

**COLLABORATIVE INTER-FIRM INNOVATION IN THE FRONTIERS OF THE
KNOWLEDGE ECONOMY: PRELIMINARY REMARKS TOWARDS
RETHINKING PRIVATE LAW FOR THE NEW ECONOMY**

*INOVAÇÃO INTERFIRMA COLABORATIVA NAS FRONTEIRAS DA ECONOMIA DO
CONHECIMENTO: CONSIDERAÇÕES PRELIMINARES PARA REPENSAR O DIREITO
PRIVADO NA NOVA ECONOMIA*

*INNOVACIÓN COLABORATIVA INTERFIRMA EN LAS FRONTERAS DE LA ECONOMÍA
DEL CONOCIMIENTO: CONSIDERACIONES PRELIMINARES PARA REPENSAR O
DERECHO PRIVADO EN LA NUEVA ECONOMÍA*

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RESUMO: Este artigo se propõe a examinar a questão da inovação colaborativa entre empresas em quatro etapas. Primeiro, analiso as principais características do paradigma de produção da “Nova Economia”, onde as empresas são cada vez mais obrigadas a estabelecer relações de colaboração para se manterem competitivas no mercado. Segundo, examino as principais formas de colaboração entre empresas estabelecidas e as formas correspondentes de desenho legal das transações. Terceiro, descrevo os principais desafios legais de coordenação para que essas colaborações sejam eficazes. Quarto, concluo mencionando as formas potenciais pelas quais as regras de comércio internacional ou guias legislativos podem contribuir para facilitar e encorajar colaborações inovadoras entre empresas legalmente independentes para inovar.

PALAVRAS-CHAVE: Nova Economia. Colaboração entre empresas. Inovação.

RESUMEN: Este artículo propone examinar el tema de la innovación colaborativa entre empresas en cuatro etapas. En primer lugar, analizo las principales características del paradigma productivo de la “Nueva Economía”, donde las empresas se ven cada vez más obligadas a establecer relaciones de colaboración para seguir siendo competitivas en el mercado. En segundo lugar, examino las principales formas de colaboración entre empresas establecidas y las correspondientes formas de diseño de transacciones legales. En tercer lugar, describo los principales desafíos legales de la coordinación para que estas colaboraciones sean efectivas. En cuarto lugar, concluyo mencionando las posibles formas en que las reglas de comercio internacional o las directrices legislativas pueden contribuir a facilitar y fomentar colaboraciones innovadoras entre empresas legalmente independientes para innovar.

PALABRAS-CLAVE: Nueva Economía. Colaboración entre empresas. Innovación

ABSTRACT: This paper proposes to examine the issue of collaborative inter-firm innovation in four steps. In the first, I analyze the main features of the “New Economy” production paradigm, where companies increasingly are required to establish collaborative relationships to remain competitive in the market. Second, I examine the main forms of inter-firm collaborations established and the corresponding forms of legal design of the transactions. Third, I describe the main legal challenges of coordination for these collaborations to be effective. Fourth, I conclude mentioning the potential ways through which international trade rules or legislative guides could contribute to facilitating and encouraging innovative collaborations between legally independent companies to innovate.

KEYWORDS: New Economy. Inter-firm collaboration. Innovation.

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INTRODUCTION

As the next generation of advancements in science and technology becomes growingly unpredictable, companies are hardly capable to produce world class innovation without establishing collaborations with other entities. Many complex and innovative products and services are the result of strategic alliances between competing companies to collaboratively co-create. BMW and Toyota have a strategic alliance to create fuel cell technology; Apple and Samsung have a collaboration to produce semiconductors for mobile phones¹.

Some of these relationships, especially those that display a high degree of uncertainty and present the need for experimentation, do not fit easily within the traditional Private Law categories such as contracts, corporations or partnerships, but rather require adaptations or a different logic. Moreover, parties growingly insert tailored governance mechanisms in their agreements to navigate the difficulties presented by these relationships. As innovation becomes paramount to assure companies' productivity and competitiveness, so becomes the need to examine the design of legal transactions structuring these innovative projects.

This paper proposes to examine this issue in four steps. In the first, I analyze the main features of the “New Economy” production paradigm, where companies increasingly are required to establish collaborative relationships to remain competitive in the market. Second, I examine the main forms of inter-firm collaborations established and the corresponding forms of legal design of the transactions. Third, I describe the main legal challenges of coordination for these collaborations to be effective. Fourth, I conclude mentioning the potential ways through which international trade rules or legislative guides could contribute to facilitating and encouraging innovative collaborations between legally independent companies to innovate.

