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WHAT MAKES A SMART BANK? THE CASE OF BRDE, A LAST-MILE SUBNATIONAL DEVELOPMENT BANK IN BRAZIL

O QUE FAZ UM BANCO DE DESENVOLVIMENTO SER INTELIGENTE? O CASO DO BRDE, BANCO SUBNACIONAL DE DESENVOLVIMENTO DE ÚLTIMA MILHA NO BRASIL

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ABSTRACT: Development banks are considered mission-oriented financial institutions that must act to fill gaps and market failures, supporting innovation with long-term financing in order to play a fundamental role in smoothing the risks associated with boom and bust cycles. . The existence and role of public development banks have been discussed for more than a century. Thus, this work proposes a case study with the analysis of the Subnational Development Bank - BRDE, in which there is a reference based on authors who discuss regional development and, subsequently, the case of BRDE, with the aim of describing the operation of a small bank in an emerging economy, its strengths and challenges. Therefore, it was possible to conclude that banks that have, at the same time, clarity of vision and mission and alignment of programs, flexibility to adjust to economic and social reality, solid financial results, robust governance attributes and autonomy - professional and collegial governance multilevel that increases the costs of both undue political pressure and bad credit decisions. From a financing point of view, the bank stands out for its technical capacity, which are critical but are important institutions to reinforce that its capillarity and knowledge of the context and local markets are useful for development. Thus, these banks provide financial instruments to expand financing at local and micro-regional levels, directly or through commercial banks and cooperatives.

KEYWORDS: Regional development, banks, financial institutions, BRDE.

RESUMO: Os bancos de desenvolvimento são considerados instituições financeiras orientadas para missões que devem agir no preenchimento das lacunas e das falhas do mercado, apoiando a inovação com financiamento de longo prazo de modo a desempenhar um papel fundamental na suavização dos riscos associados aos ciclos de expansão e recessão. A existência e o papel dos bancos públicos de desenvolvimento têm sido discutidos há mais de um século. Asim, este trabalho propõe um estudo de caso com a análise do Banco Subnacional de Desenvolvimento - BRDE, na qual é tem-se um referencial embasado em autores que discutem o desenvolvimento regional e, posteriormente, o caso do BRDE, com o objetivo de descrever o funcionamento de um pequeno banco numa economia emergente, os seus pontos fortes e desafios. De modo que foi possível concluir que bancos que detêm, ao mesmo tempo clareza de visão e missão e alinhamento de programas, flexibilidade para se ajustarem à realidade económica e social, resultados financeiros sólidos, atributos de governação robustos e autonomia - uma governação profissional e colegiada multinível que aumenta os custos tanto de pressões políticas indevidas como de más decisões de crédito. No ponto de vista do financiamento, o banco se destaca pela sua capacidade técnica são críticos, mas são importantes institutições para reforçar que a sua capilaridade e conhecimento do contexto e dos mercados locais são úteis para o desenvolvimento. Assim, esses bancos fornecem instrumentos financeiros para ampliar o financiamento aos níveis locais e microrregionais, diretamente ou através de bancos comerciais e cooperativas.

PALAVRAS-CHAVE: Desenvolvimento regional, bancos, instituições financeiras, BRDE.

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1. WHY WRITE ABOUT A DEVELOPMENT BANK IN BRAZIL? [2]

Development banks are mission-oriented financial institutions that are supposed to act filling market-failure gaps, by supporting innovation with long-term funding finance; and play a key role in smoothening risks associated with boom-bust cycles. In other words, they provide high-risk and long-term capital that private banks are unwilling or unable to offer, generating public goods and countercyclical financing (Griffith and Ocampo, 2018; Lucas, 2014).

The existence and role of public development banks have been discussed for more than a century. First as development inducers of industrial policies in developing countries, as it was the case since the 20's, in Latin America; or financial supporters for re-building after-war devastated countries, after the 50's, which was the "golden age" of development banks; or acting pro- industrialization in some contexts in the 90's, vanishing and reappearing in different cycles to come strengthened in the aftermath of 2008 financial crises and Covid19 pandemic, when they have shown ability to increase total lending, contrarily to private banks, which have rather contracted (Alliance, 2021; Finance in Common, 2021).

There are currently 527 active public finance organizations in every part of the world, with total assets of $18.7 trillion, annually financing about 10% of world's investment. 97% are public development banks (PDBs), 1% are equity funds, 2% are guarantee funds. They differ according to mandate, region, assets, governance, ownership, and level of flexibility in their operations.

Multilateral development banks account for 9% of these banks, national development banks account for 70%, and subnational institutions account for 21%. If we consider size (assets in USD), almost half of these organizations are small organizations, with under USD$ 20 billion total assets[3].

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[3] Though small in comparative perspective, they may carry substantial weight in their countries: some national. PDBs may account for 60% of their country's GDP (XU, Marodon and Ru, 2021).

Government ownership is central: 75% of PDBs are wholly owned by government agencies, and if indirect shareholding is considered, the number raises to 98%. About 35% DBs operate in different sectors, rather than specializing in one are. All large national banks are from high or medium-upper income countries (XU, Marodon and Ru, 2021).

That is why describing the institutional and operational features of Brazilian Extreme South Development Bank (BRDE), a small and subnational institution, can make sense and be useful. Indeed, it can be a proxy of 75% of the ecosystem if we think **ownership** (wholly government owned); a proxy of half the ecosystem when we think size (small, with USD 3,5 billion total assets); a proxy of 35% on **mandate** (flexible mandates, meaning non-specialized financing, with sector- broad portfolios) and a proxy of 21% of the system when we think **region** (subnational, with 111 of them in 50 countries in the world) (Finance in Common, 2021; Xu, Marodon and Ru, 2021).

Multilateral development banks have received a great more attention from academics and practitioners than subnational ones, probably for their larger assets and loan portfolio size. But not only they are not the most common type, as they operate frequently as 2nd tier banks, needing other financial agents to final delivery, be they national or subnational. They are part of an ecosystem. National banks, though a more typical organization, also operate in networks, many times using subnational development institutions. These last mile banks are probably the least known of the financial community, and are crucial elements of this ecosystem, with different set of challenges.

Last mile banks are professional intermediaries, channeling funding to local actors and helping close the financial gap. They are 1st tier banks with large expertise and knowledge of local contexts and businesses. They may also operate as project-designers or structurers. Last mile banks add value in partnering with other stakeholders, local, national or international.

They are focal points for local financing, pooling demand for local projects and matching them with private or public investments. They can act as “project takers” and as “market and policy makers” to structure subnational financial markets and align local and global agendas, as the Sustainable Development Goals.

Though with great potential, these organizations can also endure government interventions and lack of good governance structure, lack of autonomy, high dependance of government budget resources, absence of bankable projects and lack of technical capacity (Brei and Chclareck, 2018).

Though small in this international classification, BRDE is quite relevant for the Brazilian ecosystem: it is the only one owned by *several states*. As such, it has real regional governance and outreach, compared to all other agencies or banks, which are owned by *federal or only one state-level government*.

The Brazilian subnational ecosystem has 21 finance organizations, and BRDE ranks first on loan portfolio, second on assets and net equity, third on the number of clients and number of operations, and first and second in these cases are *federal banks* operating *subnational* (Bechelaine, 2022) It is also one of the main partners of the Brazilian National Development Bank (BNDES), and the main financial agent to the Innovation and Tech Fund (FINEP) and to the Tourism Fund (FUNGETUR). Ha of its portfolio is for SMEs and individuals, and 95% of its loans for private sector.

BRDE has addressed its capital need outreaching for international contracts with several multilateral and international development banks in Asia, Europe and the America. It has a non-performing loan (NPL) rate of 0.58% compared to 2,54% in the private financial sector and 2,03% in the public financial sector. It is a 1st tier bank for loans, acting eventually as 2nd tier bank with cooperatives. It also works with guarantees and provide technical assistance to public and private sectors. Over the last years, it has supported federal and state governments in countercyclical policies due to recessions in Brazil in 2015 and 2016, and Covid19 impact. It has also aligned its programs with the Sustainable Development Goals, having 74% of its loan portfolio meeting at least one SDG (BRDE, 2021).

There are successful stories from these last-mile banks with great diffusion potential, but also serious challenges on how to deliver better. Parting from BRDE experience, this paper intends to describe its strengths and achievements, but also depict what are the hurdles are in the way for these banks to meet their goals. I also intend to contribute to the discussion of what a “smart” development bank is.

