Perspectives of Inter-Organizational Relationship Governance 
Mechanisms in Business Ecosystems- A Review

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ABSTRACT

The concept of inter-organisational network relationship is increasingly gaining currency in management research; however there is limited recognition as to how this relationship is governed. Governance is concerned with the structure, power and process to make decisions on collective activities. Making the right decision is an essential part of inter-organisational relationship governance. Decisions related to the inter-organizational relationship governance can influence the health of the organizations and can as well result on fostering the success or greatly contributing to the failure of the organizations. We conduct an unsystematic review of the inter-organizational network relationship governance and related literature to offer insight into the governance mechanisms that are adopted in a transaction relationship by actors in a business ecosystem. A deeper understanding of inter-organizational governance will be valuable in crafting strategies for parties involve in transaction, as that can be used to predict behaviours of transactors as well influence the outcome of actors’ relationships. The study identified that appropriate blend or combination of different governance mechanisms is necessary, because the mechanisms exclusively do not exist mutually.

Keywords: Business Ecosystem, Governance Mechanisms, Inter-organizational Relationship, Transaction Exchange Attributes.

1.0: INTRODUCTION

In recent years, inter-organisational network interactions have become a powerful tool in business; however, contemporary literature seldom appreciates how these relationships are appropriately governed. Von Tunzelmann (2003) explained governance to largely involve the structure, power and process to make decisions on collective activities(Von Tunzelmann, 2003). Making appropriate decisions is an essential part of inter-organisational relationship governance. Decisions related to the choice of inter-organizational relationship governance can influence the health of the organizations and can as well result on fostering the success or greatly contributing to the failure of the organizations. Regarding mechanisms of governance, several authors have provided diverse conceptualizations in literature. This study takes a step to deepen the application and the understanding of inter-organisational governance concept. To accomplish these objectives, the paper tries to review related literature in an unsystematic fashion and to identify the diverse conceptualisation of governance mechanisms that exist in literature. It discusses the various forms and variations of governance mechanisms using the theories of transaction cost economics and the business ecosystem.

Section two discusses the concept and various perspectives of governance relationships. Section three discusses perspectives of business relationships and section four discusses the forms of governance mechanisms in business relationships. The implications, conclusions, possible limitations and suggestions for future research are presented in section 5.
2.0: CONCEPT AND PERSPECTIVE OF GOVERNANCE RELATIONSHIP

The concept governance does not offer itself to a precise definition or meaning, it is meant differently in different context. However, a comprehensive definition that is common to all forms of governance is that of monitoring and controlling relationships and behaviour of elements in a network or organization (Mannion et al., 2015; Provan & Kenis, 2008) and in an attempt to improve coordination between the elements (Klijn, 2012).

In corporate governance literature, it relates to the role of boards of directors in representing and safeguarding the stakes of the owners (shareholders). This is however, consistent with the principal versus-agent problem, and is internal to the organization. In public management also, it relates to organizing public service effectively and efficient. In networks, governance is mostly seen as cooperation between independent actors in a web like fashion. However, in a network with a shared goal as in a business ecosystem perspective, it relates to efficiently and effectively organizing collective action to ensure a shared goal is attained (Klijn, 2012).

2.1. Corporate Governance

Corporate governance is typically concerned with the structures and systems of control by which managers are held accountable to those who have a legitimate stake in the organization (Johnson, Scholes, & Whittington, 2008). It is additionally characterized as the monetary and legitimate system for controlling the connection between an organization's administration and its investors (Eun, Resnick, & Sabherwal, 2012; Ramaremisa, 2014). It is internal to the organization and finds practice in organizations where the shareholders are not the managers. It becomes most important when many different shareholders exist with small blocks of shares. This is particularly the case with stock market exchanged shares which creates diffused shareholders. The efficiency of risk sharing with a multitude of shareholders has its downside in the possibility of conflict of interest between owners of the business (shareholders) and their managers. This is otherwise the agency problem. The information gap between managers and shareholders creates a tension that needs to be addressed. Managers have their own agenda in pursuing a career that might not be in the best interest of the shareholder. This can be noticed in excessive wages, or investments in other companies to serve their private interests. It could be prevented if it would be possible to write a contract that would specify exactly what a manager should do.

However, in practice this is impossible and managers are given the right to make appropriate decisions within a mandate. The mandate is part of the financial and legal framework and with different remedies, or mechanisms, the agency problem is governed. Next to the mechanisms, that are available to shareholders, national law protects the shareholders.

Various governance mechanisms exist to control the agency problem. Most prominent is a board that comprise directors, and their fundamental role is to represent the interests of shareholders. If the board remains independent of the management team, it can serve as an effective mechanism (Eun et al., 2012; Ramaremisa, 2014). However, in a diffused ownership structure of a public company, managers most often select the board of directors, leading to poor governance results. Other mechanisms are, for example, incentive contracts or stock listings in countries that have protection by law that is more to the benefit of the shareholder.

