Interorganizational networks to implement public programs in brazilian energy sector

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Abstract

Public Program “LUZ PARA TODOS” (LPT) aims to provide universal access of electric energy in rural areas. The present work evaluates implementation of public programs in Brazilian Electric Sector, by applying inter-organizational networks on LPT, involving public and private organizations. The results were factors that facilitated and difficult the program implementation.

Keywords: Brazilian electric sector, Inter-organizational networks, Program “LUZ PARA TODOS”.

INTRODUCTION

Electric energy plays a key role for the economic and social organization of all countries, because it is key for social inclusion and economic development and improves people's life quality. There is not economic and social development, without an adequate source of energy (Leite, 2007)

Federal government, with the purpose of providing an adequate electric supply to rural zones, launched the program "LUZ PARA TODOS" in 2003, and the number of families attended was established based on the census data of 2000, realized by the IBGE (Brazilian Institute of Statistic and Geography).

In front the described context, the present study has the interest of answering the following question: what factors interfered in the application of the program "LUZ PARA TODOS" in the State of Sao Paulo, from 2004 to 2010?

The main importance of this study consists in the comprehension of how private business' activities and governmental agencies in the inter-organizational network contribute in the application of the program "LUZ PARA TODOS". This investigation sought factors that interfered with implementation of the program, through structured interviews. The investigation explores the subject of networks for the implementation of programs in the Brazilian electric sector. The interview analysis identified the convergent points between multiple sources of evidence.

The structure of this article, besides this introductory section, includes a section about inter-organizational networks, a section about the Program "LUZ PARA TODOS", a section of materials and methods, a section for analyzing results and final considerations about the use of network for identifying the factors that affect the application of a program.

INTERORGANIZATIONAL NETWORK

A network has nodes and links that connect nodes. Nodes, that are represented by social subjects (individuals, groups, organizations, etc.), can be called actors, that represent individuals or organizations, while links represent relations between them (Lazzarini 2008, Marteleto and Silva 2004, Wasserman and Faust 1994).

Infrastructure sectors, after privatization, have a network format, due to the significant raise in the number of private agents in which these operate under the coordination of the regulator state. In this way, it is possible to evaluate the Brazilian Electric System (BES) from a network approach, identified as critical contingency to necessity, ergo, the satisfaction of laws subset and obligatory regulations (Peci and Costa, 2002).

Goldsmith and Eggers (2011) approach network service lending as a new model called "to govern in network." In the proposed model, public institutions depend less of public servers in the traditional roles and more governmental partners, that give to the government a higher flexibility

and capacity to model the service provision system, attending better the citizens' demands, that are, at the same time, impulse by their elections. The BES in the implementation of public policies can be classified as network government, given the existence of a great integration of public-private businesses that own a concession for the provision of public services, but there is a high grade of hierarchy and public coordination though the role of Brazilian regulator organ (ANEEL) and other entities like the Ministry of Mines and Energy (MME).

PROGRAM "LUZ PARA TODOS"

The universalization of the access to energy resources is a preoccupation of social and economic policies that have been accompanying the cost reduction of production techniques with subside rates, for accomplishing objectives of social inclusion, of less favored classes (Bajay 2004, Camargo and Ribeiro 2009, Kelman 2009, Mandell 1990, MME 2001).

The Federal Government, starting from the MME, created the program "LUZ PARA TODOS", from the Decree 4873/03, with the objective of providing electricity to rural zones. The installation of electricity in homes was free for families with low incomes. The program was budgeted in R$9.5 billion and was realized in collaboration with electricity distributors concessionaries and state governs. The federal government destined R$6.8 billion for the program and the federal funds were funds from the energy sector – Energy Development Account and the Global Revision Reserve (Leite, 2007). The MME was responsible for preparing operationalization rules of the "LUZ PARA TODOS". In table 1 it is presented the actors and assignments of each one.

Table 1 – Operational Structure of the program "LUZ PARA TODOS"

Actor	Assignment
National Committee of Universalization (CNU)	Coordinated by MEE, which has the responsibility establishing "policies and guidelines for the use of electricity as an integrated vector of development in rural areas".
Ministry of Mines and Energy (MME)	Coordinate the program "LUZ PARA TODOS" and establish policies for the actions of the program.
National Management Committee (GCN)	Acting in order to promote physical structure and logistics to CGEs in their electrical regions.
State Management Committees (CGEs)	Evaluate the demands of society and define the works of rural electrification to be prioritized according to the criteria established in the Operating Manual.

