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AUTHOR

Boaventura, João Maurício Gama; Carnaúba, A.A.C.; Todeva, Emanuela; et al.

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Governance Structures and Trust: a Study of Real Estate Networks

J.M.G. Boaventura, A.A.C. Carnaúba, E. Todeva, A.C. Azevedo and E. Armando[1]

Abstract

The present study aimed at verifying how different modes of governance structure are linked to different levels of interorganisational trust. Its theoretical grounding involves Transaction Cost Theory, which studies governance of interorganisational arrangements and research on trust in the business field. A descriptive and quantitative approach has been adopted to describe the relation between trust amongst business network participants and the mode of governance adopted by the surveyed networks. Hence, a detailed questionnaire has been employed, which was answered by 35 real estate agency managers, whose participation was directly linked to 11 business networks. By using Spearman methods of identification of non-parametric correlation and correspondence analysis, it was possible to verify that certain modes of governance structure associate with different levels of trust. Considering the scarcity of quantitative research on the theme, this paper contributes to the field by presenting results which point out that collectively-managed governance of regional cooperation networks is linked to high levels of trust; whereas governance of dispersed networks with the presence of a lead company are linked to low levels of trust. Medium levels of trust were observed in networks governed by an administrative organisation. Considering the practical aspect of administration in networks, one can conclude that the process of governance structure in such interorganisational arrangements should include deliberations about the influence of the adopted mode of governance on trust amongst participants. The paper does not allow generalizations of its conclusions beyond its chosen sample.

Keywords: Brazil; competitiveness; governance structure; real estate networks; dimensions of trust.

1. Introduction

The interest in business networks has increased due to a growing number of companies which have been organised in networks as an alternative in their search for competitiveness (Idris, 2013; Jones et al., 1997). Their rise in the last few decades has resulted from advancements in information technology, amongst other factors, which have allowed new and more flexible organisational structures (Nohria, 1992). Such flexibility allows productive chains to adopt more outspread and diffuse arrangements, adapted to a context of rising competitiveness at a global level.

Under certain circumstances the performance within networks becomes a new competitive pattern so its 'locus' shifts from the rivalry amongst individual organisations to a competition amongst networks (Park, 1996; Provan et al., 2007; Zaccarelli et al., 2008). In this context, these authors defend the importance of governance role in network performance and competitiveness.

Analysing governance and management of networks is a way to understand how such arrangements function, and how some conditions in their organisation may influence the attained results (Provan and Kenis, 2008). Although it may be possible for networks without formalised coordination to reach positive results, their full potential will only be realised through the application of governance

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mechanisms which allow strategic co-alignment and coordination between individual efforts and network investments (Zaccarelli et al., 2008).

A few variables influence the adoption of a certain mode of network governance, with trust being an essential component (Zaheer et al., 2000). Trust allows the development of cooperation efforts towards common goals (Ring and Van de Ven, 1994; Van de Ven and Ring, 2006). Based on trust, organisations can strengthen relationships, allowing the exchange of knowledge and resources and maximising value creation (Tsai and Ghoshal, 1998). High levels of trust may have a positive impact on network performance, as concluded by Zaheer et al. (1998), Dyer and Chu (2003), Krishnan et al. (2006), Mu et al. (2008), and Gulati and Nickerson (2008).

Literature also acknowledges a link between trust and governance within networks (Burlat et al., 2003; Gulati and Nickerson, 2008). A few studies examining this link pointed out that networks with formalised governance structures tend to reduce levels of trust present in their relationships (Dyer and Chu, 2003; Dyer and Singh, 1998; Ghoshal and Moran, 1996; Gulati, 1998; Inkpen and Curral, 2004). On the other hand, studies such as Poppo and Zenger's (2002), and Lui and Ngo's (2004), inform that formal governance mechanisms might complement and favour the development of trust amongst organisations.

The relation between network governance and trust has not been consolidated in the literature yet, which is an evidence of the need for studies dedicated exclusively to its analysis (Fritz et al., 2008; Gulati and Nickerson, 2008; Klijn et al., 2010; Lui and Ngo, 2004). A theoretical gap has thus been identified regarding the understanding about the relation between structural modes of governance and interorganisational trust. There is a lack of evidence concerning which structural modes of governance in business networks relate to different levels of trust. This gap constitutes the main research problem in the present paper.

This paper aims at verifying how different modes of governance structure are linked to different levels of interorganisational trust. It uses quantitative research in the context of intermediating activities in real estate network transactions in Brazil. Hence it is expected to contribute to business studies, extending the understanding of the relation between these two constructs, essential to network competitiveness: trust and governance.

The theoretical foundation on which the study develops comes from the New Institutional Economics approach, specifically from the Transaction Cost Theory of Williamson (1979, 1985). This framework considers that performance in business networks in which there are positive levels of trust amongst parties favours the competitive performance of those networks, either by reduction of costs, which are then shared, or by adding value to offered services (Lazzarini et al., 2001; Leick, 2013; Man, 2004). The typology defined by Provan and Kenis (2008) was employed to analyse the modes of governance structure. Moreover, Zaheer et al. (1998) supplied grounding work to analyse dimensions of trust in business networks.

The real estate market in Brazil

The policies of expansion of real estate credit in Brazil have exponentially increased levels of real estate transactions in the country, rising from 61.1 thousand units financed in 2005 to 242.2 thousand units in 2011 (Brazilian Association of Real Estate Credit and Savings Entities [ABECIP], 2012). The development of the real estate market translated into an increment of activity in the sector, which originated the search for strategic alternatives by those companies intermediating real estate sales and rental.