2.2. Public Management Governance

According to Klijn (2012), public management governance relates to the fair treatment of citizens and organizations that adheres to the fundamental principles of the rules of the law. Here the focus is on the operation of government, rather than how the institution is organized. The principal mandate of public organization is to offer public service. In this view the role of the government is to provide public service and to govern these activities in a bureaucracy. Decisions regarding policy making and implementations are integrated vertically within the government. Hierarchical governance mechanism becomes a major tool in governance, with the focus on line managers and their accountability for spending public money (Osborne, 2010).

However, in the 90s, a new dimension of public Management was identified, where it focussed on goal setting and encouraging other (public) organizations to provide public service rather than providing the services (Klijn, 2012). Thus the focus of the new dimension has shifted from implementation towards goal setting. Hill and Lynn (2004) made a contribution and suggest that, government activities should be contracted to public or private institutions to provide public services. Also, Osborne (2010) is of the view that market mechanisms can create the efficient provision of activities and on the basis of competitive pricing. The value drawn in this idea is contained within the notion that the market place is the most appropriate place for the production of public services. The
critical issue therefore, is the ability to control the output using explicit and unambiguous performance indicators as against of the process. The mechanisms of governance in this case are the engagement of clear contracts such as public-private partnerships and the evaluation of in-and output by performance management and auditing.

**2.3. Relationship Governance**

Relationship governance is concern with analysing a governance structure of the business relationship between a customer and supplier. The relationship is greatly focussed on the dyadic inter-organizational relationships that organizations are engaged into. The key mechanisms employed for governance are hierarchies, markets and trust (social mechanism) (Kohtamäki, Vesalainen, Henneberg, Naudé, & Ventresca, 2012). The appropriate blend of these mechanisms in governance offers the supplier or customer the opportunity to predict the behaviour of the other party engage in the transaction relationship (Adler, 2001). Governance in inter-organisational relationships is different from governance in corporate organisations as it relates to external organizations, and is different from public management governance as it addresses the relationships from a dyadic level of analysis. Relationship governance is in particular useful for analysing the relationships and identifying the mechanisms that are used. It can be used to develop strategies to predict behaviour and can help organizations optimize the value they extract from relationships. However, as it only analyses the dyadic relationships, it lacks notion of the environment. In particular the environment of an organization determines what partners to select and how to proceed in the relationship as new information can change the decision heuristics of the people involved.

**3.0. PERSPECTIVES ON BUSINESS RELATIONSHIPS**

In making efforts to unravel the complexities of economic reality, different perspectives on relationships between companies, industries, and industry crossing networks have been developed. Some of the perspectives identified in literature and are employed to enrich the concept of governance are discussed below.

**3.1. Dyadic Relationship**

Research on dyadic relationships is focused on “the characteristics and attributes of organizations to explain their relationship with other organizations” (Provan & Kenis, 2008). The involvement with other organizations is through different types of dyadic relationships such as joint ventures, alliances, and partnerships. It is used to understand the nature of the relationship between organizations in terms of their characteristics and attributes (G Ahuja; Bellamy & Basole, 2013; Provan & Kenis, 2008). These characteristics incorporate, among others, tie strength, or trust level, and how these relational characteristics affect the likelihood of the relationship’s renewal, continuation, dissolution, or other outcomes (Gautam Ahuja, Soda, & Zaheer, 2012). Some scholars such as Gulati (1999) and Gulati, Nohria, and Zaheer (2000) have argued that when organizations repeatedly engage into ties with each other, the trust level between these two organizations improves. Uzzi (1997) further added that, the strength of relationship tie helps to foster specific types of asset sharing, and that strong ties are appropriate for the transfer of tacit knowledge, and weak ties foster the transfer of explicit knowledge. Furthermore, ties that have embedded (social) relationships between managers of distinct organizations are said to improve firm performance (Ingram & Roberts. 2000). However, “over-embeddedness can hurt performance due to the limited diversity of information to which they have access” (Gautam Ahuja et al., 2012). Regarding trust, Zaheer and Kamal (2011) have shown that high trust levels between organizations can lower transaction costs and “allow for the extraction of higher benefits from the relationship”.

In summary, the dyadic perspective of relationship gives a view on the impact of a relationship between organizations but with an assumption of holding other factors constant. It ignores the influence that the overall set of industry and network relationships have on organizations and the relationship between other organizations (Provan & Kenis, 2008). As a result, a network that is researched from a dyadic perspective consists of a collection of two-party relationships, rather than a unique, multi-organizational social structure (Provan & Kenis, 2008).