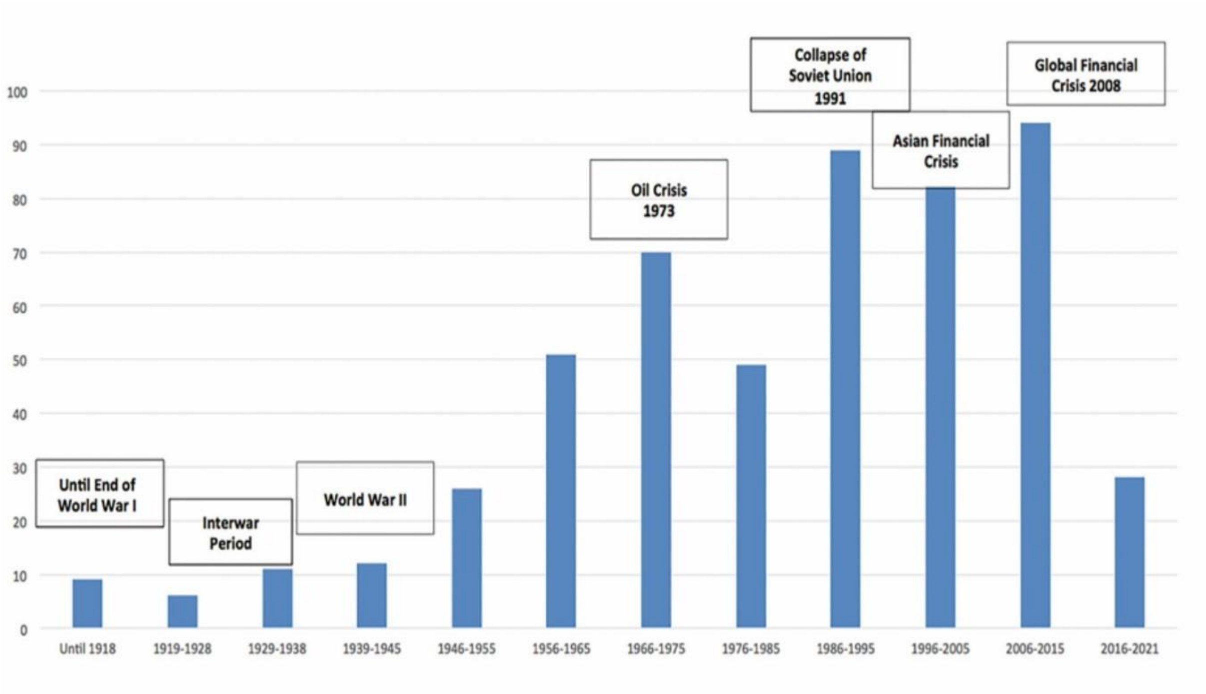
What is a smart development bank? I understand it as a bank that holds at the same time a. vision and mission clarity, b. flexibility to adjust to the economic and social reality, c. sound financial results d. robust governance attributes. It differs from Fernandes-Arias, Hausman & Panizza (2020) contribution, in which SMART means a development bank that can identify market failures and have intelligence to support governments in designing policies to reduce bottlenecks for firms. Whereas they focus on the macro moment of planning and framing, I focus on the operational side of it, which I see as a pre-requisite to the framing and planning capacity. Therefore, a smart bank should be an efficient organization that pursues the agents' (government) designed strategy, with high autonomy level and professional governance, without letting go of a positive balance that will make its impact endure. I describe BRDE positive features as a smart bank that could diffuse to nascent institutions or those looking for efficiency- focused reforms. I also bring some of its pain points. Combined, they show how to strengthen financial institutions who deliver at the last mile.

This paper is designed as follows. First section, we will cover the debate about public development banks. In the second one, we light up the Brazilian subnational ecosystem where BRDE performs. BRDE history will be drawn in the third section. Fourth to six sections will bring BRDE's smart features– its flexibility, financial results, autonomy, governance, and mission-program alignment. Seventh and eight describe challenges not only to BRDE, but to the system, followed by the final remarks.

2. WHAT ARE DEVELOPMENT BANKS FOR?

From 50`s to 80`s was national development banks "golden age", as result of developing countries efforts to achieve rapid industrialization. But in the 80`s, more than 250 state-owned banks privatized, not only because of local capital markets growth, but was a choice from local governments to tackle inefficiencies and excessive political influence. The 90`s saw the Eastern European countries rise and new financial agents, and the 2008-after financial crises has made many countries resort to development banks to counterbalance liquidity and credit squeeze (Torres and Zeidan, 2016; World Bank, 2021; XU, Marodon and Ru, 2021). Figure 1 shows the cycles of development banks and development finance institutions, with the number of created banks per decade.

Figure 1 – Number of Newly Establoshed PDBs and DFIs



Source: XU, Marodon and Ru, 2021

Development banks work to carry out policies to foster productivity change, fulfilling, as financial instruments, market failures (Fernández-Arias, Hausmann & Panizza, 2020). Historically, they have been governments tools to pursue economic development around the world, regardless of countries` development stage. Griffith and Ocampo (2018) have translated development banks' mandates in a broad statement, in which national development banks play two crucial roles: contribute to economic, social, and green development by supporting innovative sectors with long-term funding, and supporting the provision of public goods, as climate change and financial inclusion; and help avoid risks associated with boom-bust cycles in domestic private financing, mainly during and after financial crises, when private finance slow down. Their performance should not substitute private funds, but rather complement and leverage them. In other words, development banks cover for risk aversion that penalizes innovative and long-gestation projects and look forward to positive externalities, alongside other development goals, when private banks are unwilling or unable to offer (Lucas, 2014; Yeyati, Micco, & Panizza, 2007).

The main argument is that though private capital flows have scale, they have short-term gains bias, flowing intermittently to emerging market and developing countries instead of matching long-term needs in infrastructure and human capital formation (Ocampo and Ortega 2022; Rezec and Scholtens 2017). On cleaner energy and infrastructure, for instance, some estimates show private foreign direct investment in cleaner energy is less than US$ 40 billion annually. Also, the nascent global green bonds market is concentrated in advanced economies (Flammer, 2021).

To fulfill its mission, development banks act through credit, loan guarantees and other financial services, supporting small and large businesses, households, and governments. They may operate also on advising, consultancy, training, and capacity building programs, privatization design and implementation. Even in advanced economies, they may actively operate in traditional sectors or providing selective credit and fostering specific ones, as it is the case for energy, biotechnology, and environmental projects. Their countercyclical activities have also been relevant, by scaling up credit when private banks could not, through refinance, liabilities roll over, credit or portfolio building (Luna-Martinez and Vicente, 2012; Serra et al., 2013; Torres and Zeidan, 2016). During classical recessions or during Covid19 pandemic, they have provided rapid large-scale responses to economic shocks, both for urgent short-term expenditures, recovery packages and longer-term innovative investment. Empirical evidence shows their ability to significantly increase total lending as a response: in Latin America and the Caribbean alone, during Covid19 regional development banks have increased lending by USD 20 billion, and national banks by USD 90 billion (Finance in Common, 2021; Alliance, 2021).

Essentially, all PDBs and DFIs have 4 aspects in common:

a) they present fund-reflow-seeking financial instruments as the main products and services (loans, equity investments, or guarantees, e.g.);
b) they allow for some form of repayment, capital dividends, or risk premium;
c) they have other funding sources than periodic budgetary transfers;
d) they hold proactive public policy-oriented mandates (XU, Marodon and Ru, 2021).

But a positive vision of development banks is not without dispute. A literature strand considers national development banks inefficient and market-distorting (La Porta et al., 2002;

Luna-Martinez and Vicente, 2012). Even if it helps countries facing financial hard times, it may hinder the development of efficient markets. Others point to higher government ownership corresponding to slower financial development and lower growth per capita income and productivity (La Porta et al, 2002), or to state-owned banks in developing countries being less profitable and bearing higher costs than private institutions (Yeyati, Micco, Panizza, 2007). Other risks could be agency costs, lack of efficiency due to small scale, not to mention crowding out effects, as banks' size and subsidies could prevent the formation of long-term capital markets (Carvalho, 2014; Torres and Zeidan, 2016).

There are also historical records of crony capitalism, with political pressure replacing economic efficiency, and the result would be misallocation, picking losers, white elephants, benefits for connected firms, sometimes even leading to high-cost fiscal bailouts. And there are also controversies about profits, as development banks receive direct government transfers and operate with subsidies. These advantages are not always transparent and may even involve hidden fiscal costs. Cross subsidization is another concern, when banks would use profits from competitive programs to generate financial resources used in less competitive ones (Fernandez-Arias, Hausman and Panizza, 2020). Some of these studies were later disputed as flawed and partial, as the reported effects would come out only in countries with low institutional quality and financial development; or, in some cases, conclusions would come from biased evidence drawn from commercial banks. While there is evidence about flaws in the system, existing studies found that, on the contrary, higher state ownership in the banking sector was associated with faster growth, and that institutional factors are more important than the origin of capital (Yeyati et al., 2007; Andrianova, Demetriades, and Shortland 2008). There are also demonstrations that DBs participation in loan syndicate projects helps mitigate political influence, and that many countries have designed institutions with clear financial targets and defining mandates strictly, which counterbalance government ownership problems.