¹ SCHUMPETER, Managing partners, *The Economist*. Nova Iorque, 23 maio de 2015. Disponível em: <https://www.economist.com/business/2015/05/21/managing-partners>.

1 THE “NEW ECONOMY” PRODUCTION PARADIGM: DE-VERTICALIZATION, GLOBALIZATION, PROBLEM-SOLVING

In the past few years, academics², the business community³ and international organizations⁴ have widely debated the rise of a new industrial production paradigm, one where companies operate in a state of constant innovation and establish strong collaborative relationships with other firms. Such debates were initially triggered by the finding that key companies were no longer fully developing products and production processes in-house, but rather through cooperation with one or several other companies.⁵ This was coined a process of “de-verticalization” of the economy, where companies, instead of controlling the full process of production or distribution, focus on their core expertise, and establish different forms of collaboration not only with other companies, but also with research institutes, universities, customers, among others, having in view assembling an output to be offered in the market (thus the concept of “open innovation”).

This process of de-verticalization propagated in a globalized context. The intensification of world trade and economic integration has propitiated the creation of global value chains.⁶ Companies all over the world have become connected in value chains where each of them performs a certain function for the set-up of the final output. The process of production of a commercial aircraft is emblematic of this transnational collaboration. For instance, in the set-up of the Boeing 787, Boeing, the leading company assembling the aircraft, established collaborations with several companies, from different countries from all over the world, each

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² HERRIGEL, Gery B. *Manufacturing Possibilities: Creative Action and Industrial Recomposition in the US, Germany and Japan*. Oxford: Oxford University Press: 2010.

³ LIKER, J.; CHOI, Thomas Y. Building Deep Supplier Relationships. *Harvard Business Review*. Massachusetts. Dezembro 2004. Disponível em: <https://hbr.org/2004/12/building-deep-supplier-relationships..>

⁴ WORLD ECONOMIC FORUM. *Collaborative Innovation, Transforming Business, Driving Growth - Regional Report*. Agosto de 2015.

⁵ GILSON, Ronald J.; SABEL, Charles F.; SCOTT, Robert E. Contracting for innovation: vertical disintegration and interfirm collaboration. *Colum. L. Rev.*, v. 109, p. 431, 2009.

⁶ GEREFFI, Gary. A global value chain perspective on industrial policy and development in emerging markets. *Duke J. Comp. & Int'l L.*, v. 24, p. 433, 2013.

of them with strong expertise on a certain component or service, and all of them collaborating and coordinating their respective performances towards the assembly of the final output.⁷

Furthermore, this process of globalized de-verticalization has, especially in the innovative companies, often established a model of production for the rapid detection of defects, with specialization in the problem-solving abilities to deal with the identified issues and to improve them.⁸ In the past, the process of mass production in factories was the rule, with an inventory of replacements for inputs or machines once defects were encountered as a way to assuring the uninterrupted functioning of the process of production. Nowadays, it becomes growingly common for companies to adopt the strategy of stopping the process of production once problems are detected, of identifying the bottlenecks, and of investing highly in problem-solving capabilities to solve them as quickly as possible. This procedure has, in many cases, led to better and cheaper production processes and outputs. Moreover, this “Toyota system of production” led to increases in productivity and innovation.

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2 MODELS OF INTER-FIRM COOPERATION: RELATIONAL, MODULAR, CO-DESIGN

The models of inter-firm cooperation established in the context of global value chains is varied. According to the nature of the product being developed and to its complexity, different models of cooperation are more suitable. In general, it is possible to identify three main forms of collaboration: modular, relational and co-design or iterative collaboration (the truly collaborative model, involving risk partnerships).⁹

In the modular model, each party has to provide a certain service or a product that will be directly incorporated into the final output. Each party provides its own closed “module”, initially determined by the parties and produced independently, and in the end the modules from the different companies are assembled to form a final product. In this situation, formal contracts will be mostly sufficient for the parties to establish cooperation. The specifics of the module

⁷ JENNEJOHN, Matthew C. Contract adjudication in a collaborative economy. *Va. L. & Bus. Rev.*, v. 5, p. 173, 2010.

⁸ SPEAR, Steven J. *Chasing the Rabbit: How Market Leaders Outdistance the Competition and How Great Companies Can Catch Up and Win, Foreword by Clay Christensen*. McGraw Hill Professional, 2008.4

⁹ SABEL, Charles F.; ZEITLIN, Jonathan. Neither modularity nor relational contracting: Inter-firm collaboration in the new economy. *Enterprise & Society*, v. 5, n. 3, p. 388-403, 2004.

are established contractually, acts of contractual violation can be detected with reasonable ease, and prices and terms are predicted or predictable. The difficulty with the modular model is that it might obstruct the parties' efforts to improve the overall product, tying them to a second-best technology. As the parties are obliged to provide components with fixed features (which will be directly incorporated into the final product), this undermines their ability to improve them along the production process, as they discover better technologies along their problem-solving activities, or to correct potential inefficiencies. The modular model, thus, presents serious difficulties for parties seeking to innovate.

