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# Political debates and agricultural financing policies. Evaluating the creation of Brazil's Pronaf through Discourse Network Analysis

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## **Abstract:**

*The literature on rural development focuses on the socio-economic effects of agricultural financing, while the process of policy design is devoted less attention. Identifying policy coalitions may help understand the motivations behind a given financing system. Using Discourse Network Analysis, this paper studies the debates preceding the approval of the National Program for Strengthening Family Agriculture (Pronaf) in Brazil in the nineties. This represented a relevant overturn of the previous policy framework. Two coalitions were confronting each other: large farm business associations focused on productivity, and the movements of family farmers aimed at creating credit instruments for small producers. The strong pressure of social movements was paramount for promoting Pronaf. However, findings suggest that the Workers' Party, which found itself in a less conflicting position, played a key role in negotiating the introduction of particular measures.*

*Acknowledgment:*

**JEL Codes:** Q18, O19

#1528



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2      **tion of Brazil's Pronaf through Discourse Network Analysis**  
3

4      **ABSTRACT**

5      *The literature on rural development focuses on the socio-economic effects of agricultural financing,*  
6      *while the process of policy design is devoted less attention. Identifying policy coalitions may help un-*  
7      *derstand the motivations behind a given financing system. Using Discourse Network Analysis, this*  
8      *paper studies the debates preceding the approval of the National Program for Strengthening Family*  
9      *Agriculture (Pronaf) in Brazil in the nineties. This represented a relevant overturn of the previous*  
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15

16      **KEYWORDS**

17      Agricultural financing; Policy-making; Discourse Network Analysis; Brazil; Pronaf.

18

19      **INTRODUCTION**

20      In the history of rural development, agricultural financing has always represented a key instrument for  
21      creating employment opportunities and expanding farm production. It also plays a paramount social  
22      function, by alleviating poverty and compensating the high risk associated with working in agriculture.

23      The political dynamics behind the design of agricultural financing policies are particularly rele-  
24      vant in the case of Brazil. Agriculture has always been a fundamental sector for the Brazilian econo-  
25      my: in 2013, this country represented 5 per cent of the world agricultural production (the fourth largest  
26      share after China, the USA and India), and 6 per cent of the agricultural exports (the third largest share  
27      after the USA and the Netherland) (FAO, 2017). The National System of Rural Credit (SNCR), creat-  
28      ed in 1965, had represented the basis for modernizing Brazilian agriculture, allowing a transformation  
29      of its technical base, an increase in productivity, and the consolidation of agro-industrial complexes  
30      (Leite, 2001). Family agriculture – that in 1996 represented 85 per cent of the Brazilian farms – was  
31      almost neglected, with resources flowing to middle and large producers from the Centre-South, who  
32      focus mostly on export crops (Leite & Wesz Jr, 2014; Helfand, 2001). In 1995, the National Program  
33      for Strengthening Family Agriculture (Pronaf) was thus created, to provide credit to family farmers at  
34      favourable conditions (Grisa, 2012).

35      The reform of the SNCR and the approval of Pronaf was preceded by extensive debates among  
36      several actors (social movements representing family farmers, associations of agro-industrial busi-  
37      ness, policymakers, academics, international development institutions, etc.) in different contexts (social  
38      mobilization on the streets, mass media, universities, etc.). The conflicts between productivity increase  
39      and poverty reduction, farm businesses and peasants, export crops and products for internal consump-  
40      tion were at the core of these debates. Due to their importance for the Brazilian agriculture, the con-  
41      tents of the resulting norms have been extensively analyzed by literature (Flexor & Grisa, 2016; Gar-  
42      cias & Kassouf, 2016; Grisa et al., 2014; Leite, 2015; Resende & Martins Mafra, 2016). Instead, the  
43      political dynamics behind these significant changes in the farm financing system have been studied  
44      less. Identifying the actors involved, and their position on specific issues, is fundamental to understand  
45      the logic and the motivations behind Pronaf.

46      This article aims at assessing how the political discourse of key internal and external actors, in-  
47      cluding both the interrelationships among them and their agreement or disagreement on important is-  
48      sues, contributes to the design of agricultural financing policies. The approval of Pronaf is taken as a  
49      case study. The political-ideological linkages underlying the process of policy design, and their suc-  
50      ceess or failure in influencing the final version of the programme are identified. For this purpose, Dis-

51 course Network Analysis is used as methodology to map such linkages, since this approach allows to  
52 analyze political and other discourses in the form of networks. Through a codification of the state-  
53 ments of various stakeholders, it is possible to create networks of actors who share the same views on  
54 a topic. Despite the numerous researches about Pronaf and the Brazilian agricultural financing system  
55 mentioned above, no study, to date, has analyzed the role of socio-political actors within the design  
56 process.

57 The rest of the paper is structured as follows. The next section contains a review of the litera-  
58 ture to detect relevant divisive issues concerning agricultural financing policies. The third section out-  
59 lines the main features of Pronaf, and identifies the stakeholders involved in its design process. The  
60 fourth section illustrates the methodology and the data collection process. Results are presented in the  
61 fifth section and discussed in the sixth one, before the conclusions.

## 62 **LITERATURE REVIEW: AGRICULTURAL FINANCING POLICIES**

63 The provision of credit has always been one of the most important agricultural policies in developing  
64 countries. Until the mid-Sixties, the main goal of the international organizations that inspired the poli-  
65 cies of rural financing, primarily the World Bank (WB), was to interrupt the 'vicious circle' of low in-  
66 comes, low saving and low productivity; hence, they were targeting mostly large commercial farmers  
67 (Ellis, 1992, p. 155). Later, the focus switched to small family farmers, due to their higher efficiency  
68 and production potential, the lack of financing opportunities for them apart from local moneylenders,  
69 and the expected positive impact on rural poverty. Still today, agricultural financing policies may be  
70 driven by a plurality of goals (e.g., increase productivity, fight rural poverty) and targets (e.g., specific  
71 crops, or social groups), and may rely on diverse institutions (e.g., State agricultural banks, commercial  
72 banks, multi-purpose agencies, etc.) and instruments (e.g., low interest rates, tax concessions, etc.).  
73 Based on a review of the literature on agricultural financing, 19 divisive topics concerning the potential  
74 objectives, targets, instruments and institutions of agricultural financing, that are likely to be discussed  
75 by consultants and policy-makers during the policy design process, were identified. These topics,  
76 summarized in Table 1, will be used to classify the statements of the actors involved in the elaboration  
77 of Pronaf, who can either agree or disagree, or avoid mentioning them.