Prior to such intensification, the organisation of real estate intermediation activity was basically comprised of smallsized companies, fragmented and organised as family businesses, which were barely professional and showed a nearly absent mechanism of network integration. That reality of small real estate agencies reflected independent operations, with a limited frequency of transactions in partnerships. Cooperation difficulties observed in the sector were attributed to issues related to organisation and trust (Alves et al., 2011).

However, once real estate agencies became concerned with updating their management model in order to achieve higher levels of competitiveness, they began to search for alternative business models, amongst which network integration was highlighted (Hoher and Tatsch, 2011). This model, based on the integration amongst legallyindependent and occasionally competing agencies, which complementarily perform common activities in order to reinforce their competitive positioning in the market, characterises what Park (1996) calls 'horizontal networks'.

The trend towards integration amongst real estate agencies has been observed by Alves et al. (2011), and Hoher and Tatsch (2011), who have identified the potential of competitiveness maximisation amongst companies operating in cooperative transactions, due to a better utilisation of client and real estate portfolios in both companies.

Networks rise once there is an identification of common problems and the establishment of common goals by a group of organisations (Park, 1996). Nevertheless, the continuity of that cooperation is linked to their capacity of meeting proposed targets and making their participants more competitive. Hence the network must be structured, organised and managed (Zaccarelli et al., 2008). Governance is one of the key-aspects for the network to develop and for targets to be met.

However, one observes that the emergence of real estate networks gave birth to the coexistence of non-homogeneous structures, since the consolidation of those networks is still at its initial stages. According to the Federal Council of Real Estate Agents (Cofeci) (2012), institute that regulates intermediation of real estate business in Brazil, there are about 40 thousand real estate agencies and 220 thousand individuals working as real estate agents in Brazil, showing the high level of fragmentation in the sector.

Within this framework one can observe a series of networks introduced into the Brazilian markets in the past few years, from those organised by small real estate agencies which group together with no hierarchisation whatsoever and restricted geographical operations, to international networks of real estate franchises. Moreover, it is possible to verify the existence of networks acting in the entire country and led by larger-sized organisations, which complement their real estate intermediation services with real estate credit offer.

Considering the present study, the recent development of networked arrangements in the Brazilian real estate market exhibits a rich context for the proposed analysis, once it allows the observation of networks in different stages of evolution and forms of governance.

2. Literature review and theoretical background on business networks under the new institutional economics

Business networks have become an increasingly interesting theme in the business literature. Castells (2000) notes that the world economy presents itself as an extensive network of financial transactions, production sites, consumer and labour markets, fuelled by money and information flows, and company organisations. This context favours the organisation of companies in business networks with the goal of cooperatively pooling resources and capabilities to achieve competitive advantages (Idris, 2013).

A network is comprised of two or more organisations involved in a long-term relationship (Thorelli, 1986), displaying characteristics of dependence, reciprocity and mutual support amongst parties (Powell, 1990). In this sense, business networks can be seen as a group of legally independent organisations which act collectively to meet their individual and collective group goals at the same time (Provan and Kenis, 2008). In order to understand business networks, it is necessary to understand the relations amongst their constituting parts (Majava et al., 2013).

Under the perspective of the New Institutional Economics, the competitiveness of networks is analysed through the transaction cost approach (Leick, 2013). In this framework hereby also employed, networks stand out as hybrid arrangements that allow flexibility and reduction of transaction costs in complex environments with high levels of uncertainty and demands for specific assets (Jones et al., 1997; Lazzarini et al., 2001; Leick, 2013; Menard, 2004). The arrangements of business activities tend in the long term to structure themselves (according to the transaction cost theory) so that transaction costs are as low as possible amongst existing organisational alternatives; thus a productive arrangement with lower transaction costs will be more competitive than another one with higher costs (Williamson, 1979, 1985).

The association in business networks drives companies to achieve strategic attributes such as relational economies and economies of scale, complementariness of skills, access to tangible and intangible resources, learning opportunities, reduction of transaction costs and innovation (Lin et al., 2009; Sydow, 2004). Moreover, it allows the enhancement of the partners' market power, as well as an increase in their competitiveness, whether due to reduction of costs which are shared, or to value-adding to the services offered (Man, 2004).

Specifically, the trend towards organisation in real estate networks has been observed in recent studies developed by Alves et al. (2011) and Hoher and Tatsch (2011). These authors identified the potential maximization of competitiveness in real estate companies, as a result of often making transactions in partnerships, and operating in network settings. According to Alves et al. (2010), integration in real estate networks allows participating companies to pool their resources, which are comprised mainly of their respective client and estate portfolios.

Modes of governance structure in networks

In the contextualisation of business networks, it is believed that factors such as asset specificity, informational asymmetry and possibility for opportunism might impact transaction costs amongst parties. Thus governance solutions which allow coordination amongst network agents with low transaction costs are searched for in the competitive environment (Provan and Kenis, 2008; Zaccarelli et al., 2008).

Several studies have highlighted the relevance of governance structure to network performance, such as: Grandori and Soda (1995), Menard (2004), Park (1996), Provan and Kenis (2008) and Van Meerkerk et al. (2014). However, there has not been a consensus in literature regarding which modes of governance structure in networks would be associated more often with better performances.

