

Article

Impact Investing: Determinants of External Financing of Social Enterprises in Brazil

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Abstract: Social impact investing and social entrepreneurship have great potential for solving global problems. However, practitioners and researchers know little about the entrepreneurial process and the investors' criteria. Therefore, we identify the determinants of access to external finance for social enterprises in an emerging economy using a quantitative approach in a large sample (N = 601). We found that impact sector, business model, entrepreneurial support, development stage, and the adoption of technologies impact access to finance by social enterprises. We also show that green technologies have greater funding access than other enterprises and that social impact investors are more aware of environmental issues and less concerned with financial returns. To raise more funding, we suggest that social entrepreneurs include environmental issues in their business, quickly validate their idea, add an intermediary company between the enterprise and the consumer, seek the support of incubators or accelerators, and adopt emerging technologies in the product or service offered.

Keywords: social entrepreneurship; social investment; sustainability; green tech; emerging economy



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1. Introduction

Many countries worldwide deal with problems such as pollution, poverty, wars, unemployment, and child labor, among others [1]. Social enterprises (SEs), defined as private organizations that aim for profit and a social mission, can address many of these problematic issues. Social entrepreneurship is a new form of business that has grown in recent years, mainly with the increasing incidence of economic, environmental, and social problems. The proof of the importance of social entrepreneurship is that journals have published more and more studies on the subject in the last decade [2].

There is a relationship between social entrepreneurship and sustainability because social entrepreneurship is essential for sustainable development [3]. This relationship also exists because social entrepreneurship is a construct focused on sustainability and shaped by environmental dynamics [4], thus serving as a response of public and private value to social, economic, and environmental challenges discussed in the business and sustainability literature [5]. Furthermore, the sustainability orientation—necessary for the long-term survival and economic viability of social enterprises (SEs)—is one of the dimensions of the social entrepreneurship orientation [6]. Sustainability is also present in the mission of SEs, which is to solve social and environmental problems through sustainable solutions [4]. In addition, the goals of SEs are similar to the UN Sustainable Development Goals (SDGs). The SDGs are a global call for developed and developing countries to commit to 17 goals related to poverty, health, education, and hunger [7].

SEs are also the primary beneficiaries of social impact investors, who are investors who expect to achieve social and economic/financial results. They have great potential to solve several problems present in the world today [8,9] as they are an essential source of funding for social enterprises (SEs) [10] and because both have a financial and social development

logic at the same time [11]. Impact investing is an excellent stimulator for the growth of SMEs [12]. Both impact investing and sustainable investing are ways to incorporate environmental, social, and governance (ESG) criteria into investment decisions [13].

We formulate our research problem on the importance of investment for social enterprises to grow and generate social impact and the lack of knowledge about what influences this funding. Access to financial resources is one of the biggest obstacles entrepreneurs face [14], including those in social areas. Social impact investing is considered a way to solve this challenge [12]. As much as social investing is in evidence, research has not kept pace with this growth [15]. Even so, most works treat social investment as isolated and do not study contextual factors that foster investment [8]. The social investment process and the criteria investors use to select SEs are unclear. Filling this gap is essential because entrepreneurs need knowledge about the most critical criteria to capture more investment [16,17]. The investment raised is essential for SEs to improve the social impact generated [18]. We choose as a research context Brazil, one of the largest emerging economies in the world, bringing great opportunities for investors who care about social and environmental issues [19]. However, understanding the conditions that foster impact investing in these contexts is lacking.

Our work aims to identify the determining factors of access to finance for social enterprises (SEs) in Brazil's emerging economy. Therefore, the research question is as follows: "What are the determining factors for access to financing for social enterprises in Brazil?" For this, a quantitative approach was used with a large sample (N = 601 SEs), which researchers rarely use [15]. This approach reduces uncertainties regarding the results [20]. Social entrepreneurship research over the past two decades calls for more quantitative papers [21].

Among the main findings, we found that business model, impact sector, development stage, technology adoption, and acceleration/incubation had a significant effect on access to finance by SEs. In addition, social impact measurement methodologies, dividend distribution, and market orientation were insignificant. We contribute to developing knowledge about entrepreneurial finance, social entrepreneurship, social impact investment, and entrepreneurship in emerging economies. As a practical contribution, we favor social entrepreneurs who want to drive their decisions more assertively by finding the factors that foster access to finance. We also help SEs to generate a more positive impact on society, given that social investment aims precisely at this return.

The novelty of this study lies in the fact that it is a pioneer in finding the factors that influence access to finance for social enterprises in an emerging economy. The past literature is all focused on the traditional enterprise. From a methodological point of view, the novelty of this paper lies in the quantitative approach used, which, as previously stated, is still rare in social entrepreneurship and leads to more precise results. We are also pioneers in terms of variables as the variables in this study involve strategic, technological, entrepreneurial, financial, social, product, and business factors.

2. Theoretical Framework and Hypothesis Development

2.1. Social Entrepreneurship

Social entrepreneurship has been approached in several ways and can be recognized as a different form of economically oriented entrepreneurship [2]. Researchers also see it as a holistic concept that involves the entrepreneurial community, agents of social change, institutional entrepreneurs, non-profit organizations, and social enterprises [4]. The literature on business and sustainability states that social entrepreneurship is an entrepreneurial approach to address public problems such as social inequality, water shortages, and climate change, which is done through commercial means and the mobilization of resources to achieve social goals.

Within social entrepreneurship, there are four categories of social enterprises: (i) non-profit organizations, which use charity to deal with society's problems; (ii) private companies that apply business models that aim to achieve social and commercial

objectives at the same time; (iii) social cooperatives, which aim to insert socially disadvantaged people into the labor market; and (iv) social organizations in the public sector, which are linked to the government and seek to solve social problems [22].

This paper focuses on the social enterprise category of private companies. These organizations generate revenue through commercial activities while promoting their social mission to create social value for a neighboring community or a wider society [23]. Another accepted definition is that SEs are hybrid organizations that aim to solve social and environmental problems through innovative solutions [24]. In other words, SEs have both the economic characteristics of a traditional corporation and the social characteristics of a non-profit organization. Despite these definitions, a legal definition of social enterprise is lacking.