An alternative is the relational model, where parties establish a continuous and more open cooperation, drafting vague and short contracts, with few formal enforceable terms. In this situation, thus, there are several uncertainties and contingencies that might arise in the parties' relationship, which often are not predicted contractually. In case a controversy arises, therefore, most of the disputes among the parties are to be decided informally, with no need for formal contractual enforcement, except in case of partial or complete break-down of the relationship. The main incentives against opportunism and non-cooperative behavior would be the expectation for future deals with the other partner, as well as concerns as to reputation in the market, which could be damaged if information about the misbehavior against the contractual partner were to be spread to other companies.¹⁰ While the relational model remains valid and efficient in some kinds of transactions, several studies have acknowledged that it is not the predominant model of cooperation for project involving advanced innovation, some of them presenting empirical evidence to support that assertion.¹¹ Several reasons justify the inadequacy of the relational model for innovation. First, the fact that, given the high level of preliminary investments required, parties are reluctant not to establish a more sophisticated legal machinery (including governance mechanisms) to protect their interests. Second, the high uncertainty involved in innovation can lead to misunderstandings as to the behavior of the other party: it is difficult to determine whether it is duly cooperating (by experimenting) or whether it is

¹⁰ MACAULAY, Stewart. Non-contractual relations in business: A preliminary study. In: CAMPBELL, David. *Stewart Macaulay: Selected Works*. Springer, Cham, 1963. p. 361-377.

¹¹ BOZOVIC, Iva; HADFIELD, Gillian K. Scaffolding: Using formal contracts to build informal relations in support of innovation. *USC CLASS Research Paper*, n. C12-3, p. 12-6, 2015.

BERNSTEIN, Lisa. Beyond relational contracts: Social capital and network governance in procurement contracts. *Journal of Legal Analysis*, v. 7, n. 2, p. 561-621, 2015.

JENNEJOHN, Matthew. The private order of innovation networks. *Stan. L. Rev.*, v. 68, p. 281, 2016.

GILSON et al, op. cit., 2009.

defecting (evading its legal obligations).¹² Simple relational incentives are insufficient for the parties to understand each other's actions. Third, it is uncertain to what extent the reputational or business sanctions, crucial for the effectiveness of the relational model, remain valid in the context of transactions taking place in a global level, where companies are operating in huge markets and in different countries. Finally, self-regulation in long-term relationships between the partners on the basis of social norms and reputation fails because it depends on mechanisms of punishment that by themselves will contribute to destroy the basis of the relationship – trust and cooperation.¹³ For if one party is actively seeking to punish the other for their mistakes, there will be a tendency of each party taking a cautious and suspicious behavior that will be deleterious to cooperation.

The third model is co-design or iterative collaboration. According to Gilson et al, contractual transactions to generate innovation share three different features.¹⁴ First, the project of an innovative product, to be produced under a continuous process of high uncertainty, in which the final output, price and process are not definable at the outset. Second, the inability of just one firm to produce such innovation – requiring, thus, inter-firm alliances. Third, an iterative collaboration between members of different firms, working towards the specification, design and development of an innovative product, involving intense communication and sharing of information.

In this study, I will be focusing specifically on innovative ventures. Most of the advanced innovation is bound to occur through co-design or iterative collaboration – for most companies, no matter how big, do not have the expertise to generate world class innovation alone, especially in capital intensive industries. These inter-firm collaborative relationships are clearly different from traditional forms of supplying or outsourcing relationships. They involve a close collaborative relationship between companies, with, for instance, the exchange of technology and know-how, the creation of inter-firm joint working teams, online platforms for joint planning and sharing of information and the creation of steering committees between different companies for decision-making regarding upcoming disputes and contingencies. They require specific preliminary investments of each of the firms for the joint project, making the partners

¹² GILSON, Ronald J.; SABEL, Charles F.; SCOTT, Robert E. Braiding: the interaction of formal and informal contracting in theory, practice, and doctrine. *Columbia Law Review*, p. 1377-1447, 2010.

¹³ DEAKIN, Simon; LANE, Christel; WILKINSON, Frank. 'Trust or Law? Towards an Integrated Theory of Contractual Relations between Firms. *Journal of Law and Society*, v. 21, n. 3, p. 329-349, 1994.

