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Microentrepreneurship in Brazil – Mind the gap

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Introduction

In this chapter we call attention to the gaps that circumvent microentrepreneurship in Brazil and which motivates further study on the topic and the applied research at the Center of Microentrepreneurship (NUME) at PUC-Rio. Founded in 2019, NUME's aspiration is to help understand growth potential and growth enablers for microentrepreneurs. Among the research topics we highlight: the process of resilience building, the outcome of human capital inequalities, the impact of gender, resource constrains and boundary conditions under which entrepreneurial activity emerges and can thrive under different conditions and regional contexts in Brazil (NUME, 2019).

We define microentrepreneurs as people who work as self-employed or have up to five employees. We choose this definition based on practical and theoretical reason. From a discipline perspective, microentrepreneurship has been traditionally identified as entrepreneurial activity of individuals or small firms with less than 10, but often only one or two people employed (Birks et al. 1992) and as such incorporated in empirical studies (Honig, 1998; Mead & Liedholm; 1998). While some studies are even considering employees with up to 50 employees 'microentrepreneurs' (Mensman & Frese, 2019), articles that cover the concept within the Brazilian context typically focus on very small entrepreneurs or self-employed (e.g. Lenz, Sutter, Zucco, Goldszmidt, 2021; Rocha, Ulyssea, Rachter, 2018). This makes sense from a practical perspective in Brazil, as specific local legislation incentivizes the business formalization for initiatives such as self-employed individuals and microbusiness structure of up to one employee. Focusing on ventures with up to five employees, however, allows us to follow the growth pattern of this individual and brings us closer in our understanding of microbusiness operations that we have empirically observed over the years.

Despite microentrepreneurship being in the interest of entrepreneurship scholars and policy makers for more than three decades (i.e. de Soto, 1989; Honig, 1998; de Castro et al. 2014) research on microentrepreneurship still suffers from a number of shortcomings. Ranging from a 'too broad categorization of the types of problems micro-entrepreneurs face' to a lack of addressing 'the practical problems microentrepreneurs encounter as they pursue their short-term goals of achieving daily sales' to 'limited insights into the relationship that exists between the approaches microentrepreneurs implement with short-term tactical problems and those they use to address longer-term strategic barriers' (De Berry-Spence & Elliot, 2012). Microentrepreneurship is also a prosperous field for the investigation of the multilevel influence of macroeconomic, institutional, social, and local aspects on human capital development and venture growth. Microentrepreneurs are naturally more vulnerable to macro and micro changes in the environment, and the interaction of the variables at different levels increase the complexity of these impacts. For example, economic expansion may favor

business growth, but as the job market expands, the microentrepreneur might lose existing help (i.e. due to family members finding employment in the formal labor market) and with it important human capital for the business. The many directions in which changes in the environment affect the entrepreneurial process of microentrepreneurs makes it is an interesting and challenging field of research and applied research for the development of public policies.

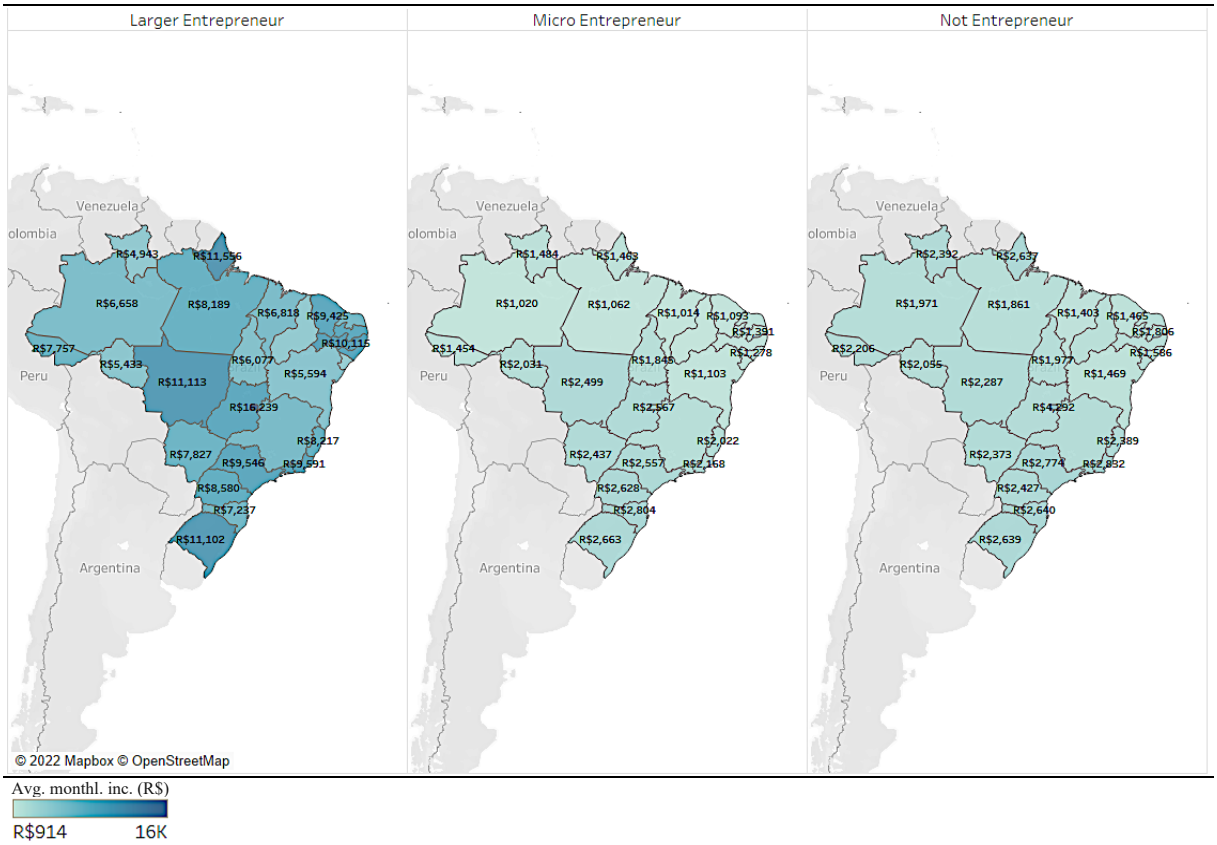
To provide insights into the research gaps and to bring an updated view of microentrepreneurship in Brazil, we use microdata from the Continuous National Sample Survey of Households (Pesquisa Nacional por Amostra de Domicílios Contínua - PNADC) produced by the Brazilian Statistics Institute (IBGE). The sample is collected through a survey that produces quarterly indicators on the workforce, with a sample of Brazilian households being the unit of analysis. We use the survey data from the fourth quarter of 2021 for our descriptive analysis in this chapter. We coded the answer 'self-employed' and 'entrepreneurs with up to 5 employees' within the primary occupation question to create the 'microentrepreneur' dummy for our analysis. By that definition, a total of 63,523 microentrepreneurs are in the PNADC sample and part of the analysis presented below. Entrepreneurs with more than five employees are summarized in the data as 'larger entrepreneurs', employees are summarized as 'non entrepreneurs'.

