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HISTORICAL FACTS AND FUTURE PERSPECTIVES ON THE UNIVERSALIZATION FUND OF TELECOMMUNICATIONS SERVICES IN BRAZIL: FINANCING, GOVERNANCE, AND ALLOCATION.

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Abstract

The Fund for the Universalization of Telecommunication Services (FUST) was set to promote the universalization of fixed telephony services in Brazil in the post-privatization years. This study aims to provide a detailed review of the current debate on FUST and the legislative guidelines towards its modernization. It makes special reference to the governance, funding, and resource allocation, in accordance with the best practices in other countries. In addition to the historical records, it introduces a renewed perspective on the concept of universalization in the telecommunications sector, oriented to the densification of coverage and the expansion of the installed capacity of the infrastructure, coherent with the current demand for data services.

Keywords: Telecommunications; Universalization; Fund.

1. INTRODUCTION.

The Universalization Fund for Telecommunications Services (FUST) was established by Law with the aim of allocating public resources to the fixed telephony services. As its original concept, the fund would provide availability, accessibility, and reasonable tariffs for fixed telephony services, in unattended regions with lower economic attractiveness.

Despite the US$ 4,5 billion cumulated amount since 2001, its effectiveness was compromised, on the one hand, by the technological obsolescence of the fixed telephony service vis-à-vis the modern data solutions. On the other hand, due to a public accounting architecture that grants the tax authority the competence to allocate FUST resources for other purposes.

In these circumstances, there were several legislative initiatives aimed at updating the FUST legal framework. A review of the main legislative initiatives and a structured analysis of the new legal framework inaugurated with the enactment of Law 14.109/2020 (Brazil, 2020), called the new FUST Law, are the main objectives of this study.

Thus, this is a prospective nature paper, which addresses elements of governance, financing, and allocation of the FUST resources and has as its context the current debate on its legal modernization. It comprises management elements, focusing on the best governance practices and the efficiency universalization resources allocation.

The study makes a historical review of the FUST, from its conception to the recent edition of the new FUST law. References are presented on the Fund's potential to leverage broadband infrastructure in areas of the so-called access gap and in activities with recognized social,

economic, and environmental impact. It is, therefore, a detailed historical report, essential for understanding its limitations and potentialities in the context of low investment liquidity in the sector.

In addition to this brief introduction, the study is divided into 4 sections. The following section addresses the origins and destinations of universalization resources in the sector. This is a historical approach that culminates in the ongoing legal review initiatives, examined in section 3. Next, the authors introduce some references on the themes of governance, financing, and allocation of FUST resources accordingly to the new legal framework.

2. FUST – CONCEPTS AND REFERENCES.

The underlying structure of public funds dedicated to a specific purpose has at its genesis the purpose of assuring greater freedom to the public manager to encourage the dynamic use of resources to meet public policies. The fund model, as it is known in Brazil, was designed in the 1960s when public management innovations were proposed in order to ensure more efficient and dynamic use of public resources (Bassi, 2019).

With the enactment of the Federal Constitution of 1988, the mandatory specification of the Funds in the Annual Budget Law (LOA) and the prohibition of binding tax revenues became effective (Bassi, 2019). It would be up to the complementary laws to define the structure of the Funds and their operating rules.

While the Complementary Law was not made available, Law 4,320/1964 served as a guideline for the control, destination, and management of Special Funds (Nunes, 2014). Such designation sustained that the funds were constituted as the product of specific revenues, linked to the accomplishment of certain objectives or services, being allowed the adoption of specific application rules. Furthermore, its terms define the application of budget revenues linked to special funds subject to the allocation set out in the Budget Law or in additional credits commitments, as well as establishing guidelines for control and accountability, for example.

The Decree-Law 200/1967 (Brasil, 1967), which established the guidelines for public sector reform, ensured administrative and financial autonomy to the so-called autonomous bodies, operated through these funds. This Decree-Law, latter complemented by Decree 93.872/1986 (Brasil, 1986), was also concerned with defining the limits of the accounting nature of funds by segmenting them into two categories - accounting and financial (Reis, 2004).

The special accounting-based funds are budgetary dependent accounts, focused on the execution of government programs, through direct administration, and subject to the public budget rites of commitment, settlement, and payment (Costa, 2011). As highlighted by Reis (2008), within this category, the transfer of balances or the accumulation of the financial surplus occurs through additional credits, which makes the process dependent on legislative authorization, according to art. 167, V, of the 1988 Constitution. The FUST has the nature of a special accounting fund and will be explored in more detail in the following section.

