; *** statistically significant at 0.01 for Welch's test.

Source: compiled by the authors using data from the Superintendencia of Companies, Securities, and Insurance of Ecuador, 2019.

Table 6 shows the results of the logistic regression model, which shows the probability that a company is in the group with the highest concentration (1) or the lowest concentration (0).

Table 6. Logistic regression model by sector

	<i>Manufacturing (C)</i>		<i>Trade (G)</i>		<i>Information and communication (J)</i>		<i>Other services activities (S)</i>	
	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>
Return on assets	3.293***	0.000	4.019***	0.000	1.909***	0.000	6.542***	0.001
Indebtedness	0.466**	0.043	1.605***	0.000	0.993***	0.000	2.156**	0.022
Net asset intensity	0.985***	0.000	-0.030	0.835	-0.283	0.413	0.527	0.528
Financial leverage	-0.055***	0.000	-0.021***	0.000	0.017	0.211	0.005	0.833
Age	0.048***	0.000	0.065***	0.000	0.093***	0.000	0.054**	0.004
R ²	0.165		0.138		0.176		0.163	
Omnibus chi-square test Model		0.000		0.000		0.000		0.001

Notes: ** statistically significant at 0.05; *** statistically significant at 0.01.

Source: compiled by the authors using data from the Superintendence of Companies, Securities, and Insurance of Ecuador, 2019.

The results show that for all sectors, the higher the return on assets, indebtedness, and age, the higher the probability of a company being in the group with the highest concentration of income. In the case of the Manufacturing (C) and Commerce (G) sectors, which are the most representative of the national economy, it is shown that financial leverage is also a predictor variable that indicates that the lower the leverage levels, the higher the probability of belonging to the group with the highest concentration of income.

The study shows that there is high inequality in the generation of income across companies in Ecuador, indicating a suboptimal behavior that produces inequitable economic growth; therefore, there is a need to implement specific policies aimed at the development and support of operational activities through the application of methodologies to promote productivity. These policies should implicitly involve the promotion of fair and formal work, entrepreneurship, and innovation. Potential industrial policy measures aimed at reversing economic concentration include the implementation of internal control systems that reduce the probability of business behavior that violates antitrust regulations, strategic partnerships between academia and MSMEs that enables such organizations to access innovation and technology which will increase their productivity and competitiveness, the proper targeting of tax incentives, and effective access to seed capital funds.

Likewise, the findings show that the highest degrees of inequality exist in the first deciles; policy propositions that promote the formalization of MSMEs are therefore needed. Such policies should allow MSMEs to be part of a fair competitive market and a national financial system that promotes access to economic resources, and allows their permanence in the sector. These needs are also highlighted in the studies of Infante and Sunkel (2009), Abosede and Onakoya (2013), Fowowe and Folarin (2019), and Apetrei *et al.* (2019).

Managers working in the business sector must enact specific interventions aimed at an adequate insertion in the sector, with actions that guarantee sustained, inclusive, and sustainable economic growth. This is to be achieved via strategies centered on appropriate technical advice on economic and productive management, directing business objectives towards national and sectoral policies, guaranteeing adequate internal working conditions, and support for human resources that impact on greater social welfare within the sector.

5. CONCLUSIONS

A Gini coefficient close to one indicates a highly unequal business sector, which is associated with an economically weak country with a deficient welfare state, where the strength of the business elites dominates the economic environment.

As the Gini indices exceed 0.7, the study found a high concentration of income and profits in all sectors of the Ecuadorian economy, with the Information and communication (J) sector showing the greatest inequality and the Other services activities (S) sector the least concentrated.

The Other service activities (S) sector, which is considered the most equitable within the economy, shows volatility in all the financial indicators analyzed; that is, its behavior is highly variable as its income decile increases. The Manufacturing (C) and Commerce (G) sectors, which are the most representative, show homogeneous and increasing behavior in the indicators of return on assets, net asset intensity, financial leverage, and age, thus demonstrating that the higher the income level, the higher the aforementioned variables.

Comparison between the sectors with the highest and lowest concentration demonstrated statistically significant differences in the variables current ratio, net asset intensity, financial leverage, and age. It is important to note that the companies in the sector with the lowest concentration have higher levels of liquidity and financial leverage.

In the logistic regression model, it could be seen that the variables of asset liquidity, indebtedness, and age have a positive influence on the probability of becoming part of the successful group (1) or the group with the highest concentration. It should be noted that the aforementioned variables are

independent predictors of the level of income concentration in the sector. Additionally, it was determined that financial leverage has a negative influence on the sectors that concentrate the greatest economic generation in the country.

The findings indicate a lack of market self-regulation and the need for state intervention, as an external agent, to establish policies and norms that promote the equitable distribution of resources.

Business policies aligned with public policies, aimed at developing sustainable enterprises, should not only focus their efforts on economic inclusion, but also on enterprises with a focus on internationalization that develop in a context of corporate social responsibility, promoting a balance between economic growth, social welfare, and the use of natural resources and the environment.

The debate on fair and equitable economic growth is a topic that warrants constant analysis, especially in developing countries. The analysis presented here attempts to shine a light on the reality of economic behavior and the existing accumulation of wealth in small groups, across various business sectors. There is, however, a constant need to periodically diagnose the business environment to allow for the design of strategies and policies that favor the insertion of disadvantaged economic groups.

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