If empirical evidence is mixed, the reality is most of the developed countries used and still use development banks, they are present today as an important source of long-term capital in many countries, being a large part of some financial systems (Torres and Zeidan, 2016; Gutierrez et al., 2011; Luna-Martinez & Vicente, 2012). The challenge would be to build a financially safe institution with "muscles and brains", that can make a relevant contribution, being "smart", or agents identifying market and government failures.

Rather than assuming government "knows it all and have a list of market gaps", scholars have argued that development banks should be doing this job of identifying gaps. Because their core business is loan screening and lending activities, they should be able to recognize market failures and provide inputs for policy design. Also, while screening, banks can acknowledge government failures that are in the way of firms, pushing for change. They point this intelligence role is similar to what modern financial intermediation theories assign to banks: institutions with comparative advantage in producing and processing information. The difference is commercial banks potentialize financial returns, and development banks social returns. Banks have this unique vantage point for observing both market and government and should apply this knowledge (Fernández-Arias, Hausmann & Panizza, 2020).

This is a very and finely addressed question. Nevertheless, there are operational duties that a bank shall perform to even have the capacity to identify market and government failures. It needs clarity in its mission and vision, a multi-level professional and collegiate governance that increases costs both for political undue pressure and bad credit decisions, at the same time allowing for flexibility, it needs autonomy, proper capital for exerting its banking and screening role, and technical capacity. Being smart means having the capacities to perform as a bank. Next sections we will devote to the ecosystem BRDE operates and the capabilities BRDE has – and other it lacks – to accomplish its mission.

3. HOW THE BRAZILIAN SUBNATIONAL DEVELOPMENT FINANCE ECOSYSTEM LOOKS LIKE?

National systems constitute a broad range of multiple, specialized, and complementary finance institutions. They include banks, promotion agencies, export-driven credit agencies, multiple commercial and development banks, pension funds, savings accounts investing in development projects, to name a few. Some countries, like France and Italy, have a more centralized model, in which the different institutions gravitate around the most robust institution, usually a national development bank. Others, like Japan, South Korea and India, have a more decentralized system, which operates under specialization to attend specific economic sectors and activities (Além et al, 2017). Germany is an example of a country with sound and evolved national development promotion system, showcasing 17 regional institutions in a vertical model, where national and subnational are connected but at the same time play different roles, with SDBs more active in implementing public policies (Wruuck, 2015). The German system also comprises cooperatives, saving regional banks, Landesbanken and commercial banks, making up a robust financial system that can operate well and cooperate (Flogel, 2018).

Development systems have a great potential for cooperation and efficiency gains, as they can lower transaction costs and/or fast track credit analyses (Suchodolski, Adauto Jr. and Bechelaine, 2020). That is true especially if knowledge and skills of smaller organizations operating in less developed regions are internalized. Multilateral and large national banks have financial resources, but these smaller banks in the last mile identify local opportunities and projects.

As in many other Latin American countries - Colombia, Peru, Mexico and Chile, to name a few -, the Brazilian national development system was created to promote "strategic sectors", especially, but not exclusively, related to manufacturing and infrastructure. They also performed on sectors such as agriculture, exports, energy and, more recently, on public-private partnerships. Brazilian DBs` birthmark was the steel industry, critical in the post-war period for industrialization-based consumer durables (Studart and Ramos, 2018). They were meant to counteract market failures, "helping to overcome the risks inherent to development of new firms, the inadequate supply of long-term credit in a financial system with a strong short-term bias of financial assets and limited financial inclusion", following the region momentum (Ocampo and Arias, 2018).

Brazilian capital markets are the largest in Latin America in terms of size and liquidity, and Brazilian banks are large, well-capitalized and increasingly international (Torres and Zeidan, 2016). Federal public large banks like Banco do Brasil (BB), Caixa Economica Federal (CEF) and National Economic and Social Banks (BNDES) have historically operated supporting industry, financial inclusion, and countercyclical credit (Mettenheim, 2010). BB and CEF are multiple banks. The first one is at the stock exchange, has total assets of R$ 1,9 trillion and a classified portfolio of R$ 785 billion, while CEF showcase 100% public ownership, total assets of R$ 1,5 trillion, a classified portfolio of R$ 870 billion and a strong participation in housing loans and public services.

In 1942, during the 2nd WW, the federal Amazon Bank (BASA) was created with USA support, to finance the rubber industry. Since 1966 it has performed as commercial and investment bank. BNDES, the national development bank, is the main exclusively investment institution in the country. It was created in 1952, during the "golden age of NDBs", designed to finance industrialization and economic infrastructure (Griffith-Jones and Ocampo, 2018; Torres and Zeidan, 2016; Studart and Ramos, 2018). It has a sizeable asset of R$ 785 billion, and a classified portfolio of R$ 298 billion, operating through sixty financial agents. It has acted as Tier2 bank, a co-financer and enabling guarantee funds. BNDES implementation paved the way to a wave of other federal and state-level banks with the same purpose of crowding-in investments in less developed areas.

Federal banks, agencies and funds benefiting North, Northeast and Mid-West regions were created, as the federal commercial and investment Northeast BANK (BNB). Soon, many states in other regions followed the trend. That was the case of BRDE, with a clear mandate on industrialization. It was an endogenous move from three southern state governments understanding the rapid 50's transformation, and that investments and economic growth were concentrating in another state of the then South, Sao Paulo, while the other states of the South region were dependent on primary activities (BRDE, 2021). As Sao Paulo was part of the South region, the institutions created delimited the "extreme south", hence the name.

In the 80s and 90s, state-level public banks were spiraling public deficits by financing their governments` expenditures, experiencing governance flaws and undergoing bad political influence. With hyperinflation and negative growth rates in the Brazil, governors would use the bank structure to issue bonds that would finance policies. This convergence catalyzed high levels of non-performing loans and fragilized the financial institutions (Undesa, 2005). Not differently from other Latin American countries, the 90's watched a deregulation and downsizing of the Brazilian financial public system. The Brazilian bank system went through entire reformulation, with PROES3 and PROES4. Many banks were privatized or extinguished, and others morphed into what is today a network of 21 subnational public finance institutions. The post-restructuring banking system of the 90's has shown stability, and banks present capital ratios above the regulatory.

This new development subnational system that came out from the 90`s reforms comprise two federal banks (Amazon and Northeast), two state-level development banks (Espirito Santo

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and Minas Gerais, BANDES and BDMG, respectively), 16 state development agencies that perform non-banking credit, and one regional development bank owned by three states of the South region, BRDE, our case study (Bechelaine, 2022). There are also important funds, like FINEP and FUNGETUR.

Central Bank regulations date back from the 70s and dictate what development agencies and banks can do. It also oversees this ecosystem: Resolution 2828, of 2001, regulates the agencies, Resolution 394, of 1976, regulates development banks and resolution 2099, of 1994, the multiple commercial and investment banks.

Griffith and Ocampo (2018) edited book brings many experiences, in Chile, Peru, Colombia and Brasil, all sharing same trends requirements (Pereira and Saito, 2015). BNDES also moved its mandate into supporting privatization programs in the 90`s, a technical assistance role on modeling PPPs and concessions and building project pipelines it still plays, in the aftermath of 2008 crises increasing its credit role.