78 The first group of topics concerns the goals of agricultural financing. The first potential goal is  
79 to increase agricultural incomes, primarily the salaries of people working in agriculture (either family  
80 farmers, or hired workers). The actors supporting this statement argue that rural credit should aim pri-  
81 marily at improving the living conditions of rural people. The second goal concerns agricultural produc-  
82 tivity: actors supporting it consider that the increase of farm productivity should be the main target of  
83 any financing policy, regardless of the destination or distribution of the resulting benefits. The third  
84 goal is to achieve technical innovation. Actors agreeing with it assign a great importance to the techno-  
85 logical level of the farm; hence, they aim primarily at stimulating the purchase new technologies (ma-  
86 chineries, high-yielding varieties of seeds, fertilizers, irrigation systems, etc.). These three goals are  
87 usually encountered together, as, for example, higher per capita incomes increase saving rates and,  
88 thus, investments and productivity (Heidhues & Schrieder, 1999). However, they can also enter in  
89 contradiction, especially when one of them becomes a priority to the detriment of the others.

90  
91 Table 1. List of divisive topics concerning agricultural financing policies.

Topics	References
Goal 1: increasing farm incomes / rural salaries	Heidhues & Schrieder, 1999
Goal 2: increasing productivity	Heidhues & Schrieder, 1999; Meyer & Nagarajan, 1996
Goal 3: stimulating technological innovation	Carter, 1989; Rosenzweig & Binswanger, 1993; Vicente & Vosti, 1995
Target 1: profit-oriented (vs. subsistence farmers)	Diaz Osorio, 2007; Hazell et al., 2007
Target 2: family farmers (vs. juridical persons)	Diaz Osorio, 2007; Hazell et al., 2007
Target 3: specific productions (vs. single farm pay- ment)	Helfand, 2001
Target 4: small farms (vs. large farms)	Helfand, 2001
Target 5: export productions (vs. self-consumption goods)	Helfand, 2001

Instrument 1: financial sustainability of the credit programme	Kumar, 2005
Instrument 2: tax concessions for commercialization	Schiff & Valdés, 1992
Instrument 3: fair access to land (property rights), even by means of expropriation	Dethier & Effenberger, 2012; Norder, 2014; Ondetti, 2016
Instrument 4: reduce the power of informal financial intermediaries	Braverman & Guasch, 1986
Instrument 5: ex post assessment for financing continuity	Thomas, 1993; Westercamp et al., 2015
Instrument 6: linking farms and researchers (vs. customer approach)	Sumberg et al., 2012; Kaimowitz et al., 1990
Instrument 7: farmers' training	Schneider et al., 2004
Instrument 8: public subsidies (vs. private loans)	Turvey, 2013; Yaron, 1994
Institution 1: rural advisory services	Meyer, 2011; McMahon, 2012
Institution 2: producers' cooperatives	Ellis, 1992; Birchall & Ketilson, 2009; Smith and Rothbaum, 2013
Institution 3: State agricultural banks	Turvey, 2013; Westercamp et al., 2015; Yaron, 1994

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The second group of topics concerns the targets of agricultural financing policies. The first divisive issue is about whether policies should target primarily profit-oriented farmers, who aim at maximizing their revenues, or subsistence and semi-subsistence ones, who strive for achieving decent life conditions. The second dilemma is about whether agricultural credit should be provided primarily to family farms (i.e. physical persons), or to juridical entities (e.g. corporations). This issue is particularly relevant in Brazil, as the concept of 'family farm', after replacing that of 'small producer', was at the core of the mobilizations which led to the approval of Pronaf (Welch, 2015). The third divisive issue opposes the supporters of crediting strategies aimed at specific crops or animal productions, to those favouring the provision of generic loans and subsidies (such as, e.g., the single farm payments of the EU Common Agricultural Policy). The forth topic opposes the advocates of small farmers, generally moved by equity concerns, and those thinking that large producers deserve a special attention because of their role within the national economy (Helfand, 2001). The fifth topic concerns the destination of the crops and animal productions incentivized by means of loans and subsidies: the actors who agree with this statement consider that export productions (as for Brazil, beef and chicken meat, soy, fruit juice, sugar, cotton, coffee, etc.) should be given priority over those intended for self-consumption, or for local markets. Many of these targets are closely related; indeed, family farmers tend to produce for their subsistence, rather than for profit, and to focus on local markets, rather than on exports (Diaz Osorio, 2007; Hazell et al., 2007).

The third group of divisive topics concerns the instruments, or strategies, for achieving a viable agricultural financing policy. The first divisive issue concerns the financial sustainability of the credit programme. The stakeholders supporting this statement think that the programme should be financially sustainable, i.e. the economic returns (e.g., taxation of resulting profits) should overcome or, at least, cover the costs. The second topic deals with the way farmers should be subsidized; the actors supporting it consider that tax concessions (e.g., on the products commercialized) are preferable to subsidies or loans. According to FAO (2001), the compensation for high taxation on agriculture enables farmers to be more competitive. The third instrument is a controversial one, due to the radical approach it entails: ensuring fair access to land, even by means of a land reform foreseeing expropriation. In large countries with many farmers under the poverty threshold, access to land is an actual issue. The assignment of property rights to disadvantaged people is a driver of innovation adoption and, thus, of farm modernization (Dethier & Effenberger, 2012). The fourth instrument addresses the power of private financial intermediaries, who may adopt an 'exploitative or monopolistic behaviour' (Ellis, 1992, p. 155). The actors supporting this statement aim at addressing the 'corruption' and the lack of accountability of rural financial markets to avoid loan-sharking situations. The fifth instrument deals with evaluation of the way money is used by recipients. The actors supporting such option consider that the continuity of credit provision should be bound to a constant monitoring, or to a positive ex post assessment. Braverman and Guasch (1986) point out that rural financial markets are unable to monitor the use of funds. The sixth instrument concerns the idea of putting in contact public and private re-

131 searchers with farmers, instead of adopting a customer approach, as improving these connections  
132 might ensure a better focus of farmers' priorities (FAO, 2014; Sumberg et al., 2012). A seventh potential  
133 instrument of the rural financial system is agricultural training, which is closely related to the previous one. This statement identifies the stakeholders who consider formal education, provided, e.g., by  
134 rural extension services, a fundamental accessory element of any credit policy. The last divisive issue  
135 with respect to the instruments concerns the nature of the loans: either public or private (market-  
136 based). The actors agreeing with this statement prefer public subsidies, while those rejecting it consider  
137 that loans should comply with market rules, so that profitability for the issuing institutions prevails  
138 over the welfare implications for the recipients. Although they are not exhaustive of all potential instruments,  
139 these eight propositions cover a wide range of issues, and are not necessarily in contradiction with one another.  
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141 The fourth group of divisive topics deals with the institutions of rural financing. The first one is  
142 represented by agricultural extension services. Indeed, credits and subsidies may also take the form of  
143 free provision of goods (e.g. better-performing seeds), or services (e.g. training on how to use new seed  
144 varieties). The actors agreeing with this statement consider public extension services a key institution. A  
145 second type of institutions is represented by cooperatives and farmer groups (either State-sponsored, or  
146 resulting from farmers' initiatives), that 'are often used as the ultimate lender to farmers', and may also  
147 become 'viable local credit organizations in their own right' (Ellis, 1992, p. 158). The actors supporting  
148 this type of institutions consider that credit policies should stimulate cooperation among producers,  
149 e.g. by means of *ad hoc* requirements to access subsidies. A third type of institution is represented by  
150 State agricultural banks with branches in the major cities, opposed to private credit institutions. Brazil  
151 opted very early for a mixed banking system, leaving the States of the Federation free to choose their  
152 favourite form (Westercamp et al., 2015). The agents who support this last statement favour the public  
153 option. Broadly speaking, the debate on institutions opposes two 'schools of thought': the supporters  
154 of public intervention, deemed necessary to attract urban capital, and the advocates of minimalist reg-  
155 ulation, who have been dominating during the last decades (Turvey et al., 2013, p. 210).  
156

