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Seeking for a framework to advance fintech-mediated digital financial inclusion for Brazilian small business companies

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Abstract: This research-in-progress aims to study digital financial inclusion, mediated by fintech, of Brazil's micro and small business companies. Digital financial inclusion is a critical factor in helping reduce social inequalities and promote economic growth, acting as a shortcut to achieve sustainable development goals (SDGs). Digital technologies in the financial market bring the promise of digital financial inclusion induced by fintech. However, the complexity of financial systems leads us to explain better the business environment and the social context of this phenomenon. Thus, we will conduct a case study on Brazilian Development Bank (BNDES), the leading Development Finance Institution (DFI) and a key actor in the financial inclusion agenda in Brazil that uses a digital platform to partner with fintech and give credit loans to small businesses. We aim to produce a framework to explain better the business environment of the digital financial inclusion induced by fintech for micro and small business companies.

Keywords: Digital financial inclusion, fintech, business environment, micro and small businesses, SDG.

1. Introduction

This research-in-progress aims to study how to advance digital financial inclusion, mediated by fintech, for small business companies in Brazil, given the business environment and the social context encompassing technology, the financial market, and the policy regulations.

Digital financial inclusion can be defined as the digital access to and use of formal financial services by the underserved segments of society [9]. Also, it is a key factor in achieving sustainable development and reducing social inequalities [38].

Digital technologies disrupt financial markets [13] and bring the promise of financial inclusion mediated by fintech, as suggested by several studies. Gomber *et al.* [16], Milian *et al.* [26], Lagna & Ravishankar [23], Gálvez-Sánchez *et al.* [14], Arner *et al.* [3], and Sahay *et al.* [33] point to an increasing interest of the scientific community to research not only on fintech and financial inclusion but also on its effects on small businesses and its relationships with sustainability.

One purpose of those new technologies is to offer better financial services [30], especially for poor individuals and small businesses companies, thus helping to advance financial inclusion in terms of access, use, and quality [32] for those underserved segments of the society.

Digital financial inclusion also has a relationship with sustainability. Sustainable Development Goals (SDGs) are a part of the 2030 Agenda for Sustainable Development that includes environmental, social, and economic dimensions and were adopted in 2015 by 195 countries, members of the United Nations, including Brazil. Relationships have been identified between digital financial inclusion and all the 17 SDGs [38]. At least five SDGs are directly linked with fintech for financial inclusion: SDG 5- Gender Equality, SDG 8- Decent Work and Economic Growth, SDG 9- Industry, Innovation, and Infrastructure, SDG 10- Reduced inequalities, and SDG 17 – Partnerships for the Goals [3].

According to the MSME finance gap study [22], USD 5,2 trillion is the estimated credit gap for the millions of formal and informal Small and Medium Enterprises (SMEs) in developing countries. It is around 19% of the Gross Domestic Product (GDP) of the 128 economies comprised by the study.

Brazil has about 17,3 million small businesses, classified as individual microentrepreneurs (MEI) and micro, small and medium companies. Those small companies contribute approximately 30% of the Brazilian Gross Domestic Product (GDP), representing USD 430 billion on average [35].

Credit is an important tool of financial inclusion for small business companies. However, especially in Brazil, small entrepreneurs have difficulties accessing credit and quality banking services [29]. A study of the credit for the small businesses in Brazil [15] pointed out that the credit demand overtakes the offers up to USD 33 billion, and the credit gap for those small enterprises, considering the first quarter of 2021, is USD 10 billion, on average.

Beyond that, several innovations in financial systems are occurring worldwide and in Brazil [25]. The Brazilian Central Bank (Banco Central do Brasil – BCB) is Brazil's leading bank system regulation of the National Financial System (Sistema Financeiro Nacional – SFN). It has initiated on the year 2016 a series of procedures and rules, revisited in 2019 at *Agenda BC#*, focused on five key aspects: inclusion, competition, transparency, education, and sustainability. The Brazilian instant payment system (PIX) and the open financial system, known as Open Banking, are being implemented as innovations of this agenda [25].

This scenario brings opportunities but also poses challenges for governments, businesses, and civil society [38] and risks in terms of financial stability [17], cyber security and hacking [30], network actors' growth and service scale, as well as unexpected effects of digital innovations [12].