Table 1 – Brazilian subnational development system, selected data, 2016-2020 (average, Reais)

Subnational entity	**Loan Portfolio**	**Assets**	**Net equity**	**Clients (N)**	**Operations(N)**
BRDE	13.632.837	16.895.406	2.722.988	36.177	53.939
BNB	11.723.001	18.272.192	4.537.187	848.070	1.101.806
BDMG	5.552.637	7.180.031	1.765.268	16.067	24.486
BASA	3.720.397	5.552.637	2.079.922	62.954	77.260
BADESUL	2.391.065	3.081.214	710.282	2.967	7.231
DESENVOLVE SP	1.366.734	1.877.102	1.091.365	2.166	2.548
DESENVOLVE PARANÁ	1.206.601	2.011.832	1.678.438	15.214	16.448
BANDES	960.699	1.349.046	368.403	25.366	36.136
BADESC	729.445	995.869	564.724	1.946	2.675
DESENBAHIA	706.643	1.179.381	585.409	14.248	17.092
AGERIO	209.473	576.539	466.469	622	714

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AF GOIÁS	122.178	254.567	184.576	3.007	3.862
AFEAM	34.360	376.819	96.398	511	2.548
AF PERNAMBUCO	32.631	56.642	48.598	1.225	1.270
DESENVOLVE MT	23.924	46.343	16.387	1.062	1.170
AF RIO GRANDE DO NORTE	19.603	75.270	44.500	8.173	8.529
AFAL - ALAGOAS	13.404	54.513	34.876	895	911
PIAUÍ FOMENTO	10.020	21.091	12.686	521	553
AF TOCANTINS	8.615	22.901	20.165	297	312
AF AMAPA	8.562	15.682	11.704	2.581	3.068
AFERR - AF RORAIMA	1.435	10.101	9.243	370	399

Source: authors, based on Bechelaine, 2022 and Brazilian Central Bank

4. BRDE HISTORY AND HOW IT BUILT A FLEXIBLE AND FINANCIALLY ROBUST PORTFOLIO – SMART FEATURE 1

BRDE was created by three governments from Brazilian Extreme South – Parana, Santa Catarina and Rio Grande do Sul in 1961. It is present in 1,092 municipalities, or 91,7% of municipalities of the Brazilian South Region, a region of 30,3 million inhabitants (estimate, IBGE, 2021), HDI 0.796 average, as opposed to Brazil 0.778 (PNUD, IPEA 2017). Its GDP is 1.3 trillion (IBGE, 2019). It holds 17.2% of Brazil`s GDP, of which 7.8% is agriculture, 24.8% industry, 67.3% commerce and services. Public sector represents 14,2%, as opposed to 17,4% Brazilian average and 26% in North and Northeast region.

BRDE is wholly government owned, has a USD 3,5 billion loan portfolio, and more than 36 thousand clients. Its mission is to “Promote and lead actions to foster economic and social development in the region, supporting government and private initiatives through long-term technical, institutional and credit support”. It has a highly qualified technical staff of 469 employees, appointed through blind public exams that focus in either financial skills or specialized knowledge, engineers with varied capacities, technology experts, accountants, administrators, economists, and lawyers.

For initial operations, the three states provided equal amounts of capital, and the bank was also using resources from Wheat Agreement, a Brazilian government loan BRDE benefited from. Over the years, BRDE has sided with different public institutions to reach out for competitive resources in a very volatile and unpredictable economic environment, boosting its financing capacity. It was the first financial agent of BNDES (1965) and of FINEP (1965). It has also paired with Caixa Economica Federal (CEF) and Banco do Brasil, as has reached federal budgets from Agriculture and Tourism Ministries.

From 1965 to 1980, the bank`s investment loans grew 65 times, and the industry doubled its participation in the total revenues of the three states (BRDE, 2021). Many today`s relevant industries leveraged their businesses in the 70's through the bank's loans. Leather-footwear, food and beverage, furniture, metal mechanics, agricultural machinery and implements, textile and ceramics sectors, among others, rose in that decade. It also financed relevant industrialization in the agriculture sector, with mechanization and industrial integration.

During the 90's, BRDE financed the states, mainly Rio Grande do Sul and Santa Catarina, on their payroll and investment commitments. Fiscal deterioration resulted in no rollover of securities and cash mismatch that jeopardized the institution. Poor project selection was also affecting balance sheets, accumulating high levels of non-performing loans. The Brazilian Central Bank intervened in 1989 and 1990, and it was under its control until 1992, when it resumed normal operation. States paid debts, strengthening BRDE's financial health (BRDE 2020, 2021). It came out of the crises with a better governance, with credit committees, multilevel collegiate decision-making, and it resumed operations under a smoother scenario of inflation control. It was also during the 90's that BRDE focused on small rural producers and micro and SMEs loans, building partnerships with cooperatives. Credit coops brought capillarity to the bank operations and boosted other cooperatives, mainly on agriculture, that provides integration of small producers to larger companies. Family Agriculture Program (PRONAF) and low carbon agriculture became flagships for the bank.

The 90's also brought other credit strategic goals, and clean and renewable energy generation, as well as energy efficiency, became more relevant. In the last years, projects on waste management, rational use of water came along, and Sustainable Development Goals have come to the core of the bank`s strategic planning. As of 2021, 74% of contracted loans were aligned with at least one SDG (BRDE, 2021).

Due to a strongly regulated and monitored financial system, BRDE has had positive results. On solvency, for instance, it has had very high performance. Basel I risk-adjusted capital rules were introduced in Brazil in 1994, through Resolution 2099, stipulating a solvency rate of at least 8% (ratio of capital to risk-weighted assets). During the Asian crises in 1997, a federal law substituted this resolution and raised it from 8 to 11%. BRDE has kept track, by reaching over 20%, a very high level of capital buffer (BRDE, 2021). MOODYS opinion in 2021 was BCA of ba3 (BNDES is ba2/ ba2 stable, ba21), "stable but concentrated" funding structure, sound capitalization levels10, moderate profitability, steady loan growth, low asset risk and limited susceptibility to political influence due to three-state ownership. It also pointed to low exposure to environmental risk. Fitch's opinion in 2021 is also favorable and stable, (B). It has a non-performing loan rate of 0.58%, compared to 2,54% in the private financial sector and 2,03% in the public financial sector.

Besides loans, it has supported public policy design, and proects improvement and their bankability for both private and public sectors. BRDE staff worked with Sebrae and CNI, providing technical assistance to projects in petrochemical industry, energy technologies, apple production chain, small municipalities looking for energy efficiency, urbanization and sanitation or designing countercyclical in the aftermath of Covid19.

BRDE is also the financial agent for the Sectorial Audiovisual Fund (FSA), a budgetary national fund designed to subsidize film and audiovisual industry in Brazil. There were more than R$ 2 billion of operationalized contracts, totaling 689 in 2019 only (BRDE, 2019) On innovation, the bank works on four fronts: loans for innovation, with subsidized rates and longer term maturity; direct investment in Equility Funds (FIP) that prioritize venture capital; acceleration programs for startups, partnering with local stakeholders as PUC Technological Park and tech associations; grants to programs aligned with innovation and SDGs (Woman on the road, a program for startups led by women, and Dev the Devs, a program for training teenagers with Education and IST secretaries), as it will be detailed later.

5. BRDE GOVERNANCE AND AUTONOMY – SMART FEATURE 2

State-owned businesses have several governance challenges that can be overruled by adopting best practices on regulation and supervision, disclosure of information, and rules for board and management appointment and compensation11. Also, by attracting and retaining qualified staff independent from political cycle, they can shield operational decisions from pressures that would distort the technical analysis of operations. This section focus on BRDE above the minimum regulatory (Moody`s independent assessment, 2021). This is so because a resolution from 2015 stablished the bank must transfer profits into its capital reserves semiannually. Moreover, the bank's bylaws require that the totality of earnings be retained and incorporated into the bank’s capital reserves and not distributed to its owners governance and how it has build a shielded system with technical staff, transparency, appointment method and collegiate multi-level decision-making.

BRDE highest directive body is its Assembly, the Southern Development and Integration Council (CODESUL), made up of the 3 owning governors plus the governor of Mato Grosso do Sul, a bordering state with strong economic synergies but with no capital participation. The assembly review bank`s operation and take major decisions. The governors oversee the executive directors, though in practice this is delegated to the board of administration.

Three levels of governance are in place: the assembly (Codesul), which approves the annual budget and has the power to change statutes; the board of administrators, composed of 6 members, 2 from each owning states, with meetings bi-monthly; the board of executive directors, composed of 6 members (one president and 5 area directors, who are responsible for the different operational areas), also 2 from each state; and the committee system.

The Board of Executive Directors are responsible for approving loans and guarantee proposals, policies, the bank strategy, budget, borrowings, and any other financial matter. The president of the bank (one of the executives) also presides the board of administration, and its chair rotates every 16 months for each state, also causing a rotation in at least one other director position. The bank has three agencies, one in each state capital, and the headquarters sits in Rio Grande do Sul.

The bank is an operational tool for partially implementing the states` strategies, but it features a very high level of autonomy. After the 90’s crises and redesign, it increased transparency and risk-sharing in the decision-making process, building on a system of committees that heavily trust on technical expertise.

Member's appointment. Members of the Board and Executive Directors and President are appointed by the governors but must go through a sound screening process that can take several months. First step for board members and executives is approval by the bank own eligibility committee (COREL), that includes the Law Senior official and the Compliance Senior official, chaired by the president. They go through a career trajectory, formal education background and political independence check list, set up at Federal Law 13.303, 2017, which regulates mandates in state-owned companies, and whose purpose is to improve the quality of leader representation and shield public enterprises from political ascendancy. Second step is the Brazilian Central Bank, responsible for both regulating and supervising the financial system. Development banks follow the same rules as commercial or multiple banks, and all C-level appointees must be screened and approved by Central Bank, that re-examine the technical suitability and political independence of candidates. Executive Directors process follow the same rules, except for Rio Grande do Sul, where there is a third step, prior to the Central Bank analyses – legislative approval of appointed officials after a public hearing at the Finance Committee and the floor, with a simple majority out of 55 votes. It is a political appointment process, but also a sound technical check of skills, education, and level of political exposure.