An essential characteristic of the SE is the impact sector. An SE can impact or benefit six impact sectors, as described in Table 1. There is a need to quantify the social, environmental, and economic impact of new forms of operation, such as the green economy and the circular economy [25]. PIPE (Innovative Research in Small Businesses, considered the largest Brazilian platform to develop SEs) created this classification. Each SE can impact more than one sector at the same time.

Table 1. Impact sectors of social enterprises.

Impact Sector	Description
Edu tech	SEs work with education improvement projects involving students, parents, teachers, and the government from early childhood to higher education.
Health tech	SEs propose solutions to health management problems and people's quality of life.
Fintech	SEs provide financial solutions for low-income people seeking cost savings and access to credit, financial transactions, business formalization, and financial education.
Civic tech	SEs promote civic engagement, poverty reduction, social inclusion, diversity, and citizens' rights and duties.
Smart cities	When enterprises work with solutions in urban mobility, public security, public areas, and housing.
Green tech	These enterprises propose solutions in energy, pollution, water, waste, recycling, agriculture, biotechnology, and the preservation of fauna and flora.

In addition to the social impact sector, every SE has a market orientation towards the bottom of the pyramid (BOP) or the top of the pyramid (TOP) [26]. From the idea of creating the SE, it can go through several stages until reaching a final product or service. These stages, described in Table 2, were also established by PIPE.

In order to help SEs to develop and raise funds, it is common for them to resort to some entrepreneurial support, the best known being the incubator and the accelerator. Due to the evolution of services provided by incubators, the concepts of accelerator and incubator have recently been confused, causing practitioners and researchers to consider them synonymous [27]. Incubators and accelerators offer the same resources to tenants; however, the time spent in an accelerator tends to be shorter (less than six months) [28].

Table 2. Development stages of social enterprises.

Stage	Name	Description
1	Idea	The entrepreneur perceives some demands from social or environmental problems and has a business proposal. This stage involves much study and the search for knowledge regarding definitions of customers and suppliers.
2	Validation	Presentation of the idea to stakeholders, possible customers, mentors, and specialists to validate the proposal.
3	Prototype	The enterprise executes the idea through a prototype and tests to check the previous operation.
4	Pilot	The enterprise places the idea on the market, and the application and utility of the prototype are verified.
5	MVP	Consumers consider the idea satisfactory, and the SE tests the business model.
6	Organization	Business management is structured, and the internal procedures and indicators are defined.
7	Traction	The enterprise, already structured and organized, begins to overgrow.
8	Pre-scale	The enterprise needs more planning and investments to continue growing sustainably.
9	Scale	The enterprise is already well structured, consolidated, and well recognized by customers.

2.2. Enterprise Funding

Several empirical works analyzed different types of access to investment or financing in different enterprises. One of the main articles on the topic is that of [29], in which the determinants of access to external financing for startups in 27 countries were studied. They found that institutional investors preferred entrepreneurs with more management experience. Informal investors, on the other hand, are more interested in the startup's product. In a systematic review of financing in small and medium enterprises, the main determinants that the authors found were the characteristics of the enterprise (age, size, asset structure, sector, location, type of property, and legal form) and the characteristics of the entrepreneur (gender, age, educational level, and experience) [30].

A topic already studied is fintech's determinants of debt financing [31]. Investors prefer enterprises with high technology and intellectual property protection [32]. Another essential variable already analyzed is the alliances and intellectual and human capital that impact the financing of biotechnology enterprises [33]. Research shows that investors reject enterprises at the beginning of their life cycle [34]. The business model's attractiveness and advertising quality have been shown to attract investment from crowdfunding for enterprises in Germany [35]. The entrepreneur's reliability, the quality of the management team, and leadership enthusiasm are relevant factors for angel investors in the USA [36].

2.3. Social Impact Investing

Social investment, also called impact investing, has its roots in the third sector and government policy. It is considered an emerging approach to financing SEs. However, unlike philanthropy and government, social investors seek to make a profit as a return in addition to social impact. Social investment is an evolution of responsible investment, with the difference being that the former explicitly intends to generate social impact. Social investment represents a class of investors that can operate as individuals, groups of investors, or institutions. Social investment gradually leaves the private sphere and enters the public sector [17]. Table 3 presents the types of investors analyzed in this work.

Table 3. Types of investment analyzed in this work.

Type of Investment	Description
Investor partner	Individuals who invest in the startup and also participate in important decisions.
Own investment	The investment made by the startup manager themselves.
Development bank	Banks that specialize in investing in small or large enterprises.
FFF	Friends, family, and fools invest based on their relationship with the entrepreneur.
Crowdfunding	Form of collective investment where individual investors and angel investors come together to invest in a startup. Typically, each investor injects a small amount.
Crowd equity	Type of crowdfunding that allows enterprises to raise seeds or other capital through small equity investments from a large number of investors.
Angel investor	Individuals who allocate smaller amounts and take less risk. They seek a close relationship with the entrepreneur and businesses where they can add something to their experience and expand their networking.
Institutes and foundations	Organizations that promote social entrepreneurship.
Incubators or accelerators	Institutions that help new enterprises in their early stages.
Public institutions	Public organizations that invest resources in social enterprises.
Private bank	Private banks that invest in new enterprises.
Venture capital funds	Professional funds dedicated to investing in new enterprises. They are usually more rigorous in the investment process, resulting in a lengthy analysis process.
Private companies	For-profit organizations that can invest in social enterprises.
Private equity funds	The investor invests private financial resources in a new enterprise with the potential for it to be sold or generate large profits in the long term.

Practitioners used the term impact investing for the first time in 2007. Despite the similarities, it has some differences concerning sustainable investing. Sustainable investors only look for environmental or social returns, while impact investors also look for financial returns. In addition, social impact investor influences the SE they invest in [13].