## 157 **THE BRAZILIAN CASE STUDY**

### 158 ***From the SNCR to Pronaf***

159 Brazil is 'a relatively industrialized middle-income country that maintains a significant family farm  
160 sector oriented to the domestic market, while also playing a key role in the global agri-food sector as a  
161 dominant agricultural exporter' (Graeub et al. 2016, pp. 1-2). This strong dualism, that is likely to be  
162 reflected in the farm financing system, together with the fact that agriculture is still playing a funda-  
163 mental economic, commercial and social role (FAO, 2017), justifies the choice of this country as a  
164 case study. To support the agricultural sector despite the import substitution industrialization strategy,  
165 the Federal Government has implemented different public policies along the years. These include  
166 macroeconomic interventions (fiscal, monetary, trade and exchange rate policies), sectoral ones (rural  
167 credit, technical assistance, price and market policies, etc.), as well as intersectoral ones (economic,  
168 infrastructural, labour, environmental, social, territorial planning, etc.) (Delgado, 2001; Heredia et al.,  
169 2010). Among sectorial policies, rural credit was of paramount importance for the transformation of  
170 Brazilian agriculture.  
171

172 The SNCR was created by law 4829 of November 5<sup>th</sup>, 1965 to support agricultural investments  
173 (from the purchase of farm equipment, to the building of infrastructures), cover the costs of production  
174 and commercialization of farm output, increase productivity, etc. Indeed, it allowed a successful trans-  
175 formation of the technical assets of the farms, an increase of agricultural productivity, the consolida-  
176 tion of agro-industrial complexes, as well as the integration of agricultural capital in financial net-  
177 works (Leite, 2001). However, until the middle of the Nineties, the SNCR had been favouring the  
178 medium and large farms located in Central and Southern Brazil, that produce coffee, soy, sugar cane,  
179 oranges and cotton, and are mostly export-oriented (Helfand, 2001; Gonçalves Neto, 1997; Graziano  
180 da Silva, 2003). A relevant share of farms, accounting for about 70 per cent of the total, did not have  
181 access to credit (Bianchini, 2015, p. 16) and, therefore, could not enjoy the benefits of the SNCR.  
182 These consisted mostly of family farms, which represent about 85 per cent of the production units of  
183 the country, and use 31 per cent of its total farmland (Guanziroli et al., 2001).

184 The political liberalization that followed the end of the military dictatorship in the Eighties al-  
185 lowed for the rebirth of civil society organizations, such as trade unions and social movements in-  
186 spired by rural workers and family farmers. The latter demanded a new agricultural policy, targeted on  
187 small producers (Picolotto, 2011). Pronaf was established within this social framework, in August  
188 1995. By recognizing the peculiarities of family farms, the new norms provided rural credit to this so-  
189 cieconomic group at favourable conditions, different from those foreseen by the SNCR (Grisa,  
190 2012). These norms represented the first national-level policy targeting specifically the needs of fami-  
191 ly farmers (Schneider et al., 2004).

192

### 193 **Actors Involved in the Process of Design of Pronaf**

194 Many studies have been focusing on the process of design of Pronaf, as well as on the actors involved  
195 and their positions (among others: Bianchini, 2015; Grisa, 2014; Moruzzi Marques, 2004; Picolotto,  
196 2011; Santos, 2011; Schneider et al., 2004). In general, three categories of stakeholders were involved:  
197 civil society organizations, political actors, and international multilateral organizations. The first cate-  
198 gory included two main interest groups: 'on the one hand, the institutions representing large landlords  
199 and the agricultural capital; on the other hand, the institutions which supported the adoption of *ad hoc*  
200 policies for small farmers, the consolidation of the agrarian reform, the expansion of the rights of rural  
201 workers, and a more sustainable agricultural model' (Bianchini, 2015, p. 19). Among the former there  
202 were the Confederation of Farming and Breeding of Brazil (*Confederação da Agricultura e Pecuária*  
203 *do Brasil*, CNA), the Brazilian Association of Agribusiness (*Associação Brasileira do Agronegócio*,  
204 ABAG), the Brazilian Rural Society (*Sociedade Rural Brasileira*, SRB) and the Organization of Bra-  
205 zilian Cooperatives (*Organização das Cooperativas Brasileiras*, OCB). Even if they did not partici-  
206 pate directly in the elaboration of Pronaf, they did have an influence on the discussion about rural  
207 credit policies.

208 The organizations supporting family agriculture included the National Confederation of Agricul-  
209 tural Workers (*Confederação Nacional dos Trabalhadores na Agricultura*, CONTAG), as well as  
210 groups born more recently, like the Landless Workers' Movement (*Movimento Sem Terra*, MST), and  
211 the National Department of Rural Workers of the Workers' Unified Centre (*Departamento Nacional*  
212 *dos Trabalhadores Rurais/Central Única dos Trabalhadores*, DNTR/CUT). Although their pro-  
213 grammes and goals were slightly different (Grisa, 2012; Picolotto, 2011), they joined together with  
214 other organizations of fishermen, natives, rubber trappers and other groups damaged by the national  
215 agricultural policies in order to organize the first Brazilian Land's Cry (*I Grito da Terra Brasil*), which  
216 took place in the capital in May 1994. In 1995, a second Cry was organized<sup>1</sup>. These mobilizations  
217 were at the core of the creation of Pronaf, as they forced the Ministry of Agriculture and the Bank of  
218 Brazil to negotiate with the organizations representing family agriculture (Vasconcellos & Vasconcel-  
219 los, 2012), and to implement the course of action favoured by them (Wesz Jr., 2010).

220 The so-called political actors consist of individuals belonging to State institutions. They may  
221 represent different interests (their social basis, their political party, their territory, etc.), and be subject  
222 to contrasting pressures (interest groups, the desire to achieve re-election, etc.). Between 1995 and  
223 1998, eight main parties were represented in the Chamber of Deputies and the Senate: the Brazilian  
224 Democratic Movement Party (*Partido do Movimento Democrático Brasileiro*, PMDB), the Liberal  
225 Front Party (*Partido da Frente Liberal*, PFL), the Brazilian Social Democracy Party (*Partido da So-  
226 cial Democracia Brasileira*, PSDB), the Progressive Party (*Partido Progressista*, PP) – which became  
227 the Brazilian Progressive Party (*Partido Progressista Brasileiro*, PPB) after a number of splits –, the  
228 Brazilian Labour Party (*Partido Trabalhista Brasileiro*, PTB), the Workers' Party (*Partido dos Tra-  
229 balhadores*, PT), and the Democratic Labour Party (*Partido Democrático Trabalhista*, PDT) (Braga  
230 and Bourdoukan 2010).