This research aims to help to face these challenges using a qualitative approach with a case study on the Brazilian Development Bank (Banco Nacional de Desenvolvimento Econômico e Social - BNDES), the foremost Development Finance Institution (DFI) of Brazil, a government-owned bank, one of the major DFIs in the world and one of the key actors on the financial inclusion agenda in Brazil [36].

The bank uses a digital platform, Canal MPME (which stands for Micro, Pequenas e Médias Empresas, or Micro, Small and Medium Enterprises - MSMEs), to partner with financial agents including fintech, which is the main tool to give credit loans to MSMEs [4,25].

Recent studies have proposed literature reviews on the thematic covered by this study. Still, a gap remains in the body of knowledge on Management Information Systems (MIS), as explained in the next section.

2. Formulating the research question: initial findings from the literature review

Digital financial inclusion in the context of a digital revolution in financial services is a complex phenomenon that allows for a qualitative approach where reality is socially constructed [39].

We have found recent illustrative literature review studies on fintech [26], fintech for financial inclusion [23], financial inclusion itself [14], and digital finance and SME [31,44]. However, those initial results reveal a gap regarding the social context and business environment related to digital financial inclusion, mediated by fintech, for micro and small business companies and its impacts on SDGs.

The systematic literature review to be conducted in our study intends to use the structured concept-driven approach proposed by Webster & Watson [41] to identify new thematic areas and possibilities of research, thus contributing to the Information Systems (IS) field.

Lagna & Ravishankar [23] argue that IS research on fintech for financial inclusion should be more engaged and needs to consider the principles of making a responsible IS research [19] and a better world with ICTs [40]. The authors have presented a literature review that uses the "IS research on fintech" and the "ICT4D research on financial inclusion" thematic to propose a new research agenda, "Fintech and the promise of financial inclusion."

One of the research opportunities identified in the Lagna & Ravishankar study [23] is the "*Business environment of fintech-led financial inclusion.*" The authors agree that the financial inclusion business environment is a complex phenomenon. This complexity is also cited in studies such as Leonardi *et al.* [24] that illustrate the Corresponding banking system implementation in Brazil, where technology is just one piece of a broader network of financial inclusion with several actors like banks, retail stores, policymakers, and customers.

Gomber *et al.* [18] also point to the complexity of the business environment, which comprises the technology, the financial market, and the regulations involving financial services: "*Financial services are created and delivered through complex systems in business with processes, organizational and operational structures, human capital and talent, and a variety of choice behaviors, subject to ethical, regulatory, and legal restrictions*" (p. 227).

Joia & Cordeiro [20], studying fintech and financial inclusion, shed light on the importance of public policies and a regulatory environment for fintech. The research also points out that one of the drivers of fintech-induced financial inclusion should be to assist in managing formal and informal micro and small businesses.

Following the financial inclusion thematic, Gálvez-Sánchez *et al.* [14] conducted a literature review study showing a growing interest of the scientific community in fintech research to advance financial inclusion and encourage further research investigation between financial inclusion, the 2030 Agenda, and the SDGs.

These implementations need to come up way responsible and sustainably as a shortcut to achieving Sustainable Development Goals (SDGs). Evidence shows gaps related to digital financial inclusion and SMEs. On SDG 5- Gender Equality the small business owned by women, faces an estimated credit gap of USD 1,7 trillion globally. Considering SDG 8- Decent Work and Economic Growth, projections show that, by 2030, 470 million employments are needed. Also, the unmet SME credit gap, until 2015, was around USD 5 trillion. At SDG 9- Industry, Innovation and Infrastructure, SMEs have constrained access to finance, especially in emerging economies [38].

Zhiqiang *et al.* [44] presented a study on digital financial inclusion and SMEs' finance constraints, revealing that digital finance technologies influence the relationship between SMEs and traditional banks. They also point out that local bank branches and fintech can be game changers to reduce the effects of financial constraints for those small businesses.

Zalan & Toufaily [43] also suggest that SMEs can benefit from the innovative technologies brought by fintech to reduce the side effects from risk-averse banks and do not offer quality credit lending to these small businesses.