2.4. Dividends

Dividends represent the distribution of SE profits to its stakeholders and shareholders. That is, SEs give returns to investors in the form of dividends [37]. In work focused on social impact investing, dividends are a form of return on investment [38]. That is, it is to be expected that investors will have a preference for investing in SEs that distribute their dividends.

We chose dividends as the variable analyzed in this work primarily because it is an essential characteristic of an SE [39] and because it can be used as a representative variable at the firm level to analyze its impact on access to finance [40]. Dividends are an excellent indicator of an organization's financial condition. In addition, the return on dividends is considered a measure of the firm's performance and is considered one of the most used metrics in the literature to describe financial performance [41]. A previous study used the return to shareholders as a control variable representative of firm performance and verified its effect on access to financing in SMEs [1]. Likewise, another study used the return to shareholders as an indicator of economic performance and stated that it positively affects access to finance. We expect that investors prefer SEs with good performance and financial conditions [42].

A positive relationship exists between financial performance and access to finance [43]. The payout of dividends is a good sign that the organization can send to the general public, thus providing greater access to funding [44]. The more the company pays out in dividends, the less financially constrained it is [45]. The organization's financial performance has a positive relationship with access to credit [46]. Based on these assumptions, we want to

prove that SEs that distribute dividends have greater access to funding, which leads to the first hypothesis of our work:

Hypothesis (H1). *Dividends have a positive and significant relationship with access to finance in SEs.*

2.5. Market Orientation

Strategic researchers divide emerging economies into two parts according to the social context: the bottom and the middle/top of the pyramid [47]. This is why we refer to the market orientation variable as being binary. The bottom of the pyramid (BOP) involves people with the lowest income, those with less access to education, health, and working conditions, and those usually living in the poorest regions of large cities or rural areas, while the top of the pyramid (TOP) has more access to resources [48]. In emerging economies, more people live at the bottom of the pyramid. Globally, the bottom of the pyramid represents about 70% of the entire population.

An organization can adopt a market orientation to satisfy a specific segment of consumers (which may be the bottom or top of the pyramid), thus bringing a competitive advantage [49]. Entrepreneurship researchers also differentiate the bottom from the top of the pyramid [26], and in the social entrepreneurship context, SEs can serve both [50,51]. Some factors can influence a venture to adopt a market orientation focused on the bottom or the top of the pyramid. The BOP offers a more significant number of consumers. However, they are more price-sensitive, buy in smaller quantities, and require additional costs to inform them about the product or service provided by the SE. Services aimed at the TOP involve fewer costs and risks [49].

We chose the market orientation variable for analysis in our work because it represents much of the strategy used by an organization [49], including being an integral part of its business model [52]. In addition, this variable has a theoretical basis, often being analyzed through theoretical lenses such as the RBV because market orientation is a unique, non-imitable, valuable, and non-exchangeable relational resource [53]. Additionally, its effect on the international performance of SMEs is also often analyzed using the RBV as a theoretical lens [54].

A positive and significant relationship exists between market orientation and access to finance in Nigeria, which is shown through quantitative regression analysis [55]. SEs serving the BOP in emerging economies face significant challenges in acquiring financial resources [56]. Enterprises that seek to serve the BOP face an environment of more significant uncertainty [57], thus making it difficult to access financing. The author observed that situation in a specific case study of an enterprise that develops renewable energy solutions. Therefore, we want to prove that SEs at the BOP have difficulty accessing financing, which leads to the second hypothesis of our work:

Hypothesis 2 (H2). *Market orientation towards the bottom of the pyramid has a negative and significant effect on access to finance in SEs.*

2.6. Social Impact Measurement

In recent years, the social impact or social change generated by SEs has received increasing interest from researchers and practitioners [58]. However, measuring this social impact is an arduous task. Most existing methodologies currently applied are very subjective, making developing SEs difficult as these organizations seek precisely to generate social impact [59]. Another problem is the lack of consensus on the best methodology for each impact case [60]. Despite this, they claim that SEs should measure their social impact through a multidimensional perspective that applies holistic indicators. An example is SPI4 (a way of measuring social performance) and a combination of proxies such as gender, outreach, and rural measures.

We chose social impact measurement because it is an essential parameter for SEs and entrepreneurs that is usually included in performance reports. Furthermore, measuring social impact is closely related to social entrepreneurship theory because the main difference concerning the theory and traditional entrepreneurship is in the organization's outcomes. While traditional ventures only aim at financial return, social ventures combine this with social impact. That is, creating value for the SE is linked to measuring the benefits acquired by the impacted people [61]. Other works have already used the same variable, like in the success of business incubators [62].

Measuring social impact is one of the parameters of corporate social responsibility (CSR) and positively influences access to finance [43], including foreign investment [63]. In addition, organizations that do not measure their social impact appear to perform worse than others [64]. By measuring social impact, social enterprises are sending a positive signal to potential investors [65]. Measuring the impact also generates more transparency for the organization, thus helping to bring in more investors. Improving social impact measurement processes also improves the credibility of the SE within society [66]. Demonstrating the measurement of social impact is one of the strategies SEs use to attract investment [65]. Therefore, we want to prove that SEs that use some form of methodology for measuring social impact attract more funding, which leads to the third hypothesis of our work:

Hypothesis 3 (H3). *Measuring social impact has a positive and significant effect on access to finance in SEs.*

2.7. Incubation/Acceleration

We can define an incubator as an organization that aims to help potential small businesses grow. An accelerator, on the other hand, is a specific type of incubator. With the evolution of research, the concepts and definitions of incubator and accelerator have become synonymous [27]. These two forms of entrepreneurial support provide the same services for enterprises, such as training, networking, physical space, and mentoring. A slight difference is that the acceleration process generally has a shorter duration [28].