231 As for international organizations, the most influent during the elaboration of Pronaf were the  
232 World Bank, and the Food and Agriculture Organization of the United Nations (FAO) (Flexor & Gri-  
233 sa, 2014). The former, known for its support of free-market policies (Wade, 2010), carried out some

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<sup>1</sup> The I and II Brazilian Land's Cry refer to a wide range of mobilizations carried out by social movements throughout the country: State Governments and the Federal Government negotiated a series of guidelines with these movements, mainly regarding rural policies (Picolotto, 2011). Such mobilizations continued in later years.

234 studies in collaboration with Brazilian researchers, whose findings were summarized within reports  
235 (World Bank, 1994a; 1994b), and divulged to the general public by means of workshops and other  
236 events. Simultaneously, the FAO – in cooperation with the National Institute for Colonization and  
237 Agrarian Reform (INCRA), and with the support of Brazilian researchers – worked on the elaboration  
238 of an operative definition of family agriculture, underlying the economic and social role of this sector  
239 for Brazil. FAO's definition could then be used to design public policy interventions specifically tar-  
240 geted on this group (Guanziroli, 1995).

## 242 METHODOLOGY AND DATA

### 243 *Discourse Network Analysis*

244 Political discourses are often neglected in the explanation of political processes (Schmidt & Radaelli,  
245 2004), despite their role in shaping the actions of political actors (Schmidt, 2008). The presence of  
246 discourse coalitions, i.e. groups of actors sharing the same social construct (Hajer, 1993), affects polit-  
247 ical processes because each coalition tries to impose its perspective on others. This is pointed out  
248 within the Advocacy Coalition Framework (Sabatier, 1988; Sabatier & Jenkins-Smith, 1993), which  
249 assumes that policymaking is an ongoing process, and political groups with similar interests and be-  
250 liefs are expected to collaborate to reach their goals.

251 Discourse Network Analysis (DNA) is a method developed by Leifeld (2009) to measure and  
252 visualize policy discourses that relies on the Advocacy Coalition Framework literature. It uses con-  
253 cepts derived from Social Network Analysis (SNA) to map the relationships among a group of actors  
254 and analyze their network's characteristics. DNA identifies discourse coalitions measuring similarities  
255 among actors based on their statements. By considering both actors and concepts, DNA identifies sub-  
256 coalitions within a discourse coalition: actors are not classified on separated categories, but may be  
257 connected through various paths. It has been used to analyze political or media discourse on environ-  
258 mental (Fisher et al., 2013) as well as economic themes (Leifeld, 2013; Leifeld & Haunss, 2012). To  
259 our knowledge, this is the first attempt to use DNA in assessing issues related to agricultural policy.

260 For our research, we firstly computed two 'actor congruence networks': the first one indicating  
261 the number of statements on which each pair of actors agrees; the second one indicating the number of  
262 statements on which each pair of actors disagrees. In both networks, the strength of the tie (edge  
263 weight) between two actors depends on the number of common (positive or negative) statements.  
264 From these two networks, it is possible to draw the 'conflict network' (Leifeld & Haunss, 2012). The  
265 'conflict network' indicates the number of statements on which each pair of actors have a discordant  
266 opinion. Within a 'conflict network', the thickness of the edge weights is computed by summing up  
267 the number of discordances between actors on the same statement.

268 Once the abovementioned network has been created, network statistics are used to detect the  
269 actors who are most influential because of their linkages. Network statistics give a quantitative mea-  
270 sure of the power of each actor, and a statistical interpretation of her centrality. We used 'betweenness  
271 centrality' to detect the actors' relevance. This indicator considers the whole network when compu-  
272 ting individual scores, and points out to where actors are placed within the network. It is computed by  
273 using the following formula:

$$274 BC_k = \sum_{i \neq j \neq k} \frac{\sigma_{ikj}}{\sigma_{ij}}$$

275 where  $\sigma_{ikj}$  is the number of geodesics linking actors  $i$  and  $j$  through  $k$ , and  $\sigma_{ij}$  is the total number of ge-  
276 odesics linking actors  $i$  and  $j$ . This measure identifies within the network actors that are strategic be-  
277 cause of their position, as it has been demonstrated that, sometimes, network location is more im-  
278 portant than the number of connections (Prell, 2012). Since we are interested in analysing the political  
279 discourse framework that emerged during the discussion of Brazil's Pronaf, 'betweenness centrality'  
280 allows us to understand which actors were in a less conflicting position: a low level of 'betweenness  
281 centrality' indicates that an actor is not involved in conflicts, while a high level denotes the involve-  
282 ment of an actor in many conflicting situations.

284

285 **Data Collection and Coding Procedure**

286 The dataset for the analysis was created using the following procedure. First, we selected relevant documents to extrapolate actors' statements on every single issue. Four types of documents were considered: public declarations, original reports, parliamentary speeches, and newspaper articles, all dating back to the three-year period 1994-1996. Overall, we analyzed 123 documents, containing 222 statements. As for international organizations, the reports we considered were published by the FAO or the World Bank on their own (Guanziroli, 1995; World Bank, 1994a; 1994b). These reports highlighted the need for State institutions to correct market failures, and to strengthen family farming in Brazil. As for trade unions and social movements, they have produced many documents and reports on this argument; hence, to assess their role in the negotiation process, we considered their official public declarations, institutional reports, and newspaper articles. Finally, as regards political actors, documented debates (i.e. speeches delivered) in the Brazilian Senate during the plenary sessions of the three-year period 1994-1996 were analyzed to identify the orientation of political parties. Among the senators whose speeches were analyzed, at least two (Jonas Pinheiro e Júlio Campos) belonged to the *Bancada Ruralista*. We decided not to consider the debates that took place in the parliament, because they were mainly focused on local issues; hence, they were not useful to understand the position of the parties on the general principles concerning agricultural financing. Due to the large amount of declarations available, the search terms 'Pronaf', 'rural credit', and 'agricultural financing' (in Portuguese and English language) were used to identify potential speeches of interest within the database of the Senate (Brazil, Federal Senate, 2017).