Regarding the business environment and social context of digital financial inclusion mediated by fintech, Zalan & Toufaily [43] argue that fintech in the emerging markets does not always disrupt the whole financial market but aims to partner with traditional financial institutions, such as banks.

Toward this direction, Zalan & Toufaily [43] have proposed a framework based on a qualitative approach that comprises a hybrid platform into a broader ecosystem. It allows for partnership between banks and fintech (Figure 1).

Although the framework was not designed to address the financial inclusion phenomenon, Zalan & Toufaily [43] cite that the opportunity to promote financial inclusion mediated by fintech was mentioned by several respondents during their research.

We believe Zalan & Toufaily model [43] can be used as a starting point for the framework that will be constructed during our research for a number of reasons.

First, Application Programming Interfaces (APIs), located at the center of the hybrid platform model, allow data exchange and communications between different organizations. As Zalan & Toufaily [43] point out, a collaboration between banks and fintech is necessary to enable innovative solutions, and APIs are a key element in this scenario.

Open APIs are a Digital Financial Services (DFS) model that has emerged to facilitate the integration between traditional banks and those new digital financial actors, mostly fintech. The most recent innovations in the financial sector, like Open Banking, also use APIs to exchange data between its participants [25,42]. Moreover, OpenAPIs have shown the potential to foster financial inclusion [30] as they can reveal new business models [8].

Second, the broader ecosystem proposed by Zalan & Toufaily model [43] surrounds the hybrid platform and includes financial services' actors in the social context that encompasses technology, the financial market and the policy regulators. However, considering that DFIs are key actors in the financial inclusion agenda [25,35], we propose that development finance institutions must be considered in the framework that will be developed during our research.

Third, considering the known challenge of digital financial inclusion and the business environment of fintech mediated digital financial inclusion, we believe Zalan & Toufaily model [43] can be a starting point to help answer the research question, "What is the business environment and social context that encompasses the technology, the financial market and the policy regulations that amplifies the digital financial inclusion, induced by fintech, of Brazilian micro and small business companies?"

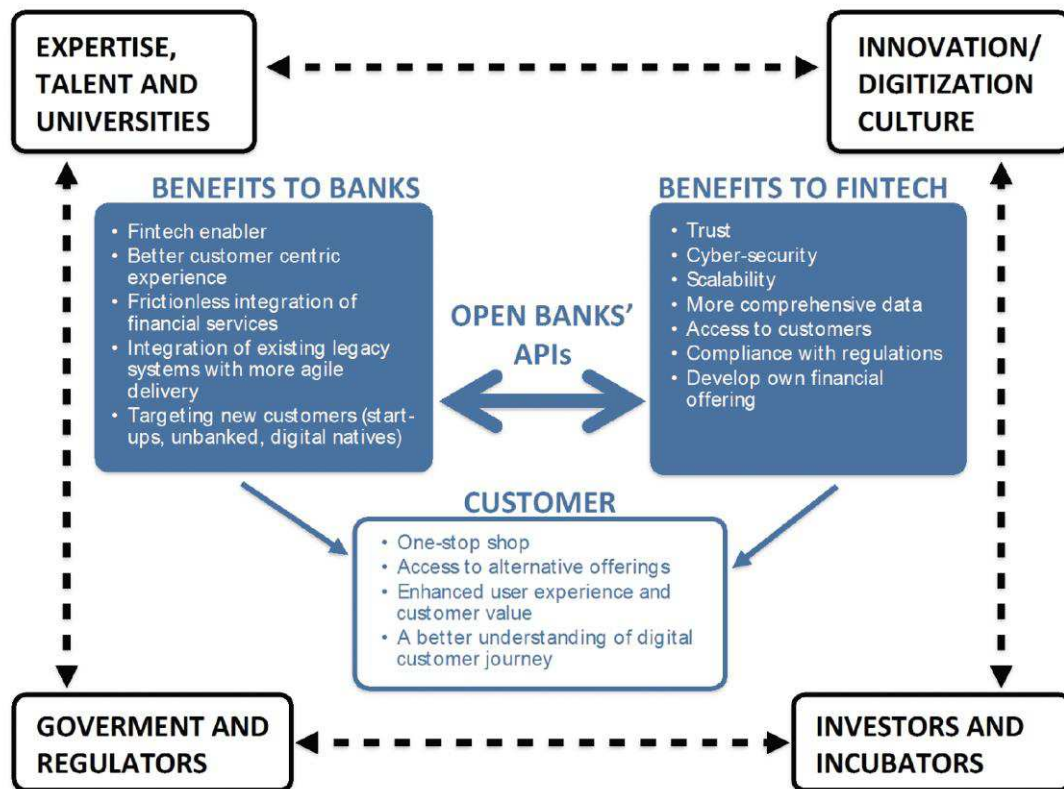


Figure 1. Zalan & Toufaily model intends to be used as a starting point for our research. Source: Zalan & Toufaily [43]