We chose to analyze the incubation and acceleration process because it is the most prominent form of entrepreneurial support [67] and is one of the most studied topics in the literature. In addition, incubators are directly linked to social entrepreneurship and are even trying to adapt to this context, so much so that more recently, a new type of incubator has emerged, the "social incubator", focused only on assisting SEs [68]. Other works have already analyzed the role of incubation or acceleration in other entrepreneurial contexts, like the resource valuation of new traditional enterprises [69]. Incubators and accelerators also have a theoretical basis. Scholars often study the incubator through the RBV by providing several resources for enterprises. This theoretical lens states that going through an incubation or acceleration process is a competitive advantage for enterprises due to the large number of resources acquired [62].

The incubator positively affects enterprises regarding growth, survival, scaling, and the acquisition of financial resources [68]. A systematic review found that access to finance is one of the main supports offered to new enterprises in the incubation process, mainly through seed capital or angel investors [70]. Other research shows that the funding comes through public or private investment [71]. We, therefore, want to prove that SEs that undergo an incubation or acceleration process have greater access to financing, which leads to the fourth hypothesis of our work:

Hypothesis 4 (H4). *The incubation and acceleration process has a positive and significant effect on access to finance in SEs.*

2.8. Technology Adoption

Adopting emerging technologies such as information and communication technology (ICT) is a critical factor for sustainable development and is also fundamental for long-term business sustainability, allowing enterprises to improve their products and services [72]. This reality makes adopting technologies a fundamental factor for the success of small and medium-sized enterprises (SMEs) [73]. These technologies have already demonstrated their social function, such as helping people with disabilities [74]. The emerging technologies are Big Data, the Internet of Things (IoT), nanotechnology, blockchains, chatbots, artificial intelligence, and machine learning, among others.

We chose the adoption of emerging technologies as a variable for analyzing our work because SEs widely use them and they are a possible way to deal with social issues. Technology and innovation are crucial to employment growth, social welfare, sustainable growth and quality of life [75]. Furthermore, entrepreneurs contribute to social innovation by applying technology to their businesses. Innovation, in turn, increases the profitability of business [76]. Another reason that made us choose this variable is its relationship with theory. Technological resources are extensively studied through the Resource-Based View (RBV) theoretical lens and can enhance an organization's competitive advantage. For example, a previous study analyzed the adoption of ICT through the RBV and affirmed its impact on an organization's social, environmental, and economic objectives [76]. All these benefits mean that there are already government incentives for the adoption of emerging technologies by organizations.

Recent research shows that the adoption of emerging technologies improves productivity and users experience [77]. Researchers call attention to the need for more empirical studies on the benefits of adopting ICT in SEs [78]. In other contexts related to entrepreneurship, researchers have already described the role of new technologies. The government has encouraged the digital transformation of SMEs, stating that they can contribute to its financing [73]. ICT adoption and innovation contribute positively to access to finance in SMEs [79]. The innovation indicators of an SME are significantly and positively related to the chances of receiving external investment [80]. Banks, for example, prefer to offer credit to SMEs that adopt some ICT [81]. With this, we can create the following hypothesis:

Hypothesis 5 (H5). *The adoption of emerging technologies has a positive and significant effect on access to finance in SEs.*

3. Research Method

3.1. Research Classification

We classify our study from an ontological point of view as being objective. This work can be classified as being from the positivist paradigm regarding epistemology. Regarding the methodology, we classify our work as being hypothetical-deductive. Regarding the techniques used, this work uses a quantitative approach due to the collected data type. This work also analyzes secondary data. We also used statistical tests because we calculated the *p*-value to verify the significance of the analyzed variables.

3.2. Research Context

We chose Brazil as the context of our study due to its economic importance, which attracts researchers' interest in issues such as the solidarity economy [82] and innovation ecosystems [83]. Brazil has several social and environmental problems, such as deforestation, lack of water and energy, vulnerability to climate change, land concentration, and other social empowerment problems [84]. Past studies show that SEs can help people who live in this context [83], which explains the growth of social entrepreneurship in Brazil [85]. In 2011, Brazil had the most Ashoka social entrepreneurship scholarship fellows [86]. Despite this, Brazil is a country that presents many barriers to social impact investing. Among these barriers, poor financial education, institutional weakness, socio-economic inequality,

and low levels of schooling stand out [87], thus justifying the objective of this work to find the determinants of access to finance in the context of an emerging economy.

3.3. Data Collection

A secondary dataset developed by PIPE Social (Innovative Research in Small Businesses) frequently collects information about SEs and maps the innovation ecosystem. To form this dataset, PIPE Social makes an online call where SE managers respond to a questionnaire voluntarily. In order to verify whether the organization registered on the platform is an SE, PIPE analyzes several aspects. In the first place, the self-declaration, i.e., the enterprise considering itself social. Even so, PIPE checks social networks, websites, and the enterprise's mission to verify if they fall within some aspects that characterize it as an SE, such as the intention to solve a social problem (the business's principal activity) and the search for a financial return. The sample analyzed in this study was collected in 2019 and contained information on 601 SEs. Thus, SE is the unit of analysis of our work. Our results only apply to SEs and cannot be expanded to another type of enterprise.

In order to assess the credibility of the secondary sample, researchers should observe issues such as specifications, errors, frequency, objectives, the type of variables, and the methodology [88]. These aspects are shown in Table 4.

Table 4. Dataset evaluation.

Variable	Description
Specifications	The PIPE database provides current data on the profile and performance of SEs and an overview of the ecosystem's efforts and its agenda concerning the pointing out of gaps, challenges, and opportunities for growth in the social entrepreneurship sector in Brazil. Research begins with a call made by PIPE and continues with the support of several other development agencies.
Error and accuracy	A 4% margin of error for general analysis and a 95% confidence interval.
Frequency	PIPE carries out the survey every two years.
Objectives	Monitor the evolution of the SE pipeline, thus helping to guide the strategies and actions of the various actors who are building and fostering social entrepreneurship in Brazil.
Type	The variables collected are related to the general profile of the SE (such as impact sector and business model) and aspects such as types of consumers, financial resources, revenue, development stages, technology adoption, social impact measurements, and incubation/acceleration processes.
Methodology and reliability	The study involves quantitative data collection (with 45 questions and data from around 600 SEs), qualitative data collection (through interviews with entrepreneurs), and secondary data collection (to verify the agenda and efforts and to compare with other countries). In addition, business experts validate the data to gain critical insight.

