

Stability and the Diffusion of Vertical Production Arrangements: A Theoretical Contribution¹

Decio Zylbersztajn

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1. Introduction:

Vertical coordination analysis is one of the paradigms of the new institutional economics in the tradition of Ronald Coase, especially departing from the well-known article “ The Nature of the Firm” (1937), after which the theoretical corpus of studies which attempted to explain the pattern of the governance of transactions, with special emphasis being given to vertical integration, followed. Of considerable interest is the work of Williamson (1985)², whose basic proposition is centered on the existence of a pattern of efficiency, which will minimize transactional costs and lead decision makers to construct governance mechanisms which align the characteristics of the transactions with the design of the contracts.

The literature which has developed along these lines has been useful both for decision makers in organizations and public anti-trust regulating agents. One of the themes which has been becoming increasingly important is that of vertical contractual coordination, and its implications for food chain management. Various authors throughout the world have followed this line, as can be seen in the work of Sauvéé (1998)³, Cook and Chaddad (2000), and Zylbersztajn and Farina (1999)⁴.

¹ Zylbersztajn,Decio. Professor in the Department of Business Administration of the School of Economics, Business Administration, and Accountancy (FEA-USP) of the University of São Paulo and Head of the Agribusiness Program (PENSA).

² Williamson, O.E.1985. *The Economic Institutions of Capitalism: Firms, Markets and Relational Contracts*. New York. Free Press.

³ Sauvéé,L.1998. “Toward an Institutional Analysis of Vertical Coordination in Agribusiness”. In *The Industrialization of Agriculture*. Royer,J.S. and Rogers,R.T.,eds

⁴ Zylbersztajn,D. e Farina,M.M.Q.1999. “Strictly Coordinated Food Systems :Exploring the Limits of the Coasian Firm”.*International Food and Agribusiness Management review*.vol. 2, n.2.

The theme of vertical coordination and the appearance of specific contractual relations has had a special kind of impact on the study of food production chains. The success in the use of this theory may be explained by the fact that these chains have undergone great transformations, both in terms of technology and institutional changes which affect the design of forms of governance. There are changes in the degree of the specificity of assets which characterize transactions in vertical production chains as a result of technological change and alterations in the degree of time specificity and assets related to the development and maintenance of the attributes of the quality of the food products.

The aim of this paper is to contribute to the theoretical development which supports the analysis of vertical production and distribution systems, introducing the concept of *stability and diffusion of vertical chains*.

The paper will develop an example of a widely diffused stable vertical sub-system (poultry) but where there is an intriguing co-existence of distinct patterns of governance. The text is structured in five parts, including this introduction. The second part presents relevant concepts which are based on transaction cost economics. The third section discusses first contractual stability, second the stability of vertical cooperative arrangements and third presents the concept of the diffusion of vertical systems, which is the focus of the study. Part four examines the application of the concepts of stability and diffusion in the poultry industry in Brazil. The results are then discussed in part five. The results demonstrate the utility of the theoretical concept introduced for the study of cooperative strategies in productive chains and indicate possible ways of measuring variables, with a view to future empirical tests.

2. Revision of key concepts

Governance of Contractual Relations: A central aspect of the theory is the coordination of contractual relations. Williamson defines governance as the matrix where the contractual relation is developed in its totality and supports the view that the observed forms of governance should be aligned with the characteristics of the transactions and follow the logic of economizing transaction costs. This basic hypothesis is that, in the presence of specific assets, and under the potentially opportunistic behavior conditions of agents, the

governance structures should be designed so that they economize in transaction costs, always aiming at the management of opportunistic post-contractual behavior.

The theory of contracts and incentives refines and adds to Williamson's proposal as it attempts to treat the contract as an instrument that allows the parties to make a joint production effort, thereby reducing the risks of an opportunistic post-contractual hold-up. This is the contribution made by Klein (1992)⁵. The theory proposes that the design or the choice of the efficient form of governance attempts to reduce or mitigate post-contractual risks. Klein defines the limits of self-control range on contract breaking within which agents are induced to maintain contracts. However, once these limits have been reached, an opportunistic breaking of the contract becomes possible.