In the next section, the proposed case study chosen to help find insights from the research question will be explained.

3. Case study

To understand the phenomenon of Brazilian small business companies' digital financial inclusion, mediated by fintech, we intend to use an abductive approach [11] and the case study methodology proposed by Pan & Tan [28].

The case study proposed in this research is the Brazilian Development Bank (BNDES). This government-owned bank institution acts as a second-tier credit loan for micro and small business companies and entrepreneurs. In this indirect model of operation, the development bank passes along its money resources to financial agents, which then deal loans with SMEs and entrepreneurs' customers [7].

There is a number of reasons to choose BNDES as a case study. First, the bank is the leading Development Finance Institution (DFI) in Brazil, founded in 1952, and one of the major DFIs in the world. It has a significant role in helping SMEs and disbursed in 2020 more than 34 billion Brazilian Reais (BRL) (around USD 6 billion) for more than 460.000 Brazilian SMEs [5]. Also, BNDES is one of the key actors in the Brazilian financial inclusion agenda [36].

Second, it is possible to identify relationships between the financial inclusion of SMEs and the growing partnership with fintech on the BNDES long-term agenda and impact deliveries for society [6]. Moreover, other DFIs worldwide, like KfW Development Bank from Germany [21] and Agence Française de Développement in France [2], are also establishing partnerships with fintech to promote financial inclusion.

Third, the bank participates in the digital financial inclusion business environment in Brazil using a digital platform as one of the main tools to give credit to SMEs. Canal MPME allows for business partnerships between financial agents, including fintech, and it was conceived and developed by BNDES internal teams. It uses Application Programming Interfaces (APIs) for data exchange and communication with the fintech authorized to act as BNDES financial agents. Since its launch in 2017, the digital platform has contracted more than BRL 1,9 billion, around USD 350 million, in credit and has approved more than 13.000 proposals. Brazilian micro and small business companies represent 98% of these operations [4,25].

At last, DFIs play a key role in promoting Agenda 2030 [10]. For instance, BNDES is promoting a shift in disbursements for SDG 8, which is closely related to SME loans, which experienced a significant growth from 32,2% (BRL 28,4 billion) of the total disbursement in 2016 to 48,0% (BRL 31,2 billion) in 2021 [10].

Given this scenario and based on the future findings of the case study, our research aims to advance the framework (Figure 1) proposed by Zalan & Toufaily [43], as will be explained in the next section.

4. Proposed research design and expected contributions to the IS field

The complexity of the financial information systems business environment phenomenon leads us to consider those three dimensions of our research design: the technology, the financial market, and the regulation.

Taking Zalan & Toufaily's [43] framework as a starting point, our study will consist of three phases to encompass those three dimensions in our future framework proposal.

In the first phase, we aim to conduct a systematic literature review to advance theoretical contributions in IS field. Topics include the advances on the financial inclusion agenda in Brazil, considering the digital financial inclusion induced by fintech, financial inclusion and SMEs, and the relationships with SDGs. The findings of the systematic literature review will also help to choose the theoretical models that will be used in our study.

The second phase of the study will be data gathering and analysis. Primary data will be collected by semi-structured interviews conducted with the following actors: employees from several organizational levels, ranging from technology to business areas, from operational to managerial levels, and that deal with fintech partnerships and SME credit lending from BNDES. CEOs and CTOs from different sizes of Canal MPME partner fintech companies, as well as representatives of ABFINTECHS [1], the primary fintech hub association in Brazil will also be interviewed. Our research plans to interview small business entrepreneurs that have and have not used Canal MPME to get loans from fintechs and, at last, employees of BCB that deal with the policy regulation of fintech and financial inclusion.