Under the perspective of the New Institutional Economics, governance structure of business networks is linked to the evolution of the group of companies, conditioned by constraints in the environment where it develops (Menard, 2004). From a phase of shared collective governance in which trust relations allow an initial transaction level amongst parties, through networks possessing a leadership element or hub that acts as a coordinating element, the network could further develop until it forms a bureaucratic managing entity, which will play the role exclusively allotted to network coordination.

Several authors have been searching for a classification of networks that could serve as a parameter in research on network governance. Amongst these, Grandori and Soda (1995) present a typology of classification related to structure. According to them, networks can be classified as symmetrical (there is no central company) or asymmetrical (one company centralises all relations), where they can also be bureaucratic (relations and coordination formalised in contracts) or social (purely social relations without formalisation) regarding the formalisation level axis.

Park (1996), on the other hand, arguments that networks can generally present two modes of governance: bilateral and trilateral. Bilateral governance refers to the cases in which network control and coordination are shared by managers of participating firms without an autonomous entity created for this purpose. Trilateral governance is characterised by the creation of an autonomous management entity, which monitors the behaviour of participants and manages the process of collective decision-making.

Another typology is present in the literature by Provan and Kenis (2008), who propose three types of governance structure in inter-organisational relations: (1) participant – governed networks that are characterised by collective strategic and operational decisions made by network participants without a formal structure beside the interactions amongst agents; (2) lead organisation – governed networks in which there is a common goal which allows the integration amongst network agents, and in which there is an organisation of sufficient size and power to lead the network; and (3) network administrative organisation, with an individualised structure dedicated to network management as a whole, regardless of the structure of participating companies.

Considering the absence of one single typology for governance based on network classification, this paper adopts the model of Provan and Kenis (2008), which has a strong alignment with its objectives. In the present study, networks with the participant – governed networks governance, will be labelled as follows: regional cooperation networks (COOP), the networks with the governance called lead organisation – governed networks, refer to the dispersed networks with a lead company (LEAD) and, finally, the networks governed by administrative organisation remain with the same designation (NAO).

Trust dimensions in network relationships

Amongst investigations which further identify the factors of network competitiveness, studies like those developed by Dyer and Chu (2003), and Gulati and Nickerson (2008) identify inter-organisational trust as an essential factor, since higher trust levels allow reductions of transaction costs, enhancing competitiveness in business networks. This reduction is generated by networks performing repeated transactions and developing trust (Leick, 2013).

Generally, there has been a consolidation of the positive association between trust and performance in the literature, as identified by the studies of Afuah (2013), Dyer and Chu (2003), Gulati and Nickerson (2008), Gulati and Sytch (2008), Li et al. (2013) and Zaheer et al. (1998). In this context, trust is understood as the belief of an individual in a vulnerable position that another individual in good faith will not do him wrong (Van de Ven and Ring, 2006). Trust amongst organisations refers thus to the assurance that one partner will not exploit the other partner's vulnerability (Gulati, 1998).

Zaheer et al. (1998), when researching the theme of trust, highlight the need for a multidimensional analysis, differentiating interpersonal trust and inter-organisational trust. Inter-organisational trust actually does not refer to that trust shown by an organisation itself, but to a level of trust shared by the group of individuals of a certain organisation when interacting with another organisation.

Furthermore, inter-organisational trust reflects those procedures institutionalised during the succession of transactions and interactions taking place in the relationship amongst organisations. Interpersonal trust develops from a positive response to a previous conduct expectation of an individual towards another in the countless interactions which shape social relations. Likewise, inter-organisational trust develops in each interaction established between two organisations (Zaheer et al., 1998) within the sphere of relationships amongst companies.

Apart from inter-organisational and interpersonal dimensions, a few studies highlight other dimensions of trust analysis. One example comes from Rousseau et al. (1998), who present a model of trust development comprised of the institutional dimension, based on the institutional environment in which transactions take place; of the rational dimension, based on the perception of gain and risk in the transaction; and of the relational dimension, which develops in time and is based on the relationship amongst parties.

To Rousseau et al. (1998), the relational dimension of trust grows as repeated transactions allow a higher level of exchange of knowledge and information, when considering the development of trust in time. Still according to the authors, the rational or calculated dimension of trust changes little in time, and will prevail in isolated situations in which there is not a lot of information regarding the counterpart. The institutional dimension, on the other hand, establishes a minimum level of trust common to the sector analysed, from which subsequent dimensions of trust might develop (Rousseau et al., 1998).

In this study we employed the concept of trust as presented by Gulati (1998), who establishes trust as the assurance that a partner in a vulnerable position in a network transaction will not be harmed by another. On the other hand, dimensions of trust find their basis in the proposals of Zaheer et al. (1998), the analysis also being valid to the propositions of Zaheer et al. (1998).

Hence, the elaboration of trust at a general level operationally involves interpersonal and inter-organisational dimensions, incorporating elements of relational trust, based on the evolution of relationships amongst network members, and of calculated trust, based on a rational process related to risks involved in a transaction amongst companies.

The institutional dimension of trust proposed by Rousseau et al. (1998) was not included in the study, since the institutional environment is reasonably common to the surveyed universe. One should consider that the regulation of real estate professionals is present in every region of the country.

The relation between modes of governance structure and trust

The relation between network governance and trust amongst participants is characterised in the literature as being interdependent. In this aspect, Gulati and Sytch (2008), and Inkpen and Curral (2004), note that the choice of the governance mode adopted by the network will be a decision influenced by the pre-existing level of trust, and that this same governance model, from a dynamic perspective, might influence the level of inter-organisational trust. Some compatibility between governance structure and the levels of trust present in networks has thus been acknowledged (Provan and Kenis, 2008).