**3.2. Ego-Network Relationship**

The ego network relationship refers to the kind of relationship effects that an ego’s network has on the behaviour and performance of an organization. The perspective of this relationship is different and typically focused on the structure of relationships surrounding the focal organization (ego). The ego network relationship can be helpful in analysing the impact of individual organizations, dyadic or
network ties, on organizational performance as well as focussed on the role of an individual organization in a network (Gautam Ahuja et al., 2012; Provan & Kenis, 2008). Critical dimensions in this relationship perspective is concerned with the understanding of the structure of relationships with structural dimension such as: centrality, structural holes (and closure), structural embeddedness, structural equivalence, social capital andLastly status (Gautam Ahuja et al., 2012).

In the past decades, the interest of research scholars was largely on dimensions such as centrality and the size of the alliance network of an ego network. Scholars have associated the structural dimensions to different meanings of organizational performance. For instance, (George, Zahra, Wheatley, & Khan, 2001; Wassmer, 2010) indicate that structural dimensions improves absorptive capacity, whereas the study of Deeds and Hill (1996) and Rothenmer and Deeds (2004) reveal improvement in the rate of new product development, and Improvement in the innovative output (Gautam Ahuja, 2000; Gautam Ahuja et al., 2012).

Social capital is another domain of interest to research scholar. Burt (2009), studies reveal that, networks with many structural holes are rich in social capital, whereas Coleman (1988) has a differing opinion and argued in favour of closure to improve social capital. In reconciling these conflicting views, Burt (2009) makes a distinction for different situations in which either structural holes or closure improve social capital. He indicated that closure in network favours social capital in situations of cooperation between organizations involved, whereas in situations where there is fierce competition between or among the organizations, structural holes will improve social capital.

A last field of interest is 'status', which signals quality and aids in finding partners for exploring new domains (Dimov & Milanov, 2010). A higher status compared to competitors can lead to lower transaction costs in acquiring resources (Podolny & Page, 1998).

In literature, studies on network are largely classed into micro and macro level of analysis (Wasserman & Faust, 1994). That is the view from the individual organization with regard to its network, and the overall view from the network level.

Ibarra, Kilduff, and Tsai (2005) also made a distinction between egocentric network and whole network respectively. However, a major limitation of this perspective is its central attention on a single industry, thereby making research findings to be generalized.

3.3. Whole Network Relationship

Another perspective of relationship is the whole network relationship. It is concerned with the characteristics and behaviour of the entire inter-organizational network (Gautam Ahuja et al., 2012). The whole network relationship is involved in analysing the effect of multi-level actions and structures on network level outcomes or a system-level approach (Provan & Kenis, 2008). Structural concepts such as centralization and “small worldness” are key issues, together with the analysis at the whole network level instead of the individual level (Gautam Ahuja et al., 2012; Provan & Kenis, 2008). In recent times attempts are made to unravel network dynamics (Gautam Ahuja et al., 2012). For instance, a study by Lee and Venkataraman (2006) demonstrate the evolving of networks with characteristics on both at micro and macro level of analysis. The authors suggest that research is required to helps understand the dynamics of competition and cooperation in a network. Their work was supported by the work of W. W. Powell, White, Koput, and Owen-Smith (2005) where demonstrated how network evolves. They indicated that an actor can change from collaborator to competitor over time, that is to say collaborations are often cross-cutting.

Other scholars argue to perform research into ‘network dynamics’, in a broader sense. They argue that without knowledge of the genesis and evolution of the network structures, the outcome of the network is incomplete and potentially flawed. They develop a framework for research into network dynamics to help understand “how and why organizational networks emerge, evolve, and change”. They define the subject area and identify key dimensions on which networks can change (Gautam Ahuja et al., 2012).

In summary, the whole network perspective focuses on a single industry, thereby making findings to be limited in generalizing. The perspective also lacks the understanding of network dynamics. According to Gautam Ahuja et al. (2012) in most network analyses, researchers face practical difficulties in obtaining longitudinal network data.

3.4. Business Ecosystems Relationship

In a study by Anggraeni, Den Hartigh, and Zegveld (2007) they indicated that the principal focus of research in business ecosystems is on relationships, interactions, and dynamics at the system level. A perspective that is trying to understand “the relationships or interactions among the members and
their environment, the roles and interests of the members of the system, and the mechanisms guiding these interactions toward the achievement of a shared goal” (Anggraeni et al., 2007). They added that the view on business networks, the relationships and mechanisms shape the business ecosystem. It incorporates both an ego-network approach, with the roles and strategies of the individual actors, as well as a whole network approach, how the network coevolves towards a shared goal. This shared goal is seen as the forward-looking vision of the industry leaders (Moore, 2006).

According to Moore (2006) the key issues are in the understanding of the complex inter-firm relationships between actors as well as the keystone species that has a strong influence on the coevolving dynamics in the business network. Scholarly research studies have largely focussed on the characteristics and roles of firms, and the structure and dynamics of networks. The dynamics in the network influence the governance choice and performance of actors in the system (Anggraeni et al., 2007). It creates a mutual dependence among each other in which multi-sided market effects can be identified (Eisenmann, Parker, & Van Alstyne, 2006). The dependency upon each other makes them more willing to cooperate as they can meet again in the future.