305

306 Table 2. Heatmap: positive statements (green), negative statements (red), and lack of opinion (white).

Statement	MST	CNA	ABAG	SRB	WB	CUT	CONTAG	PP	PFL	FAO	PTB	PMDB	PRN	PDT	PPB	PT
Goal 1																
Goal 2																
Goal 3																
Target 1																
Target 2																
Target 3																
Target 4																
Target 5																
Instrument 1																
Instrument 2																
Instrument 3																
Instrument 4																
Instrument 5																
Instrument 6																
Instrument 7																
Instrument 8																
Institution 1																
Institution 2																
Institution 3																
<b>Total</b>	<b>17</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>9</b>	<b>17</b>	<b>17</b>	<b>15</b>	<b>13</b>	<b>14</b>	<b>10</b>	<b>14</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>12</b>

307

308 Secondly, we conducted the coding process manually, based on the list of divisive topics derived from the abovementioned review of the literature on agricultural financing. For each of the 19 topics, we registered whether an actor showed agreement, disagreement, or lacked any opinion on it. Overall, 26 physical or juridical persons belonging to 16 different organizations (which represent our actors proper) were considered. We considered the opinions expressed by individual senators as representative of the position of the party they belonged to. In case of more than one senator belonging to the same party, the opinions expressed could be considered jointly, since we observed no contrasts amongst them. The outcome of the coding procedure is illustrated in Table 2. This was analyzed using the DNA software (Leifeld, 2010) and Ucinet (Borgatti et al., 2002).

317

318 **RESULTS AND DISCUSSION**

319 ***Analysis of the Results***

320 This section presents the results of the analysis and discusses them. In particular, we identified the ac-  
 321 tors who managed to prevail, i.e. to contribute more to the final policy outcome by avoiding conflicts.  
 322 Table 3 provides an overview of the divisive topics mentioned in the documents: it shows the per-  
 323 centage of actors who dealt with each topic, specifying whether their statements were in favour or against.  
 324 Three important insights can be gained from Table 3. First, economic goals such as raising farm in-  
 325 comes, productivity and profits were always mentioned, while topics related, for example, to socio-  
 326 political aspects, such as reducing the level of corruption, providing training, developing advisory ser-  
 327 vices, and implementing an ex post assessment of the way money was used played a minor role. Se-  
 328 cond, despite being mentioned by many, the topics linked to general financial issues, i.e. export (tar-  
 329 get 5) and financial sustainability of the programme (instrument 1) are supported by only a few stake-  
 330 holders. In particular, only 8 per cent of those mentioning the financial sustainability of the policy,  
 331 and 27 per cent of those mentioning the support for export productions agreed with these arguments.  
 332 Third, the most divisive topics were the support for specific productions (target 3), the adoption of  
 333 measures to grant a fair access to land (instrument 3), and the creation of State agricultural banks (in-  
 334 stitution 3), indicating that government intervention was the matter of debate.

335

336 Table 3. Percentage of actors mentioning each topic, and percentage of actors agreeing or disagreeing.

Statement	Mentioning (%)	Agreeing (%)	Disagreeing (%)
Goal 1: increasing farm incomes/salaries	100	100	0
Goal 2: increasing productivity	100	100	0
Goal 3: stimulating technological innovation	94	93	7
Target 1: profit-oriented farmers	100	94	6
Target 2: family farmers	88	79	21
Target 3: specific productions	56	56	44
Target 4: small farmers	81	77	23
Target 5: export productions	94	27	73
Instrument 1: financial sustainability	75	8	92
Instrument 2: tax concessions	69	73	27
Instrument 3: fair access to land	56	56	44
Instrument 4: reduce power of informal intermediaries	0	NA	NA
Instrument 5: ex post assessment	13	100	0
Instrument 6: linking farms and researchers	69	100	0
Instrument 7: farmers' training	31	100	0
Instrument 8: public subsidies	94	73	27
Institution 1: rural advisory services	38	100	0
Institution 2: producers' cooperatives	69	100	0
Institution 3: State agricultural banks	81	69	31

337

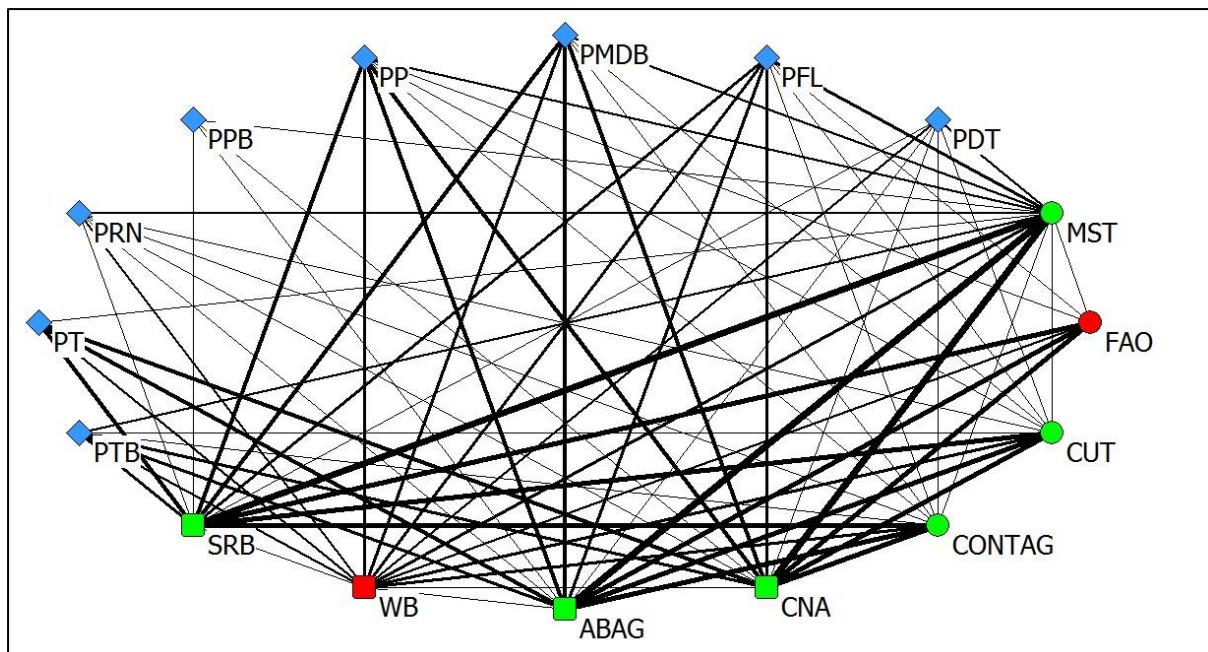
338 Figure 1 represents the 'conflict network'; the two 'actor congruence networks' can be found in  
 339 the Appendix. There is a clear grouping of the stakeholders into two distinct coalitions: one including  
 340 the SRB, ABAG and the CNA, another including the MST, CUT and CONTAG. The network struc-  
 341 ture is coherent with Leifeld and Haunss (2012), who argue that strong polarization is not generally  
 342 found in policy conflicts; nevertheless, their presence might be interpreted as an indicator of the  
 343 significance of the conflict. In Brazil, rural credit has a great socio-political relevance, and has been  
 344 used by the Brazilian government to create political consensus on several occasions (Garcias &  
 345 Kassouf, 2016), meaning that it is matter of debate within the political arena.