In turn, the special financial funds, according to the systematization proposed by Bassi (2019), are allocated to official credit institutions. These classes of funds define that disbursements return to the loan portfolio through the payment of interest and principal (Sella and Arruda,

1996; Sanches, 2002). Bassi (2019) emphasizes that, although managed by an official credit institution, they remain linked to direct administration.

The use of special financial funds follows an operational logic, consistent with banking practices, and independent of the public budget rite (Bassi, 2019). To do so, it requires risk analysis, the definition of guarantees, in addition to the typical commissions for banking operations.

In common, the fund categories share the National Treasury's cash as a source of funds. This aspect goes back to the principle of the treasury unit, defined in Law 4,320/1964, as explained by Nunes (2014).

2.1. The Fund for Universalization of Telecommunications Services (FUST)

The guidelines for the creation of a sectorial universalization fund were defined under the terms of Law 9,472/1997 (General Telecommunications Law - LGT). This legal framework established the obligation to universalize the telecommunications service provided under the public regime and then to attend society's legitimate demand for universal fixed telephony in Brazil.

Later, the FUST was the object of a specific Law, Law 9,998/2000 (FUST Law), which defined it in the category of Special Accounting Fund. The FUST Law defined the fund sources, its destination and thegovernance aspects. The Ministry of Communications was given the power to formulate policies, general guidelines, and priorities for the allocation of resources while the

sector regulator (ANATEL) was responsible for implementing, monitoring, and inspecting the resulting projects financed by the Fund.

The FUST Law also stated the recognition by the legislator that it would be up to the State power, in the liberalized environment that was inaugurated with the privatization of the sector, to preserve the sustainability of the recently privatized sector and to provide conditions for the financing of service avilability in those locations with lower stock of infrastructure and lack of economic requirements necessary to justify the economic viability of telecommunications services. Therefore, the universalization fund emerged as an attempt to reconcile the principles of public policy and market economy (Gómez Barroso, 2005).

This position confirms the objective of the universalization fund and the recognition, at the principle level, that the private operator orients its investments towards more populous regions (Grubesic, 2004) and with higher per capita income (Strover, 2003). The question of economic viability is thus manifested as a fundamental frontier between private universalization actions and those that, in order to occur, require the allocation of specific resources.

The FUST Law also specified its funding sources. It covers the appropriations designated in the Union's annual budget law and its additional credits, the public prices charged by ANATEL, a contribution equivalent to 1% of the gross operating revenue arising from the provision of telecommunications services, donations, and transfers from another fund, the Fund of Telecommunications Inspection (FISTEL), in the order of 50% of the total collected, respecting the annual ceiling of R$ 700 million.

Individually, the resources derived from a percentage of the gross operating revenue of companies providing telecommunications services are the ones that have the greatest representation in the composition of the Fund. By its turn the FISTEL has a historical average annual contribution of 42% of the total (Anatel, 2020).

Despite the financing architecture expressed in the legislation, the effective use of the Fund proved to be frustrated over time. Data from the Federal Court of Accounts - TCU (TCU, 2017), indicate that more than 84% of the total resources of the FUST were used between 2001 and 2016 for purposes alternative to the universalization of telecommunications services. Untyings for the purpose of complying with provisional measures lead to the allocation of the resource (TCU, 2017).

As for the portion of resources effectively used for the universalization of telecommunications services, it corresponds to less than 0,002% of the total FUST resources (TCU, 2017). The reasons for this configuration are discussed in detail in the TCU Report, prepared in response to the National Congress's Request (TCU, 2017). In summary, the Court's diagnosis points out that the untying of federal government revenues began to impact FUST collection as a result of Constitutional Amendment 42/2003 (Brazil, 2003), whose effects authorized the untying of 25% of resources from contributions from intervention in the economic domain.

This Constitutional Amendment, which introduced changes to the National Tax System, included guidelines for constitutional transfers to federal entities in the Constitution. Under the terms of the TCU Report (2017), such authorization triggered the untying of part of the FUST revenues at the time of collection, assuming, since its entry into the Treasury coffers, the

classification by source of Ordinary Resources. This percentage, originally 25%, was later set at 30% by Constitutional Amendment No. 93/2016 (Brasil, 2016).

The cited references highlight the weight of accounting guidelines for the underutilization of FUST in its main purposes. On the contrary, they subsidized the use of the resource for different purposes that, despite being aligned with the public interest, do not correspond with the purpose of universalizing telecommunications.