We continue by presenting the data and by showing the regional and gender inequalities that emerge from the PNADC sample of microentrepreneurs in Brazil. Along with the data, we indicate the knowledge gaps and possible directions for future studies.

The Status Quo of Microentrepreneurship in Brazil and Research Directions

The data of PNADC shows that entrepreneurial activity is generally associated with a higher income across Brazil. However, this does not necessarily count for microentrepreneurs. In Brazil, the average income of larger entrepreneurs is 3.6 times higher than the average income of employees. Whereas the average income of microentrepreneurs in Brazil is 16% lower than that of employees in the labor market (not considering the part of the population outside the labor market, i.e. due to unemployment). Figure 1 displays the average monthly income for employees, microentrepreneurs and larger entrepreneurs across all states in Brazil. The comparison shows large differences in the income of microentrepreneurs across regions and compared to the average income of employees within the same region.

Figure 1: Average monthly income for employees, microentrepreneurs and larger entrepreneurs across states in Brazil.



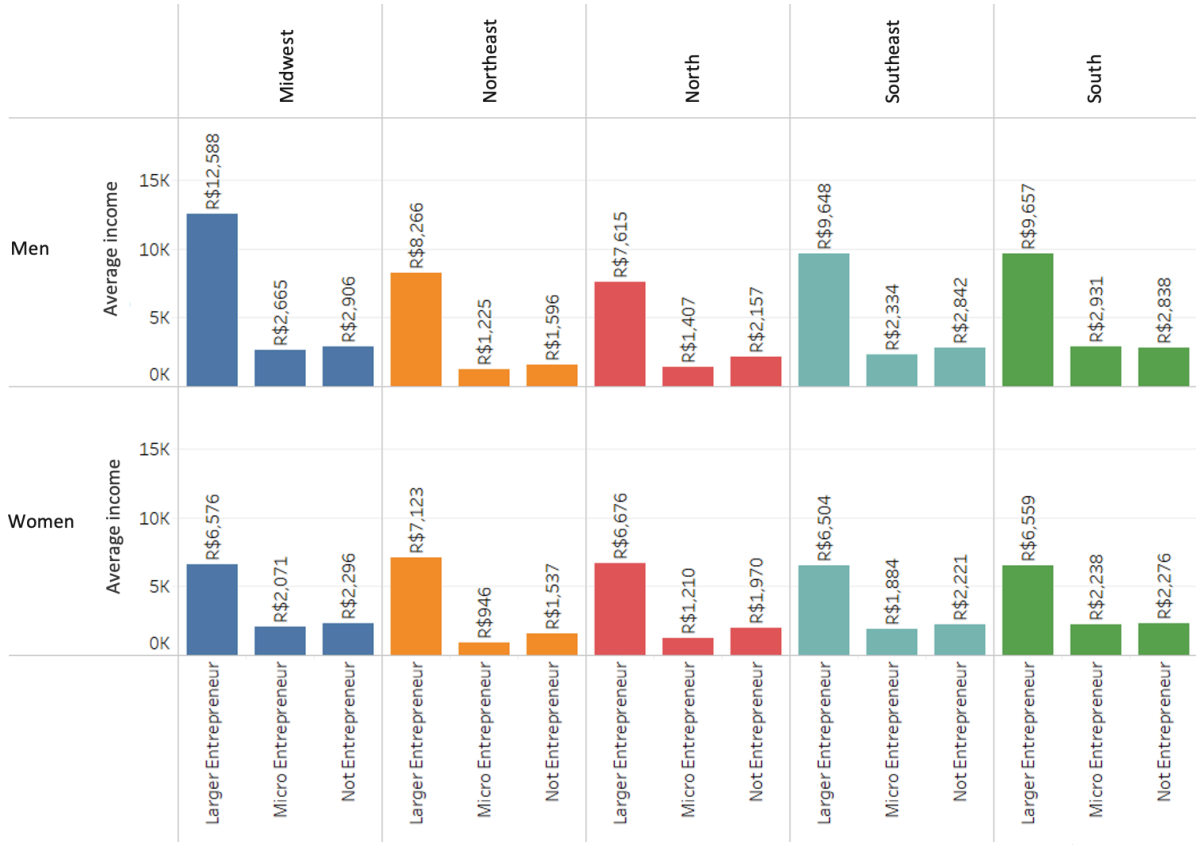
Source: Authors based on data from PNADC (2021, 4th trimester)