Williamson (1985)⁶ elaborates the concept of the governance of contractual relations considering the transaction as a unit of analysis, which differs in its characteristics, requiring deferential forms of governance within a perspective that minimizes transaction costs. Williamson (1991)⁷ also centers his attention on the question of coordination, analyzing the impact of unforeseen shocks on the adaptability of contracts. He classified these shocks as being non-consequential, consequential and strongly consequential, aligning them with the characteristics of asset specificity which are present in the particular transaction. Transactions, which are subject to consequential or strongly consequential shocks require forms of governance which privilege adaptability in order to absorb the impact of unforeseen events. In this case, autonomous adaptation is associated with the price induction mechanism, cooperative adaptation requiring governance instruments, which can be associated with vertical integration or long-term contracts.

The Firm as a Governance Structure: The main dimension of Williamson's work is centered on the proposal that the neo-classical theory fails when it conceptualizes the firm as a production function and thus loses the chance of explaining a series of organizational phenomena, which can be studied from the point of view of the firm as a governance structure. This concept is a critique of the idea of the firm as merely the result of profit

⁵ Klein, B. 1992. "Contracts and Incentives: the role of contracts terms in assuring performance". In Weir, L e Wijkander, H. *Contracts Economics*. Blackwell, 359pp.

⁶ Williamson, O.E. 1985. *The Economic Institutions of Capitalism*. The Free Press, N.Y.

maximization incentives and allows us to include other behavioral elements and the non-neutrality of institutions, considering the firm as a mechanism of governance. This view represents neo-institutional microeconomics, which aims at studying the limits which are imposed by institutions on organizations.

This dichotomy, of the organizations representing the micro vision, and the institutions, the macro-institutional aspect, can be seen as the basis of new institutional economics.

Comparative Institutional Analysis : The analysis of the firm as a governance structure led to the so-called comparative institutional analysis, which differs from marginalist analysis, indicating the possibility of the comparison of alternative forms of governance based on the institutional matrix where these forms of governance can be found and on the characteristics of the transactions. According to Williamson (2000), the importance of comparative institutional analysis is in the proposal that moving from one organizational form to another results in discontinuities. **This question returns to the examination of the factors which are responsible for such discontinuities.** This is an important consideration for the present study.

Critiques and alignments: Williamson's analysis broadened knowledge of the economy of organizations and resulted in a considerable literature which tests hypotheses based on the assumptions of transaction cost economics. The hypothesis of the alignment of structures with the characteristics of transactions, specially the measurements of the specificity of the assets has been widely tested in quantitative empirical studies. Tests based on the analysis of limited dependent variables allow the relations between the proposed variables to be empirically checked. Studies on the duration of contracts allow the hypotheses on the inductive role of the specificity of the assets and the reduction of the contract renegotiation risks to be tested, just to mention two of the areas which are most explored.

Critiques of the theory have also appeared, especially those centered on the static character of the proposal of the economy of transaction costs. Loasby (1998)⁸ explores the concept of specific dynamic competencies as being generators of processes of **path dependence**

⁷ Williamson, O.E. 1991. "Comparative Economic Organization. the Analysis of Discrete Structural Alternatives". *Administrative Science Quarterly*. 36:269-96.

⁸ Loasby, B. 1998. "The Concept of Capabilities". In Foss e Loasby (1998) *Economic Organization, Capabilities and Co-Ordination*. Routledge Studies in Business Organization and Networks.

which result from the non-replicable routines which are generated inside organizations. This is a concept which originated from the evolutionist theory of the firm of Penrose (1959)⁹. Langlois (1998)¹⁰ and (1997)¹¹ also makes critiques of Williamson's approach, especially the aspects of the separation between production and transaction costs and the focus on the Kleinian rationale of the effect of the risk of the opportunistic contract breaking as a factor which induces vertical integration. Langlois quotes Richardson, who considers that, differently to the possibility of contractual breaking inducing vertical integration, it is the inflexibility of the highly specific assets that induces the choice of organizational forms, but for other motives, especially the possibility of distributing ex-post quasi-rents.

The evolutionist tradition of the firm, the knowledge and competencies which are intrinsic to the governance structures may become inflexible when faced by Schumpeterian changes. In these circumstances, new structures may emerge and prosper (Langlois, 1998, p. 197).