ELETROBRÁS	Responsible for examining the plans of works, contract signing and release of funds and monitoring of their correct application.
Execution Agents	Responsible for execution of the works - concessions, permits and authorizations.
"LUZ PARA TODOS" Agents	Act directly in the field, in direct contact with the target population of the program, subordinate to the Coordinator of the State Management Committee.

The present study uses such structure like the Institutional program of network for identifying the factors that interfered in the application of the period 2004 to 2010, in the State of Sao Paulo.

The number of connections of the program at national level, in the period of 2004 to 2010, in which the stipulated national goal of connections was 3,031,454 bonuses, but the number of connections was inferior in 13.7%, ergo, at the end of 2010, the number reached was 2,654,536. Although, in the state of Sao Paulo the number of connections realized (85,795) in comparison with the established number as goal (57.555) of 49.07% was superior.

Aspects such as the divergence between the goal and the number of calls made in the state of São Paulo, the divergence between the duties of the regulator determined in the Operating Manual and the role of this in the program, will be addressed in the chapter on presentation and analysis of results.

MATERIALS AND METHODS

Structured interviews were made with who participated in the Institutional Network formed for the application of the program "LUZ PARA TODOS", and they were carried out in the state of Sao Paulo, from 2004 to 2010. To help the analysis of content, the answers given by the surveyed people were plenty transcribed and the software *Atlas.ti 7* was used.

The interviews had a minimum duration of thirty-three minutes and maximum one hour and forty minutes.

The executing agents are responsible of the works and are represented by the concessionaries, licensees and authorization. The state of Sao Paulo counts with 11 concessionaries that participated in the program, but these comprehend business group. The concession of AES Eletropaulo did not participate in the program.

The investigation could cover 76% of the number of connections realized by the Program in the State of Sao Paulo, at the time interviewing the program responsible in the period 2004 to 2010, of the concessions CPFL and the concession Elektro.

The field research was through interviews with the actors that make up the organizational structure of the "LUZ PARA TODOS" in São Paulo. The table 2 describes each actor that was interviewed and its assignment.

Table 2 – Assignment of respondents in the Program "LUZ PARA TODOS"

Organizational Structure of the program	**Assignment of Respondents / interviewed**
Ministry of Mines and Energy (MME)	Universalization Coordinator
National Management Committee (GCN)	Manager of National Management Committee
Sao Paulo Regional State Committee Management (GCR)	Manager of State Committee of Sao Paulo
ANEEL (National Agency of Electrical Energy)	Superintendent of Regulation and Regulatory Specialist
ARSESP (Regulatory Agency for Sanitation and Energy for São Paulo State)	Director of Regulation and Fiscalization
ELETROBRÁS	Superintendent Sector Program Management
Executing Agents: Elektro Energy Concessionaire	Responsible for coordinating the program "LUZ PARA TODOS" in Elektro Concessionaire
Executing Agents: CPFL Energy Concessionaire	Responsible for coordinating the program "LUZ PARA TODOS" in CPFL Concessionaire

Next chapter presents the obtained results from the interview content analysis and the relation with theory about inter-organization networks.

PRESENTATION OF RESULTS

The results will be presented from the content analysis made with the software *Atlas.ti 7*.

The survey identified four factors that make the program application easier. In the figure 1, the factors are presented.

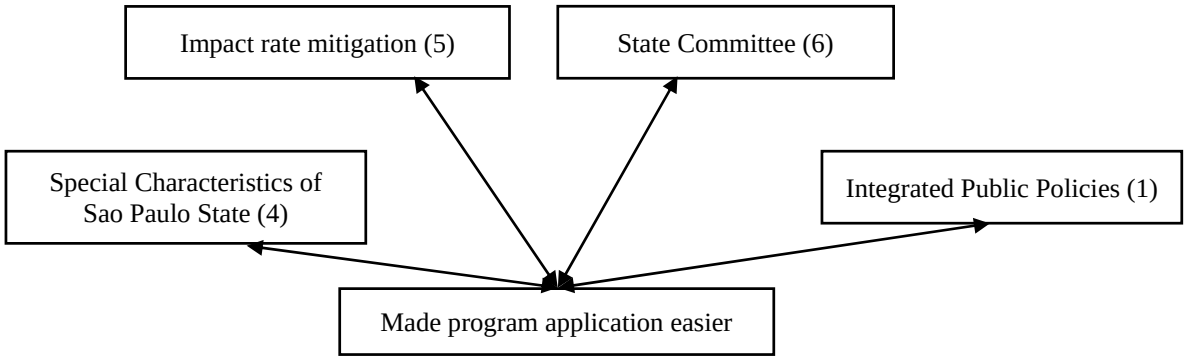

Figure 1 - Codes of Formation of Factors that made Program application easier

The State Committee for the implementation of the program was the most mentioned factor, being cited by 6 out of 8 participants. The Universalization Coordinator cites the State Committee as provider, because it served as a "bridge" between the final user and the program direction. In earlier programs this commission did not exist and the user's demands sometimes did not reach the government in a clear and efficient way.