These data will be codified using the approach suggested by Saldaña [34]. A qualitative data analysis software tool will also be considered [37].

Then, the data will be complemented by researcher observations and financial inclusion workshops conducted with the study participants. Also, we plan to confront those data with secondary data analysis such as internal organizational reports from BNDES, partner fintech companies, and BCB. At last, we intend to use news related to the research on the media and the social networks as another source of secondary data.

The coding categories will come from the framework Zalan & Toufaily [43] that will be used as a starting point for our research and from the literature review. Other categories will arise from the case study.

In the third phase of the study, we will adjust and validate the proposed framework using a round of specialists, as indicated by the Delphi method approach [27].

In our research, we aim to produce a framework that contributes to IS field and helps to explain better the business environment of the digital financial inclusion induced by fintech for micro and small business companies. We believe this future framework can be used as a tool to advance digital financial inclusion and to guide scholars, practitioners, policy regulators, development finance organizations, fintech companies, and their associations.

References

1. ABFINTECHS (2022). Associação Brasileira de Fintechs. Retrieved January 04, 2022, from: <https://www.abfintechs.com.br/>
2. AFD (2018). Agence Française de Développement. Fintech helps African entrepreneurs grow. Paris: AFD. Retrieved January 04, 2022, from: <https://www.afd.fr/en/ressources/fintech-helps-african-entrepreneurs-grow>
3. Arner, D. W., Buckley, R. P., Zetsche, D. A., & Veidt, R. (2020). Sustainability, FinTech and financial inclusion. *European Business Organization Law Review*, 21(1), 7-35.
4. BNDES (2022a). Banco Nacional de Desenvolvimento Econômico e Social. Canal MPME. Rio de Janeiro: BNDES, 2022a. Retrieved January 04, 2022, from: <https://ws.bndes.gov.br/canal-mpme/#/home>
5. BNDES (2022b). Banco Nacional de Desenvolvimento Econômico e Social. Com participação histórica de pequenas e médias empresas, BNDES tem lucro recorde em 2020. Rio de Janeiro: BNDES, 2022b. Retrieved January 04, 2022, from: [https://agenciadenoticias.bndes.gov.br/detalhe/noticia/Com-participacao-historica-de-pequenas-e-medias-empresas-BNDES-tem-lucro-recorde-em-2020-R\\$-207-bi/](https://agenciadenoticias.bndes.gov.br/detalhe/noticia/Com-participacao-historica-de-pequenas-e-medias-empresas-BNDES-tem-lucro-recorde-em-2020-R$-207-bi/)
6. BNDES (2022c). Banco Nacional de Desenvolvimento Econômico e Social. Conheça a agenda de longo prazo do BNDES. Rio de Janeiro: BNDES, 2022c. Retrieved January 03, 2022, from: <https://www.bndes.gov.br/wps/portal/site/home/quem-somos/planejamento-estrategico/agenda-de-longo-prazo-do-bndes>
7. Borça Júnior, G. R.; Faleiros, J. P. M.; Zylberberg, R. S. (2020). O modelo indireto do BNDES: benefícios, diagnóstico e perspectivas = The indirect model of BNDES: advantages, diagnosis and perspectives. *Revista do BNDES*, Rio de Janeiro, v. 27, n. 53, p. [53]-88, jun. 2020.
8. CGAP. (2022a). Open APIs for digital finance. Retrieved January 04, 2022, from: <https://www.cgap.org/topics/collections/open-apis>
9. CGAP. (2022b). What Is Digital Financial Inclusion and Why Does It Matter? Retrieved January 05, 2022, from: <http://www.cgap.org/blog/what-digital-financial-inclusion-and-why-does-it-matter>