This institutional design with shared power among the states brings governance hindrances, but also creates opportunities for collaboration and coordination that, otherwise, would not be possible within Brazilian federation lines. It is heterogeneous, as it brings the varying strategic mind-set of the three states and its government priorities, promoting checks to sudden political moves or unwanted political influence. But it also convenes homogenous preferences, as the states have similar socioeconomic profiles – strong agriculture and industry, high HDI, innovation ecosystems, less dependence of the public sector jobs and higher income compared to other regions in Brazil.

The decision process and committee system. The Board of Administration and the Board of Executive Directors have a decision process strongly based on the institutions' committees, and governance is based on professional advice from committees; and the committees' composition is designed to reflect technical, financial, and regulatory aspects. CODESUL established internal rules, based on Constitutive Acts approved by the state legislatures, which defines administrative and organizational structure is determined by Inte (BRDE, 2021).

The board of administration meets every 2 months, and the board of executive directors mandatorily once every two weeks, for deliberating on loans and resolutions concerning the bank`s norms, strategy, or operations. The president has the agenda power to stablish the voting topics. All meetings occur through electronic voting system. Each director tables his/her proposal for resolutions, programs, actions on the respective areas – credit, finance, planning and capital outreach, risk management and so forth. All proposals go through the technical committees or specific areas, and also risk and legal screening. Each vote has thus at least three reports. During meetings, the president calls the respective director, who presents the argument, and then it is debated and voted. Voting is registered and published. The president can also call for informal meetings to debate on different themes - technology change, risks, compliance, finances, human resources, credit, communication strategies e.g. as pre-formal sessions preps.

Besides COREL, that approves future members and monitor corporate governance practices related to the succession, BRDE has other five committees for management: the Management Committee (COGES), responsible for operational and strategic planning and annual operational plan; the Employee Assessment committee (COVAL); Technology Committee (COINT); Permanent Procurement committee (COPEL); and Financial Committee (COFIN), that advises on investments and shareholding.

For the bank core business, credit financial analysis, risk and impact, there are two committees: COGER, a first-line committee at the agency level, that reports with a formal and conclusive opinion on projects and can also approve operations up to USD 300,000; and COCRED, a second-line committee which reviews 1st line operations above the ceiling, on risk, impact, and regulatory binding. It is chaired by the Chief of Credit Operations. No loan is approved by the board of executive directors without the 2-step screening.

On risk management, there is a Risk Committee (CORIS), which advises reports directly to the Board of Administration. It actively manages client, credit, operational, socioenvironmental, capital, market and liquidity risks, establishing exposure limits and suggesting mitigating actions. As BRDE only finances companies and projects that prove their compliance with environmental legislation, CORIS coordinates the Social and Environmental Responsibility Policy Action Plan, a set of policies, guidelines, procedures, and tools for the identification, assessment, mitigation, and monitoring of socioenvironmental risks in the portfolio, and the General Data Protection Plan (BRDE, 2021).

The Audit Committee (COAUD) reports directly to the Board of Administration on financial statements, internal control and risk management. Annually, BRDE goes under independent verification auditing. The Ethics Committee investigates alleged breaches of Code of Conduct and advises the Board of Executive Directors on such matters.

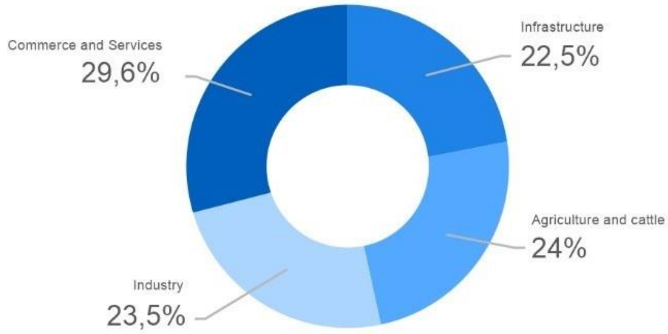
While Central Bank oversees financial and operational performance, on management BRDE is accountable to all three state auditing courts and public ministry institutions, to the national auditing court and federal public ministry, on federal fundings. Federal regulation, Central Bank supervision, state accountability and internal procedures strengthen technical decisions and constrain unproper decision-making.

6. BRDE MISSION-ALIGNMENT AND LOAN PROGRAMS – SMART FEATURE 3

BRDE has a flexible mandate, meaning it does not perform as a specialized bank, but rather operates in several economic sectors (XU, Marodon and Ru, 2021). It has the largest classified loan portfolio in the country, considering the subnational ecosystem, and if we consider the entire national Brazilian system, is second only to the powerful national bank BNDES (BCB, 2022). Its portfolio is distributed among sectors, with 22,5% on infrastructure, 24% on agriculture and cattle, 23,5% on industry and 29, 6% on commerce and services (Figure 1).

The number of operations has increased throughout sectors in 2021 by 61.4%, during the aftermath of Covid19, with a strong increase in the number of micro, small and medium-sized enterprises loans (BRDE, 2021). Commerce and Services, the most affected sectors, had the largest amount allocated.

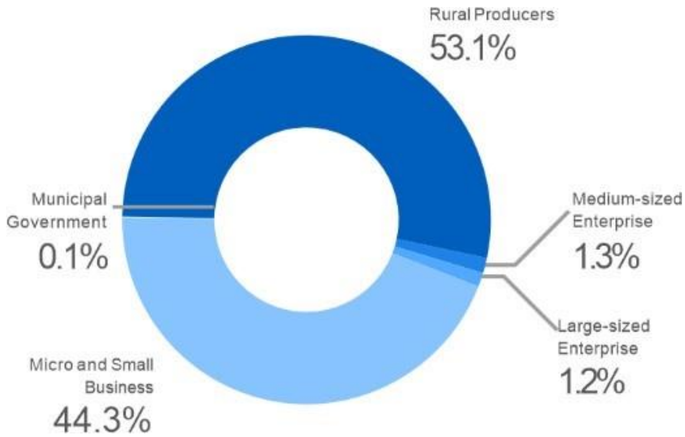
Figure 1 – Loan portfolio by economic sector, 2021



Source: BRDE Report, 2021

Regarding number of loan contracts, 53.1% of them were directed to rural producers and 44.3% to small and medium-sized companies, in 2021. Also, the top twenty largest enterprises in the portfolio are agroindustry cooperatives, where thousands of families join to access markets and credit, as well as achieve efficiency gains of scale (figure 2).

Figure 2 – Number of loan contracts according to business size, 2021 (%)

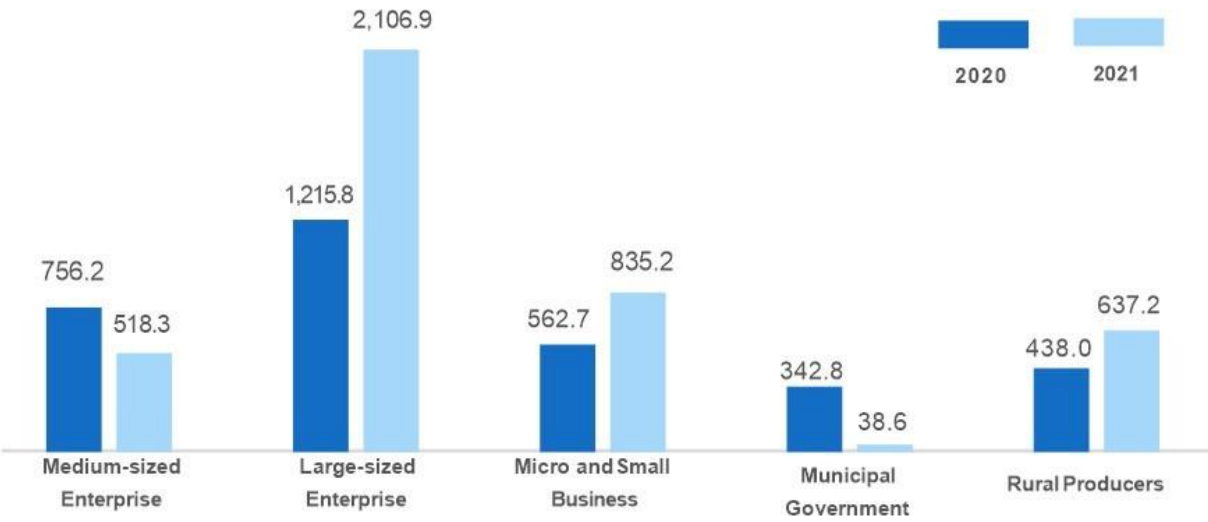


Source: BRDE Report, 2021

If we look at the portfolio from the business size perspective, it shows that 41,6% of contracted volume comes from large enterprises, and MSMEs sum up 36%, rural producers 18% and public sector 5% (Figure 3). This role as a MSMEs financial agent is quite relevant.