Another relevant aspect thet lead to the underutilization of the resource concerns the technological obsolescence of fixed telephony in the early years of the post-privatization period. Specifically, the FUST Law circumscribed the application of resources to initiatives contemplated in the General Plan of Universalization Goals – PGMU, whose terms are linked and limited to the object of the fixed switched telephone service concession contract (Brasil, 1998). Such delimitation reflects the main demand of society at the time of privatization, in the late 1990s when fixed telephony was an object of maximum social interest.

2.2. Alternative actions aimed at universalization

To complete this historical report, it is worth clarifying that, in the absence of a usefull FUST, the sector regulator, the policy maker, and the legislator established alternative strategies to meet the universalization goals. Thus, there were over the time initiatives to improve the conditions of access to telecommunications services in rural, peripheral, and remote regions.

The main highlight is attributed to the coverage obligations, referred to in clauses of the radiofrequency notices conducted by the sectoral regulator. This procedure, which innovated

when composing the pricing of radiofrequency out of the combination of payment and coverage obligations, allowed the service expansion and infrastructure densification in the country. Such strategy proved to be effective for the access universalization of mobile services in 3G and, later, 4G technologies (Paz Filho, 2009).

The success of this policy motivated its inclusion in the current debate that precedes the 5G radiofrequency allocation strategy (ANATEL, 2020a). Public documents on the subject indicate that the regulator has guided its actions to compose a hybrid model that combines coverage commitments in Brazilian locations that currently do not offer mobile services through this technology, the densification of mobile coverage in at least 95% of the urban area of the most population desnity areas of Brazilian municipalities under 30,000 inhabitants, the expansion of fiber optic data transport infrastructure, road coverage, among others (Aquino Neto, 2019; ANATEL, 2020a).

Also in line with the actions aimed at expanding the coverage of services, the sector regulator established initiatives for commuting pecuniary sanctions by structural investment (Silva, 2017; Fonseca, 2019). The terms of adjustment of conduct (TAC) and sanctions of obligation to do, aimed at mandatory investment in regions of low economic attractiveness (Freitas et al., 2019) are some examples of these initiatives. These innovations allowed the regulator to modernize its approach to the sector and create incentives to expand the availability of services in regions with low economic activity and a unavaibale or outdated infrastructure.

The TAC was instituted within the scope of the sectorial regulator in 2013 (ANATEL, 2013). The initiative was a pioneering attempt to address alternative sanctioning mechanisms in administrative proceedings (Freitas et al., 2016), in line with best practices carried out by

foreign agencies (Bruce et al., 2004). It has a negotiating-based approach and aims to reduce litigation costs while correcting conduct. In turn, obligation-to-do sanctions is a non-negotiated sanction, applied as an alternative to a fine, and oriented towards the provision of infrastructure, expansion of its capacity, provision of services (Freitas et al., 2019).

On the part of the legislator, there is evidence of the existence of projects aimed at providing infrastructure in regions of less economic attractiveness, with the purposes of universalization. Provisions in this regard include, for example, the Senate Bill 349/2018 (BRASIL, 2018) which proposes the rationalization of regulatory fees in order to promote the diffusion of broadband services via satellite. This measure is identified as potential enabling accessibility in rural, remote, and outskirts of urban areas (Freitas et al., 2017).

On the part of public policymakers, initiatives to expand access, with the public budget, stand out. Included in this scope are the Electronic Government – Citizen Assistance Service (GSAC) program, with the objective of promoting digital inclusion through a satellite network platform (Neto, 2009), and the Connected Amazon project whose terms provide for the availability of broadband to locations in the Amazon region.

These actions reveal how necessary universalization actions remains necessary in Brazil. This recognition justifies the need to update the legal framework and, in the case of the FUST Law, the scope of its application, in order to allow an effective expansion of broadband penetration in regions with notable economic inequality and unavailability of infrastructure.

3. SCENARIOS FOR LEGAL REFORM OF FUST.

Prior to the approval of Law 14.109/2020, the Brazilian National Congress had at least twenty bills aimed at revising the Fund for Universalization of Telecommunications Services (FUST). In common, the intention of parliamentarians is to modernize the scope of the Fund, in order to ensure its effective use, stands out.