Langlois emphasizes the critique of the failure of the operationalization of the transaction costs economics (1998, p. 189.), which, coincidentally, is the same type of critique that Williamson (2000)¹² makes of the theory based on competencies. This critique is centered on the lack of a defined unity of analysis, contrasting with the transaction cost economics which defines the transaction as an analytical unit. Langlois also mentions the difference which is imposed by the assumption of organic rationality which is intrinsic to the evolutionist theory, contrasting with the limited rationality idealized by Simon, which is adopted by the transaction cost economics, as having differential characteristics between the two focuses.

Also of interest for the present study is the theme of alignment between structure and governance and the characteristics of contracts, given a determined institutional

⁹ Penrose, E. 1959. *The Theory of the Growth of the Firm*. Oxford. Basil Blackwell. Oxford University Press, ed. 1995.

¹⁰ Langlois, R.N. "Capabilities and the Theory of the Firm in Foss e Loasby", 1998. *Economic Organization, Capabilities and Coordination*. Routledge Studies in Business Organization.

¹¹ Langlois, R.N. 1997 "Transaction Cost Economics in Real Time". In *Resources Firms and Strategies*. Oxford Management Readers.

¹² Williamson, O.E. 2000. "Why Law, Economics, and Organization?" UC Berkeley Public Law and Legal Theory Working Paper Series. Social Science Research Network Paper Collection, http://papers.ssrn.com/paper.taf?abstract_id=255624.

environment, according to which it is expected that there will be a convergence of forms of governance. If this is the case, it is necessary to explain the plurality of governance structures which can be observed but which share similar transaction characteristics. How can this plurality of forms be explained?

The economy of transaction costs does not necessarily neglect aspects of path dependence but does privilege the effect of the institutional environment as a generator of different alignment results even when the characteristics of the transactions are the same. But the theory of dynamic competencies privileges the existence of specific non-transferable routines to explain the co-existence of different patterns of governance.

The present study will consider that the following explanations are plausible:

- The existence of different governance patterns can be explained by path dependence.
- The existence of different governance patterns can be explained by different institutional environment.
- The existence of different governance patterns can be seen as temporary disequilibrium, representing adjustments between present and future forms of governance, which are stimulated by modifications in the characteristics of the transactions or modifications in the institutional structure.
- The existence of different patterns imposed by differential competencies, which are developed by specific non-transferable routines.

The Productive Chain and Networks: A development which is derived from this theoretical approach can be applied to the organization of contracts between different agents along a productive chain, aiming that a determined product or bundle of services and products reach the consumer. This analysis was defined in the literature as a “strictly coordinated sub-system”, referring to the definition of complementary and dependent strategies in a cooperative form. Thus the different contractual arrangements between, for example, agricultural producers, the processing industry and the supermarkets, sustained by a financial intermediary, may form a magnified group of transactions which are coordinated in an almost hierarchical way.

In such cases, long-term contracts substitute the hierarchy, and the agents behave like an expanded Coasian firm (Zylbersztajn and Farina, 1999)¹³. The contractual arrangements thus established may present advantages when compared to competitors, offering special attributes of the product to the consumer, as frequently happens in food chains.

The structuring of long-term vertical contracts may, however, be subject to external impacts, such as those described by Williamson (op. cit). Different sub-systems will thus not only compete with each other but will also be submitted to pressures by the environment, in terms of their long-term stability of contractual arrangements, substituting full vertical integration.

This article defines the stability of the strictly coordinated sub-system and emphasizes three resulting dimensions:

- Capacity to absorb external impacts.
- Capacity to resolve disputes (distributive impacts), and
- Diffusion of stable sub-systems.

The first dimension emphasizes the organizational mechanisms which are cooperatively constructed by the agents in the chain in order to anticipate or identify external shocks, evaluating the impact in each agent present in the sub-system. The second dimension emphasizes the design of the mechanisms which aim at the solution of the distributive problems which are a result of the necessary adaptations to external shocks. Finally, the third dimension discusses the diffusion pattern of stable systems, which should displace the competition, which is based on less efficient forms of organization. When the two former dimensions are employed efficiently (governance structures aligned to the characteristics of the contracts), the organization will tend to survive external impacts. In the opposite case, the arrangement may have a short life, or even fail to become established.