IFC`s MSME Finance Gap study has found that 41% of MSMEs in 128 countries are credit-constrained, and 131 million MSMEs in developing countries have unmet financing needs. The finance gap for MSME in developing countries is estimated to be approximately $5 trillion, and the informal sector remains largely unattended, with about $2.9 trillion demand for finance (IFC, 2019). Women-owned businesses comprise 23% of MSMEs and account for 32% of the MSME finance gap.

Figure 3 – Volume of loans by business size, 2021 (billion, REAIS)



Source: BRDE Report, 2021

BRDE operates as 1st tier, directly with the client, and as 2nd tier, through operational agreements with credit cooperatives, productive cooperatives in different sectors, manufacturing banks, industries, and machine re-sellers. Besides credit loans, it also works with project finance and technical assistance for public and private sector. For the latter purpose, it partners with local and regional business associations, like Sebrae (national organization for small and medium enterprises), looking for increasing projects’ bankability.

In the next sections, we will discuss how it has worked countercyclically during Covid19, as well as how it performed a programs and lines revision to align with Sustainable Development Goals and hence accelerate provision of public goods.

6.1. Acting countercyclical – recover sourth, zero interest rates and creative economy programs

Recover South. In 2015 and 2016, Brazil experienced its largest economic recession in history, accumulating 7,2% of GDP fall in two years. When Covid19 hit, Brazil was still 2,4% below of 2014 level (Souza Jr. and Giambiagi, 2021). BRDE had started in 2019 a plan to boost recovery but sped that up during pandemic. It designed a countercyclical package for which it won the 17th Banking Transformation Summit prize on Credit Innovation among 231 rival projects. It included indirect operations for microcredit, direct and indirect for MSMEs and individual entrepreneurs (MEI). Credit cooperatives and social organizations partnerships were essential to give greater outreach and capillarity to the program. R$ 518.9 million (2020) came from own resources, and BRDE technical staff created a "fast track" mechanism to simplify credit analysis, approval and contracting. Credit operations reached 1,612 businesses in 2020, 92% of that year clients, predominantly micro and small businesses, main sectors being manufacturing industry (36%), commerce (22.5%), restaurants and accommodation (7%). A creative economy pilot line in Rio Grande do Sul was created to target economic sectors massively impacted by Covid19. There was technical assistance associated to the program, as many MSMEs were in the informal sector. The bank also used the national Guarantee Fund for Investment (FGI) with more flexibility, approved payment deferrals for clients up to 18 months, and adhered to deferrals from partner institutions. New regulation and procedures were in place to facilitate access to these extensions. 2,513 extension contracts were signed, a total of R$ 3,200 million (BRDE, 2020).

Zero Interest rate programs. After Recover South, which used own resources and offered market interest rates, two out of the three owning states have pushed the bank to implement zero interest rate programs, designed with the support of bank legal and financial technical staff. BRDE was also he financial agent responsible for analyzing, approving, contracting and disbursing. Governments would pay back the interest rates to businesses and individuals who paid on time and did not fire employees. Grace periods were up to one year and loans had three-years maturity. In Santa Catarina, the program reached about 6 thousand businesses and individuals in 217 municipalities (2020), 4,000 of which to individual businesses (MEI) with average ticket of BRL 8 thousand reais. Rio Grande do Sul put in place a similar program in 2022, and reached 5.591 contracts, of which 1.569 individuals, average ticket 9,865 reais; 2,807 contracts for microbusinesses, average ticket 26.856 reais; 1.215 contracts and average tickets of 65,803 reais for small businesses. This was a government strategy to leverage resources, as they paid for interests while the funding was the bank's own or from funds and partners (BNDES, Fungetur and CAF).

6.2. Positive externalities – gender, energy, sanitation and forest projects

Gender lens. According to IaDB, there are between 1.2 and 1.4 million micro, small, and medium-sized enterprises (MSMEs) in Latin America owned by women, 40% of the total. However, female business owners face higher barriers to accessing financing and often obtain less attractive conditions (IDB Invest, 2019). The credit gap is significant, at US$5 billion for women-owned micro businesses and US$93 billion for women-led small and medium-sized enterprises (SMEs). Women are not receiving sufficient debt or equity financing.

The BRDE launched, in March 2020, the *Empreendedoras do Sul Program (Women Entrepreneurs from the South)*, whose purpose was to improve finance inclusion and the business environment, generating more equality for job and income generation. The program could benefit rural producers and businesswomen from any economic sector. With basically one year on, the initiative has met BRL 198 million (around USD 40 million) in financing 426 small entrepreneurs. Under the same program umbrella, they signed a 2nd tier operation with a Civil Society Organization targeting microcredit, reaching over 100 contracts and the average loan of BRL 7 thousand per client (USD 1,400).

Gender-oriented credit has had positive reputational return and was relevant for funding contracts with international partners and multilateral banks aligned with the same agenda. The French Agency for Development (AFD) has recently signed a EUR 100 million contract to fund SDGs projects, especially on energy, but also with social impact, as these gender-oriented loans.

Renewable energy and energy efficiency. To meet decarbonization and climate mitigation goals stablished in the Paris Agreement, renewable energy must be scaled up at least six times faster. Investments should be around US$ 120 trillion between 2015 and 2050 in low-carbon technologies (Xu and Gallagher, 2022). BRDE has actively worked as incubator for renewable energies, with 15% of renewable energy and energy efficiency in the portfolio.

National and international financial partners recognize the bank expertise with hydro, wind, and solar projects. BRDE supported approximately BRL 500 million in projects adhering to SDG 13 in 2021, on adaptation and mitigation, such as irrigation, dams construction, solar, micro and small hydro plants, forests, natural parks and reserves, among others. In 2021, the Bank launched its formal program to outreach sustainable energy, with a goal of reaching R$ 5 billion in 5 years, incrementing by 70% its ratio.

Most projects concentrate on micro and small hydropower plants, ranging up to 1MW, the so-called Hydroeletric Generating Plants (CGH), and from 1 to 30 MW, the Small Hydroelectric Plants (PCH). One example is cooperative (COPREL) PCH Tio Hugo, of 10.1 MW, a BRL 88 million project BRDE financed 90%, and that has already sold (at auction) the energy to be generated on or after 2024. COPREL is a cooperative operating in 72 municipalities, providing service for more than 50 thousand families. Another energy plant is CGH Barra da Europa, 4.60 MW, with BRL 40 million investment, 50% financed by BRDE. In 2021, BRDE financed BRL 335 million for energy generation from hydric sources, which will supply an additional 84.2 MW to the national electricity system (BRDE, 2021).

On wind finance, an example is Wind Farms of Osório, built in 2007, which was the largest active wind farm in the South Hemisphere and the first in Latin America to use large unit power turbines with 150 megawatts (MW) at that time. A big project in 2013 financed another record-breaking wind project, Geribatu Wind Complex, with a capacity of 258 MW, then the largest wind energy system in Latin America. It has also supported smaller-scale wind projects, like Água Doce, 15 wind turbines with the potential to generate 9 MW of energy.

Energy from waste projects, highly innovative and beneficial for the environment, have been financed, such as Lages Bioenergética, through wood waste, or projects on rice husk energy: a Thermoelectric Plant with 3.8 MW capacity (Alegrete), that removes 45 thousand tons of carbon and uses the ashes for recovering of degraded soils, and another with 8 MW (São Sepé).

Solar energy finance ranges from rural producers to larger plants. It financed a large photovoltaic energy generation plant project of Cataratas Thermas & Resort, in Foz do Iguaçu, producing 100% of the energy consumed; but also acquisition of equipment for the generation of photovoltaic energy aiming at electrical self-sufficiency in small rural properties, addressing the issues of adaptation and mitigation of climate effects.

Energy cooperatives have also worked in the Telecom sector, taking advantage of existing infrastructure. COPREL has more than 13 loans on projects for providing optics fiber and data processing access to remote locations where larger operators have not been investing, from 2010 to 2019. These investments were extremely relevant during the pandemic, in 2020 and 2021, as schools were losed, and their service allowed students to attend virtual classes – an unanticipated benefit from the operations.