The distinction between dyads, whole networks and business ecosystems are the key issues central to trust and evolution that can be identified and may be unique to a particular level of network analysis (Provan & Kenis, 2008). Moore suggested that, the system is more than a network, because it incorporates governmental bodies, associations, standardization bodies, and crosses different industries and networks (Moore, 1993). That is, the concept incorporates both relational embeddedness (as concept from the dyadic level) and structural embeddedness (as concept from the ego-network level). The perspective has the ability to open the black box of the co-evolution of outcomes, behaviours, and structures (Moore, 2006).

Traditionally, firms were defined by their products and service offering. The focus was incorporating incremental innovations to existing products. However, in the ecosystem companies are defined by their innovation trajectory instead of their products and service offering. To be competitive, every company is forced to constantly update its products and services. The mutual dependence of companies allows them to co-evolve with other players in the ecosystem. They aggressively look for new possibilities and solutions in a more radical way to keep a competitive edge over other players in the ecosystem (Moore, 2006).

4.0. PERSPECTIVES OF GOVERNANCE MECHANISMS IN BUSINESS ECOSYSTEMS

Regarding mechanisms of governance, literature provides diverse conceptualisations that are subject to debate by several authors. This section basically identifies what governance mechanisms exist in literature. It discusses the various forms and variations of governance mechanisms and how they are applied in business ecosystems. To achieve this, a step is taken to justify the basis for the study.

Governing a network is an interesting issue considering that a firm can only influence the network to a certain extent, and couple with the fact that a lot also depends on the behaviour of other actors in the network (Anggraeni et al., 2007). Research scholars have indicated that the research on business ecosystem governance has seldomly received attention in both the academia and in practice, despite its relative importance (Jones, Hesterly, & Borgatti, 1997; Provan & Kenis, 2008). Jones et al. (1997) appreciate the increasing importance of network governance but quick to indicate that it is poorly understood. Moore, the pioneer of business ecosystem idea says that the most vital contracts governing networks relationships are community governance systems and quasi-democratic mechanisms. Moore’s idea on ecosystem system governance includes markets and hierarchies. He specifies that the ecosystem disguises the frameworks of firms and the markets that associate them under the directing hands of community leaders (Moore, 2006). Iansiti and Levien (2004) Help to expand the comprehension of the business ecosystem idea, and specify that ecosystems are governed by shared destiny or fate. They don’t, be that as it may, talk about these guiding mechanisms components in depth. In a research work by Kohtamäki et al. (2012) they recognized diverse perspectives in network governance studies, which are:

- Markets versus hierarchies, a view based on the transaction cost theory which defines price and authority as the mechanisms of governance.
- Networks as an intermediate form between markets and hierarchies. In this interpretation, partnership is a more integrated form than a market but less integrated than a hierarchy.
- Networks as a form distinct from markets and hierarchies. In this view the governance mechanism of a network is a social one,
emphasizing the meaning of shared purpose and trust between actors.

- The simultaneous use of three different mechanisms of governance which are price, authority and social governance.

Vos (2006) as in Anggraeni et al. (2007) identified four basic principles, coming from complex adaptive systems theory that can be used to conceptualize governance mechanisms, namely co-evolution, emergence, self-organization, and adaptation.

4.1. THEORY OF TRANSACTION COST ECONOMICS

Transaction cost economics (TCE) is a starting point for academic debate on governance, and distinguishes market governance (i.e., price mechanisms) and hierarchy governance (i.e., authority mechanisms)(Hennart, 1993; O. E. Williamson, 1979). The transaction cost economics principle has been introduced by Course in 1937 but has become widely known by (O. E. Williamson, 1979) by defining the cost of transactions in making or buying a product. If the costs of producing in-house are higher than the market, a buy decision is made and if producing in-house is cheaper than the market a make decision is made. The market or hierarchy mechanisms of production are the two primary dimensions of TCE. Market governance mechanisms are used when the activities are organized external to the firm and hierarchy governance mechanisms are used when the activities are organized internal to the firm(O. E. Williamson, 1979). Legal contracts and prices are the coordinating mechanisms in market governance, whereas employment contracts and authority are the coordinating mechanisms in hierarchy governance(de Reuver & Bouwman, 2012). According to O. Williamson (2005) the organizations within TCE are assumed to be rationally bounded, risk neutral, and at least some are opportunistic to allow for competition. Since its conception, TCE has elicited a great deal of criticisms, especially in social science literature. The notable one is that, TCE treats transactions as discrete events and omits the effect of social relationships on economic behaviour(Jones et al., 1997). For example, scholars have argued to consider self-enforcement arrangements, such as goodwill, trust and embeddedness (Dyer Jeffrey H., 1998). Such effects may stem from structural embeddedness(Granovetter, 1985; Uzzi, 1997) and relational embeddedness(Gulati et al., 2000). While Hennart (1993) proposes a continuum ranging from markets to hierarchies to solve these discrepancies. However, these dimensions have also been subject of criticism, indicating that they are mutually exclusive in their original form. It has led to additions of a ‘network’ dimension as hybrid form, which is in between markets and hierarchies (O. Williamson, 2005). Other scholars also argue that such a continuum fails to capture the complex reality of economic exchange. They advanced a third governance structure that involves exchange through networks of interdependent actors(W. W. Powell & DiMaggio, 2012; Sako, 2006). In this third structure, trust is the dominant mechanism, which conceptually is distinct from contracts and power.