3. Stability and Diffusion :

¹³ Zylbersztajn,D and Farina,E.M.M.Q.1999. "Strictly Coordinated Food-Systems:Exploring the limits of the Coasian firm". *International Food and Agribusiness Review*, 2(2):249-265.

The theme of the stability of contractual relations has been studied in the literature of transaction costs economics, mainly the case of a single contract between two parties. Masten (1998)¹⁴ discussed the theme along these lines, revising the formal theories of contracts and distinguishing the implicit costs, the agreements that are guaranteed between the parties and the real contracts, which he considers to be legally enforceable. The author stresses the role of the legal system in ensuring that contracts be followed.

The considerable amount of literature centered on the theme of the duration of contracts should also be mentioned, as in the case of Joskow (1988)¹⁵, and the renegotiation of contracts, as in Hart and Moore (1988)¹⁶. Related to these themes is the literature on the survival of contracts, as in Harris and Holstrom (1987)¹⁷, and Zylbersztajn and Lazzarinni (1997)¹⁸, who study the survival of contracts in the seed industry in Brazil.

This literature is basically centered on a single contractual relation between two agents. However, the majority of organizational architectures which have been observed include in a single structure a number of firms which must be coordinated to reach the market. In the studies of supply chains in the food business, many authors have adopted such an approach. This analysis assumes that a group of agents will spontaneously adopt common strategies. In other words, the studies of vertical coordination recommend the functioning of a series of contracts between independent agents, which are coordinated by different governance mechanisms. In an extreme case, all the contracts will be under the hierarchical coordination of a single firm, resulting in complete vertical integration. In the other extreme, the price system would play the role of coordinating production and distribution. The majority of the complex forms of governance which have been observed show solutions which are a long way from both extremes, and are based on long-term contracts, generally a mixture of formal contracts, real contracts in the words of Masten, and informal contracts, which are guaranteed by commitments based on calculative trust or reputation.

¹⁴ Masten, S.E. 1998. "Contractual Choice". In *Encyclopedia of Law & Economics*. B. Boukaert and D. de Geest editors. Edward Elgar Publishing and the University of Ghent.

¹⁵ Joskow, P.L. 1985. "Vertical integration and long term contracts. The case of coal burning electric generation plants", *Journal of Law Economics, and Organization* 1, 33-79.

¹⁶ Hart, O.D. and Moore, J. 1988. "Incomplete contracts and renegotiation". *Econometrica* 56, 755-85.

¹⁷ Harris, M. and Holmstrom, B. 1987. "On the duration of agreements". *International Economic Review*. V.28, 2:389-406.

¹⁸ Zylbersztajn, D. and Lazzarini, S.G. 1997. "On the survival of contracts: A study of contract stability in the Brazilian seed industry". Article presented at the Conference of the International Society for the New Institutional Economics, Structure. Louis, USA.

3.1. The Stability of Vertical Production Arrangements: The theme of the stability of bundles of contracts has received little discussion in the literature. The literature on strategic alliances may throw some light on the theme, as can be seen in Kay (1998)¹⁹. However, seen as an enlarged Coasian firm, a vertical chain of production is a much more complex coordination challenge than that of an individual firm.

This theme was examined by Zylbersztajn and Farina (2000), who looked at governance as a strictly coordinated sub-system that differs from a strategic group as it deals with intersectorial relations and voluntary collective strategies. Seen from the point of view of the coordination, a vertically organized system joins specialized agents of the various stages of production and may therefore have specialized assets, or co-specialized from the point of view of Teece and Pisano (1994)²⁰. The value of the specific investments is greater in their use within the vertical system than in their best alternative use. This maintains the decision to stay within the system.

However, this doesn't solve the problem of stability. An agent may leave the system, without there being a break in the system. Alternatively, there may be agents whose contribution is the key to its functioning, without whom the vertical arrangements would no longer function. The stability is related to, but is not limited, by the existence of a coordinating agent, who will be able to act in an almost hierarchical way, preserving residual decision rights. The rearrangement of contracts when faced with the possibility of external shocks may require strictly coordinated actions, like those mentioned by Williamson, which will make the arrangements which have been coordinated by the price system, impossible to operate.