¹⁴ GILSON et al, op. cit., 2009, página 451.

gradually more valuable to each other, thus shunning the adversarial logic of the market. At the same time, these projects involve high risks as to their feasibility (Can a new form of high-storage energy battery be developed and commercialized? Can genetically modified seeds for a certain plant be effectively generated?). These high risks require the project to allow for a high degree of flexibility: if the project seems not to be developing promisingly, the parties should be free to walk-away. Such characteristics generate the need for an “experimental” model of business that calls for two apparently paradoxical demands: full trust and cooperation, coupled with a high degree of freedom and flexibility to change the relationship, if there is a need to adapt the project, or even to terminate it, in case the experiment seems to be leading nowhere.

An example of a collaborative network of contracts for innovation illustrates how these features manifest. As some automotive industries, Chrysler undertook restructuring of its commercial relationships with suppliers in the United States during the 1990's.¹⁵ Its objective was to engage its suppliers of components in product and process development, seeking to achieve more innovation and cutting costs of production. It downsized the number of its suppliers and started developing a closer relationship with a few chosen firms. The selected suppliers were not sought according to the lower prices offered, but according to capabilities which could eventually lead to optimized production. Instead of having short-term relationships involving detailed contracts, long-term open contracts were concluded. The components' prices were commonly agreed and revised between the parties along the way, according to a “target costing”, calculating how much the final customer would pay for the product and then calculating the price of components backwards to see how much would be the contribution of each supplier to the final product.

Chrysler managers themselves, however, acknowledged that the target costing was set “somewhat unscientifically and then, when necessary, [we] had the suppliers convince us that another number was better”.¹⁶ The plan of production, instead of being imposed by Chrysler on the suppliers, was elaborated collaboratively with them, through the creation of “cross-functional teams”, where technicians of Chrysler and different suppliers' employees met to plan the optimization of production jointly. It created a platform program for communication, where

¹⁵ DYER, Jeffrey H. How Chrysler created an American keiretsu. *Harvard Business Review*, v. 74, n. 4, p. 42-52, 1996.

¹⁶ *Ibid.*

suppliers gave suggestions for the improvements of Chrysler's processes for which, if implemented, the supplier would receive some reward. As this example demonstrates, in a network, the companies become interdependent and their relationship is based on trust and cooperation, yet they maintain their independent legal personality. Chrysler restructuring of its relationship with its suppliers led to significant improvements in its processes of production, leading to more efficiency and profits.

3 LEGAL ISSUES REGARDING COLLABORATIVE INNOVATIVE PROJECTS: BEYOND THE TRADITIONAL LEGAL CATEGORIES

For legal studies, this emerging business model posed an initial obvious challenge: these relationships could not be clearly framed within traditional private law categories of company law or contract law. While the production involved close collaboration, the companies themselves were legally independent – and often they did not pertain to the same economic group/reality. At the same time, the level of interdependence between the companies, the strong degree of interaction between them created intense duties of co-operation, information, monitoring, beyond those prescribed by the traditional duties of good faith in contract law – especially if one considers common law jurisdictions. Partnerships could present an alternative, but the fiduciary logic in partnerships (giving preference to the partners interests, rather than to its own) contradicted the experimentalist logic of collaborative projects, where parties should be given the freedom to compete and collaborate simultaneously.

The search for legal institutional frameworks adequate to govern hybrids such as networks of contracts, located in the intersection between the market and the firm, became a rising tendency, especially from the 1990's, when a significant literature on contractual networks emerged in Europe¹⁷. While the recognition of the failures of traditional contract law were acknowledged, no alternative concrete legal framework could be advanced in this first

¹⁷ See, for instance:

TEUBNER, Gunther. Beyond Contract and Organization? External Liability of Franchising Systems in German Law. In: JOERGES, Christian. *Franchising and the Law: Theoretical and Comparative Approaches in Europe and the United States*, 1991.

SCHANZE, E. Symbiotic Contracts: Exploring Long-Term Agency Structures Between Contract and Corporation. In: JOERGES, Christian. *Franchising and the Law: Theoretical and Comparative Approaches in Europe and the United States*, 1991.