The mechanisms of governance may mostly cover and the interchange of governance mechanisms is a central issue for some research scholars. They contend that in actuality plural types of governance happen, and that, actors can utilize numerous mechanisms in the meantime in light of the fact that the mechanisms are non-fundamentally unrelated. The exact confirmation demonstrated is that, in all actuality the mechanisms that are utilized as a part of the dimensions exist together and are utilized by each other(De Reuver, 2009; de Reuver & Bouwman, 2012; McEvily, Zaheer, & Kamal, 2017; Von Tunzelmann, 2003). For instance, authority mechanisms frequently exist in written contracts, or are implicitly present within an industry or network.

4.2 TRANSACTION EXCHANGE CONDITIONS AND THE CHOICE OF GOVERNANCE MECHANISMS

4.2.1. Transaction Exchange Conditions of Resources

Exchange conditions of transactions raise transaction costs and can create market failure(Geyskens, Steenkamp, & Kumar, 2006). Leading to the decision to produce internal to the firm or integrate vertically. These conditions are; ‘asset specificity’, ‘uncertainty’, and ‘transaction frequency’(O. E. Williamson, 1979). They are the conditions or attributes surrounding the transaction in the dimensions of markets and hierarchies and are the observable measures as identified by(O. Williamson, 2005) . In a study conducted by Jones et al. (1997) they confirmed that exchange conditions of the network dimension are similar but have the additions of ‘task complexity’ and are more specific to the situation in which the network form will emerge and thrive. The different common conditions are described.
4.2.1.1 Asset Specificity

Asset specificity refers to the level of unique investment required to support a transaction. It allows dependency between partners (Jones et al., 1997). Exchanges can range from non-specific to highly specific, and the asset specificity level influences governance choice (O. E. Williamson, 1981, 1991). A high asset specificity level of a transaction entails customized exchanges or assets to the transaction. Transaction exchanges supported by non-specific assets do not pose significant exchange hazards because the assets can easily be redeployed without greater loss of value. Such assets can be more easily redeployed than highly specific assets because alternate partners interested in the transaction of the asset can be identified and therefore reduce the threat of opportunism (Mahoney & Pandian, 1992). According to TCT, when the threat of opportunism is low, there is much less need for formal controls or dispute resolution mechanisms and therefore, markets and relational (Trust) forms of governance are preferred to the hierarchical form of governance (O. Williamson, 2005). However, when a high level of unique investments is made it cannot be easily redeployed to other uses, and if transactors’ try to redeploy the assets they incur increased transaction cost. With this, there is a safeguarding limitation as market competition will exploit the assets opportunistically to increase the transaction costs. The authority relationships and hierarchical control procedures through vertical integration are assumed to have greater safeguarding capabilities and are seen as the solution to the problem (Geyskens et al., 2006).

4.2.1.2. Uncertainty

A second transaction exchange condition is uncertainty which arises when project properties are too unpredictable to be specified beforehand in a contract or the performance cannot be verified afterwards (Geyskens et al., 2006). It is broken up into environmental uncertainty and behavioural uncertainty. Environmental uncertainty refers to unpredictability outside the firm’s boundaries (O. Williamson, 2005; O. E. Williamson, 1991). When environmental uncertainty is low, there are much less unanticipated disturbances. Transaction costs are low because firms can anticipate and specify ex ante appropriate adaptations to disturbances in market and hybrid contracts (O. E. Williamson, 1991). When environmental uncertainty is high, however, boundedly rational economic actors cannot anticipate environmental disturbances to specify all appropriate contractual adaptations. The environmental changes that require adaptations to an agreement raise transaction costs and can be solved by hierarchical mechanisms of a contract or authority. Thus, the higher the environmental uncertainty, the greater the likelihood that contracts will be incomplete. When contracts are incomplete, the threat of opportunism and transaction costs increase because adaptations are needed in response to environmental disturbances (O. Williamson, 2005; O. E. Williamson, 1991). Increased environmental uncertainty confuses managers’ abilities to predict contingencies, which makes contracts more incomplete. When contracts are more incomplete, higher transaction costs arise because bargaining and renegotiations are needed to resolve disputes arising from unforeseen contingencies.