These criteria are in the marketing literature but in a chapter that deals with secondary samples so that they can be used in our work [88]. A SEBRAE survey with the United Nations Development Program (UNDP) counted around 800 SEs in Brazil, with this number thus indicating the country's total population of social enterprises. The PIPE database analyzed in this work covered about 75% of the total SEs and is thus representative.

3.4. Variables

As a dependent variable, we selected the Financial Diversity Index (FDI) given by the sum of all external sources of funding through which SEs had access. We want to identify the factors that influence access to finance, and the literature considers the FDI the official measure for this type of study [29,89]. We chose five independent variables, indicated in Table 5, each corresponding to a previously described hypothesis.

Table 5. Independent variables.

Hypothesis	Independent Variable	Type	Description/Measure
H1	Dividend distribution	Binary	Whether the SE distributes (1) or does not distribute (0) dividends.
H2	Market orientation	Binary	Whether the SEs focus on the bottom of the pyramid (BOP) (1) or the top of the pyramid (TOP) (0).
H3	Impact measurement	Binary	Whether the SE measures (1) or does not measure (0) the social impact generated.
H4	Acceleration/incubation	Ordinal	The number of acceleration or incubation processes in which the SE participated.
H5	Technology adoption	Ordinal	The number of emerging technologies that the SE uses, e.g., AI, Big Data, IoT, blockchains, biotech, robots.

In addition to the independent variables, we also selected three control variables. The first one is the SE impact sector; according to Table 1, that is a binary variable, and each SE can have more than one impact sector. The second control variable is the business model the SE adopts, which can be B2B, B2C, B2B2C, C2C, B2G, or a simultaneous combination. We first selected the impact sector and the business model of the SE because these are variables linked to the characteristics of the enterprise and, according to [30], can influence access to finance. The last control variable is the stage of SE development according to Table 2. In this variable, the development stage was ordered from 1 to 9, thus forming an ordinal variable. A previous study already used the development stage as an ordinal variable [90]. This variable is commonly used as a control variable, as was the case in [69]. One of the differentials of our work is that we selected enterprises from all stages of development, as recommended by the literature [91], while most studies analyze only the most advanced stages [29]. We selected the development stage because the cycle theory states that as an organization grows and evolves, its performance improves [60].

3.5. Analysis

Figure 1 shows the relationship between this work's independent and dependent variables. As the dependent variable in this work is ordinal, we chose to use ordinal logistic regression as an analysis method to relate the independent variables with the FDI. Regression is widely used in traditional organizational research, including research on entrepreneurship, to identify success factors or key performance indicators [92]. The regression method provides each variable's coefficient (effect) and significance. When the significance is less than a specific α value, the coefficient has explanatory statistical power with probability $1 - \alpha$ [93]. In our work, we checked the significance through the p -value. Using secondary samples to identify determining factors through regression is expected [94].

The assumptions for using ordinal logistic regression are as follows:

- The dependent variable must be ordinal (as in the case of the FDI in our work);
- At least one of the input variables must be categorical, continuous, or ordinal, as shown in Tables 5 and 6;
- The correlation between the variables must be low (<0.6), thus implying low multicollinearity. In Table 7, we show that all the correlations between the variables in our study are low, thus not exhibiting multicollinearity or any relationship between the variables.

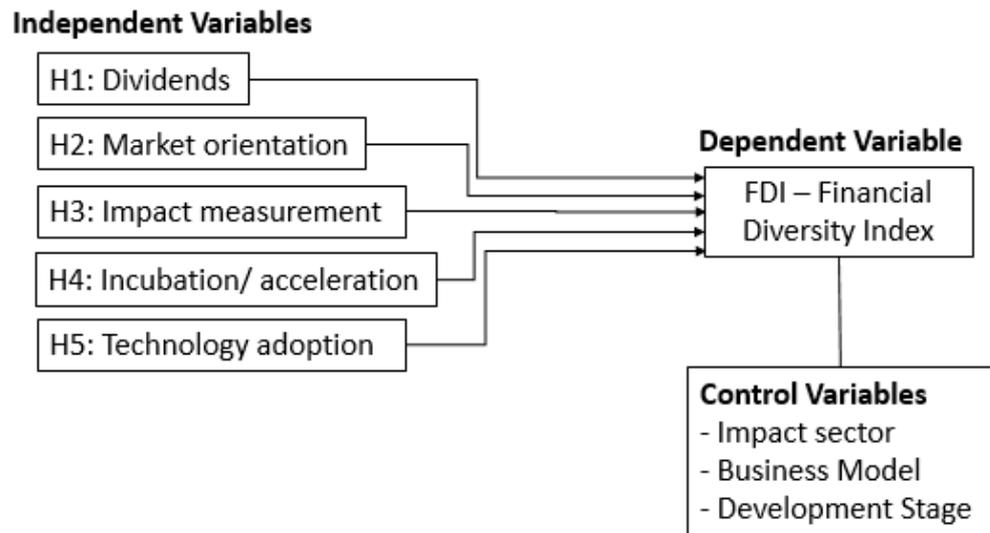


Figure 1. Relationship between independent and dependent variables.

Table 6. Control variables.

Variable	Type	Description
Impact sector	Binary	It could be green technology, smart cities, health tech, Edu tech, Civic tech or Fintech.
Business model	Binary	The business model that the SE applies, which can be B2B, B2C, C2C, B2B2C, and B2G.
Development stage	Ordinal	It could be 1—Idea, 2—Idea Validation, 3—Prototype, 4—Pilot, 5—MVP, 6—Business Organization, 7—Traction, 8—Pre-scale, or 9—Scale.

Table 7. Summary of the sample.