It has thus been observed that the existence of trust among companies grouped in a network allows the adoption of economic governance models which incur in lower costs, enhancing transaction performance. Similarly, the governance mode adopted in the network might influence the level of trust among participants, involving higher or lower interaction levels, as well as a higher or lower formalisation level of established relations.

In that sense, a few studies report that networks with more formalised governance structures might imply the incidence of lower levels of trust among network actors, once the relational aspect is replaced by the rational one, and relations begin to be mediated by formalised contracts, dispensing with or minimising the need for relational characteristics which allow the interaction among actors (Dyer and Singh, 1998; Inkpen and Curral, 2004).

On the other hand, Lui and Ngo (2004), and Poppo and Zenger (2002) evidence that the formalisation of governance structures might favour the development of trust in the network, once they act as safeguards of the actors involved, that is, they represent a positive reinforcement of the relation among parties. Still, in highly-uncertain and complex scenarios, relations guided only by contracts, bonds and penalties might not be enough to assure interaction amongst actors, demanding the existence of trust amongst parties in order to complement such relations (Klijn et al., 2010).

Provan and Kenis (2008) highlight trust as one of the key factors to the effectiveness of governance in networks. By theorizing on the possible associations between levels of trust and structures of governance particular to the networks, the authors present the following propositions:

• Networks with shared governance structures tend to show denser relations and higher, more generalised levels of trust amongst actors; in such structures, trust is a fundamental element in the development of collaborative activities.

• Networks with a lead company responsible for governance tend to show lower-density relations and a highly-centralised management, which implies lower levels of interaction and trust.

• Networks which have an administrative organisation responsible for its governance have actions of that leadership structure collectively monitored by its members, which generates sharing among companies and characterizes trust relations of a moderate level.

However, in spite of the advances in the literature, Fritz et al. (2008), Gulati and Nickerson (2008), Klijn et al. (2010), and Lui and Ngo (2004), point out that the comprehension about the relation between trust and governance in networks is not yet consolidated, stressing the need for a wider range of research on the theme. Hence, there is a need for better comprehension about the link between the way companies structure their governance and the existing trust amongst their participants.

3. Research model and methods

This paper aims at verifying how different governance structures and levels of trust are related. With this goal in mind, an exploratory and quantitative study was conducted, based on the theoretical model shown in Figure 1. This model relates governance modes – shared governance, lead company governance, and network administrative organisation – to trust dimensions – interpersonal and interorganisational. The objective is to clarify the occurrence of influence. The model in Figure 1 presents the two main constructs and their elements.

The theoretical ground admits that there is interdependence between governance mode and trust. In this perspective, it is observed that the governance mode chosen by the network is influenced by the level of trust. On the other hand, from a dynamic perspective, governance structure may influence the existing level of confidence (Gulati and Sytch, 2008; Inkpen and Curral, 2004). There is some research that argues that governance formalisation damages trust levels amongst networked organisations. There is also another line of thought that argues that the increase in governance formalisation favours higher levels of trust in the network. It can be observed that the interdependence is recognized in both lines of thought. However, the circumstances and strength of the relationship needs further clarification. This is the theoretical gap that this study seeks to fill.

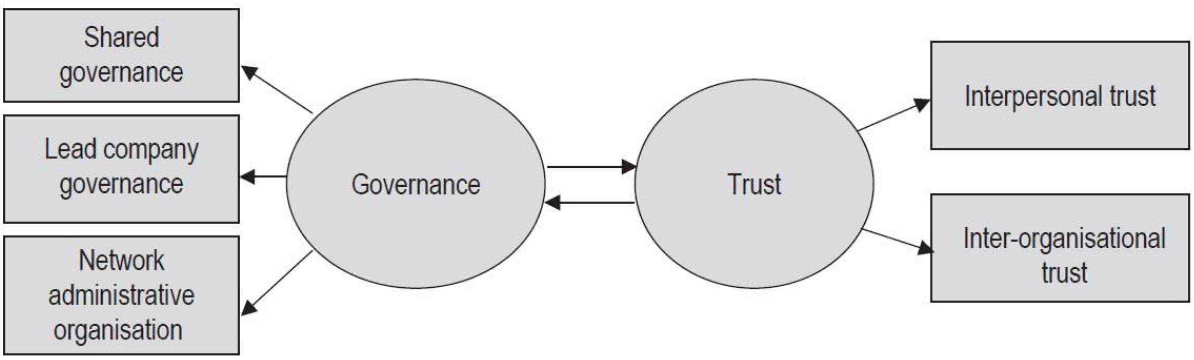
Sample and tool of data collection

There has been a selection of Brazilian real estate agencies which explicitly participate in real estate networks. The selection was purposefully oriented so that networks in several evolutionary phases and with different modes of governance structure could be observed. By the use of the availability criteria, 209 real estate agencies were initially selected. The final sample is comprised of 35 real estate agencies participating in 11 networks established in different areas in the Brazilian territory. The admission criterion of a participant was its having performed at least one transaction in a partnership within a network in the past six months prior to the field research. The research unit was thus the responding real estate agency, adequately represented by a manager in charge.

According to the propositions of Provan and Kenis (2008), different network structures are associated to different modes of governance structure. The real estate sector exhibits all those different governance structures proposed by the authors, therefore being useful to this analysis.