¹⁹ Kay, N.M. 1998. "Clusters of Collaboration: The firms, joint ventures, alliances and clubs". In Foss, J.N. e Loasby, B.J. *Economic Organization, Capabilities and Co-ordination*.

²⁰ Teece, D.J. e Pisano, G. 1994. "The Dynamic Capabilities of Firms: An introduction". *Industrial and Corporate Change*, 3:537-556.

The stability of the system requires the existence of an agent who has the capacity to resolve distributive conflicts which will always take place when there are external shocks affecting the group. The motivation to act in the group will especially depend on the possible loss of value of the co-specialized asset, which indicates a possible rationale to explain the cohesion of heterogeneous groups which will always be competing for the margins. If it is difficult to remain inside the group, it is impossible to survive outside it.

3.2. Diffusion of governance forms: Organizations may operate in vertical production systems accepting to adopt joint strategies under the coordination of a specialized agent. The aim is to reach the market in such a way that will use the specialized assets advantageously. Such collective arrangements have an identity, both internally, and externally to the system as they may generate a differentiated recognition by the target public and are thus not anonymous actions.

The strategic vertical arrangements operate like Coasian firms as they are subject to the same pressures as a traditional firm. These may be competitive pressures, contractual conflicts between the agents, or risks of transferring the value of the specific assets. These organizations will also compete with other vertical production arrangements in the same sector. Franchises and certain strategic alliances are representative examples, where the frontier of efficiency of the firm is no longer important, giving way to a network of relations between organizations.

Within a comparative perspective, if a superior form of governance appears and manages to align the characteristics of transactions to the pattern of vertical coordination and does so in a coordinated way by adopting joint strategies, it will become the dominant form of governance. If this is the case, a process of the diffusion of the architecture adopted by the participants in the system may take place. If it is a form of governance which minimizes the transaction costs, it may dominate and become the exclusive pattern of contractual architecture, eliminating other existing arrangements.

The diffusion pattern will be affected by three fundamental factors: firstly, by the existence of non-copiable dynamic factors, which are generated by the specialized agents which are part of the coordinated sub-system; secondly, by the institutional environment within which

the coordinated arrangement is carried out; and thirdly, by entry barriers to the technological type, which is under the control of the group.

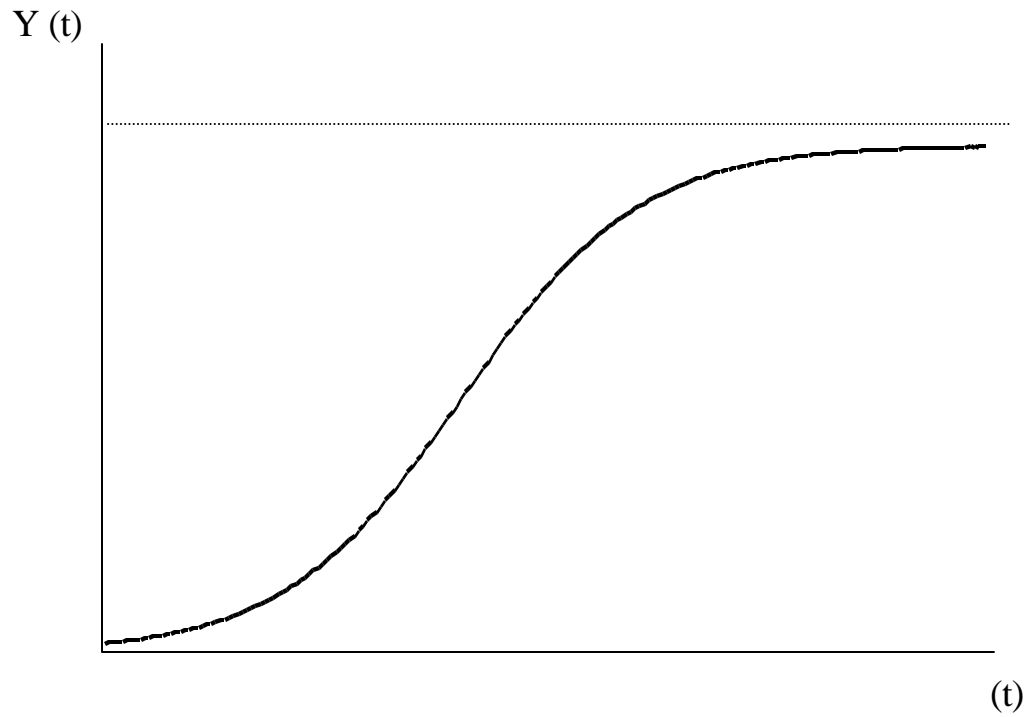
If these barriers do not exist, it can be expected that the pattern will spread and become dominant or homogeneous, eliminating the less efficient alternatives from the point of view of transaction costs. If we consider two alternative forms of vertical coordination architecture, represented by Fa and Fb, whose difference has no technological connotation but just that of the internal contractual architecture between the agents who act in a vertical production chain, in the absence of institutional obstacles, barriers to entry, and without the development of distinctive dynamic competencies, it is expected that there will be a diffusion of the superior pattern.