Correlation Table							
	Variable	Mean	SD	1	2	3	4
1	Stage	5.66	2.16	1	0.18	0.244	−0.033
2	FDI	1.73	1.05	0.18	1	0.298	0.154
3	Inc/accel	0.58	0.69	0.244	0.298	1	0.137
4	Tech adp	2.52	2.42	−0.033	0.154	0.137	1
	Variable	Yes	No		Variable	Yes	No
Impact Sector	Edu tech	32.45%	67.55%	Business Model	C2C	11.48%	88.52%
	Health tech	25.12%	74.88%		B2C	60.40%	39.60%
	Green tech	53.41%	46.59%		B2B	65.89%	34.11%
	Civic tech	38.44%	61.56%		B2B2C	44.59%	55.41%
	Smart cities	21.46%	78.54%		B2G	29.62%	70.38%
	Fintech	20.80%	79.20%		Variable	Yes	No
				Binary variables	Market orientations (BOP/TOP)	88.35%	11.65%
					Imp Meas (measures/does not measure)	22.80%	77.20%
					Distribution of dividends	71.05%	28.95%

The regression method is adequate, and the samples are representative when the sample size is at least five times greater than the number of variables [95]. We used the SPSS Statistics 20 software to apply the logistic regression method.

In order to evaluate the model, model fitting information was calculated, such as −2 Log Likelihood, Chi-square, and its significance. This statistic tests the hypothesis that all coefficients of the independent variables are equal to zero versus the hypothesis that at

least one coefficient is not zero. If significance is lower than 5%, we can say that at least one coefficient differs from zero. Pearson's goodness of fit was also calculated using the Chi-square test, where if the significance value was lower than 5% we rejected the null hypothesis that the model fits the data adequately. Finally, we calculate the Negelkerke, McFadden, and Cox–Snell pseudo- R_2 values.

4. Results

Figure 2 shows the characterization of the dependent variable FDI, which expresses access to finance in SEs. As observed by the average of 0.835, most SEs in Brazil may have difficulty accessing some financing. In addition, the high standard deviation shows a significant disparity between SEs, some having access to different sources while others rely only on their investment.

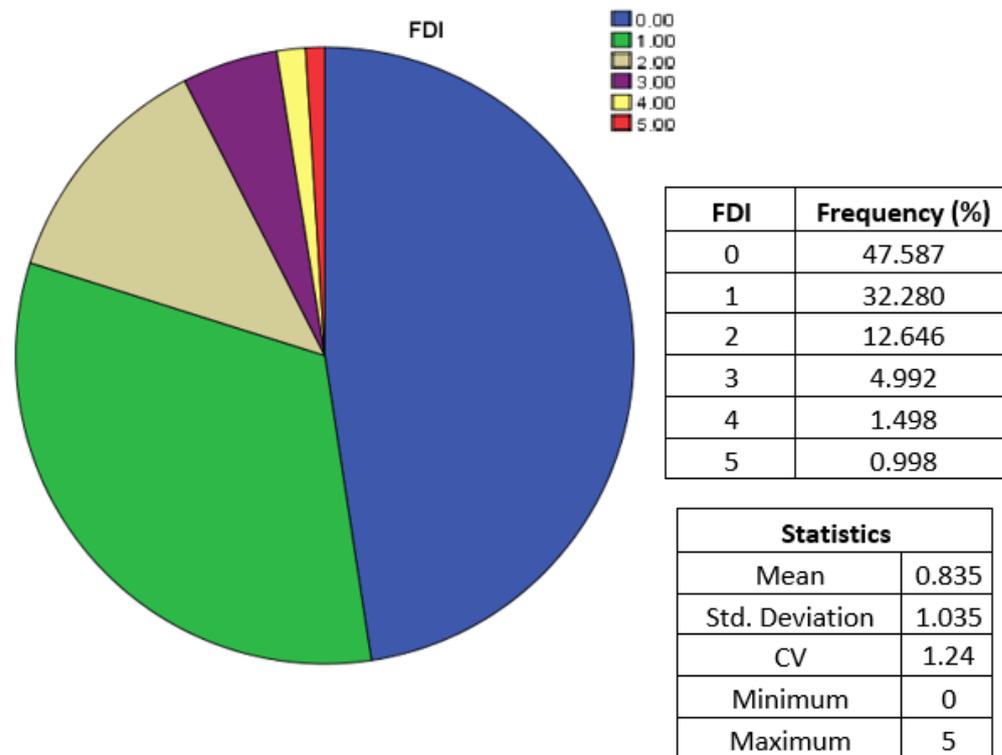


Figure 2. Description of the FDI.

In order to characterize the sample, Table 7 shows a summary of the variables analyzed in this work. First, there is no pair of variables with high correlation, so there are no multicollinearity problems in the sample and no associations or relationships between the variables.

More than half of the SEs consider themselves to be Green techs, showing the environmental awareness of the entrepreneurs. The vast majority of SEs also have a B2B business model, that is, they have another business as a customer that seeks to solve social or environmental problems. Most SEs have the bottom of the pyramid as a market orientation, seeking to solve the problems of the most vulnerable and low-income members of the population. Most enterprises do not measure their social impact, showing difficulty accessing and using these methodologies. Finally, most SEs distribute their dividends, showing good financial conditions. Table 8 presents the regression results, where we highlight the significant variables in green. In Table 8, we present the different control and independent variables, all separated by the border.

Table 8. Results of regression analysis.

Variable		Coef	Std Error	Sig (<i>p</i> -Value)
Control variable—impact sector	Edu tech	0.182	0.195	0.353
	Health tech	0.171	0.197	0.385
	Green tech	0.347	0.185	0.061
	Civic tech	−0.228	0.173	0.188
	Smart cities	−0.419	0.206	0.043
	Fintech	−0.07	0.206	0.736
Control variable—business model	B2B2C	0.434	0.163	0.008
	B2B	−0.163	0.181	0.368
	B2C	0.006	0.166	0.969
	C2C	−0.323	0.269	0.231
	B2G	0.133	0.185	0.473
Control variable—dev. stage		0.892	0.321	0.005
Independent variable	H1: Dividends	−0.033	0.176	0.849
	H2: Mkt orientation	0.303	0.256	0.238
	H3: Social impact meas.	−0.004	0.197	0.983
	H4: Acel/Inc.	1.648	0.25	0
	H5: Tech adop	1.09	0.555	0.05

The green technology impact sector, B2B2C business models, the stage of development, the incubation/acceleration process, and the adoption of technologies had a significant effect ($p < 0.1$). Only the smart cities impact sector had a significant negative effect ($p < 0.1$).