ADAMS, John N.; BROWNSWORD, Roger. Privity and the Concept of a Network Contract. *Legal Studies*, v. 10, n. 1, p. 12-37, 1990.

moment. From the mid-2000's, the interest on contractual networks in Europe re-emerged strongly, with new proposals as to how to materialize an institutional framework for networks (such as the concept of connected contracts in Germany or the Italian legislation on “network-contract”).¹⁸ Nonetheless these efforts, the literature in the field is classified by a leading expert as still being in its “infancy”.¹⁹

It is indeed important to notice that the search for a legal concept of contractual networks has been far more significant in Europe than in the US, where it seems that there is an implied acceptance that most of the specific challenges of contractual networks should be decided on an ad-hoc basis, rather than on a systematic fashion. I claim that the reason for that is that there is a greater belief among US scholars that contractual networks can be most efficiently self-regulated by their participants²⁰, which has lead them to focus on the study of private agreements' design and contractual governance mechanisms between the contractual partners, which is more developed than in Europe. In Europe, however, legal scholars such as Teubner have persuasively argued that there are some significant issues (such as profit sharing and network liability towards third parties) where the courts and the legal doctrine have an important role to play.²¹ These doctrinal discussions, on their turn, seem to be more advanced in Europe than in the US. Moreover, they seem to have pointed towards a need for the legal doctrine to evolve towards some definition of contractual network (even if only to remain a guiding rather than a legal concept), a definition that seems to be less important in the US. in contrast, in other regions such as Latin America, the doctrinal formulation of contractual networks seems to me to be mostly associated with the concept of linked contracts (credit card chains', franchising, purchasing finance), with a lack of any major discussion regarding contractual networks in the context of productive networks involving a high degree of interdependence and working

¹⁸ See, for instance:

CAFAGGI, F.; GRUNDMANN, S.; VETTORI, G. *The Organizational Contract - From Exchange to Long-Term Network Cooperation in European Contract Law*. London: Routledge, 2016.

CAFAGGI, F. *Contractual Networks, Inter-firm Cooperation and Economic Growth*. Cheltenham: Edward Elgar Pub. 2011.

TEUBNER, Gunther. *Networks as Connected Contracts*. London: Bloomsbury Publishing PLC, 2011.

JUNG, S; KREBS, P; TEUBNER, G. *Business Networks Reloaded*. Baden-Baden: Nomos Verlagsgesellschaft, 2015.

¹⁹ GRUNDMANN, Stefan. The Future of Contract Law. *European Review of Contract Law*, v. 7, n. 4. P 490-525, 2011

²⁰ BUXBAUM, Richard M. Is" Network" a Legal Concept?. *Journal of Institutional and Theoretical Economics (JITE)/Zeitschrift für die gesamte Staatswissenschaft*, v. 149, n. 4, p. 698-705, 1993.

²¹ TEUBNER, Gunther, *Networks as Connected Contracts*. London: Bloomsbury Publishing PLC, 2009.

collaboration between contractual partners. I believe this absence is related to the fact that the most advanced forms of production (Post-Fordism) in Latin America are still confined to a very small proportion of the productive sector. The most recent developments in the US recognize the development of contractual agreements mixing formal and informal elements to deal with inter-firm arrangements for collaborative production²² - as demonstrated by studies across law²³, management²⁴ and economics.²⁵

4 CHALLENGES TO BE OVERCOME IN THE COORDINATION OF COLLABORATIVE INTER-FIRM PROJECTS

In overview, there are three main features of long-term contracts that are not adequately taken into account by rules governing spot contracts that serve as a paradigm for traditional Contract Law. All these issues are present and intensified in contracts for innovation, requiring taking further steps even in relation to the treatment of long-term contracts. First, the inherent uncertainty (or incompleteness) of these contracts; second, the specific investments often necessary in such contracts; and, third, the different incentives regime in contracting that requires adjustment of termination rules and allocation of opportunities.²⁶

The first issue, the inherent uncertainty in long-term contracts, relates to the impossibility to predict the contingencies that might arise in the long-run of the contract performance.²⁷ Beyond that, in the field of innovation, it is common that not even in the initial stages it may be possible to predict what a project will be or what are the parties' obligations (even if it is a short-term project).²⁸ An illustrative example is that of a computer manufacturer buying

²² Gilson et al, op. cit. 2010, páginas 1377-1378.

²³ DEAKIN et al. Contract Law, Trust Relations, and Incentives for Co-operation: a Comparative Study. In: DEAKIN et al. *Contracts, Co-Operation, and Competition: Studies in Economics, Management, and Law*. Oxônia: Oxford University Press, 1998.

²⁴ DYER, Jeffrey H.; SINGH, Harbir. The relational view: Cooperative strategy and sources of interorganizational competitive advantage. *Academy of management review*, v. 23, n. 4, p. 660-679, 1998.

²⁵ On the concept of hybrids by New Institutional Economics, see: WILLIAMSON, Oliver E. The economic institutions of capitalism. Firms, markets, relational contracting. In: *Das Summa Summarum des Management*. Gabler, 2007. p. 61-75.