The research was carried out through data collection in February and March 2012. A detailed questionnaire with 30 questions was elaborated and sent to managers of real estate agencies through an electronic platform. The tool, including indicators of trust level and data about modes of governance structure in networks, employed the Likert scale with a five-answer range, besides multiple choice questions. Four questions were proposed to test the sample eligibility. All indicators were selected based on the underlying theory in order to reinforce the reliability of employed methods. Besides that, the elaboration of the questionnaire received contribution of experts in order to facilitate understanding from the respondents.

Figure 1. Conceptual research model.



Secondary data for qualitative information concerning networks was also employed. More precisely, it contained information regarding their structure, either with or without a lead company, and either with or without an administrative organisation. Secondary data was obtained on the websites of networks.

Definition of the variables

The methodological procedures involved in measurement and analysis of research variables are presented as follows:

Modes of governance structure

Data was collected on network governance in order to classify the modes of governance structure. This data allowed the respondents to be classified in three categories, adapted according to the studies of Provan and Kenis (2008):

• Regional Cooperation Networks (COOP): collectively managed, with no leadership formalisation, decision-making through interaction amongst real estate agencies participating in the network.

• Dispersed networks with a lead company (LEAD): managed by a real estate agency which stands out and shows leadership, seeking to reach common goals to all network members.

• Networks governed by an administrative organisation (NAO): managed by an individualised structure and dedicated to the management of the network as a whole, existing only for administrative purposes regardless of the structure of participating companies.

Trust

Previous studies indicate that the multidimensional nature of trust demands a fragmented analysis of this construct (Rousseau et al., 1998). According to Zaheer et al. (1998), interpersonal and inter-organisational dimensions of trust constitute interdependent constructs that join to form network trust. Therefore, measurement of the trust variable (TRUST) in this study was carried out by integrating indicators that represent interpersonal and inter-organisational dimensions of trust. And in order to analyse levels of trust, we have opted to work with the categorised TRUST level, hereby denominated TRUSTc. It was operationally defined:

• Interpersonal Trust (IT): related to trust in the real estate agent who works for the partner agency in the network where the transaction was performed. This dimension was evaluated by 5 trust indicators, as shown in Table 1. To each indicator a questionnaire was employed (in a 5-point Likert scale, varying from 'completely disagree' to 'completely agree'), whose results defined this interval variable in a scale between 5 and 25 points.

• Inter-organisational trust (IOT): refers to the trust perceived by the respondent towards the partner real estate firm within the network in which a transaction with the same partner was performed. This dimension was evaluated by 3 trust indicators, as shown in Table 1. To each indicator we have applied a Likert scale questionnaire (of 5 points, varying from 'completely disagree' to 'completely agree'), thus defining this interval variable in a range between 3 and 15 points.

• Trust (TRUST): comprised of the integration between dimensions of interpersonal trust (IT) and interorganisational trust (IOT). Its measurement was performed by adding up scores obtained from IT and IOT variables. This interval variable may range from 8 to 40 points in its scale.

• Categorical Trust (TRUSTc): TRUST variable, redefined as categorical in order to be employed in a correspondence analysis (CORANA). In order to stratify the trust (TRUST) variable in three analysis categories, data was recodified towards an ordinal variable and thence classified in three levels (high, medium and low) by employing the k-means clustering method with the aid of SPSS 17 software.

Table 1. Trust indicators.

Dimensions	Trust indicators
Inter-organisational trust	Business practices of partner real agency were reliable and trustworthy, conveying trust I completely trust in that real estate agency. Both of our companies have mutual relationship that conveys assurance to me, regardless of the real estate agent coming to us Access to other agencies and clients allowed by transactions make up for risk Both of our companies belonging to the same network makes the partnership much more reliable Until receiving the commission fee I had some fear of being harmed by the partner agency
Interpersonal trust	I trust in that agent, for I personally know him The partner agent's conduct conveyed trust The other agent's behaviour left me in doubt

It is important to emphasise that the employed questionnaire identifies only the perception of trust from the respondent in a transaction in which he participated in the network. Trust, with its countless variables of sociological nature, does not allow direct measurement.

In order to verify the internal reliability of each construct (IT and IOT) we have employed a Cronbach alpha-coefficient test, which is shown in the result section. The results of the test pointed out that the selected indicators are meaningful towards the formation of a sole scale of trust (TRUST).

Statistical analysis

We have employed the Correspondence Analysis (CORANA) technique for the purpose of analysing the found data. According to Hair et al. (2006) this technique is used in the analysis of non-linear relations and data with categorical responses, measured in nominal terms, in order to group associated variables, building the representation of relations amongst variable categories into a perceptual map. Correspondence analysis supplies a multivariate representation of interdependence for non-metric data which is not possible by using other methods. According to Hair et al. (2006), this interdependence technique facilitates perceptual mapping of objects in a set of non-metric attributes. Besides that, its compositional nature supplies higher specificity for the researcher to validate results.

In order to analyse the relation between trust levels (low, medium and high) and the modes of governance structure of surveyed networks, the Spearman Rank Correlation technique was employed, due to its employing ordinal positions occupied by variables instead of their absolute values (Gibbons and Chakraborti, 2011; Hair et al., 2006). Bonett and Wright (2000), when testing different sample sizes to measure Spearman's non-parametric correlations, identified that acceptable results may be achieved in samples with 20 observations and higher, with a 95% confidence interval. As the sample is hereby comprised of 35 observations, it was possible to measure the significance of identified associations.