Based on the obtained results, we can consider that hypotheses H1 (dividend distribution), H2 (BOP market orientation), and H3 (social impact measurement) could not be confirmed, as their respective variables did not have significant effects on access to financing. On the other hand, we confirm hypotheses H4 and H5 and that their respective variables (incubation/acceleration process and technology adoption) positively and significantly affect SE funding. In Table 9, we present a summary of the hypotheses.

Table 9. Hypothesis summary.

Related Variable	Hypothesis Statement	Results	Conclusions	
H1	Dividends	Positive and significant effect	Not significant	Hypothesis not confirmed
H2	Mkt orientation	The bottom of the pyramid has a negative and significant effect	Not significant	Hypothesis not confirmed
H3	Imp. measurement	Positive and significant effect	Not significant	Hypothesis not confirmed
H4	Incubation/accel	Positive and significant effect	Positive and significant effect	Hypothesis confirmed
H5	Tech adoption	Positive and significant effect	Positive and significant effect	Hypothesis confirmed

We did not confirm hypotheses H1, H2, or H3 because the p -value of the respective variables was greater than 10%. Therefore, they have no significant effect. We confirm hypotheses H4 and H5 because the p -value statistics of the respective independent variables were less than 10%. Furthermore, the regression coefficients were positive. Table 10 presents the measures of goodness of fit from the regression model.

The 2-loglikelihood significance value from the Chi-square test was less than 5%, demonstrating enough evidence to state that at least one coefficient of the independent variables is different from zero. In Pearson's Chi-square test for goodness of fit, we obtained a significance of 75.5%. As this value was larger than the 5% selected for this work, we can say that there is not enough evidence to say that the model does not adequately fit the data. Pseudo- R^2 values indicate that we can add new variables in future work.

Table 10. The goodness of fit measures from the regression model.

Model Fitting Information		
−2 Log Likelihood	Chi-Square	Sig.
1392.900	94.2	0.000
The Goodness of Fit (Pearson)		
Chi-Square	Sig.	
2919.300	0.755	
Pseudo R ₂		
Cox and Snell	Nagelkerke	McFadden
0.145	0.158	0.063

5. Discussion

According to Table 8, it is possible to answer the research question of our work by observing the coefficients and significance. The determining factors for access to finance for social enterprises in an emerging economy are (i) incubation/acceleration; (ii) technology adoption; (iii) development stage; (iv) the B2B2C business model; and (v) the green technology impact sector. These were the significant factors with a positive effect, and we ordered them in descending order according to the regression coefficient. In addition, the smart cities impact sector had a significant and negative effect.

The impact sector's significant effect shows that investors care about the sectors in which entrepreneurs plan to have an impact. Green technology's significant positive effect demonstrates greater environmental awareness by investors. On the other hand, the smart cities sector does not seem attractive to investors. The government is essential in promoting smart cities by allocating resources and creating market policies [96]. Thus, a lack of government investment means that SEs focused on solutions for smart cities do not develop and do not attract investors.

Our work has shown that the business model that an SE applies influences access to finance, demonstrating that investors are concerned with how the entrepreneur provides value to their clients. The B2B2C business model was the only one considered significant, and its positive coefficient demonstrates its attractiveness to investors. The SE can derive several benefits from the intermediary company, such as greater logistics possibilities, more customers, visibility, and less credit risk. The reality of the significance of the impact sector and business model corroborates with another study that states that the organization's characteristics are determining factors for financing issues [90]. We already knew that the attractiveness of business models influences the investment received through crowdfunding for enterprises in Germany [35], and now our study shows its importance for social enterprises in Brazil.

The fact that the distribution of dividends has no significance shows that investors do not care whether or not the SEs are returning dividends to shareholders. As the distribution of dividends is one of the best indicators of financial performance [42], its non-significance shows that social investors are not concerned with the financial situation of the SEs they invest in. Social investors are indeed "social"; they are very concerned with the social return they bring, not just the financial issue.

Market orientation had no significant effect on access to finance, which shows that BOP- or TOP-focused SEs receive the same interest from investors. This highlights that investors want the enterprise to have a mission with a social impact, no matter which layer of society this impact is in. The fact that the development stage has a significant positive coefficient in terms of access to finance shows the difficulty SEs have in raising funds at the beginning of their entrepreneurial journey. It also indicates that these raised funds increase when the initial idea takes shape and becomes a viable product. The life cycle theory states that the performance of an organization tends to increase with its maturity (life cycle) due to the knowledge acquired in this process [60]. Our work contributes to the knowledge stating that as an SE evolves, it becomes more attractive to investors, thus having more

access to financing. One of our differentials is that the vast majority of works study only the most advanced stages of the startup cycle, while in our work we analyzed from the initial stages [29].

The impact measurement was not significant for the investment received. As much as social investors are interested in the social impact generated by SEs, the subjectivity, high cost, and lack of consensus about the best measurement methodology for social impact [59,60] make the reliability of social results difficult, thus leading to them having little relevance for investors. It does not mean investors are not interested in the social impact generated, as the social mission of an SE already contains information about its social purpose. Thus, we can conclude that the impact investor is interested in the enterprise's social mission, not necessarily the social impact metric. Another reason is the lack of publicity and knowledge about social impact measurement methods (as opposed to financial impact).

The fact that incubation and acceleration have a positive and significant coefficient on the investment received shows the importance of this type of support in bringing more resources to new SEs, confirming the results found in [97]. It shows that incubators and accelerators can potentially connect tenants with investors. In addition, incubators and accelerators usually help with product development and provide consultancy in communication, marketing, and finance, thus making their tenants more attractive to investors. Research has already identified the influence of incubation on the financial resources raised by traditional enterprises [71]; however, the literature on incubation is still evolving, and there is a need for further studies, especially regarding the impact of incubators on tenants [68]. Our work then demonstrates an impact on access to finance, specifically in social enterprises which may have different needs in terms of incubators and may thus experience a different influence from them.