²⁶ GRUNDMANN, Stefan; CAFAGGI, Fabrizio; VETTORI, Giuseppe. The Contractual Basis of Long-Term Organization—The Overall Architecture. In: GRUNDMANN, S., CAFAGGI, F. VETTORI G. *The Organizational Contract*. London: Routledge, 2016. p. 3-38.

²⁷ BELL, John. The Effect of Changes in Circumstances on Long-term Contracts. In: HARRIS, D.; TALLON, D. *Contract Law Today: Anglo-French Comparisons*. 1989.

²⁸ Gilson et al, op. cit. 2009, página 450.

regularly circuit boards from another company.²⁹ While there may be an initial description of the product, the buyer expects to cooperate closely with the partner company to constantly produce innovations in the components – which otherwise will rapidly become obsolete due to the rapidly changing nature of the field. This might not only lead to a different product, but to a different price and contractual reality that is impossible to predict at the outset.

The second issue is the need for specific investments in some long-term contracts.³⁰ It is common that, in preparation for a contractual agreement or for its performance, one contractual partner has to make investments tailored to the project at hand. These investments will be considered specific when the products/services in which they result will not be marketable to third companies in case the long-term relationship is terminated. For instance, a component produced specifically for a model of machine used only by the contractor cannot be sold to third companies in the market that do not employ the same model. The non-marketability of these products creates a vulnerability for the party who made the investments in regard to its contractual partner. When the investments are considerable and when the other party has not undertaken a same level of investments in the project, this creates a risk for the non-investing party to act opportunistically, as it knows that the investing party has to maintain the contract or it will lose its investments. It may then seek to opportunistically renegotiate the contract, asking for abusively lower prices or asking for inadequate advantages.

The third issue is the incentive structure of long-term contracts, which should be markedly different from that of spot contracts due to the repeated dealings in which the parties are involved.³¹ In long-term contracts, parties are continuously performing their contractual obligations (as opposed to fulfilling their obligations in a one-time performance). In this context of repeated dealings, it is crucial to create “warning” mechanisms that permit a contractual party to immediately sanction the inadequate performance of the contract by the other party rather than wait for the end of the contractual term. Similarly, the termination mechanisms have to be calibrated for long-term contracts. Sometimes, allowing an inadequate performance to lead to termination may favor the party who less invested in the project to exit or to blackmail the other party.

²⁹ Ibid, página 465

³⁰ WILLIAMSON, Oliver E. Transaction-cost economics: the governance of contractual relations. *The journal of Law and Economics*, v. 22, n. 2, p. 233-261, 1979.

³¹ Cafaggi et al, op. cit.

5 POTENTIAL AREAS OF STUDY FOR INTERNATIONAL TRADE ORGANIZATIONS

In this section, I propose potential legal recommendations in different areas of study that could be developed by international trade organizations having in view facilitating and encouraging innovative collaborative inter-firm relationships.

5.1 GOVERNANCE MECHANISMS AND LEGAL DESIGN

In practice, the first attempt to deal with the challenges in inter-firm collaborative relationships to innovate is by the parties establishing themselves governance mechanisms that could contribute to solve coordination problems, to reduce the risks of opportunism and to enhance communication between companies. Furthermore, the overall legal design of the contract is an important issue for the contract to provide for a balance of rights and obligations.

A series of legal studies have analyzed the potential of such governance mechanisms, examining the creation and functions of steering committees (or contractual boards) in the context of strategic alliances³², financial incentives³³, non-compete clauses' role in producing innovation³⁴, the use of advanced technology to foster coordination and collaboration between contractual partners³⁵, the use of outsourcing relationships to develop specific forms of governance³⁶ and a blending of formal and informal law (braiding) in designing collaborative relationships.³⁷ There was a fragmented account of the different contractual elements to structure collaborative relationships in innovative ventures. These studies culminated with the deployment of a more developed general theory for contracting for innovation with a series of

³² SMITH, D. Gordon. The exit structure of strategic alliances. *U. Ill. L. Rev.*, p. 303, 2005.

³³ DENT, George. Lawyers and trust in business alliances. *Bus. Law.*, v. 58, p. 45, 2002.

³⁴ Ibid. página 53.

³⁵ CIRCO, Carl J. A case study in collaborative technology and the intentionally relational contract: Building information modeling and construction industry contracts. *Ark. L. Rev.*, v. 67, p. 873, 2014. (discussing the use of the Building Information Modelling – BIM – as a technology facilitating collaboration between partners in the construction industry).

³⁶ GEIS, George S. The space between markets and hierarchies. *Virginia Law Review*, p. 99-153, 2009. See also: GEIS, George S. An empirical examination of business outsourcing transactions. *Virginia Law Review*, p. 241-300, 2010.