If it is expected that a determined pattern will eventually be adopted by more vertical production systems, such a process may be represented by a logistic curve, whose characteristics are familiar and which has been used in the literature to represent continuous diffusion processes. For example, Griliches (1957)²¹ adopts a logistic representation to model the diffusion process of the technology of hybrid corn in North American agriculture. The model allows the parameters which limit the proportion those who adopt it, the rate of diffusion of the technology, and the positioning of the curve in the time scale, to be defined.

Figure 1 presents this model, indicating the interest parameters.

²¹ Griliches, Z. 1957. Hybrid Corn: "An exploration in the economics of technological change". *Econometrica*, vol 25-n.4:501-522.

Figure 1. The logistic representation of contractual diffusion.



$$Y(t) = \frac{K}{1 + e^{-(a+bt)}}$$

- where a is the constant which positions the curve
- b is the growth rate

Source : Griliches(1957)

Such a model can represent the diffusion of forms of governance, and may be useful to focus on two of its parameters: the maximum level for the adoption of a coordination pattern and the diffusion or growth rate of the adoption of a contractual pattern.

The model departs from the assumption that alternative forms of governance may exist side by side, but, in terms of comparative analysis, there will be a superior pattern. This problem could be worked on in the literature to explore the explanations for different levels of adoption ceilings and different growth rates, and would contribute to the explanation of the co-existence of Fa and Fb.

The first step might be the analysis of the institutional environment, where existing institutions at the beginning of the process may lead to a single form of governance among the players in a productive vertical system, or prevent the establishment of a single pattern, in regions where the same institutional incentives are not replicated. The second step, or rather, the adoption of a governance pattern, may be explained by the specific competencies of the participants in the vertical system, where path dependence processes are established, which may work as accelerators of the diffusion process. Seen from another angle, the specific capabilities, **if they are established among independent agents** in a determined coordinated vertical system, function as an impediment to the replicability of that model of architecture, protecting the advantages which have been obtained by the first adopters.

The literature on dynamic competencies should develop explanations for the appearance of routines amongst organizations.

In this section, the study has introduced a number of elements which can explain the characteristic of the stability of vertical productive arrangements and has explored certain elements which can explain the diffusion of governance mechanisms.

4. An Example: The Poultry Industry in Brazil

The co-existence of different models of governance in productive food systems has long been studied and analyzed. If the theory suggests that, in given circumstances, one form of governance should be more efficient than a second, how can the persistence of different forms be explained?

The poultry industry in the south of Brazil is an interesting case to exemplify the diffusion model of a contractual form of governance and to explore elements of contractual stability. Questions of discontinuity which are suggested by Williamson (op. cit.) will be concentrated on.