The income disparity increases with the location and the distance to the South and Southeast, as the major economic centers. In the North of Brazil, employees earn on average 53% more than microentrepreneurs, followed by the Northeast, where employees earn on average 39% more than microentrepreneurs. The difference is much smaller in the Southeast, where microentrepreneurs earn on average 17% less, and even smaller in the Center-West with 7%. Distinct from all other regions, microentrepreneurs in the South earn 5% more than the average employee. The income of microentrepreneurs in the South is with R$2,703 also the highest across all regions in Brazil (Figure 2). This indicates that the opportunity cost for becoming an entrepreneur is higher in the North and Northeast, compared to formal sector employment. This suggests that individuals in these regions enter microentrepreneurial activities due to a lack of formal employment options, which indicates that they are driven by means of necessity. Necessity entrepreneurship connotes that engaging in entrepreneurship occurs out of the need to earn an income and due to a lack of employment alternatives (Binder & Coad, 2013; Alvarez & Barney, 2014). This matches with data on unemployment rates that indicates that the South of Brazil has the lowest level of unemployment in the fourth trimester 2021 (IBGE 2022).

Previous research has pointed out that challenges for individuals not only persist due to lower number of employment options, but also due to lack of skills and the absence of supportive institutional levers that push individuals towards necessity entrepreneurship (Alvarez & Barney, 2014; Karnani, 2007). We see both challenges more defined in the North and Northeast of Brazil, where microentrepreneurs, historically, have lower education levels and where the institutional environment is less developed (IBGE, 2021). However, institutional environment has changed, and there are attempts to enhance development and to foster decentralization. Research could explore the effects of the regional development (pushed, for example, through

education and professional trainings) on the volume and type of microentrepreneurship over time, relative to larger entrepreneurs and income levels in the formal employment market. The aim is to test the assumption that increasing institutional levels contribute to the transition of necessity entrepreneurs to more growth-oriented entrepreneurship.

Figure 2: Differences in average monthly income (in R$) per region between employees (not entrepreneur), microentrepreneurs and larger entrepreneurs.



Source: Authors based on data from PNADC (2021, 4th trimester).

Dencker et al. (2021) have argued that entrepreneurs with low levels of human capital, who are driven by physiological needs will engage in copying entrepreneurial business ideas related to basic services (e.g. food retail, farming activities) that they can observe in their immediate environment and that do not require any specialized skills. The imitation process is potentiated by the absence of supportive institutional levers to provide funding, advisory and capacity building for microentrepreneurs (Dencker, Bacq, Gruber, & Haas, 2021). Data from a survey study conducted with 4,300 microentrepreneurs in Rio de Janeiro demonstrated the dominance of entrepreneurial activity along beauty salons, micro retail stores and takeaway food (Lenz, 2018). Yet, it is less clear how these necessity entrepreneurs behave, if they start to generate an amount of income that puts them out of the need for immediate fulfillment of physiological needs. Would this lead to a change in the entrepreneurial process? We see a small percentage of necessity entrepreneurs growing into bigger ventures – what makes them different? At which stage of their entrepreneurial process does entrepreneurial opportunity exploitation set in?