With regard to the fundamental aspects, it is worth emphasizing the importance attributed to the social, political, and economic situation and other prominent themes in Brazilian society that, over the years, have been motivating the proposition of bills. From this perspective, it is possible to identify in the projects an alternation of themes whose focus varies over time to reflect the parliamentarians' perception of urgency in view of the needs of society.

Thus, it was considered its use for abatement (PL n° 6711/2002), for the promotion of the national industry (PL n° 6685/2006), the fight against the Covid-19 pandemic (PLP n° 137/2020), among others. The preferential allocation of resources was also object of proposals. For example, the PL 4061/2019 suggests the allocation of FUST in accordance with the Structural Telecommunications Network Plan (PERT), prepared by ANATEL. Others make propositions for school connectivity and increased mobile coverage.

There are also broader discussions focused on the public funds model itself. For example, Constitutional Amendment Proposal 187/2019 (PEC for Funds) proposes to extinguish public funds that are not ratified by Complementary Law. Its effects cover the main sectorial funds, such as FUST and FUNTTEL.

The most recent bill 172/2020, presented as a substitute by the Chamber of Deputies to Senate Bill 103/2007, worths special mention. The importance attributed to such a proposal stems from its subsequent conversion into the new FUST Law.

The general design of the bill proposal 172/2020 shows, therefore, steps regarding the destination, governance, and allocation of resources for universalization purposes. As a whole, it presents addresses fundamental issues of operationalization of the FUST and covers the main guidelines elaborated within the scope of the proposals submitted in other drafts of bills on the subject.

The text was equally sensitive to the adaptation of the Fund's integration objectives to other key themes of the Brazilian economy. For example, in the composition proposed for the FUST Management Council, the Legislator specified the agricultural sector, for example, as an integral member of the collegiate, appearing, for the first time, as a decision-making framework within the scope of the telecommunications sector funds.

Other proposals, elaborated out of Bill 172/2020, already in the context of the COVID-19 sanitary pandemic, raised other aspects for the application of the FUST. In these cases, the legislators expressed a will to adopt measures to stimulate consumption, in the form of subsidies to low-income consumers.

The overall debate about the legal reform of the FUST is inserted in the context of sectorial liberalization whose apex has been sheltered in Law 13.879/2019 (Brasil, 2019). In summary, this legal change, identified as the main microeconomic reform of the sector since its privatization (Mattos and Morais, 2020), gives fixed telephony concessionaires the option to

migrate to the authorization regime, in addition to the consent for successive renewal of grants of use of radio frequencies, among other hypotheses.

4. GOVERNANCE, ALLOCATION, AND FINANCING.

The fund's governance, financing, and allocation guidelines summarize the most fundamental innovations of the new regulatory framework. With regard to governance, the legislator proposes the creation of a Management Council, linked to the Ministry of Science, Technology, Innovation, and Communications, and made up of representatives of the Ministry of Science, Technology, Innovation, and Communications and representatives of the Ministry of Economy, of the Ministry Agriculture, Livestock and Supply, Ministry of Education, Ministry of Health, National Telecommunications Agency and telecommunications service providers and civil society.

This collegiate arrangement is not particularly new and its use in Brazil reveals broad legal support (Avelino et al., 2017). The model adopted for the FUST is mirrored in the experience of the Fund for Technological Development of Telecommunications (FUNTTEL) from which the best experiences in terms of use and management of funds in the telecommunications sector are derived (TCU, 2017).

Its design and operation are also consistent with the best fund management practices conducted in other countries (GSMA, 2013). In this format, the collegiate is in charge of selecting projects, defining incentives to maximize the public interest and the destination of assets. The transparency of decisions and their submission to auditing by external control bodies, with

supervisory power over the management system and resource allocation, ensure that the fund's purposes and management practices are better met.

Another important aspect of the collegiate concerns its composition. The presence of representatives from different segments allows the allocation of resources for projects of different spectrums, through deliberation in a collegiate body. This aspect agrees with the best practices mentioned by Abel (2001) and by Dobra and Lubich (2013), for the boards of pension funds in the United States, which suggest that the composition of the collegiate body is an important vector for the balance in the distribution of resources.

As for allocation mechanisms, their urgency is justified by the market's failure to allocate resources to regions without economic attractiveness and the need to maximize the benefits of public resources that, by nature, are scarce. The new Law alludes to the bidding mechanism as an instrument for making the resource available.

Such designation demonstrates the Legislator' care in matters of optimizing the use of the resource. In these terms, it refers to the potential executors of programs, projects, plans, activities, initiatives, and actions for universalization and includes in this list the private initiative, cooperatives, or, in a decentralized manner, public or non-profit educational establishments, which assist people with disabilities, through instruments signed between the Union and public or private non-profit bodies or entities.