346 The group composed of the SRB, ABAG and the CNA (hereafter, the 'productivity-focused  
 347 group'), which was more in line with the World Bank, supported a market-oriented reform, while the  
 348 group including the MST, CUT, and CONTAG (hereafter, the 'welfare-focused group') was more re-  
 349 lated to FAO's beliefs. The conflict derived from background principles: the former group defended  
 350 the interests of business farming, while the latter represented the interests of small producers. Santos

351 (2011, p. 123) points out to the presence of two coalitions in dispute ('duas coalizões em disputa')  
 352 about agricultural policies<sup>2</sup>.

353 Moruzzi Marques (2004) points out that the official documents on small production and family  
 354 farming elaborated by the CNA represent this group – either implicitly or explicitly – as having aspi-  
 355 rations and claims similar to those of large producers. The CNA, the SRB and ABAG were opposed to  
 356 the creation of a differentiated line of rural credit for family farmers exactly because they did not agree  
 357 with the idea that family and business agriculture were experiencing different working conditions.  
 358 Nevertheless, after the start of the political debate on agricultural financing (which then led to the in-  
 359 troduction of Pronaf), these organizations tried to influence the discussion on the shape of the pro-  
 360 gramme to ensure more flexible eligibility criteria for their social base<sup>3</sup>.

361  
 362 Figure 1. 'Conflict network' of the actors involved in policy debate on Pronaf.



363  
 364 Note: Squares indicate the actors belonging to the productivity-focused group, circles the actors belonging to the  
 365 welfare-focused group, and diamonds other actors. Political organizations are marked in blue, civil society orga-  
 366 nizations in green, and international organizations in red.

367 Looking, again, at Figure 1, there are three more actors that seem to conflict with the productiv-  
 368 ity-focused group: the PP, the PMDB, and the PT. Although the intensity of their conflict with such  
 369 group is more intense, the first two actors disagree also with (a smaller number of topics supported  
 370 by) the welfare-focused group; instead, the PT discords only with the productivity-focused group<sup>4</sup>.  
 371 The PT and the PPB are the actors with the lowest level of hostility within the network, even if the  
 372 former expressed a (positive or negative) statement on twelve topics, while the latter only on eight  
 373 (Table 3). Their limited conflict is confirmed also by network statistics: as shown in Table 4, these

<sup>2</sup> This dispute resulted in the creation, in 1999, of two Ministries dedicated to agricultural themes: the Ministry of Agrarian Development (*Ministério do Desenvolvimento Agrário*), dealing with family farming, local development and agricultural planning, and the Ministry of Agriculture, Livestock and Supply (*Ministério da Agricultura, Pecuária e Abastecimento*), focused on large farm businesses and public policies for entrepreneurship.

<sup>3</sup> For example, as regards Pronaf's eligibility criteria, the productivity-focused group supported the idea that the family management had to be the only criterium to classify the producing entities, regardless of property size, income, and the presence of employees. The CNA put pressure on the Ministries to include, as eligibility condition, the presence of two permanent workers (which, indeed, became a rule of Pronaf), while CONTAG considered that the presence of temporary employees would have been enough (Grisa, 2012; Santos, 2011).

<sup>4</sup> The PT conflicts with the MST on two topics, but the MST expressed disagreement on them, contrary to all the other actors. For this reason, the MST has at least one conflict edge with every actor, i.e. it has the highest value of *betweenness centrality* (Table 4).

374 parties have the same (lowest) value of ‘betweenness centrality’ (0.231), while the members of the  
375 productivity-focused group have the highest values.

376 The MST appears with the highest score in Table 4 because, in addition to opposing the inter-  
377 ests of business agriculture organizations (the CNA, ABAG and the SRB), it had divergent positions  
378 from CONTAG and CUT on some issues (Picolotto, 2011). Although the MST recognized the im-  
379 portance of agricultural financing under differentiated conditions for family farmers, its priority was  
380 represented by the agrarian reform to achieve a more equitable access to land. Moreover, they did not  
381 share the view that agricultural financing should aim at raising the technological level of the farms to  
382 increase profits, since this is the logic of capitalist business agriculture, and the movement supported  
383 traditional production methods.

384  
385 Table 4. ‘Betweenness centrality’ indicator (actors listed in decreasing order).

Actor	‘Betweenness centrality’	Actor	‘Betweenness centrality’
MST	8.082	PFL	0.607
CNA	7.852	FAO	0.356
ABAG	7.852	PTB	0.322
SRB	7.852	PMDB	0.322
WB	5.332	PRN	0.322
CUT	2.356	PDT	0.322
CONTAG	2.356	PPB	0.231
PP	0.607	PT	0.231

386  
387 A possible explanation of the network position assumed by the PT and the PPB can be related  
388 to the topics they oppose. The PPB is the only actor that did not express any negative statement, while  
389 the PT opposed only one topic: like most of the actors (except for the productivity-focused group), it  
390 opposed the idea of giving priority to export crops over subsistence production. The larger centrality  
391 values observed among the actors belonging either to the productivity-focused or the welfare-focused  
392 group is pointing to their involvement in more conflictual situations. Nevertheless, the members of the  
393 latter show lower levels of ‘betweenness centrality’, which probably favoured the approval of the final  
394 structure of Pronaf.

### 395 **Discussion**

396 Result suggest that two conflicting coalitions (what we call ‘productivity-focused group’ and ‘wel-  
397 fare-focused group’, respectively) emerged during the discussion of Pronaf. Since we observe multi-  
398 ple and complex linkages among the stakeholders, including those belonging to different groups, the  
399 final structure of the policy should have been the result of political negotiations. In order to assess the  
400 relative success of the groups, it is necessary to identify the elements that have been either included or  
401 excluded from the norms finally approved in 1996<sup>5</sup>. Table 5 provides an overview of the outcome of  
402 the negotiations.

403 Specific funds for interventions aimed at increasing farm incomes (goal 1), raising productivity  
404 (goal 2), stimulating the adoption of new technologies (goal 3), as well as for profits-oriented farms  
405 (target 1) were established through Pronaf, since every actor (except for the MST) agreed that rural  
406 credit should help achieve these objectives.

407 The financial sustainability of the programme (instrument 1) was not introduced in the norm,  
408 since it was decided to adopt a fixed interest rate (Bianchini, 2015). Obviously, Pronaf was created  
409 with a primary focus on family business (target 2), and the funds target specific productions (target 3),  
410 rather than foreseeing any form of single farm payments. Therefore, on the one hand, Pronaf created a  
411 rural credit programme specific for family agriculture (which did not exist in the SNCR); on the other  
412 hand, it maintained an operating logic similar to the SNCR, adopting a sectorial perspective, i.e. by  
413 product and not by farm (Grisa et al., 2014).