4. Results

Descriptive statistics

Questionnaires were sent out to 209 different real estate agencies, 35 of which returned them correctly answered. Due to the high number of mandatory questions to be answered, the system automatically disposed of incompletelyanswered questionnaires. Therefore, the valid answer rate of questionnaires reached 16.7% of the total.

According to Table 2, the sample shows to be territorially diversified, coherent with each region's economic significance in the country. The Southeastern region concentrates the highest percentage in the sample, for it represents a higher level of industrial and urban development. It is followed by Southern, Northeastern and Midwestern regions. In the Brazilian context, the Northern region is considered the overall least economically active one, as well as in the real estate sector. Although a few real estate firms were found in the region, none has answered the sent questionnaires.

It is important to emphasise the high rate of participation of real estate agencies in the Southern region. Two of the largest national real estate networks are also located in this region.

Analysis of the modes of governance structure

Regarding the governance model adopted by the networks to which the responding real estate agencies belong, the following frequency distribution was observed in Table 3. Regional cooperation networks are represented by regional action networks, with similarly-sized companies in which governance is shared amongst companies. According to the typology of Grandori and Soda (1995), this network mode characterises itself as symmetrical and social, in which social interaction is more prominent. In the opinion of Provan and Kenis (2008), they would characterise networks of shared governance. They would additionally be bilateral networks according to Park's (1996) typology, once there has not been an administrative structure specifically designed to governance and network management as a whole.

Table 2. Distribution of respondents by region.

Midwest	Northeast	North	Southeast	South
1	4	0	26	4

Table 3. Modes of governance structure.

Modes of governance structure	Number of respondents
Networks of regional cooperation – COOP	13
Dispersed networks with lead company – LEAD	11
Network administrative organisation – NAO	11

Table 4. Cronbach alpha.

Indicators	Number of questions	Cronbach alpha
Interpersonal trust (IT)	3	0.647
Inter-organisational trust (IOT)	4	0.835

Dispersed networks with a lead company, on the other hand, characterise themselves as networks structured by a large-sized company, which makes a system available to which smaller companies adhere, with a low negotiation possibility. Low loyalty and little integration in its operations were also verified. As regards real estate transactions, banks which finance networks and function as channels of real estate credit were observed to stand out. In the typology of Grandori and Soda (1995), they represent expressively asymmetrical networks, with governance concentrated around a lead company, as claimed by the typology of Provan and Kenis (2008).

Networks with administrative organisation constitute networks with centralised governance, high loyalty level and maximum integration in their inter-organisational operations, including assignment of know-how and trademark rights. Therefore, they are relatively asymmetrical and highly bureaucratic (Grandori and Soda, 1995), trilateral (Park, 1996), and with an independent governance structure dedicated to the network as a whole (Provan and Kenis, 2008).

Trust dimension analysis

For the purpose of measuring the internal reliability of trust indicators, the Cronbach alpha indicator was employed, since data collection was carried out by a Likert-type scale questionnaire. Table 4 summarizes results as follows:

Since both indicators have a reasonable degree of internal reliability and are based on the underlying theory, they both confer reliability and validity to those indicators employed to measure levels of trust amongst networked real estate agencies.

The statistics show there is limited adherence to the normal distribution, with a higher concentration of indicators in high levels of trust, supplying evidence that real estate networks allow development of trust amongst participants.

Correspondence analysis

In order to allow replies to the questionnaire questions, an analysis of correspondences observed in the midst of levels of trust (low, medium and high) in relation to modes of governance structures in the surveyed networks was carried out. Table 5 lists the frequency and associations observed:

It is observed that within regional cooperation networks, 7 out of 13 companies in a group possess the highest level of trust. This typology includes networks in which governance action is shared by participants in a reasonably symmetrical way (Grandori and Soda, 1995) by using direct negotiation amongst parties.

According to data observed in the questionnaire, the limited geographical presence of such a mode of network structure and constant negotiation amongst parties during the decision-making process seem to allow a higher development of trust, especially in its relational component.

From the perspective of Provan and Kenis (2008), this shared structure of governance is the simplest one, in which organization groups work collectively with no formalised administrative entity. Networks with such structures demand higher involvement and commitment from the participating organisations and consequently higher closeness and involvement amongst parties which are usually interdependent and work towards common goals. Hence higher levels of trust naturally originate from such relations.

Table 5. Correspondences amongst answer levels.

Modes of governance structure	TRUSTc						
	Low level		Medium level		High level		Subtotal
	n	%	n	%	n	%	N
COOP	3	23	3	23	7	54	13
LEAD	6	55	4	36	1	9	11
NAO	3	27	5	45	3	27	11
Subtotal	12	34	12	34	11	31	35

In dispersed networks with lead companies, it was observed that within a group of 11 companies, only one reported a high level of trust, whereas 6 companies reported lower levels. In the context of horizontal networks, it was observed that in dispersed networks coordinated by a lead company there is high asymmetry of economic power and influence amongst participants, and the levels of loyalty and integration are relatively lower.

In such structures, the activities and key-decisions are coordinated by one of the network members, which leads and manages the network, facilitating the activities of participants in their efforts to meet network goals (Provan and Kenis, 2008). The low level of trust outlined in this typology of network governance seems to indicate that lower integration and loyalty negatively impact the levels of trust. Loyalty plays a preponderant role towards competitiveness in business networks (Zaccarelli et al., 2008).