The fact that the program mitigated the Rate Impact was cited by 5 out of 8 surveyed people. The National Management of the program explains that the concession area is smaller by the concessionaire, in São Paulo, because the state has several concessionaires and permissionaires, unlike when compared to other states. On the other hand, rural areas were far from the existing network, therefore, the respondent emphasizes the importance of the program to mitigate the Rate Impact. The Director of Regulation of ARSESP said that there was not a rate impact, and he assigns this to the way the program was financed by reimbursable funds in EDA and two states. This way of financing made possible the universalization in the rural zone and mitigated the rate impact.

The Integrated Public Policies Code was cited by 5 out 8 surveyed people, but there was divergence. The MME, ANEEL and ARSESP said that there were Integrated Public Policies to the program "LUZ PARA TODOS"; however, the agent's actors of the surveyed people do not know the Integrated Public Policy of the program realized in the state of Sao Paulo. The only cite tentative of integrating the policies like: reunions with the Ministry of Communications, were a program directed to the promotion of services of ways to the rural communities and schools was introduced; however, this project was not successful and isolated actions, like the donation of computers to some settlements.

The universalization Coordinator mentioned that LPT involved 18 ministries and exemplified three ways of conjunct action: a) INCRA, that had a number of settlements to start working, that there was light, provided by the program; b) Ministry of Health through the FUNASA, that had bathrooms and water wells directed to were was energy; c) The Ministry of

Education demanded energy in rural zones. The MME informs the places where there will be implementation for the committee and this prioritized the places.

The special characteristics of the State of Sao Paulo for the program implementation were cited in 4 out of 8 surveyed people. The people surveyed believe that “financial health” of the concessionaries was important so that these would have the capacity of giving the continuity to LPT. With the program concessionaries increased size, because there was an increase in the number of consume units, even taking into account the technical difficulties inherent to the rural zone and localization of the clients distant to the energy distribution networks.

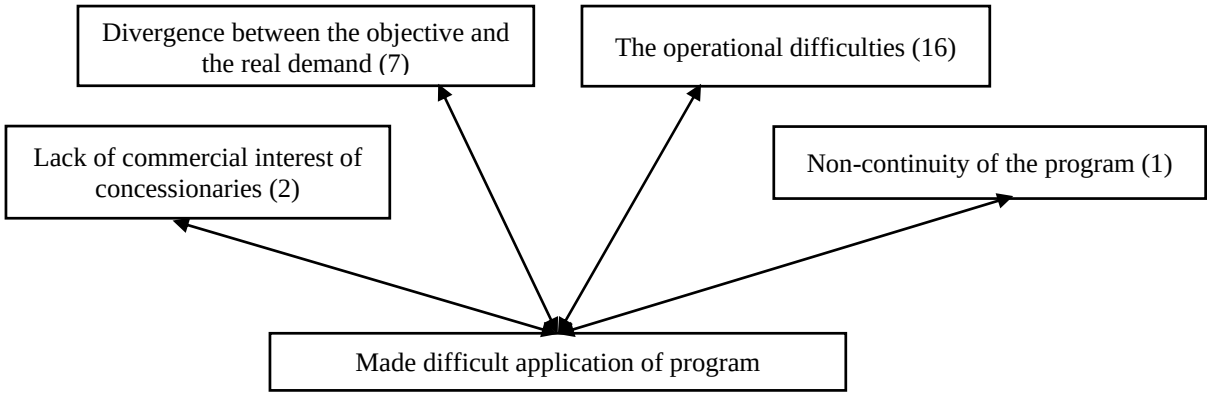

Figure 2 - Codes of Formation of factors that made difficult application of the Program

Equally were identified four actors that made difficult the implementation of the program. In the figure 2, it is possible to identify them.