The behavioural uncertainty surrounding a transaction involves the difficulties in evaluating if the performance measured ex post meets the expectations. The classical argument from TCE would be to integrate the activities vertically in such a situation, a make decision is then made. This will allow the firm to remain in control over these activities and acquire more complete information for the ex post evaluation (Geyskens et al., 2006). Compared to hierarchies, markets and hybrids have less powerful ways to resolve disputes. Hierarchies can resolve disputes more efficiently via fiat, which reduces transaction costs and improves adaptability (O. Williamson, 2005; O. E. Williamson, 1991). Markets, on the other hand, rarely specify dispute resolution mechanisms and although hybrid contracts may include such mechanisms, they are less efficient than fiat. Thus, as environmental uncertainty increases, hierarchy lowers transaction costs and better enables firms to navigate their environments.

4.2.1.3. Frequency of Transaction

A third condition is the frequency of transaction. Transaction frequency refers to the number of times a transaction occurs. According to (O. Williamson, 2005; O. E. Williamson, 1991), transaction frequency can be categorized as one-time, occasional, or recurring. When frequency is one-time or occasional, transaction costs and adaptation problems are often low because these transactions pose fewer threats of opportunism. In short, contracts can be more easily written when transactions are one-time or occasional. If a transaction is to transpire for one week, for instance, transactors could more easily anticipate and specify contractual contingencies.
Accordingly, firms’ adaptation capabilities are not heavily influenced. Thus, non-recurring transactions have fewer threats of opportunism, and have a lesser impact on transaction costs or adaptability. Because markets preserve more powerful incentives than hierarchy and such transactions have little impact on firms, they are consequently handled by markets (Atalay, Hortaçsu, & Syverson, 2014; Brodrechtova, 2015; Globerman & Schwindt, 1986; Hashimoto, 2017; Vinholis, Filho, Carrer, & Chaddad, 2014). When transactions recur, however, hierarchy can lower transaction costs(Tadelis & Williamson, 2012).Masters and Miles (2002) for example, found that because of costs resulting from negotiating and renegotiating contracts for recurring needs, market contracting increases transaction costs. Firms preferred hierarchy instead because contracts do not need to be negotiated or renegotiated on an ongoing basis, thereby reducing transaction costs. Hierarchies therefore lower transaction costs by ameliorating ongoing negotiating and renegotiating costs with other transactors. Furthermore, an increased transaction frequency will reduce the information asymmetry between the organizations and therefore making hierarchical mechanisms more suitable(Van de Vrande, Lemmens, & Vanhaverbeke, 2006; Van de Vrande, Vanhaverbeke, & Duysters, 2009).

4.2.1.4 Task complexity
The complexity of a task is described as the distinct specialized inputs needed to complete a product or service(Jones et al., 1997). It requires more coordination and creates behavioural interdependence between the organizations. By use of mutual adjustment between participants, through information flows and meetings, these difficulties can be overcome. The network governance form stimulates this behaviour and is likely to be preferred over other governance methods.

4.2.2. CHOICE OF GOVERNANCE MECHANISMS

4.2.2.1 Hierarchy and authority
The classic dimensions from TCE are hierarchy and markets being mutually exclusive in its original form. Market failure justifies the need to organize activities internal to the firm based on the hierarchical mechanism of authority. Authority is viewed as the degree to which an organization can impact the decision making process of another organization(De Reuver, 2009; de Reuver & Bouwman, 2012). The ability to exercise control is seen as the primary reason for hierarchical mechanisms to be more efficient than market mechanisms. This is reached with an employment relationship or contractual arrangement that provides decision-making authority in certain areas(Geyskens et al., 2006). Between organizations it is not an employment relationship but a difference in power that gives an organization the decision-making authority(De Reuver, 2009; de Reuver & Bouwman, 2012).