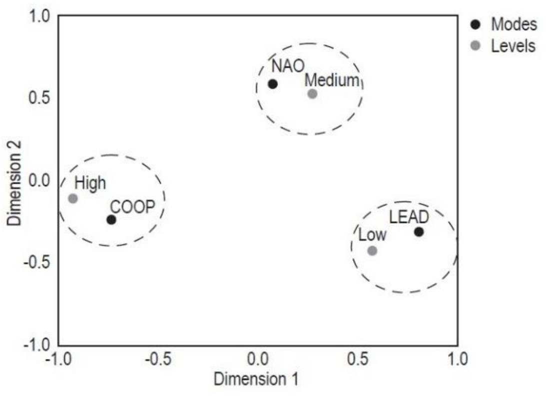
In this mode of network governance, links amongst participants are based on the rational component of trust, which allows the maintenance of relationships despite low indicators of inter-organisational and interpersonal trust. This result can be explained by the studies of Rousseau et al. (1998), which separate the rational component of trust from its remaining components, the relational and the institutional ones. Within these networks it is believed that the connection to each of the partners is sustained due to the visibility that lead companies lend to the remaining partners, and to the access to complementary services of real estate credit.

In networks governed by administrative organisations, it is observed a level of trust which could be described as medium in comparison to what has been observed in the other modes of governance structure. In these governance structures, partner organisations may work together with one another, but activities and key-decisions are coordinated by a separate entity.

In these networks of a higher bureaucratic component and which involve a higher formalisation of connections in the group of participating companies, including assignment of property rights, it is possible to infer evidence of influence of formal governance mechanisms, which seem to support trust in the arrangement (Poppo and Zenger, 2002). Medium levels of trust would be associated to an also medium interaction level, which is stimulated by franchise managements, but that is still inferior to the common level of interaction in cooperation networks.

Consolidating the aforementioned results, Figure 2 presents the perceptual map built from the analysis of correspondence between levels of TRUSTc and the modes of governance. Dimensions 1 and 2 are those generated by the SPSS software and have no specific meaning.

Figure 2. Perceptual map of trust vs governance mode.



The perceptual map shown in Figure 2 presents the results aforementioned discussed, graphically representing the association between modes of governance structure (COOP, NAO and LEAD) and levels of TRUSTc (High, Medium and Low). As presented in Table 5, those networks structured with shared governance (COOP) were seen by most respondents (54%) as having higher levels of trust, whereas in networks governed by a lead company (LEAD) most of the answers (55%) indicate low levels of trust. In networks with the presence of an administrative organization (OAG), most respondents (45%) associated them to medium levels of trust. The presented data represents empirical results which corroborate and reinforce the propositions of Provan and Kenis (2008) within the context of horizontal networks.

From this analysis we can realise, in line with the propositions of Provan and Kenis (2008), that there is evidence of association between levels of trust and the kind of structuring of network governance, evidencing the interdependency relation between both variables.

According to the studies of Ring and Van de Ven (1994) and Sydow (2004), networks possess a dynamic of development of their own, not remaining static. From this perspective, Provan and Kenis (2008) affirm that governance systems are transitory structures that change according to the characteristics and needs of the network.

In terms of their evolution, Menard (2004) calls the attention to the existence of networks void of formalised governance and set up solely based on trust among parties, evolving towards networks based solely on relational governance, all the way towards more complex formats, which include the dimensions of hierarchy and governance formalisation. From the perspective of the author, the nature of the network and its level of complexity (number and variability of actors involved, dimension and volume of transactions) may originate different governance settings, demanding higher or lower levels of trust.

From the model proposed by Provan and Kenis (2008), and considering the evolutionary context of horizontal networks (hereby represented by real estate networks), it has been observed that, as the network widens and becomes more complex due to the number of actors involved and different levels of relations established, trust itself, even at high levels, turns out to be insufficient to sustain collective management and shared decision-making, which are characteristic of shared governance (COOP) networks.

Thus, when the structure spreads out and begins to disperse, calling for more autonomy and power, levels of trust tend to lower and the demand for a more formalised governance structure emerges, as it is the case of networks led by a lead company (LEAD) and of those which elect an administrative organisation to take on their governance (OAG). Both structures showed low and moderate levels of trust respectively.

Correlational analysis

The results of analysis of non-parametric correlation between the mode of governance structure and the respective level of trust observed, which allow empirical and statistical evaluation of associations identified by CORANA, are listed in Table 6.

Table 6. Non-parametric correlation.[1*]

			ModeGov	TRUSTc	TRUST
Spearman's rho	ModeGov	Correl. coefficient	1	0.384*	0.352*
		Sig. (2-tailed)		0.023	0.038
	TRUSTc	Correl. coefficient	0.384*	1	
		Sig. (2-tailed)	0.023		
	TRUST	Correl. coefficient	0.352*		1
		Sig. (2-tailed)	0.038		

[1] * = Correlation is significant at the 0.05 (2-tailed) level.

Table 6 presents the correlations between governance mode and trust, both in the original variable (TRUST) and in the categorical one (TRUSTc). It is possible to verify that in both cases the Spearman coefficient is positive, being respectively of 0.384 and 0.352.

These results indicate correlations of moderate strength, with significance levels of 0.023 and 0.038. Therefore, the association between the mode of governance structure in networks and trust is significant in the surveyed sample, corroborating the studies of Provan and Kenis (2008).