10. Chan, I. Y. R. K., & Freitas, M. B. D. (2021). O papel dos bancos de desenvolvimento na Agenda 2030: o caso do BNDES = The role of development banks in the 2030 Agenda: the case of the BNDES. *Revista do BNDES*, Rio de Janeiro, v. 28, n. 56, p. [11]-54.
11. Dubois A., Gadde L. (2002). Systematic combining: an abductive approach to case research, *Journal of Business Research*, Volume 55, Issue 7, Pages 553-560, ISSN 0148-2963, [https://doi.org/10.1016/S0148-2963\(00\)00195-8](https://doi.org/10.1016/S0148-2963(00)00195-8)
12. Foster, C., & Heeks, R. (2013). Innovation and scaling of ICT for the bottom-of-the-pyramid. *Journal of Information Technology*, 28(4), 296–315.
13. Gabor, D., & Brooks, S. (2017). The digital revolution in financial inclusion: international development in the fintech era. *New Political Economy*, 22(4), 423–436. <https://doi.org/10.1080/13563467.2017.1259298>
14. Gálvez-Sánchez, F.J.; Lara-Rubio, J.; Verdú-Jóver, A.J.; Meseguer-Sánchez, V. (2021). Research Advances on Financial Inclusion: A Bibliometric Analysis. *Sustainability*, 13, 3156. <https://doi.org/10.3390/su13063156>
15. Gonzalez, L.; Barreira, B.; Ridolfo, A. (2021). Crédito para os pequenos em tempos de pandemia. São Paulo: [FGV EAESP, 2021]. Working paper - GVcemif - Centro de Estudos de Microfinanças e Inclusão Financeira.
16. Gomber, P., Koch, J. A., & Siering, M. (2017). Digital Finance and FinTech: current research and future research directions. *Journal of Business Economics*, 87(5), 537-580.
17. Gomber, P., Kauffman, R., Parker, C., & Weber, B. (2018a). On the fintech revolution: Interpreting the forces of innovation, disruption, and transformation in financial services. *Journal of Management Information Systems*, 35(1), 220–265.
18. Gomber, P., Kauffman, R., Parker, C., & Weber, B. (2018b). Special issue: Financial information systems and the fintech revolution. *Journal of Management Information Systems*, 35(1), 12–18.
19. ISJ. (2019). Call for papers: Special issue on responsible IS research for a better world. *Information Systems Journal*. Retrieved January 03, 2022, from: https://onlinelibrary.wiley.com/page/journal/13652575/homepage/special_issues.htm
20. Joia, L. A., & Cordeiro, J. P. V. (2021). Unlocking the Potential of Fintechs for Financial Inclusion: A Delphi-Based Approach. *Sustainability*, 13(21), 11675.
21. KfW (2017). KfW Development Bank. Facilitating access to SME finance. *KfW Development Bank*, Frankfurt am Main, 1 mar. 2017. Retrieved January 03, 2022, from: https://www.kfw-entwicklungsbank.de/International-financing/KfW-Development-Bank/News/News-Details_401856.html
22. Khanna, M. *et al.* (2017). MSME finance gap: assessment of the shortfalls and opportunities in financing micro, small, and medium enterprises in emerging markets. Washington, D.C.: The World Bank Group, 2017. Retrieved January 03, 2022, from: <http://documents.worldbank.org/curated/en/653831510568517947/MSME-finance-gap-assessment-of-the-shortfalls-and-opportunities-in-financing-micro-small-and-medium-enterprises-in-emerging-markets>
23. Lagna, A, Ravishankar, MN. (2021). Making the world a better place with fintech research. *Information Systems Journal*, 1– 42. <https://doi.org/10.1111/isj.12333>
24. Leonardi, P., Bailey, D., Diniz, E., Sholler, D., & Nardi, B. (2016). Multiplex appropriation in complex systems implementation: The case of Brazil's correspondent banking system. *MIS Quarterly*, 40(2), 461–473.
25. Melo, R. D. C., Almeida, H. T. V. D., Braga, H. V., Moscon, L. M., Alvim, R. B., & Silva, T. M. D. D. (2021). As inovações dos serviços financeiros e o open banking: um caminho possível para acelerar a inclusão financeira de micro e pequenas empresas no Brasil? = Innovations on the financial sector and open banking: a possible pathway to accelerate financial inclusion of micro and small enterprises in Brazil?. *Revista do BNDES*, Rio de Janeiro, v. 28, n. 56, p. [519]-572.
26. Milian, E. Z., Spinola, M. D. M., & de Carvalho, M. M. (2019). Fintechs: A literature review and research agenda. *Electronic Commerce Research and Applications*, 34, 100833.
27. Mullen P., (2003). Delphi: myths and reality, *Journal of Health Organization and Management*, Vol. 17 Issue: 1, pp.37-52, <https://doi.org/10.1108/14777260310469319>
28. Pan S., Tan B. (2011). Demystifying case research: A structured–pragmatic–situational (SPS) approach to conducting case studies, *Information and Organization*, Volume 21, Issue 3, Pages 161-176, ISSN 1471-7727, <https://doi.org/10.1016/j.infoandorg.2011.07.001>
29. Paula, G. M. (2017). Inclusão financeira de pequenas e médias empresas no Brasil. Santiago: CEPAL. (Documentos de projetos). Retrieved January 03, 2022, from: https://repositorio.cepal.org/bitstream/handle/11362/43229/1/S1701094_pt.pdf
30. Pazarbasioglu, C., Mora, A. G., Uttamchandani, M., Natarajan, H., Feyen, E., & Saal, M. (2020). Digital financial services. Washington: World Bank Group. Retrieved January 03, 2022, from: <http://pubdocs.worldbank.org/en/230281588169110691/Digital-Financial-Services.pdf>
31. Rasheed, R., Siddiqui, S. H., Mahmood, I., & Khan, S. N. (2019). Financial inclusion for SMEs: Role of digital micro-financial services. *Review of Economics and Development Studies*, 5(3), 571-580.
32. Roa, M. J. (2015). Financial inclusion in Latin America and the Caribbean: access, usage and quality (Vol. 10). Mexico, DF: CEMLA
33. Sahay, R., Von Allmen, U.E., Lahreche, A., Khera, P., Ogawa, S., Bazarbash, M., and Beaton, K. (2020). The Promise of Fintech: Financial Inclusion in the Post COVID-19 Era. IMF PFFIEA no. 20/09, July. <https://doi.org/10.5089/9781513512242.087>