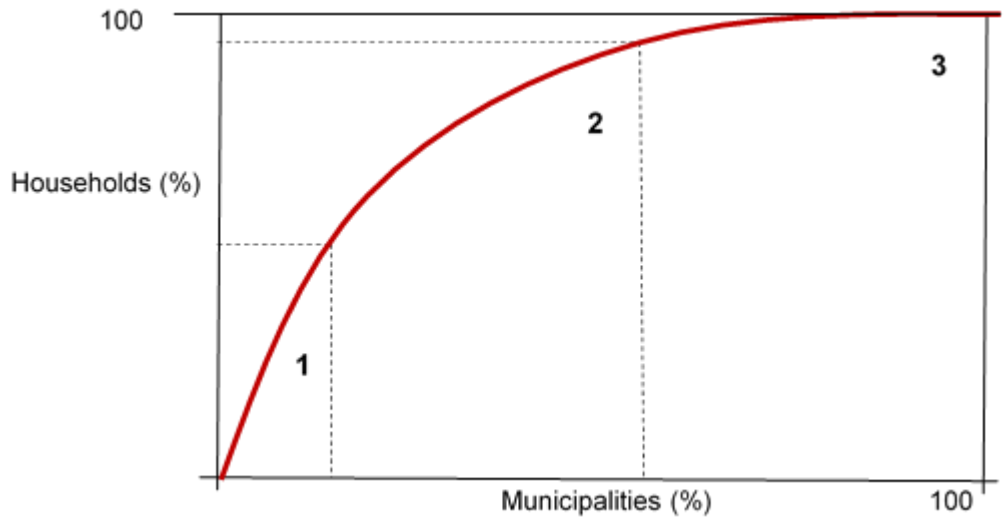
It should be recognized that Brazilian regions have heterogeneous characteristics, both in terms of socioeconomic and geographic conditions and of installed infrastructure, which requires

prior knowledge about the structural and socio-economic conditions of the locations. Some authors were responsible for prospecting the systematization of these regions.

For example, Carvalho et al (2017) took care to estimate the potential size of the Brazilian broadband market from the characteristics of households, identifying at the time a potential market of 45 million households without the service. Prado (2018), in turn, proposed a diagnosis of massification policies for access to fixed broadband based on metrics of municipal economic attractiveness. The study by Freitas et al (2016) identifies groups of municipalities according to socioeconomic variables, availability of broadband access and the presence of telecommunications infrastructure.

This approach, together with government efforts, such as the General Plan of Competition Targets (ANATEL, 2018), and other international classification standards, such as the Gaps Model, developed by the World Bank, allowed for qualifying the allocation efforts in order to identify more sensitive areas for the allocation of public resources. The following diagram, prepared by the Inter-American Development Bank (IDB, 2012), presents a simplified view of the problem.

Figure 1: Types of interventions for the implementation of broadband infrastructure in areas with different sociodemographic and economic characteristics.



Source: Inter-American Development Bank (2012).

In summary, the diagram distinguishes regions according to population density. Locations with a greater demographic concentration justify acting under conditions of free competition and free market, regardless of public support. In intermediate regions, competition is partially and usually restricted to certain types of technology. In this region, broadband deployment can be accelerated through incentive policies. Finally, regions with greater demographic dispersion are usually preferential recipients of universalization policies and the development of broadband requires public intervention.

Another step in this process is choosing the allocation instrument. Some tools lend themselves to this purpose, but the allocation via auction of subsidies stands out as the preferred practice

of regulators (Wallsten, 2008). Other instruments, such as public-private partnerships, have legal protection and practical experience in the Brazilian public sector, although they are used with less intensity (Borges and Neves, 2005; Nakamura, 2019).

In Brazil, the reverse auction mechanism is the standard way in which the government purchases any good or service. Its operation occurs with the identification of the good or service that you want to acquire and, then, the issuance of a request for proposals with the proper specification of deadlines, quality, destination, and compliance with technical and environmental requirements. The service provider, or supplier, chosen is the one who has presented the best offer, in terms of price, quality, or a combination of these variables (Brasil, 2002, 2005).