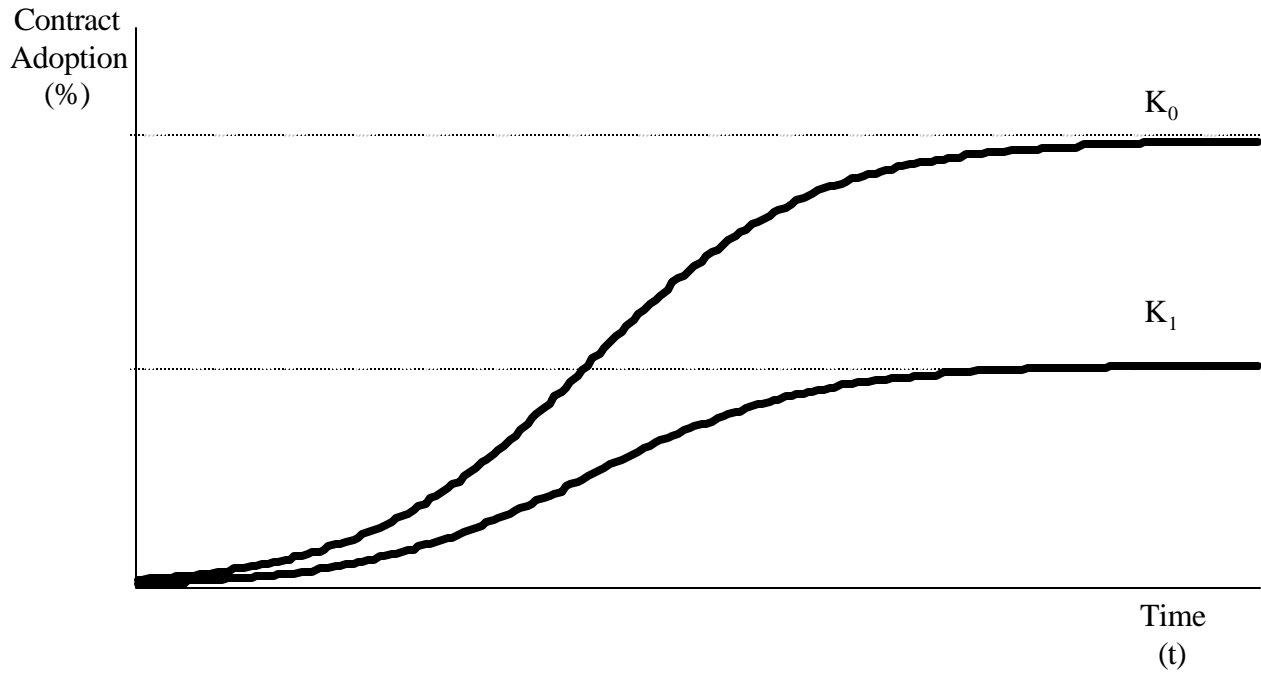
With the entrance of soya into Brazil and the beginning of the 1970s, the poultry industry, whose growth accompanied the increase in the supply of grain, developed. Genetic and production technology were developing in other countries and could be easily imported into Brazil.

A quasi-integrated production system based on contracts between a large number of poultry producers and processing factories developed within a few years. This system evolved to form a network of relations which also include the genetic, veterinary medicine and animal feed industries and a complex distribution system. In the state of Santa Catarina the model quickly led to the adoption of this form of contractual organization which was strongly coordinated by the industry, which defines the production technology, control the production technology and collects the product for slaughter and processing. As there is no complete vertical integration, as the unity of the firms is maintained, the set of operations can be seen as an almost hierarchical system, which is characteristic of countries with a developed poultry industry.

Although, on one hand, the model has been highly efficient from the point of view of the detailed coordination of production, allowing rapid adaptations which are coordinated by the industry, on the other hand, the model has not been entirely replicated in the state of São Paulo, where the ceiling of diffusion stabilized at a lower level than in Santa Catarina. How can it be explained that a superior model of coordination has not had the same diffusion pattern in different regions, given the availability of the same technology?

Figure 2 illustrates the two situations, based on the logistical model of the diffusion of governance patterns. In Santa Catarina the adoption was rapid and the level of adoption reached almost 100%. In the state of São Paulo, the rate of adoption was slower as well as the rate of adoption. What are the possible explanations for these differences?

Figure 2: Diffusion of the governance pattern in the poultry industry in Santa Catarina and São Paulo.



Source: Interviews with producers/ the author²²

²² The quantitative data are being collected in order to provide more precise data. This figure is just qualitative, based on the data obtained from the agents of the system.