34. Saldaña, J. (2015). *The coding manual for qualitative researchers*. Thousand Oaks: Sage Publications.
35. SEBRAE. (2020). *Atualização de estudo sobre participação de micro e pequenas empresas na economia nacional*. Brasília, D.F.: FGV Projetos. Retrieved January 03, 2022, from: <https://datasebrae.com.br/wp-content/uploads/2020/04/Relat%C3%B3rio-Participa%C3%A7%C3%A3o-mpe-pib-Na.pdf>
36. Sela, V. M., Gonzalez, L., & Christopoulos, T. P. (2020). Construction of the financial inclusion agenda in light of the actor-network theory. *Revista de Administração Pública*, 54, 162-180.
37. Sinkovics, R. R., Penz, E., & Ghauri, P. N. (2008). Enhancing the trustworthiness of qualitative research in international business. *Management international review*, 48(6), 689-714.
38. UNSGSA. (2018). *Igniting SDG progress through digital financial inclusion*. United Nations Secretary-General's Special Advocate for Inclusive Finance for Development (UNSGSA). Retrieved January 03, 2022, from: https://www.unsgsa.org/files/1615/3738/5820/SDG_Compndium_Digital_Financial_Inclusion_September_2018.pdf
39. Walsham, G. (1995). Interpretive case studies in IS research: nature and method. *Eur J Inf Syst* 4, 74–81 (1995). <https://doi.org/10.1057/ejis.1995.9>
40. Walsham, G. (2012). Are we making a better world with ICTs? Reflections on a future agenda for the IS field. *Journal of Information Technology*, 27(2), 87–93.
41. Webster, J., & Watson, R. (2002). Analyze the past to prepare for the future: Writing a literature review. *MIS Quarterly*, 26 (2), xiii–xxiii.
42. Zachariadis, M.; Ozcan, P. (2017). The API economy and digital transformation in financial services: the case of Open Banking. *SWIFT Institute Working Paper*, London, n. 2016001. Retrieved January 03, 2022, from: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2975199.
43. Zalan, T., & Toufaily, E. (2017). The promise of fintech in emerging markets: Not as disruptive. *Contemporary Economics*, 11(4), 415-431.
44. Zhiqiang L., Junjie W., Hongyu L. & Duc K. N. (2021). Local Bank, Digital Financial Inclusion and SME Financing Constraints: Empirical Evidence from China, *Emerging Markets Finance and Trade*, <https://10.1080/1540496X.2021.1923477>