Sanitation and waste management. Urban infrastructure is key to development, such as safe drinking water, sanitation, urban facilities. BRDE has supported projects like Sanitary Sewage System in Joinville, through its local water company, benefiting 27 thousand people. Another urban-focused project is Viamão, a 256 thousand population city, BRL 15.1 million to improve urban mobility and accessibility, through paving and drainage of 28 urban residential and commercial roads, several in the municipal public transport route. Another project was with CS BIOENERGIA S/A, a biodigestor project using sewage and organic waste, associated to energy generation and fertilizers production. It was implemented in the Sewage Treatment Station Belém. Biogas production is used for energy purposes, and the remaining waste used for fertilizers (BRDE, 2019).

Forests. BRDE finances exploitation of commercial forests and natural parks and reserves, among others. One example is the Tanagro project, that finances reconstitution of commercial forests with international certifications, an investment of BRL 56.5 million on black acacia forests, a native species, in a region with low economic development. TANAC, a company of the same group focused on the industrial processing of acacia bark, offers qualification to producers in the region to meet international best practices.

6.3. Still on public goods – the innovation front

BRDE is acting in four fronts on innovation:

Credit. BRDE has operated with FINEP funding since the 60s, when there were very few institutions financing innovation. The fund has halted transferences for some time, but in 2013 it returned funding innovative projects through financial intermediaries. BRDE has financed 276 projects, totaling BRL 607.9 million (USD 120 million), leading the national FINEP ranking. Some interesting examples of projects are on the food sector (the development of a new oat product to 9 months to 6- year-old children), green technologies (a sanitation industry project for eletric- oxidation and electric-floculation), and a software incrementing the amount of information available on dams control (BRDE, 2019).

Investment on Equity Investment Funds (FIP). BRDE's subscribed capital at national equity funds supports enterprises headquartered in the South Region up to 2.50% of its Net Equity (PL). Currently, BRDE is a shareholder of FIPs Criatec 3, designed to innovative and scalable micro and small tech companies; FIP Anjo, for start partnering with angel investors or accelerators; and TM3 Capital VC4, a venture for medium-sized tech businesses. In 2021, a fourth seed capital fund has been designed, aimed at scalable, technology-based companies with gross yearly revenues ceiling of BRL16 million (USD 3 million).

Startups acceleration programs. BRDE Labs Program supports health, information technology, agribusiness, IoT and 4.0 Industry sectors, and builds a network with governments, universities, and industries. Anchor companies launch challenges for the startups. Specialized mentorships and workshops are run on growth in sales, financial modeling, people, technology, and other strategic topics. It may also focus on management and structuring of companies, to leverage future resources and partnerships.

Non-reimbursable grants. The bank may eventually sponsor programs aligned with innovation and SDGs. Some examples were "Woman on the road", a program for women-led startups, and "Dev the Devs", a pilot program for training one thousand secondary students as developers, coordinated by Tecnopuc Tech Park, in partnership with Education and Science and Technology state departments and tech local associations. The first-year program was successful and for the second year, the Bank for Latin America – CAF has also contributed with a grant of USD 100,000 to expand the program to almost 3,000 students.

7. BRDE FUNDING – THE ROAD TO FINANTIAL SUSTAINABILITY – CHALLENGE #1

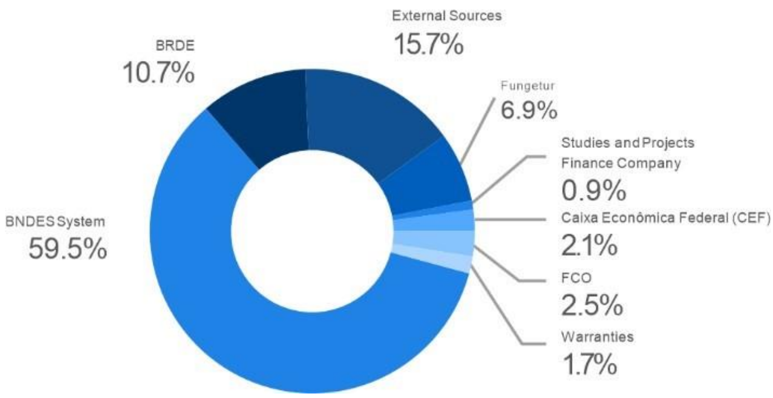
Development demands an adequate supply of long-term funds in local currency, especially in early stages of industrialization and if private funding is scarce or expensive. If available, these funds will turn financial institutions more inclined to grant loans with lower interest rates or better terms than they would normally offer to specific sectors, e.g. low-income family farmers, small and medium enterprises, or exporters of high domestic content goods (Torres and Zeidan, 2016). That is a huge challenge for development banks. Having a sound and diversified funding structure is key to the success of the financial institution in the long term, because make it less dependable to government cycles and priorities changes that are outside its reach or governance. Also, it gives the bank more flexibility to work with the credit conditions – interest rates, maturity etc – than if depending on one only partner. Moody`s assessment has pointed to funding sources diversification as possible positive upward pressure in BRDE`s grading, particularly if the funding is lower cost and stable Historically, BRDE has depended on federal public resources, especially BNDES, and budget funds. It was thus basically a financial agent to larger banks or funds, and its dependence reached over 95%. In 2017, BNDES funding represented 94% of resources (Moody`s, 2021). In recent years, BRDE has diversified its funding using two avenues. Firstly, through contracts with international development banks or agencies. Since 2018, it has signed no-sovereign operations contracts with CAF (Latin American Development Bank, Aa3), EIB (European Investment Bank, Aaa, stable) and AFD (Agence Francaise pour le Development)15. It has also been negotiating with Interamerican Development Bank (IaDB), World Bank and New Development Bank (NDB) sovereign operations (and counter guarantees from the states` governments) for resilient cities, infrastructure, SMEs, and SDGs-oriented projects. Second avenue is using own resources, reducing its liquidity buffer over 20%.

Though BNDES is still the main partner, it dropped to 59.5% of resources in 2021, and funding structure has become more diversified, having 15.7% from international funding, compared to 2% in 2018, and growing in relevance,10.7% from own resources, 6,9% of a federal fund for tourism activities, FUNGETUR, boosted in 2020 and 2021 to support businesses affected by Covid19, 5.5% from other federal funds. Guarantees represent only 1.7%, showing there is a large margin for growth (Figure 4). The international diversification strategy has been important not only for credit, but also because it is binding to the SDG agenda, directing resources to SMEs, energy, gender and other social or environmental impact-oriented projects.

Central Bank regulation does not allow development banks to take deposits from individuals and companies, which strains its possibilities. As a pilot project, BRDE issued three tranches of Bank Receipt Deposits (RDB), raising BRL 30 million, and it has been preparing possibly green or sustainable bonds. Nevertheless, that will depend on technical capacity and digitization.

The way to autonomy is not steady enough. North, Northeast, and Mid-West regions have funds to propel development (FNO, FNE and FCO, respectively), since 70s (Bechelaine, 2022). Other banks without these tools struggle to meet demands of local economic agents, especially in a country of very high interest rates and economic volatility.16 Co-financing arrangements with other banks are a possibility to explore complementarities in the financial sector, but BRDE has built syndicate operations with public banks only.

Figure 4 – BRDE funding sources, 2021



Source: BRDE Report, 2021.

Besides diversification, other challenges on funding are the adequate funding costs, which may or may not curb investments; international operations on foreign currencies, which transfer risk to the agency/ bank or the client; the demand for sovereign guarantees from international institutions, which then would involve Ministries of Finance and the Senate, in the Brazilian case, for authorizing the contract. This is time-consuming and creates needles steps out of governance from the smaller institutions.

8. OTHER CHALLENGES AHEAD

There are several hurdles for improving development bank's role in supporting recovery and incrementing credit provision, and they may vary according to the Banks's scale, region, size, ownership. This section lists three challenges "small" Central Bank site, November 8th 2022, institutions operating may face: a. de-risking instruments; b. external factors, such as macroeconomic environment and government policy changes; c. technical assistance.

Indeed, the International Finance Corporation survey (World Bank Group with UKAID, 2019) to understand banking challenges to SMEs identified the main pain point as credit risk (52% of responses). External factors such as macroeconomic environment and government policy changes (35% of responses) follows, as they steer asset and profitability risks, also curbing financial innovation.