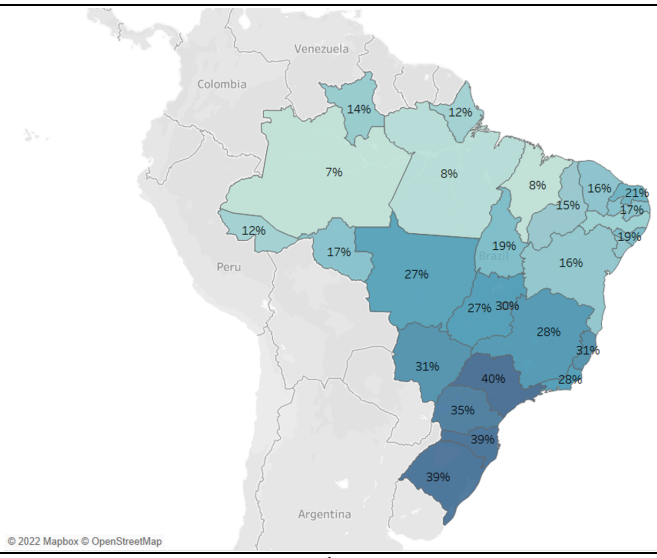
The literature widely agrees that opportunity exploration activities are unlikely to happen by entrepreneurs with low-human capital levels if they don't receive some support (Dutt et al. 2016; Bhatt, Quereshi, Sutter, 2022). This collaborates with our empirical perceptions from necessity entrepreneurs in urban centers in Brazil, who typically neither have enough resources, nor capabilities to seize growth opportunities. To enable a shift into a more growth-oriented entrepreneurship, Dencker et al. 2021 propose that supportive institutional levers are needed to encourage necessity entrepreneurs to explore a broader range of market opportunities. In Brazil, several policy programs have specifically targeted microentrepreneurs over the last 15 years. The results are increased ease of business formalization (specifically through the MEI program, see Infobox 1), access to microcredit[1], and access to institutional sponsors such as SEBRAE in more excluded areas such as Favelas[2]. These institutional changes allow for event studies that can observe core characteristics of microentrepreneurship in both, specific contexts (for example favelas in Rio de Janeiro after institutional sponsors start their work) and as a regional country comparison over time (for example using PNADC data). This can help to empirically test recent propositions around antecedents and outputs of necessity entrepreneurship (Dencker et al. 2021).

Effective institutional support and adequate development of public policies depend on the ability to observe the trajectory of microentrepreneurs. Business formalization plays a critical part in making these numbers visible. However, business formalization is still relatively low in Brazil, and even lower for the North and Northeast regions (Figure 3). This corresponds with the lower institutional levers in the North and Northeast of Brazil. Formalization not only allows observing the numbers and follow-up on the development of microentrepreneurship, but also helps to target other support initiatives, such as access to financial resources. States like Santa Catarina in the South, with higher levels of formalization, stimulate business formalization by granting registered microentrepreneurs access to lower credit rates.[1] Comparative life course perspectives could shed more insights into the dynamics that lead to formalization within different regions in Brazil. This could lead to a better understanding and use of more targeted incentives and policy interventions to increase formalization rates.

Figure 3: Percentage of Microentrepreneurs with CNPJ across states in Brazil.

[1] Several states promote reduced credit rates for microentrepreneurs in Brazil. See for example "Juro Zero" – a program that promotes access to investment capital in the state of Santa Catarina. https://www.jurozero.sc.gov.br/juro-zero.html

[2] For concrete examples see, for example, "Favela Legal" – a program that promotes business registration and capacitation of entrepreneurs in Favelas in Sao Paulo, or 'Sebrae nas Comunidades' in Rio de Janeiro.



Source: Authors based on data from PNADC (2021, 4th trimester).

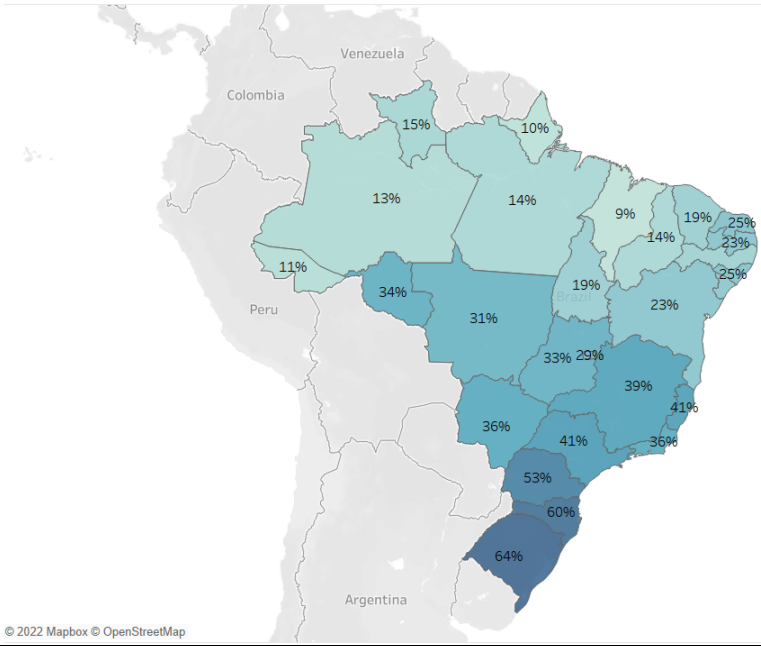
Even within the same city, interventions to increase formalization rates have shown different treatment effects. For example, Lenz and Valdivia (2021) and Zucco, Lenz, Goldszmidt & Valdivia (2020) are both linking information treatments with facilitated access to technical assistance to increase formalization in different neighborhoods in Rio de Janeiro. The results of both studies show heterogeneity in treatment effects that can be associated with differences in the local institutional environment and differences in the strength of the informal environment and crime levels, thus increasing, for example, the need for mobile technical assistance. We encourage the design and implementation of field experiments in different environments and regions to gain a deeper understanding of the take up of these policy interventions.