Adopting technology exhibited a positive and significant coefficient in terms of access to finance. We conclude that emerging technologies make SEs more attractive to social impact investors. These emerging technologies, often called ICT (information and communication technology), have their importance proven in Industry 4.0 and traditional enterprises. For example, ICT is an essential component for the financial inclusion of innovative enterprises. However, study of its effect on SEs is lacking [98], so much so that there is a need for empirical studies on the benefits of technology for SEs [78]. Thus, we advance knowledge by demonstrating that one of the benefits that emerging technologies bring to SEs concerns access to finance. It also shows that investors are more interested in enterprises with some technology embedded in their products or services. Technology facilitates partnership and collaboration with other actors in the ecosystem, mainly through digital platforms [99].

5.1. Practical Implications

Our results mainly affect social entrepreneurs who can take specific practical actions to maximize the social investments raised. The fact that the "green" impact sector positively affects access to finance shows that the entrepreneur should consider including the environmental issue in their products or into the SE's mission. Instead of waiting for governments to be more open to innovations, entrepreneurs interested in solving urban problems (smart cities) could organize themselves into groups and better disseminate their proposals to the population. Thus, they could also sensitize the authorities to the importance and general gains in implementing solutions in urban areas.

Regarding the business model, we saw that SEs with B2B2C business models have more access to funding. In practical terms, entrepreneurs should partner with another organization to reach their final consumer. The significant and positive impact of the development stage shows that the entrepreneur must focus on validating their idea as soon as possible and then put it on the market to attract more investors.

The positive influence of adopting emerging technologies on access to finance shows that entrepreneurs should seek to implement some of these technologies in their solutions

for the customer. Finally, we recommend that the entrepreneur seek the support of an incubator or accelerator, as these organizations can expose SEs to investors and provide access to knowledge through consultation and mentoring.

Market orientation does not affect access to finance, so the entrepreneur can choose whichever portion of the pyramid they find most convenient. The same occurs with the distribution of dividends. The entrepreneur may or may not return the dividends to the company, depending on their needs. Even without a significant effect, the entrepreneur should adopt some social impact measurement methodology suitable for the business since it can influence other issues like financial and environmental performance.

5.2. Theoretical Implications

This article first contributes to the social entrepreneurship and investment literature by filling the gap regarding the criteria and factors social investors consider when investing in an SE. We contribute to knowledge by presenting a specific profile of the social impact investor. We show that they are more sensitive to causes related to the environment, perceive the financial return to not be as relevant, and are more concerned with whether the invested enterprise has a social mission (impact sector), with the portion of society that the enterprise reaches and the measurement of its impact not as important. We also show that life cycle theory, in the case of social enterprises, also applies to access to finance. As an SE acquires maturity, it also becomes more attractive to investors. We also build on existing knowledge regarding the role and impact of technologies and incubators/accelerators by showing their influence on access to finance for SEs. We are also pioneers in the set of predictors used, thus bringing novelty. In addition, the literature on social entrepreneurship lacked quantitative works that used large databases [100].

The article contributes to the literature on entrepreneurial finance by identifying the determinants of access to finance for SEs. The theory divides entrepreneurial finance into four levels of analysis: (i) the entrepreneurial firm; (ii) organizations that encourage and provide resources for entrepreneurial firms; (iii) the organizations that support these organizations; and (iv) the country in which the firm works [101]. In our work, we addressed three of these four levels. We analyzed the enterprising firm, in this case SEs, which is our database's analysis unit. One of our independent variables was precisely the incubator/accelerator, which plays the role of an organization that provides resources for entrepreneurial firms. Finally, we used the country where entrepreneurial firms are located as the context of analysis, in this case Brazil, one of the largest emerging economies in the world.

Our study also contributes to the literature on entrepreneurship in emerging economies because many characteristics of Brazil are similar to other emerging economies. The same entrepreneurial challenges stand out among these characteristics, such as the lack of financial and technological resources, weak institutions, and excessive bureaucracy [102,103]. Economic and socio-economic similarities include economic growth, lack of infrastructure, social inequality, high rates of informal work, and poor education and health systems [47,104]. Finally, political similarities are also highlighted, such as political instability and corruption [104]. However, researchers and practitioners should take into account cultural differences.

6. Conclusions

This work aims to find the factors that determine access to financing for social enterprises in the context of an emerging economy, in this case Brazil. For this, we used a large sample with information from 601 SEs and the quantitative method of ordinal logistic regression was applied.

The determining factors were the impact sector, the business model, the development stage, the incubation and acceleration process, and the adoption of emerging technologies. The results focused on the level of importance investors placed on green technology and enterprises with a B2B2C business model. Enterprises that are already well established and have an active product or service on the market attract more attention from investors. The results prove the potential of incubators and accelerators to attract investors to their

incubated enterprises. Finally, our work demonstrated the power of new technology when added directly to the product or service offered by the SE.

This study mainly affects social entrepreneurs, who can use our results in the strategic decisions of their enterprises. As the variables that had the highest regression coefficients were incubation/acceleration and technology adoption, our results highlight the great need for social entrepreneurs to seek the assistance of an incubator or accelerator and the need to insert an emerging technology in the solution they offer in order to enhance access to financing.

As a practical implication, this work can help entrepreneurs to take specific initiatives to have more access to financing. As a theoretical implication, our article contributes to research on social entrepreneurship, social investment, entrepreneurial finance, and entrepreneurship in emerging economies. As a social implication, by having more access to finance, the social entrepreneur can invest more in their venture to generate more social impact.

The limitations of this work refer mainly to the use of a secondary sample. As a result, we face restrictions regarding the selection of variables. Therefore, future work could use other variables such as size and location, which researchers can collect from primary sources through a survey.

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