The divergence between the link program goal and the number of connections realized was cited by 7 out of 8 surveyed people. The methodology used by the INGE for the Census, diverges from the electricity provision legislation (Resolution 414/10) applied to BES. BES’s legislation obligates concessionaries to satisfy all electric demands and would only realize the connections when they were requested. Therefore, the necessity of points to be connected to the network was higher in relation to the initial objective established.

The responsible of the program, CPFL and Elektro, attributed divergence between the objective and the real demand, the accumulated demand that was lived in the rural zones. The program opened a demand in the market that nobody knew it existed. The CPFL had difficulties to affirm which was the demand in their area of concession, because the more points were called, more demand surged. Elektro was tardy at correcting the estimation of connections and in other regions the ambient difficulty was underestimated and the difficulty of access that the concessionary faces.

The operational difficulties were cited by 5 out of 8 people surveyed, it is important to highlight that the actual code had been cited by all the executors of the Program in the State of Sao Paulo.

The difficulty of completing the legal requirements of the program is also an operative difficulty that faces the public services business (concessionaries). The responsible of the program in CPFL mentioned that the concessionary is not authorized to buy posts and to give them away in the area of concession.

The difficulty with providers of the concessionaries can be qualified as another way of operative difficulty in the execution, because there were difficulties when the concessionary requested specific program elements.

The incorporation of private networks is an operative obstacle for the execution of the program by CPFL, because there was a necessity to incorporate particular networks, because they were part of their private network, and in that place there was difficulty of reaching the program solicitant after having particular network.

The lack of commercial interest was cited by 2 out of 8 surveyed people as a difficult problem for the program. There is not commercial interest by the concessionary side; it is not possible to know if the consumer will have the energy bill payment capacity. The Program responsible of the CPFL group, in the period of 2004 to 2011, informs that some concessionaries have measured the defect in the rural zones, like the Concession of Santa Cruz, and a 40% defect was identified.

The Promoter of the Sao Paulo State Commission understands that the non-continuity of the program is a complicated factor. The interviewee said that, while there is exclusion there will be necessity of the program, because he considers that there was not complete attention of the existing demand in the rural zones and that there should be continuity of the program, in a way that there is no cost of connection for the consumers of rural zones.

The inter-network formed by the program “LUZ PARA TODOS” has its nodes and links that are interconnected. The nodes are represented by public organisms and private companies and, they are called actors, while the links represent relations between them, which in the case of BES are established through regulations, laws and contracts. This analysis corroborates the theory of networks of the authors Balestrin and Verschoore 2008, Candido and Abreu 2004, Castells 1999, Lazzarini 2008, Marcon and Moinet 2000, Marteleto and Silva 2004, Peci 2000.

Regarding the actors’ responsibilities in the program of RI, the interviewees corroborated the theory from their answers. Peci (2000) reinforces, the attributions are defined through the own legislation, laws and regulations, and in the case of the program “LUZ PARA TODOS”, these collaborated with the plenty comprehension by each part of the actor, its role in the program’s organizational network, being an essential factor for the success of networks.

FINAL REMARKS

The implementation of the “LUZ PARA TODOS” told less about public servants in traditional roles and more with private partners. This has given the government more flexibility and ability to model the system services, given the increased demands that have occurred throughout the program in the state of São Paulo. This phenomenon is called by the Interorganizational Network theory as "governing by network," of the authors Goldsmith and Eggers (2011).

Respondents mentioned that the formation of the structure for the program is innovative based on data from actors who make it up, but were not aligned and there is a need for a closer relationship between the agents representatives of federal govern and regional executive agents for better understanding regional specificities.

Two peculiarities of São Paulo State are relevant as facilitating factors: financial structure of utilities such as AES Eletropaulo that did not join the program by not need financing for construction work in rural areas and existence of CERESP (Rural Electrification Commission of State of Sao Paulo) that held regular meetings in order to discuss Electrification rural in São Paulo.

The complicating factor most often cited in interviews was the divergence between goal and number of calls made and this was the lack of government data showing the reality of rural areas.

The program was successful in São Paulo, because the Interorganizational Network formed enabled the functioning of the Operating Structure, which ensured the involvement of the network actors and as a result achieve the desired goal, namely, to provide electricity to rural areas within the state by 2015.

The limitations of the research refers to the methodological field, specifically the sample and data collection: This study only analyzed the state of São Paulo and the program is nationwide; and executing agents were not interviewed in its entirety. The perspectives of respondents can bring intrinsic limitation to the study, due to the subjectivity of the respondents.

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