5 Pronaf was established by the Decree of the President of the Republic no. 1,946 of June 28, 1996.

415 Interventions on land ownership (third instrument) were not included amongst the action lines  
 416 of the policy, since this issue was being addressed by other programmes<sup>6</sup>. Moreover, the main policy  
 417 tool of the agrarian reform was '*the legalization of land already occupied by peasants or the distribution of public land*' (Vergara-Camus & Kay, 2017). The decision to support primarily small business  
 418 (target 4), as well as the establishment of local production groups (institution 2) are related to the emphasis  
 419 on family farms. Their introduction within Pronaf is illustrative of the 'defeat' of the productivity-focused group.  
 420 Many stakeholders supported the development of an integrated system between research and family farming (instrument 6), and some of them (family farming organizations and the  
 421 FAO) were in favour of organizing farmers' training activities (instrument 7), leading to their incorporation  
 422 within the policy.

423 Pronaf introduced rural advisory services (institution 1) for the first time in Brazil. These institutions  
 424 were organized into local (County Councils for Rural Development, *Conselhos Municipais de Desenvolvimento Rural*), State (State Council for Pronaf, *Conselho Estadual do Pronaf*) and Federal  
 425 boards (National Council for Pronaf, *Conselho Nacional do Pronaf*), with the participation of civil society  
 426 organizations and public administrators.

427 The importance of the public sector emerges clearly from Pronaf. Indeed, the decree created  
 428 public banks (institution 3), and public subsidies were preferred to private loans (instrument 8). Furthermore,  
 429 the preferential support for export crops, which characterized Brazilian agricultural policy during the sixties, seventies and eighties, was not included in Pronaf, in order to stimulate family farm  
 430 production (which involves self-consumption and a focus on domestic markets) – although it remained within the SNCR. Finally, three of the topics identified were not discussed throughout the political  
 431 debate and, therefore, were not included in the law: the possibility of introducing a monetary  
 432 compensation for the taxation of agri-food products (instrument 2), the institution of anti-corruption  
 433 norms for reducing the power of informal intermediaries (instrument 4), and the development of ex  
 434 post evaluation schemes for avoiding the misuse of public funds (instrument 5). While anti-corruption  
 435 measures and policy evaluation tools were (almost) never mentioned by the stakeholders in the political  
 436 debate, the introduction of tax concessions was supported by the productivity-focused group. Interestingly  
 437 enough, these topics were not relevant for the PT, the least conflicting actor of the network, which never mentioned them.

444  
 445 Table 5. Final policy outcome: topics included (green), excluded (red), or not discussed (white).

Statement	Inclusion
Goal 1: increasing farm incomes/salaries	Green
Goal 2: increasing productivity	Green
Goal 3: stimulating technological innovation	Green
Target 1: profit-oriented farmers	Green
Target 2: family farmers	Green
Target 3: specific productions	Green
Target 4: small farmers	Green
Target 5: export productions	Red
Instrument 1: financial sustainability	Red
Instrument 2: tax concessions	Red
Instrument 3: fair access to land	Red
Instrument 4: reduce power of intermediaries	White
Instrument 5: ex post assessment	White
Instrument 6: linking farms and researchers	Green
Instrument 7: farmers' training	White
Instrument 8: public subsidies	Green
Institution 1: rural advisory services	Green
Institution 2: producers' cooperatives	Green
Institution 3: State agricultural banks	Green

6 Pronaf does not intervene in the subject of land ownership. This issue was handled by the National Institute of Agrarian Reform (*Instituto Nacional de Colonização e Reforma Agrária*, INCRA), with the creation of dedicated rural settlements, and the 'market-assisted land reform' (Heredia et al., 2013; Mendes Pereira, 2007).

446

447 The final shape of Pronaf was thus the outcome of negotiations between two well-defined  
448 groups, which were diverging on several issues. The conformation of the groups was due to the polariza-  
449 tion of the Brazilian society (CONTAG, CUT and the MST on one hand; the CNA, ABAG and the  
450 SRB on the other hand). This cleavage was strengthened by the alignment of Brazilian political par-  
451 ties along it, and by a diverging orientation between social movements – which were able to keep  
452 their autonomy with respect to political parties – and other organizations. In 1995, during the govern-  
453 ment of Cardoso, most of the parties with senators belonging to the *Bancada Ruralista* (the PP, the  
454 PFL, the PMDB, the PRN and the PTB) were part of the parliamentary majority (Vigna, 2007).  
455 Therefore, their conflict with the productivity-focused group emerging from the analysis may be due  
456 to political opportunism, rather than to diverging economic interests. This is the case of the PP and the  
457 PMDB, who were close to the agri-business.

458 Instead, the PT and the PDT presented more affinity with FAO's proposals, and with the asso-  
459 ciations supporting family farmers (although they adopted a non-conflicting stance on most issues).  
460 Overall, only one of the positions of the PT (i.e., the need of an agrarian reform) was not reflected in  
461 the legislation. This party managed to have the options favoured by the welfare-focused group (to  
462 which it belonged) approved, without entering in an open conflict with the productivity-focused one.

463 We can thus conclude that the welfare-focused group managed to shape Pronaf according to its  
464 beliefs, but some of the issues backed by its members were not included in the final document, proba-  
465 bly because of a political agreement with influential stakeholders like the PT, or due to the strong op-  
466 position of the productivity-focused group. In any case, the mobilization of the social movements rep-  
467 resenting family agriculture (mainly in the framework of the Brazilian Land's Cry) was key to the ap-  
468 proval of Pronaf, as it gave visibility to the demands of this sector, allowing them to entered the pub-  
469 lic agenda (Bianchini, 2015; Grisa, 2014; Moruzzi Marques, 2004; Picolotto, 2011; Schneider et al.,  
470 2004).

471

## 472 CONCLUSIONS

473 The analysis of competing coalitions in political debates is becoming increasingly popular in policy  
474 studies; however, empirical findings concerning agricultural policies are missing. Our study aimed at  
475 filling this gap by focusing on the Brazilian National Program for Strengthening Family Agriculture  
476 (Pronaf), which was created to provide credit to family farmers at favourable conditions. Through our  
477 analysis we were able to identify the actors involved in this process, and their positions with respect to  
478 potential changes in the Brazilian agricultural financing policy. A prominent role was played by inter-  
479 national organizations (World Bank, and FAO), as often occurs in developing countries. Amongst in-  
480 ternal stakeholders, there was a convergence on certain issues, while others were a matter of debate.  
481 Such duality was a matter of debate for the above international institutions, which were interested in  
482 promoting their vision of the Brazilian agricultural sector. In turn, their partially contrasting visions  
483 were used by Brazilian parties, unions, and business associations to legitimate their positions on spe-  
484 cific issues.