³⁷ JENNEJOHN, Matthew C. Collaboration, innovation, and contract design. *Stan. J.L. Bus. & Fin.*, v. 14, p. 83, 2008.

articles by GILSON, SABEL and SCOTT³⁸, which incorporated some of the different mechanisms of contractual governance aforementioned. They incorporated in their narrative, to a great deal, the different elements insofar studied only in a fragmented way. Their theory has been influential in academic studies.

Indeed, GILSON et al defend that formal and informal rules coexist in the context of contracts for innovation in the following manner. These contracts contain a few formal enforceable rules that impose upon the parties the participation in processes of cooperation that make the behavior of each party more observable.³⁹ These processes or “contractual milestones” are moments where the parties have to come together to cooperate. As they cooperate, they will check their compatibility and will be able to decide whether to continue cooperating or not. The contracts will not impose the project to be pursued to the end, but as the parties decide to voluntarily keep on cooperating, the costs of switching partners will become higher.⁴⁰ As the parties have voluntarily continued cooperating, they invested in each other, acquired know-how and expertise related to the other company, developed communication channels. To forego all those advantages would incur significant costs for the companies, especially when compatible partners with expertise might be lacking in the market. The informal side, therefore, gradually creeps in, and serves as a mechanism to undermine opportunism where formal legal sanctions are no longer available. In the case there is defection in the initial phases of experimental cooperation (in the “contractual milestones”), GILSON et al argue that formal legal enforcement should be restricted to “low-powered enforcement”, that is, mostly to the restitution of the incurred costs in certain circumstances.⁴¹

A potential contribution to improve relations between companies willing to innovate collaboratively would be to further study and present alternative governance mechanisms to be included in contracts for innovation. A Recommendation Guide could suggest, for instance, in which situations and for which functions different governance mechanisms would be useful and how they could interact with each other.

³⁸ GILSON, et al, op. cit, 2009; GILSON, et al, op. cit, 2010. See also: GILSON, Ronald J.; SABEL, Charles F.; SCOTT, Robert E. Contract and innovation: the limited role of generalist courts in the evolution of novel contractual forms. *NYUL Rev.*, v. 88, p. 170, 2013.

³⁹ See the detailed explanation of the theory, based on three different contracts used to structure innovation, in GILSON, et al, op. cit, 2009, página 473 et seq..

⁴⁰ Ibid. página 481 et seq.

⁴¹ GILSON, et al, op. cit, 2010, página 1415 et seq.

5.2 LEGAL DOCTRINE

The role of legal doctrine may be significant to deal with collaborative relationships for innovation, whenever the parties are unable to solve their disputes informally or through the governance mechanisms established in their agreements. In most cases, parties are able to solve disputes arising from collaborative relationships without the need for legal enforcement.⁴² However, whenever this might not be possible, legal doctrine might then guide the adjudication of disputes involving these ventures or might provide guidance for parties regarding the leverage each of them will have in renegotiating their contracts, due to some contingency or dispute.

The main fields that could provide insights to deal with those problems are those dealing with relational contract law, contract design and contractual networks. The limitations of relational contract law to deal with these collaborative relationships have been indicated above. Contract design will be mostly employed by the parties in innovative projects, with particular governance mechanisms, such as those indicated in the section above. However, there will be situations where these governance mechanisms might not be sufficient to solve all conflicts and adjudication will be necessary. Legal studies on long-term contracts might provide relevant insights, clarifying how hard and soft law can serve to solve conflicts in collaborative relationships. For instance, rules on fundamental change of circumstances, on implied terms, or the good faith principle. The limitations of incomplete contracts' insights, however, are also significant. Innovation and especially experimental relationships involve constant uncertainty and impossibility to predict the future of the parties' relationship. It might not be possible, for instance, for a court to imply a "reasonable" term into the parties' agreement considering their previous behavior: innovative projects involve creating something new or in a new way, for which there is no previous reasonable model one could use as a guidance to predict the future. Similarly, courts cannot easily identify what is a "reasonable" behavior that is in accordance with good faith in such uncertain environment as that of constant innovation.