#1 De-risking operations. BRDE follow Basel and other regulatory frameworks, and holds a regular risk management model. It has a low asset risk (non-performing loans are low), but partly for its concentrated portfolio on agriculture and cooperatives. If the bank broadens loans towards MSMEs – which is reasonable, as capital markets are not a realistic option for them, and this is a sector in much demand - de-risking operations become more and more relevant. Development institutions are frequently gridlocked in the dilemma of incurring in higher risk and incrementing non-performing loans or denying credit to innovative firms and not filling the credit gap. This is true specially for MSMEs. Though being the backbone of economy, they face constraints in accessing cheap finance for asymmetric information problems between suppliers and users of funds. Therefore, more collateral requirements and higher lending interest rates are always in place, which is an obstacle to their growth. They have low financial literacy and end up facing tight credit conditions, stringent collateral requirements (many times due to national or international regulation), lengthy and complex procedures. Development banks are supposed to develop credit-rating strategies, credit guarantee schemes to address the collateral issue and credit information infrastructure to solve the information asymmetry problem. Barriers have been documented all over the world, from Latin America to Asia. MSMEs should be involved in the policy process, funding agencies should improve transparency and their operation models, and introduce non-credit option or alternative financing such as leasing, factoring and private equity (Yoshino and Taghizadeh- Hesary, 2019). Banks can also benefit from differentiating and segmenting client base (by sector, turnover, herds etc). That can help to understand sector`s unique needs and help improve efficiency, risk management and define the strategic sectors more adherent to the institution vision, allowing for investments on the more critical value chains (IFC, 2019).

Implementing literacy strategies is also relevant and related to challenge #3, technical assistance. Globally, many businesses do not have formal record keeping processes, as financial accounts and audited financial statements. Much of the SME market is informal, not banked, which prevents financial institutions from using electronic data to assess cash flows. Because their loans are of small size, it raises costs for banks, as loan origination and assessment costs are fixed, and they compete with more structured and larger ones. BRDE has solved this problem partially using finance cooperatives as outsourcing partners, with coops providing assessment and guarantees. Nevertheless, this strategy has two problems: loan cost raises, as these institutions work with riskier operations; and again, the systemic low access + expensive credit problem remains – one can trust in partners to take the risk and incorporate costs, but still the final cost will be expensive because of the risks associated to informality and precarious conditions. BRDE has operated directly on tickets over R$ 50 thousand (10 thousand USD), lowering its direct operation threshold, but there are limits on staff capacity to absorb a larger demand. In a country as large as Brazil, where 60% of the economy is informal, it is relevant to develop de-risking instruments, procedures, and institutions in a coordinated way.

#2 Economic and Political Environment. IFC survey also showed that external environment is a major concern for 35 percent of respondents. Particularly in Latin American, South Asia, Eastern Europe and Central Asia regions, banks have experienced political, social or economic instability in recent years, some for longer periods. That has a relevant impact in contraction of consumer markets, limits expansion of businesses and reduces public and private investments. During uncertain times, especially for SMEs, it is hard to raise equity as liquidity goes down, high interest rates are prohibitive and currency devaluation significantly affects some sector competitiveness, due to the cost of imported inputs. Respondents also described how poor macroeconomic conditions contributed to lower investment, lower growth and formalization of companies, and increased default and late payment (IFC, 2019).

This is not strange to BRDE – every time interest rates went down, funding supply was insufficient to meet demand. As the curve reverse, loans from all economic sectors that had been originated and assessed, sometimes even approved, were on hold for the thigh interest rates.

#3 Technical capacity. This a key aspect to reduce risks and improve the quality of projects, both on their financial and technical side. KFW is a good example. They have financial expertise – knowledge of financial markets, risk assessment, bond issuance, financial securitization - and engineers and specialists in sectors like agriculture, energy transport, water, natural resources, civil engineering. That is promotes deeper understanding of sectors and related markets not only to identify imperfections, but to anticipate consequences of interventions. That increases likelihood of success in projects from a socioeconomic and commercial perspective. It also helps governments to pursue public policies, designing, sharing information, and implementing them. With an adequate staff, banks can provide recommendations for the best strategy, policy design or assessments. It can also signal that the demand is too strenuous or not viable, establishing new processes and parameters (Moslener, Thiemann and Volberding, 2018). This is connected to challenge #2, de-risking. Indeed, many businesses have a lack of financial skills and literacy. As public institutions, development banks and DFIs can work for firms' capacity building, and develop significant technical capacity aligned to the SDG agenda, be it identifying, pursuing sustainable projects, or creating a taxonomy to classify existing credit portfolios.

Besides human skills, the intense use of technology can have significant impact on processes, making them more efficient for the bank. The combination of going digital in the delivery side plus use of data analytics and external databases to inform decision can speed up processes, identify weaknesses and help correct asymmetric information, incrementing the credit volume.

With the pandemic Covid19, BRDE had to speed up its digital transformation – becoming more transparent, manageable, and capable of reaching isolated areas, with more reliable and accurate data. It developed strategic and executive plans and increasing the investment: investment volume in 2021 was three times what was invested in 2018.

BRDE has a high-quality technical staff that explains part of the success story of the bank. That differs from a big part of the ecosystem, which still struggles with lack of human capacities in several areas (Finance in Common, 2021; Alliance, 2021). On the dark side, bureaucracies can also build their own agendas, resist change, and capture the institution`s mission. Because loan development impacts are hard to assess, and defaults are easy and employees can be punished for non-performed loans – they end up risk averse, maximizing its financial health – a feature to watch out (Fernández-Arias, Hausmann & Panizza, 2020).

9. FINAL REMARKS

The purpose of this briefing was to describe the functioning of a small bank in an emerging economy, its strengthens and challenges. By doing so, we can extrapolate relevant features to either nascent development finance institutions or those looking for efficiency-geared reforms. We have in mind the possibility of diffusion processes.

We also contribute to a more prescriptive debate on what framework development banks and development financial institutions should have. We depart from "smart" development bank concept, based on its capacity to identify both market and government failures, due to a privileged position in working with both as part of its daily business. Smart banks would be operational agents, but mainly institutions capable of working in the real market gaps and, at the same time, support and design policies to leverage development (Fernandez- Arias, Hausman and Panizza, 2020). We add up debating the micro level, that is, features smart banks should build up to perform this role, matching them with the case study of BRDE's.

Smart banks are in our vision banks that hold at the same time vision and mission clarity and programs alignment, flexibility to adjust to the economic and social reality, sound financial results, robust governance attributes and autonomy - a multi-level professional and collegiate governance that increases costs both for political undue pressure and bad credit decisions. Funding and technical capacity are critical.

We described some of the smart features of BRDE – its good results and adaptation capacity not only in the 90s, but also in recession times and covid19 pandemic. It has adhered to SDG agenda; its governance and autonomy, with little if any undue political influence; and mission-alignment displayed in the loan programs. Some of the challenges are also lined up and have commonalities with many other development banks and financial institutions: proper funding, risk management, economic and political volatile environment. Technical staff is not a challenge for BRDE itself, more of a strength, but can be for many other sister.

It is quite relevant to light up governance aspects, as faulty issues may lead to the institutions' discredit. Governance failures can deeply harm many other aspects of performance, related to the loan quality (politically biased choice of projects, low quality analysis of beneficiaries), operational aspects (high operational cost, ineffective debt collection, too slow

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credit processes, breaches in cybersecurity) or reputational. And this can jeopardize the discussion on the positive effects of such institutions on promoting public goods.

Not all challenges were raised, though. They can include a lack of good project pipelines and of cooperation with other international or national development banks; finding and selecting financial intermediaries for more capillarity; social risks associated to data security and customer privacy, generating reputational damage. Others top concerns listed are digitization, capacity building and funding.

A frequently additional challenge is regulatory framework. In many countries, it is the same for public or commercial institutions, and it may also compromise the capabilities to accomplish the development mission, even when providing financial stability and avoiding political intervention. (Gottschalk et al., 2022). The argument goes that development mandates includes financing complex projects and innovation, often long term, with their above-average risk, and Basel has results-driven bias. The other point is that most DBs don't potential for systemic crises, depending largely on budgets, but some investment banks and large NDBs to have. The question is which ones would deserve special, tailored regulatory framework. Basel is not compulsory and there is ample discretion in implementation, but certainly incentives for convergence. An alternative would be standards that consider forms of ownership, funding structure, business model and strategic role (Xu and Gallagher, 2022; De Castro, 2018)

Given the underdevelopment of financial markets in many parts of the world, the replication of development banks, even with the possibility of crony capitalism and potential crowding out effects, has been advocated. But these regions need investments, and it is necessary to funnel long-term credit into local markets to infrastructure and other public goods projects, while absorbing part of their risk and being capable of dealing with international institutions. Development banks might not be the best and final solution whatsoever, but it can build up capabilities and be a phase of a country`s transition to better market and institutions (ZEIDAN, 2016).

On subnational banks and institutions, it is reinforceable that their capillarity and knowledge of local context and markets is quite useful. They provide financial instruments to broaden financing to local and microregional levels directly or through commercial banks and cooperatives, scaling up investment through private resources or partnerships with development financial institutions, many times with the advantage of local currency. How can they perform better. The exercise here was a simple one – to describe and leave to practitioners the possibilities for change.

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