In the south of Brazil, especially in Santa Catarina, a number of large companies managed to introduce the contractual system, which involves not only the producers and the industry but also genetic companies and veterinary drugs, thus forming a complex system. At the beginning of activities, these leading companies managed to obtain institutional support, which included loans at preferential rates for investments the poultry farmers should make in highly specific assets. Such an institutional arrangement allowed the model to be implanted in the coordinated manner which has been its characteristic in the last three decades. Although the model contains the risk of an opportunistic break of contract, the present effect of this factor was minimized by public investment policies.

There have always been cases where the coordinating organization has acted in a way to deal with the impact of external shocks, as, for example, the control of diseases, and support with technical help. The problems of disputes within the system have been minimized, both through the characteristics of specific location of the transaction between producers and the industry, which gives power to the latter, and through the lack of an alternative for the producer and the coupling of this activity within a set of productive activities which the local producers carry out.

In the state of São Paulo, independent production, which has grown in terms of scale, has not been linked to the industry in the same way that it has been in Santa Catarina. Producers have adopted the same technologies as in other regions, but specialized intermediate agents have emerged to structure the relation between dispersed producers and the slaughter and processing industries. Many of these intermediaries have eventually become important producers.

When the design of the contractual coordination adopted in Santa Catarina became known, it was adopted as it was perfectly replicable but failed to reach the same level of use as in Santa Catarina. The two cases differ in both the k level and in the rate of change from a pattern which was coordinated by the market to a pattern of contractual coordination.

In the case of Santa Catarina, a group of producers was formed who were integrated by contract; many of them had worked within the system for decades and had developed joint routines with the company which coordinated the system. The fact that there is no

alternative for the producer must also be taken into account, and this results in a situation of dependence and an almost hierarchical system. In the case of the state of São Paulo, the existence of the two forms of governance limits the actions of the industry as there is an alternative for the producer in case of a break of contract.

Summarizing the four explanatory elements for the co-existence of different governance patterns, we can say that:

- The different institutional environment allowed the rapid adoption of a certain governance pattern in the state of Santa Catarina. The government acted specifically in order to facilitate to participation of the small producer, in the form of a program which had a social impact, which reduced the costs associated with a break in contract.
- Path dependence was established, and from the facilitating initiative, many other producers became interested in taking part in the coordinated system.
- Dynamic competencies between the participants in the system may have appeared, though they are difficult to identify. Informal mechanisms to solve disputes, associations of producers, and collective training programs are visible developments of this type of organization.
- Transaction characteristics only, do not explain the differences between the organization of the two regions.

The theme of the lack of equilibrium and the discontinuity factors mentioned by Williamson are an element which has motivated this study. If alternative governance forms can co-exist as points of lack of equilibrium in an adjustment process, then this is a theme which is open to empirical analysis. These discontinuities may also have permanent characteristics, if support can be given to the hypotheses based on dynamic competencies, specific routines which are developed between firms. This hypothesis, though it may have a conceptual appeal, is difficult to operationalize.

The other explanations are in greater harmony with the present state of empirical studies, which provide evidence that supports the role of institutional differences and differences in the specificity of the assets.

A promising empirical analysis may be developed if the processes of the adjustment of forms of governance can be identified. This will allow differences and the disequilibrium

processor to firstly be identified, and then to test hypotheses to distinguish the factors indicated in this article

5. Conclusions:

This study has attempted to structure theoretical elements to analyze disequilibriums among forms of governance. The possibility that there exist observable forms, but that they are transitory, may reinforce explanations that are based on the economy of transaction costs, which are in turn based on the advantages of the efficiency of alignment between transaction characteristics and forms of governance.

The analysis of governance arrangements involving vertical productive systems with a large number of players is a challenge in terms of making generalizations for the models developed up until now, which have been centered on the relations between two agents. This leads us to look for ways of interaction with collective decision theories, as seen in the proposal of Olson (1965)²³. The interface between resource based theory and the theory of dynamic competencies and the economy of transaction costs should also be examined in greater detail. Although conceptual distinctions (assumption of rationality) and also distinctions of the operationalization of the variables (competence and routines) still appear, there is certainly scope for the exploration of common concepts such as path dependence and co-specialized assets.

²³ Olson, M. 1965. *The logic of collective action: Public Goods and the Theory of Groups*. Harvard University Press.