485 One of the limitations of this study consists in the limited number of declarations identified to  
486 extract the statements of the single stakeholders. Since Pronaf was created in 1996, when the press  
487 and institutional documents were rarely digitalized, it was very difficult to find more than a couple of  
488 documents per stakeholder. For this reason, we assumed that each physical person belonging to an or-  
489 ganization (a political party, a union, a business association) was following the guidelines of this or-  
490 ganization and was thus representing its positions. The goodness of our choice was confirmed by the  
491 fact that we found no discording opinions in the (few) cases in which we had multiple individual dec-  
492 larations per organization.

493 Although Pronaf has been evolving since the nineties, we decided to focus on a specific period:  
494 specifically, the years of its creation. A longitudinal study would allow understanding how changes in  
495 the political discourse have been reflecting on the programme in the years following its approval, and  
496 especially after the PT came to power in 2003. Indeed, rather than observing a progressive opening to  
497 more radical instances, represented by social movements like the MST, we assisted to a gradual emp-  
498 tying of the provisions of Pronaf, that culminated in the abolition of the Ministry of Agrarian Devel-

499 opment after the impeachment of Dilma Rousseff in 2016. Further research developments should thus  
500 consider the evolution of Pronaf along years, with a particular focus on the changes introduced by the  
501 governments of the PT. This would make possible to assess whether the objectives of the organisations  
502 belonging to our 'welfare-focused group' (the MST, CUT, and CONTAG) have been pursued  
503 or, rather, the PT has made a mockery of their requests.

504

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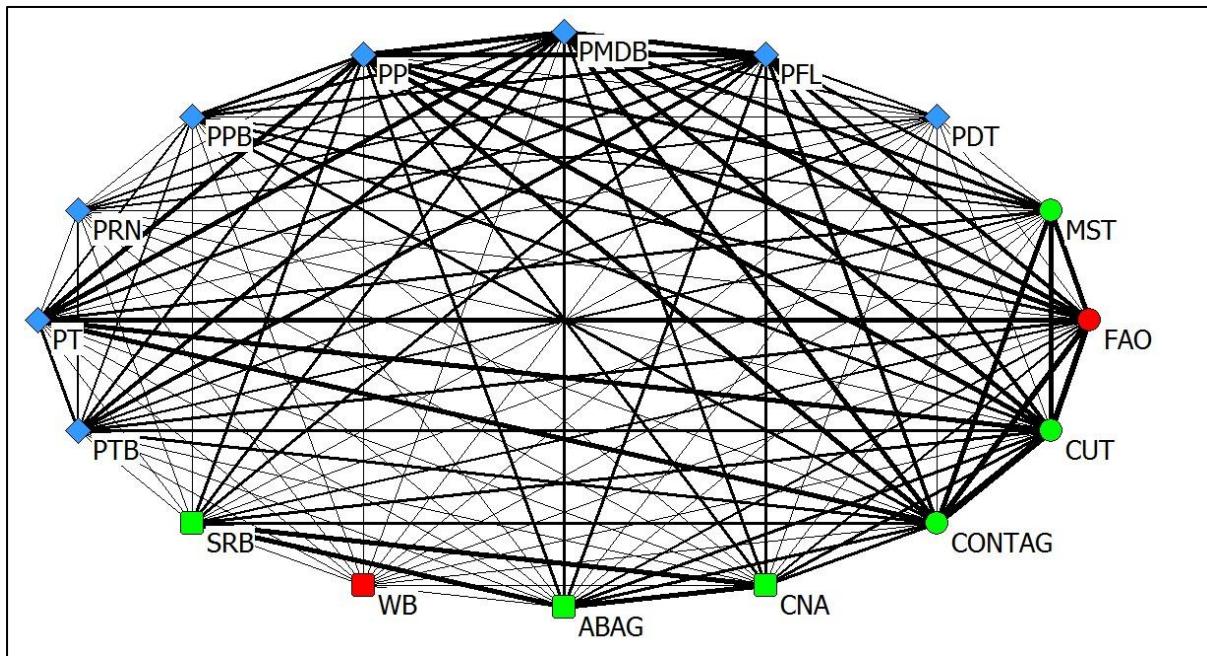
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689 **Appendix**

690 Figure 1A. Congruence network: agreements of the actors involved in policy debate on Pronaf.

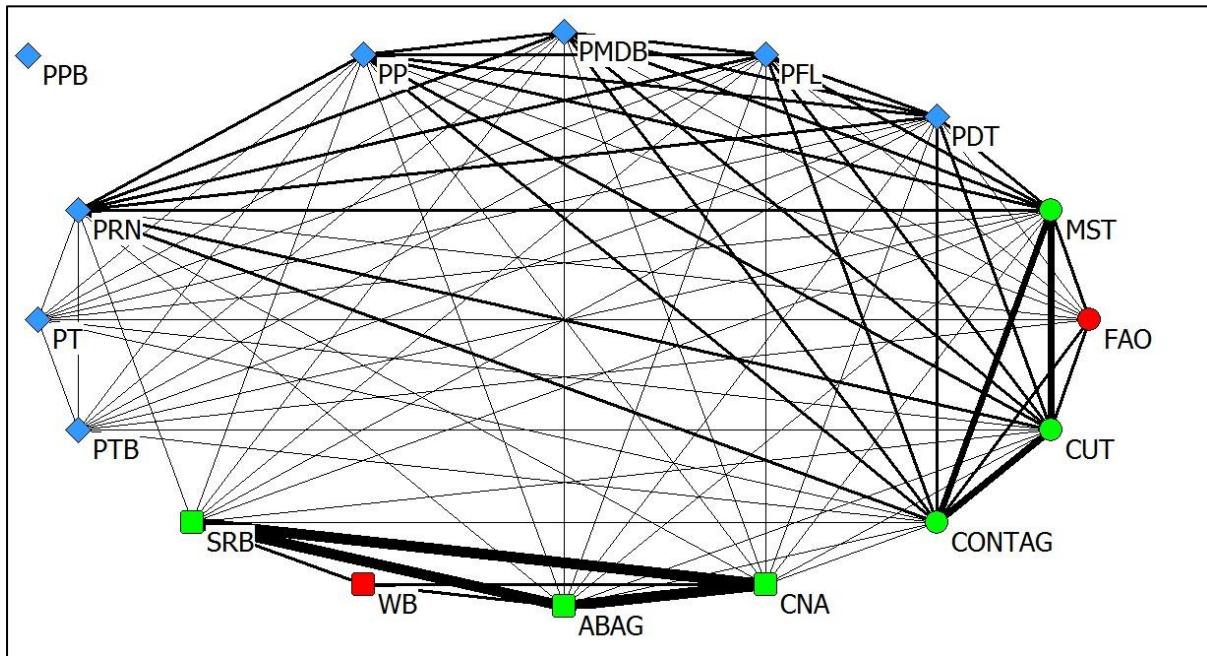


691

692 Note: See Note to Figure 1.

693

694 Figure 2A. Congruence network: not agreements of the actors involved in policy debate on Pronaf.



695

696 Note: See Note to Figure 1.