Nevertheless, such observations are not enough in themselves, for the relation between trust and governance is one of interdependence, as shown above. From this perspective it is possible to admit that either the level of governance adopted may influence levels of trust or that there might be a mutual reinforcement cycle, in which trust may be developed and maintained by strategies of network management (Klijn et al., 2010), that is, good performance and continuous cooperation might increase levels of trust (Van Meerkerk and Edelenbos, 2014), even when dealing with a formalised governance structure.

Specifically concerning trust, it is necessary to reinforce that this study has developed from a structural perspective, that is, it was considered that the adopted governance structure interferes in levels of trust present in the network, whereas studies such as those of Klijn et al. (2010), and Van Meerkerk and Edelenbos (2014), explain this relation from an agency perspective.

What sets both approaches apart is that real estate networks are horizontal networks, formed by similar organisations with common goals, that is, we can verify a higher level of homogeneity in the network. Whereas public governance networks (Van Meerkerk and Edelenbos, 2014) are temporary networks, formed by several different organisations (governmental agencies, commercial agents, non-profit organisations, local inhabitants) specifically with the intent of solving complex issues, with looser interrelational levels and demanding the presence of intermediating agents.

This distinction is necessary to explain the discussion arising from this study, which is based on the argumentation that the governance structure itself is able to make tangible the interaction among parties in horizontal networks, influencing levels of trust. Nevertheless, the presence of an intermediating agent is to be needed to facilitate the development of trust within more complex networks with diversified actors. In both contexts trust is perceived as necessary for governance moderation and network performance.

5. Conclusions and remarks

The analysis of observed results made it possible to answer the question of the proposed questionnaire, displaying the existence of significant association between modes of governance structure adopted by the surveyed networks and levels of trust evidenced by participants. Such results contribute to a deeper understanding of the relation between trust and mode of governance structure in business networks.

From the perspective of empirical contribution to research on business networks, one can verify the existence of a statistically meaningful association between diverse modes of governance structure in networks and different levels of trust.

In the surveyed sample there is evidence supplied by correspondence analysis and its respective perceptual map, that higher levels of trust are associated to cooperation networks in which real estate agents of similar size share network governance. Frequent interaction amongst decision-making agents allows the development of trust, resulting in adherence to the trust development model introduced by Rousseau et al. (1998). However, as shown in the studies from Alves et al.

(2010) and Gulati and Nickerson (2008), the shared mode of governance encounters boundaries in network expansion and development, which many times lead to the existence of more bureaucratic and centralised structures.

It was verified that networks governed by administrative organisations manage to somehow balance network expansion, structuring and formalising relationships amongst parties, but without leading to very low levels of trust. Such networks are associated to medium levels of trust in the surveyed sample.

It was also verified that lower levels of trust are associated to geographically dispersed networks coordinated by a lead company that has relevance and visibility in the industry. It is believed that this fact possibly arises from the lower level of integration and loyalty seen amongst participants in this sort of network. In more dispersed networks the distance amongst participants makes it difficult to develop interpersonal trust as well as inter-organisational trust, once the transaction frequency amongst partners turns out to be lower.

Such results confirm arguments from other studies such as the ones from Gulati and Nickerson (2008), and from Provan and Kenis (2008) which pointed out the importance of deeper research on modes of governance structure within networks. It is worth stating that formalisation in the case of networks governed by administrative organisations does not negatively influence levels of trust, as has already been defended by Poppo and Zenger (2002) and Lui and Ngo (2004). Therefore, it cannot be affirmed that formalisation opposes the development of trust, as the studies of Ghoshal and Moran (1996), Dyer and Singh (1998), Gulati (1998), Dyer and Chu (2003), and Inkpen and Curral (2004) indicate.

Returning to the ideas presented in the introduction of this paper, competition also begins to occur in the midst of business networks and not only within individual companies. The impacts of adopting different modes of network governance must be adequately evaluated by managers. Decision-making processes on the mode of governance structure must include deliberations on the level of trust expected for the network, balancing out the interests of partners and network strategic interests as a whole. It is thus justified that network managers should be aware of expected impacts of governance structure decisions over their performance.

A few limitations should be taken into account. The context in which the research applies is restricted to real estate intermediation activities, which characterises a network of the horizontal type. Hence the analysis results shall not be generalised into other sectors, especially into vertical network contexts. The sample is not statistical, although there were efforts to attain a sample composition similar to that of the researched universe, including real estate firms of various sizes and regions of the country. Hence, the restrictions to result generalisations within the whole universe studied also apply. Another limitation is that it is not possible to affirm a two-way causality relation between the mode of governance structure and trust, for the study verifies the association between both variables at a given moment in time, and the research design does not supply precedent data for a longitudinal analysis. Lastly, the study developed from a structural perspective, that is, the question of the agency was not investigated.

Considering these limitations, conducting of further studies is suggested within different frameworks and economic sectors, in order to complement the results hereby obtained, allowing a broader generalization of conclusions. Conducting future research with a qualitative approach may also contribute to the further clarification of the hereby obtained results due to a triangulation of approaches, once analysis of correlations does not allow the identification of cause-and-effect, but only the identification of existing meaningful associations amongst relevant variables. Research designs that allow a more thorough analysis to infer the causality of the relation can be of great value. Lastly, the development of studies from a joint approach, associating both the structure and agency approaches, might result in a new and holistic branch of governance and trust analysis within the context of networks, complementing both this study and that of Klijn et al. (2010) and Van Meerkerk and Edelenbos (2014).

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