Infobox 1: The MEI program

- The Brazilian government instituted, in 2009, the Individual Microentrepreneur Program (Programa do Microempreendedor Individual, hereafter "the MEI program");
- The MEI programprovides a low-cost, streamlined method for entrepreneurs to formalize (Rocha et al., 2018).
- MEI registration is completely online and free. However, it requires microentrepreneurs to pay a fixed monthly fee, which includes subsidized social security contributions - which is approximately half of what other employees or entrepreneurs have to pay - as well as state taxes and municipal taxes (Zucco et al. 2020).
- Bookkeeping is not required other than declaring once a year that the revenue is below the legally mandated limit of R$ 81 thousand (US$ 18 thousand) as of 2021.
- MEI companies can employ up to one employee, which is tax subsidized.
- By becoming formal, entrepreneurs gain access to financing and the ability to do business with other formal firms. Furthermore, they receive a slew of social security benefits through the MEI program. In the event that entrepreneurs fulfill their monthly payments, and reach retirement age and have completed a minimum of 15 years of contribution, they are eligible for a monthly retirement benefit of one minimum wage for life.
- Those who become MEI and honor the monthly payments will also be able to receive disability pensions, sick leave, maternity leave benefits, as well as a limited life insurance benefit for children (Zucco et al. 2020).

Lower levels of formalization may not only impede business growth but also reduce the social security (INSS) coverage of entrepreneurs, which increases the risk associated with working as an entrepreneur due to a lack of eligibility to disability pension, paid sick leave and paid maternity leave (Zucco, Lenz, Goldszmidt, Valdivia, 2020). This may be particularly harmful for entrepreneurs in poorer regions as these contingencies may cause entrepreneurs to fall back into poverty (Hulme & Shepherd, 2003). However, as Figure 4 points out, the percentage of microentrepreneurs who pay INSS is much lower in the relatively poorer North and Northeast than in all other states. It seems that in regions in which microentrepreneurs are in the most vulnerable situation INSS coverage is lowest. We encourage research to explore why this is the case and how the entrepreneurial life journey is affected by decisions around formalization and associated social security coverage in Brazil.

Figure 4: Percentage of Microentrepreneurs who pay INSS across states in Brazil.

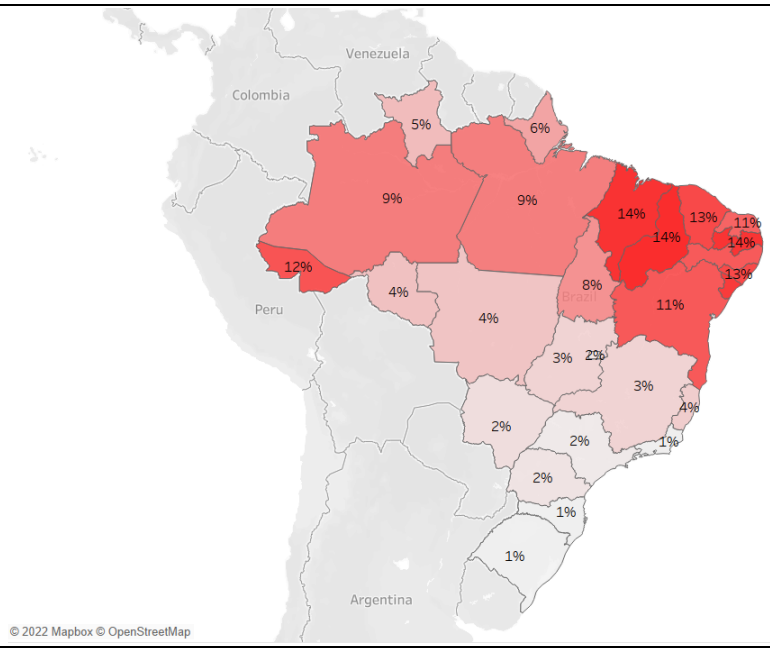


Source: Authors based on data from PNADC (2021, 4th trimester).