A further field of study providing insights for the subject is that of contractual networks. Most of the first generation of studies acknowledging the specificity of contractual networks in

⁴² JENNEJOHN, *op. cit.*, 2010, página 197 et seq.

general date from the early 1990's. It is clear how this process of acknowledgment occurs. The early studies on the topic dealt with franchising, exploring how the dependence of the franchisees upon the franchisor required recasting contractual principles and interpretation.⁴³ They were then focused upon a form of *hierarchical* network. To regulate this form of hierarchical relationship, the main purpose of Private law would be the protection of the weakest link in the network against the all-powerful network leader. But soon after authors such as Teubner recognized the existence of *heterarchical* networks, truly collaborative ventures where the parties are all vulnerable in relation to each other due to the spirit of discovery, to the uncertainty of their project.⁴⁴ The legal problems involving hierarchical networks require very different responses to those required by heterarchical networks – such as those involving collaborative production and distribution. In the latter case, the issue is not asymmetry and/or the protection of the weaker party (apart in some special situations), but rather true *coordination, monitoring and transparency* between the parties, as well as undermining risks of *opportunism*.

Collaborative relationships involving multiple parties should be distinguished from other kinds of transactions which can be classified as “linked contracts”. It is true that the two main issues that arise in linked contracts are also present in contractual networks. Conversely, however, contractual networks’ most acute legal difficulties are normally not even mentioned in the studies regarding linked contracts.

Linked contracts do not represent at all a new development in terms of the law of obligations, but their recognition as a separate group is relatively recent. General examples of linked contracts involve purchase financing, cartel agreements, construction projects involving a plurality of contracts or chain of sales contract between the producer and the consumer or end-user. In these contracts, there are two main legal issues that are presented as requiring divergent solutions from mainstream contract law rules.

The first one is the issue of liability for damages arising between two parties not directly connected through contract, inserted in the context of interrelated contractual relationships of

⁴³ See, for instance, SCHANZE, op. cit. 1991.

⁴⁴ TEUBNER, Gunther. Beyond Contract and Organization? External Liability of Franchising Systems. In: MARTINEK, Michael. *Franchising and the Law: Theoretical and Comparative Approaches in Europe and the United States*, 1991.

which they were parties.⁴⁵ Three sub-questions arise regarding this matter: first, the effect of exemption clauses between parties to linked contracts; second, the emergence of supplementary obligations between parties with no direct contractual relationship; and, third, the issue whether a producer might be directly liable for his product in the context of a chain of sales.

The second issue refers to the effects that linked contracts might have on one another, that is, whether the fact that one contract is terminated or breached will imply the termination of the other contract.⁴⁶ Consider, for instance, a case involving purchasing finance, where the customer concluded two contracts, one with a constructor for the erection of a building, and another one with a financial institution for the financing of the project. In the case of an anticipatory breach attributed to the constructor, would that incur in the termination of the contract with the purchasing finance and, if so, in what circumstances?

In European private law studies on contractual networks, the focus has been on two general issues: 1) the interpretation of bilateral contracts embedded in the context of a network of contracts, especially the intensification of cooperation duties; 2) the extension of the effects of bilateral contracts to parties not directly connected to these contracts but actively participating in the network.⁴⁷ Whereas the second issue was already subject to extensive discussions in the context of “linked contracts”, it acquires a somewhat different nuance in the context of collaborative networks. In those collaborative networks, partners not only are interdependent, but maintain either a working relationship or a relation where the modification of the other party’s performance requires recasting their own contribution to the network.

All of these different areas of study provide important contributions for a legal doctrine seeking to deal with collaborative relationship typical of the New Economy, but none of them alone can solve all the issues presented by them.

Most collaborative contracts contain very few formal enforceable terms: as the parties do not know exactly what and how they will be producing collaboratively until they start experimenting, the contracts remain open. They contain, as aforementioned, a procedure for the

⁴⁵ SAMOY, I.; LOOS, M. B. M., Introduction. In: SAMOY, I; LOOS, M. B. M., *Linked Contracts*, Cambridge: Intersentia, 2009.

⁴⁶ Ibid. página 6.

⁴⁷ GRUNDMANN, Stefan. Contractual Networks in German Private Law. In: CAFAGGI, Fabrizio. *Contractual Networks, Inter-firm Cooperation and Economic Growth*. Cheltenham: Edward Elgar Pub, 2011, páginas 111, 115-116.

continuous specification of their duties as their relationship evolves and general duties of cooperation to guide their behavior.

In this context, an important contribution to international trade organizations would be to establish what would be the particular content of duties of cooperation in the context of collaborative experimental relationships. What are exactly those duties, what do they entail and how do they differ from traditional duties of cooperation in non-collaborative relationships? Such duties include a duty of confidentiality, duties to provide information, duties to cooperate and to act in good faith, sometimes, if the contract so provides, duties to share profits, to treat different parties participating in the collaborative project non-discriminatorily or to provide for a non-opportunistic termination of the project, if one of the parties made significant preliminary investments.

In other words, that would be a contribution towards rethinking Private law in light of collaborative relationships where parties compete and cooperate simultaneously to generate advanced innovation.

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