This mechanism also plays a leading role in the allocation of resources for universalization in the telecommunications sector in the world (Belli et al., 2001). International experiences show that reverse auctions can optimize the allocation of subsidies and, once modulated to include incentive attributes, similar to those elaborated by Laffont and Tirole (1987) and Che (1993), can enhance the instrument's accuracy by promoting competition, reduce transaction costs, promote the sharing and efficiency of the subsidy taker.

Finally, the structuring projects designated for the purpose of allocating the Fund's resources naturally refer to Decree No. 9,612/2018, which provides for public telecommunications policies and the Structural Plan for Telecommunications Networks (PERT), under the authority of the sectoral regulator.

The preparation of PERT is based on the LGT and, in summary, it serves to indicate the gaps in the service of telecommunications infrastructure and access networks, fixed or mobile, confined or through radio frequencies, which make it impossible to provide high data services added value, mainly in small municipalities and rural and remote areas (ANATEL, 2020b). In its current version, PERT represents the regulator's allocation effort with regard to broadband services and high-capacity data transport infrastructure.

Finally, the document presents innovations in the mechanics of financing. Notably, it establishes rationality aimed at balancing the provision of resources to the Fund and the least burden on service providers. In short, the model works as savings with a ceiling, which seeks to preserve the capacity of public financing, without imposing an excessive burden on the service provider. In this model, investments would be allocated up to the limit of 50% of the amount to be collected by the telecommunications provider annually. This percentage would be preceded by an adaptation period and would converge to this ceiling only in the fourth year of the Law's validity.

Also in this spectrum, it introduces the option of operating as an investment guarantee. In this scope, the FUST assumes the role of guarantor of the service provider, in the event of default. This composition serves as security for financial institutions and, mainly, as a variable to reduce the cost of capital associated with loans to carry out investments in the sector.

This renewed financial structure places FUST in a prominent position in the current financial ecosystem of the sector, consistent with the challenges of financing productive investments and in line with policies to expand the availability of infrastructure and provision of telecommunications services.

5. DISCUSSION AND CONCLUSIONS.

Universalization funds are public subsidies aimed at the development of essential sectors, in regions with low economic attractiveness. They are justified by the recognition that a given essential service or infrastructure cannot be provided by free-market mechanisms and, in these terms, deal with a deliberate allocation of capital to meet public policies.

The availability of this resource is legitimized by the expected gains from increased economic activity, social well-being, and the reduction of regional inequalities, among others. Traditionally, Brazil uses specific funds to meet infrastructure universalization policies. FUST is the best-known fund for the telecommunications sector.

This study presents a detailed history of the FUST and some of the reasons that explain its reduced use to meet the purposes for which it was created. It makes particular reference to the obsolescence of fixed telephony, which constitutes the universalization object for which the FUST was created, and the limits imposed by the underlying financial architecture of the FUST that directed its application to other public expenditures.

The review of the sectorial public policy, which replaced the focus on voice services in fixed telephony with data services, promoted a definitive break in the perspective addressed by the current FUST Law. In order to adapt the State's actions to the new guidelines, it became a requirement to update the legal framework and, in the case of the FUST Law, the scope of its

application in order to allow an effective expansion of broadband penetration in regions with low income, prohibitive costs of adhering to services and unavailability of infrastructure.

Furthermore, the conditions of the Brazilian market and the persistent gaps in infrastructure continue to justify the existence of a fund with the purpose of universalizing digitalization. Thus, legislative initiatives that confirm the maintenance of the Fund, with the necessary updates for governance purposes and its effective allocation, seem to bring together the best perspectives for the sector.

Thus, to be effective and lasting, the legal reform requires flexibility to adapt to conceptual changes that encompass the very perspective on universalization, now focused on densifying the coverage area and scaling the infrastructure capacity to meet the growing demand for data. In these same terms, consideration should be given to the evolutionary nature of the universal service, which requires compliance with the principle of technological neutrality. A step in this direction could ensure greater liquidity to the allocation of resources and longevity of legislative guidelines.

The succession of bills proposed in order to modernize the scope and use of the FUST reveal the obsolescence of the fixed telephone service, object of the FUST Law, and the accounting artifices adopted for the use of the resource. On this issue, the study reports the influence of conjunture issues, prominent in Brazilian society over the years, as a guide for successive proposals for bills.

Among the modernizations sent by the legislator, those that concern the system of governance, allocation, and financing of the fund, subscribed to the recently enacted Law nº 14.109/2020,

are given special emphasis in this study. These dimensions are crucial for maximizing the returns of public policy in a context of investment restriction and, according to references presented in the text, they have the potential to improve the transparency and use of the resource.

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