Microentrepreneurship is generally characterized by lower levels of human capital compared to higher growth entrepreneurship (Audretsch, 2012). However, in areas with lower institutional development, human capital acquisition is more constraint, limiting the development of managerial skills and the attraction of talent (Kluve et al., 2017; Cho and Honorati, 2014). In Brazil, this challenge has been linked to a lack of social entrepreneurial activity in disadvantaged areas (Barki et al. 2020) and the poorer chances for resilience building during crisis among microentrepreneurs (Brito, Lenz, Pacheco, 2022, *forthcoming*). Figure 5 shows an estimate of the percentage of illiterate microentrepreneurs across regions in Brazil. Illiteracy, defined as the ability to read and write, is largely present among microentrepreneurs in the North and, particularly, the Northeastern region. On average, one in ten microentrepreneurs has severe human capital restrictions, and the likelihood to be illiterate is 10 times higher among microentrepreneurs in the North and Northeast than in the South of

Brazil. Despite findings that associate higher human capital levels with a stronger likelihood for venture survival, growth, and employment generation, we know very little about the if and how the entrepreneurial process differs for entrepreneurs with very low human capital level and particularly those that are illiterate. Given the high numbers of illiterate microentrepreneurs we encourage studies to explore this question further in the Brazilian context.

Figure 5: Percentage of illiterate microentrepreneurs across regions in Brazil.



Source: Authors based on data from PNADC (2021, 4th trimester).

In summary, the data on income, formalization rate, social security payment and illiteracy paint the picture that entrepreneurs in the North and Northeast of Brazil are more likely to engage in microentrepreneurial activities due to necessity rather than opportunity.

These findings have consequences for the growth limits and growth enabler that entrepreneurs need. For example, microentrepreneurs with lower levels of human capital will need different support than educated entrepreneurs, or entrepreneurs that are already better structured through formal registration. Training may also be determined by the type of activity and industry sector in which microentrepreneurs are active. In this regard, Table 1 shows the distribution of industry sectors among Microentrepreneurs in Brazil from the PNADC sample.

Table 1: Distribution of industry sectors (CNAE) among Microentrepreneurs in Brazil from PNADC sample.

CNAE Sector	**Microentrepreneurs**	
Agriculture, Livestock, Forestry, Fishing and Aquaculture	16,349	25.74%
Trade, Repair of Motor Vehicles and Motorcycles	12,987	20.44%
Construction	7,904	12.44%
Processing Industries	5,234	8.24%
Other Activities and Services	5,153	8.11%
Accommodation and Food	4,444	7.00%
Transportation, Warehousing and Mail	4,037	6.36%

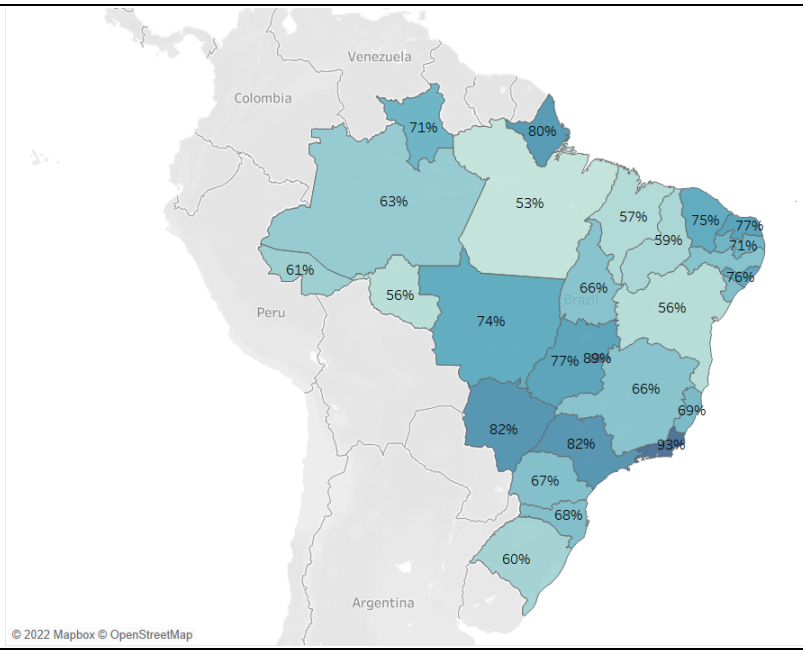
Professional, Scientific and Technical Activities	2,619	4.12%
Human Health and Social Service	1,162	1.83%
Administrative Activities and Complementary Services	1,048	1.65%
Arts, Culture, Sports, and Recreation	685	1.08%
Education	666	1.05%
Real Estate Activities	421	0.66%
Information and Communication	380	0.60%
Financial, Insurance and related Service Activities	252	0.40%
Water, Sewage, Waste Management and Decontamination Activities	111	0.17%
Extractive Industries	44	0.07%
Poorly defined Activities	26	0.04%
Electricity and Gas	1	0.00%
Total Sample	63,523	

Source: Authors based on data from PNADC (2021, 4th trimester).

The Table shows that very few microentrepreneurs operate in more technological intense industry sectors, such as the information and communication sector. However, microentrepreneurs in these sectors may particularly benefit from support, as these sectors have higher growth rates (GEM, 2021). We expect these microentrepreneurs to have different demands for support organizations, as they are likely to enter the entrepreneurial activity with higher human capital levels. For example, microentrepreneurs might benefit from more personal growth trainings, market access and networking skills and mentoring. We encourage policy makers and researchers alike to further explore industry specific demands and microentrepreneurial outcomes.