4.2.2.2 Markets and Contracts
“Contract-based governance” is the degree to which organizations cling to legally binding agreements in their collective action(De Jong & Ja Klein Woolthuis, 2009; Dolfsmo & Seo, 2013). Several types of contracts may govern activities between firms. Contracts may include different types of commitments, regarding financial aspects, internal management, monitoring, allocation of outcomes, intellectual property, external relations and conflict resolution(Blumberg, 2001). In markets it is contracts and prices that are used to organize collective action. Markets “are a spontaneous coordination mechanism that imparts rationality and consistency to the self-interested actions of individuals and firms” (W. Powell, 2003; W. W. Powell & DiMaggio, 2012). The market is open to new participants and is free of future commitments. It is the prices that determine the success of an exchange. The price is most often used as a strategy to drive for the best bargain(W. Powell, 2003; W. W. Powell & DiMaggio, 2012). The governance mechanisms of the market dimension are contracts and prices. They offer choice, flexibility, and opportunity, and are used as a device for fast and simple communication(W. W. Powell & DiMaggio, 2012). The assumption is that the market is more efficient than vertical integration due to competition(O. Williamson, 2005; O. E. Williamson, 1979). Vertically integrated organizations can become bureaucratic and slow, and therefore increasing the transaction cost. However, certain exchange conditions can create market failure, making hierarchical or network governance mechanisms more efficient. Contractual based governance helps reduce the hazards in a partnership, because they provide an efficient safeguard against opportunism(O. Williamson, 2005; O. E. Williamson, 1979). This is achieved by placing limits to the actions of partners and enhancing monitoring(Hoetker & Mellewigt, 2009). Furthermore, they facilitate the control of information shared between partners and set out the rules for the resolution of any dispute that might occur(Poppo & Zenger, 2002). They have, however, the difficulty that everything should be known beforehand a transaction, to allow the drafting of a
contract. In particular in high-technology environments with unknown outcomes of a development project, this is difficult to write down (Bradach & Eccles, 1989). The contract is used to draft up specification, conditions, and the price for which the exchange will take place. It involves the division of benefits and guarantees that are given upon delivery. It is dependent on local law and the assumption of fair competition. De Jong and Ja Klein Woolthuis (2009) argue that contracts and trust can serve both as substitutes and complement each other, and need not be mutually exclusive alternatives. Stinchcombe (1986) noted that contracts may simulate hierarchical relations and thus also involve power.

4.2.2.3 Networks and Trust

The boundaries of a firm in an economic context have blurred as they engage in collaboration that does not resemble market like transaction nor a hierarchical one. In a seminal work by powell, he argues that it is relational contracts that are increasingly becoming important in a transaction instead of formal contracts or bureaucratic structures. Accordingly, the relational contracts are characterized by informal social systems that help firms meet resources and functional needs from their network instead of from vertical integration or by the market (W. W. Powell & DiMaggio, 2012). Conflicts are resolved by reputational concerns instead of law enforcements and the means of communication are relational instead of by pricing. In markets a firm will try to bargain the best deal while in a network it will try to create indebtedness and reliance in the long run. The bureaucratic structure of hierarchies fosters efficient decision making and clear departmental boundaries. The strength of hierarchies is in reliability and its accountability for efficiently exploiting activities. But when uncertainty disturbs the environment, the liabilities of hierarchies are exposed (W. W. Powell & DiMaggio, 2012).

The governance mechanisms of the network dimension, also referred to as relational mechanisms (Geyskens et al., 2006), are based on the trust in a relationship that each party will live up to the requirements.

Reputation, goodwill, and referrals are important drivers that help build up trust between the organizations. The basic assumption of a network of relationships is that, one party is dependent on resources of another and that pooling of these resources can lead to gains. They put in effort to build up a relationship and over time it becomes economically sensible to exercise voice rather than exit (W. W. Powell & DiMaggio, 2012). Voice further stimulates the creation of friendship, reputation, and interdependence, integral parts of the relationship. Information from friends, or someone you have dealt with in the past and has proven reliable, is often more valuable than from strangers. The information that flows through networks is therefore more ‘thicker’ than information from markets, and ‘freer’ than that from hierarchies. This makes networks in particular useful for the exchange of commodities whose value cannot easily be measured (W. W. Powell & DiMaggio, 2012), such as with innovations or uncertainty in the technology. Powell concludes that network mechanisms are in particular useful for collective action. In which cooperation can be sustained over the long run as an effective arrangement. The relationships in this cooperation create incentives for learning and the dissemination of information. This will improve the speed of translating ideas into action. With variable resources and high environmental uncertainty, networks are most useful because they offer feasible means of using and improving tacit knowledge and technological innovation (W. W. Powell & DiMaggio, 2012).

The dominant governance mechanism in the dimension of networks is trust. It is often considered a multidimensional concept. Trust “the readiness to acknowledge vulnerability in light of positive assumptions about another's expectations or behaviours” (McEvily, Perrone, & Zaheer, 2003; McEvily et al., 2017; Zaheer, Gözübüyük, & Milanov, 2010; Zaheer & Kamal, 2011).

To comprehend network level associations, it is the distribution of trust that is basic, and in the event that it is responded among the network members, it can be generally distributed (high thickness of trust relations), or barely distributed (low thickness of trust in relations).

A distinction is made between interpersonal and institutional trust. Interpersonal trust relates to the trust that is obtained directly from individuals or groups. Where as institutional trust is experienced or observed indirectly by work or observing quality of institutions.