Similarly important in the targeting of public policy efforts, are the differences in demands of urban versus the rural microentrepreneurs. Figure 6 shows the percentage of microentrepreneurs within the PNADC sample who live in an urban area. The data indicates that entrepreneurial activity in northern states tend to occur in rural and more isolated areas, than that in southern states, yet the majority of microentrepreneurial activities take place in urban areas across all states in Brazil. This stands in contrast to earlier studies from multi-country samples that have found the majority of microentrepreneurship taking place in rural areas (Mead & Liedholm, 1998).

Figure 6: Percentage of microentrepreneurs who live in an urban (vs rural) area.



Source: Authors based on data from PNADC (2021, 4th trimester).

In Brazil, like in vast majority of countries worldwide, there is still a large income gap between women and men-led businesses (GEM Women Entrepreneurship Report, 2021). However, the gender income gap for microentrepreneurs is less defined compared to larger entrepreneurs, with male microentrepreneurs generating 26% more income than female microentrepreneurs, while men-led businesses in the category of larger entrepreneurs generate 43% more income than women-led businesses of the same category. Importantly, the gender income gap in Brazil seems to be driven by entrepreneurial activity, as men employees have on average 19% higher income. Furthermore, larger businesses seem to drive the gender income gap more than smaller businesses. Table 1 shows that the income gap varies by regions and becomes larger with increasing incomes of larger entrepreneurs. Overall, regions with lower income appear to have lower differences in income between men and women. This may, for example, suggest that the economic surplus of richer regions in Brazil is more absorbed by men-led businesses than by women entrepreneurs, although the causal relationship cannot be established based on our observations. It may also suggest, a difference due to industry participation. As typical male-led industries, like finance, are more dominant in the Southeast and South, while the large gender pay gap within large entrepreneurs in the Center-West may be possibly explained with big agribusiness. We encourage future studies to further explore the reason for the income differences between men and women-led businesses and to contribute to the identification of suitable policy initiatives to fight gender inequality. Some part of the gender income-gap might be explained with a lower number of hours than women microentrepreneurs spend on average in their business (Table 2). However, even when we adjust income for hours spend in the business a gender-income gap remains.

Table 1: Income Difference (in R$) between men and women entrepreneurs and non-entrepreneurs (employees) among regions in Brazil.

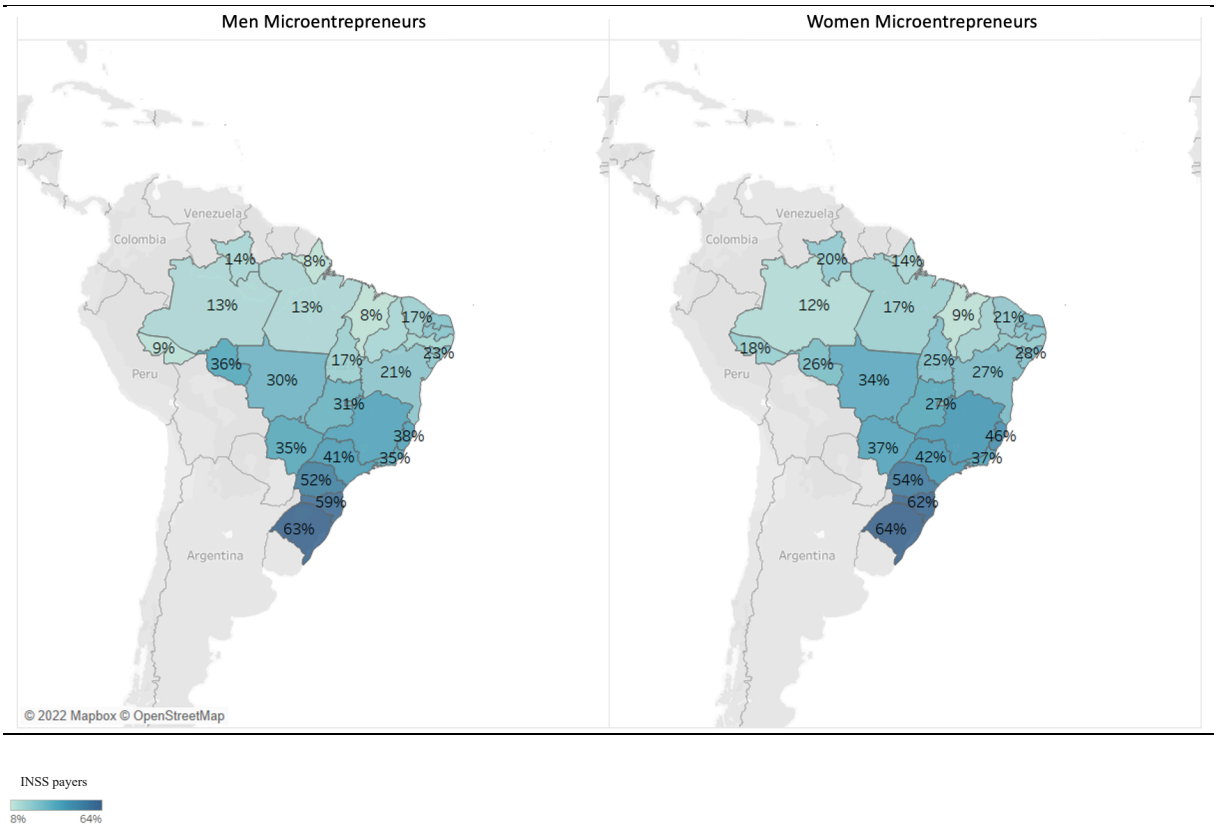
Region	Microentr. vs. Larger Entr. vs. Employee	Income Men	Income Women	Income Difference (%)
Midwest	Larger Entrepreneur	R$ 12,588	R$ 6,576	191%

Midwest	Micro Entrepreneur	R$	2,665	R$	2,071	129%
Midwest	Employee	R$	2,906	R$	2,296	127%
Northeast	Larger Entrepreneur	R$	8,266	R$	7,123	116%
Northeast	Micro Entrepreneur	R$	1,225	R$	946	129%
Northeast	Employee	R$	1,596	R$	1,537	104%
North	Larger Entrepreneur	R$	7,615	R$	6,676	114%
North	Micro Entrepreneur	R$	1,407	R$	1,210	116%
North	Employee	R$	2,157	R$	1,970	109%
Southeast	Larger Entrepreneur	R$	9,648	R$	6,504	148%
Southeast	Micro Entrepreneur	R$	2,334	R$	1,884	124%
Southeast	Employee	R$	2,842	R$	2,221	128%
South	Larger Entrepreneur	R$	9,657	R$	6,559	147%
South	Micro Entrepreneur	R$	2,931	R$	2,238	131%
South	Employee	R$	2,838	R$	2,276	125%

Source: Authors based on data from PNADC (2021, 4th trimester).

Under a gender lens, missing access to social security is even more relevant, as women tend to stay out of the labor market for longer due to childbearing and motherhood. Figure 7 shows that, in general, women have a higher likelihood of paying social security (INSS) than men.

Figure 7: Men and Women Microentrepreneurs who contribute to INSS payment in Brazil across regions (in %)



Source: Authors based on data from PNADC (2021, 4th trimester).

Missing social security directly affects the available income that women microentrepreneurs have in the month after giving birth. The lack of coverage might contribute to restricting growth of women-led ventures. In addition, the lack of institutional assistance in childcare (e.g. kindergarten) may prevent women to pursue training and business opportunities, as they need to take care of children. Previous research has highlighted that women entrepreneur have greater social obligations than men (Lenz et al. 2021). The higher number of hours that women spend on household and family care activities might be the reason for which female microentrepreneurs spend on average six hours less working in their ventures than men (Table 2).

Table 2: Average amount of microentrepreneurs' hours spend in business by gender

Gender	Avg. Hours effectively worked	Avg. hours normally worked
Men	39.23	40.38
Women	33.11	34.11

Source: Authors based on data from PNADC (2021, 4th trimester).

Conclusion

We are using PNADC data from the 4th trimester 2021 to present an up-to-date view on microentrepreneurship in Brazil and to flash out possible research directions. Figure 8 shows the summary of our propositions along institutional, venture and entrepreneurial characteristics. While research has already provided evidence that institutional development and institutional support can help microentrepreneurs, more process research is needed to understand how changes in institutional levers affect the transition from necessity to growth-oriented entrepreneurship. Research in the Brazilian context could particularly focus on regional differences, formalization rates and social security coverage, as well as gender differences.

Figure 8: Research directions on Microentrepreneurship in Brazil

	Levers	Research Agenda
Institutional	Development Support	To explore the effects of changes in institutional levers on the transition from necessity to (opportunity) growth-oriented entrepreneurship. Attention to: • Regional differences • Formalization rates & social security coverage • Gender differences
Venture	Resources & Capabilities	To investigate the entrepreneurial process evolution from necessity to more opportunity exploitation, and the effects of: • Training and capacity building programs • Networking skills and mentoring • Industry/business concentration • Gender
Individual	Human capital Vulnerabilities	To study how the entrepreneurial process differs for microentrepreneurs with different levels of human capital level. Attention to: • Illiterate microentrepreneurs • Unskilled microentrepreneurs • Microentrepreneurs with high levels of human capital

On the venture level we recommend to further investigate the entrepreneurial process evolution from necessity to more opportunity exploitation. Research in this area can benefit from evidence-based research on the different training and capacity-building programs, networking skills and mentoring, differences in industry and business concentration and gender. On the individual level low human capital levels and economic vulnerability characterize the majority of microentrepreneurs. However, human capital levels are different within microentrepreneurs and how these differences affect the entrepreneurial process is insufficiently explored. Research in this direction can contribute to the understanding of geographic and gender differences in microentrepreneurship and help to identify public policies to address regional and gender inequalities in Brazil.

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All maps created using Tableau (2022.1).