Interpersonal trust can be viewed as a processed-based trust that depends on a personal relationship between two firms and is hence exceedingly particularistic. Strong ties will be ties that are sincerely extraordinary and strong, encourage mobilization of assets or resources and are marked by elevated amounts of interpersonal trust. The level of trust diminishes as we move from strong interpersonal ties with our family to unknown ties.
with outsiders, individuals in the city, and so forth. Solid or strong ties tent to exist in network structures that are described by a high level of closure or network density, which allow for the exercise of reinforcement of positive expectations by means of close monitoring and social control (Rus & Iglič, 2005). Mutual trust between organizations, or inter-institutional trust, can be seen as the reliability that the other organization will fulfil its obligations. Trust creates the expectation that the organizations will show predictable behaviour according to the agreement. The expectations in this case reduce transaction costs, because monitoring and renegotiating the exchange are needed when environmental changes occur. This is usually the case in highly complex tasks that face serious time constraints (Jones et al., 1997). Furthermore, it is believed that trust affects the richness and depth of exchange relations, especially concerning exchange of information. Trusting behaviour is noted as a core element for improving innovation through collaboration (Häusler, Hohn, & Lütz, 1994).

5.0. CONCLUSIONS, LIMITATIONS AND IMPLICATIONS OF RESEARCH.

The way a relationship is governed affects the functioning of the organisations involved. Proper governance can increase the health and prosperity (performance) of the organisations. Appropriate decision making is an important part of the inter-organisational relationship governance. Therefore, the study tried to deepen the understanding of governance mechanisms that can be used by actors in a business network from the perspective of a business ecosystem. It tried analysing business relationships and identifies the mechanisms that are used in a relationship at a system level. An adequate knowledge in this by transactors can be useful in crafting strategies to predict each transactors behaviour in the transaction, and can as well help organizations optimize the value they extract from relationships. Secondly, research from this tangent is scarce, and therefore the research adds to previous contributions of (Holzer & Ondrus, 2011; Pittino & Mazzurana, 2013; Roshan Kokabha, 2012; Selander, Henfridsson, & Svahn, 2013) because it offers insight into the governance mechanisms that are exerted in relationships actors have in a business ecosystem. Also, the mechanisms identified in literature give room for further in-depth studies to identify the dynamisms of the governance mechanisms and how they can be used to influence relationships. With this, actors can use it to predict behaviour and craft strategies for their relationships. Sound knowledge in this can as well be used to influence the outcome of their relationship and sometimes may create the opportunity to exert governance on a system level. It is noted in literature that pluralism in governance mechanisms exist and these governance mechanisms are non-mutually exclusive in a governance dimension (Bradach & Eccles, 1989; de Reuver & Bouwman, 2012; Von Tunzelmann, 2003). Therefore, in a governance dimension, a balance is sought for the governance mechanisms that can be exerted. With a sound knowledge of this balance, research can be performed to craft strategies for appropriate balances in partnership. For instance, in a formal relationship with transaction partners where a contract is used, the trust-based governance mechanisms can be used to give hope that the organizations will live up to the obligations in the contract. Furthermore, an authority-based mechanism is used in the decision making process of the collaboration.

The study is however, limited in it completeness. Literature could not be reviewed on the application of game theory in relationship governance. This therefore, made it difficult to conclude that behaviours of transactors in relationships could possibly be predicted. Again, an attempt is made to suggest that transaction attributes greatly predict governance mechanisms and are influenced by business ecosystem dimensions on a network level. However, there can be other attributes such as structural properties of a network (Uzzi, 1997) innovation phases (de Reuver & Bouwman, 2012) that can influence governance mechanisms. For future research studies, the consideration of other factors together with transaction attributes applied on system level aspects will offer a comprehensive insight into relationship governance and the extent of influence that transactors can possess in the relationship. Also, the study could not identify the extent of influence the choice of governance mechanisms have on the performance of organizations. This is partly due to the nature of research studies reviewed, because larger portion of studies reviewed adopted qualitative approaches and hence difficulty in operationalizing the measurement metrics.

On the other hand, a sound knowledge on governance mechanisms will help practitioners to evaluate the relational risks associated with the transaction with another organization. If significant variations are noticed in how the transactors in the relationship prefer to exert governance mechanisms, a clue to possible manifestation of transaction
challenges could be identified in the relationship. For instance, a transactor that prefers working with contracts and is suddenly faced with a partner or transactor that lacks the skills to draft a contract can be safeguarded to exhibit opportunistic behaviour. To safeguard this relationship, the transactor or business partner must compensate the lack of contract-based governance mechanisms with a strong trust bond in the transaction exchange.

The academia can enrich the understanding of the governance mechanisms in relationship with actors in a business ecosystem when theories such as the game theory are used to give insight into the prediction of transactors behaviours in the relationship transaction. This can be used to design strategies for the participation of organizations in a business ecosystem. Therefore, more predictors of governance mechanisms in a relationship other than transaction attributes or exchanges are required. This can further provide room for research on the dynamics of governance mechanisms.

REFERENCES


