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Institutional Change in Globalization: Transnational Commercial Law from an Evolutionary Economics Perspective

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A. Introduction

Markets need a complex set of institutions in order to work properly. Within a state, the national legal order with its legal rules, courts, and enforcement agencies have the task of fulfilling this role. Besides safeguarding property rights, the national legal order encompasses (1) the facilitating of market transactions by offering enabling (facilitative) law (as legal standard solutions) and helping private parties to enforce contracts within the domain of freedom of contract, and (2) the regulation of market transactions for solving or mitigating market failures problems and achieving other policy objectives. A comparable consistent legal system is missing on the international level for ensuring the working of global markets and the governance of cross-border transactions. However, the dynamic process of globalization has brought about the development of a number of new institutional solutions for solving these problems. The most prominent issue is the regulation of international markets ("global governance"). This article, however, will focus on the evolution of institutions for the enforcement of contracts for cross-border transactions between firms. Although there have always been institutional solutions for the governance of cross-border contracts (*lex mercatoria*), in recent years, a number of new governance solutions for the enforcement of cross-border transactions have emerged ("transnational commercial law").[1] The increasing use of

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[1] Gralf-Peter Calliess, Thomas Dietz, Wioletta Konradi, Holger Nieswandt, and Fabian Sosa, *Transformations of Commercial Law*, in TRANSFORMING THE GOLDEN AGE NATION STATE, 83 (Achim Hurrelmann, Stephan Leibfried, Kerstin Martens, and Peter Mayer eds., 2007); Gralf-Peter Calliess, Jörg Freiling, and see article by Moritz Renner, *Law, the State, and Private Ordering: Evolutionary Explanations of Institutional Change* in Vol. 9 No. 04 GERMAN LAW JOURNAL (2008); with a greater focus on the EU see also Fabrizio Cafaggi, *Rethinking Private Regulation in the European Regulatory Space*, in REFRAMING SELF-REGULATION IN EUROPEAN PRIVATE LAW, 3 (Fabrizio Cafaggi ed., 2006).

choice of law, private governance instead of private law (provided by states), and private arbitration instead of public courts are the most important characteristics of this development. This also includes hybrids as new combinations between private and public solutions for the governance of cross-border contracts. Therefore, the process of globalization is accompanied and enabled by a complex process of institutional evolution.

The aim of this article is to demonstrate how evolutionary economics might contribute to the explanation of this institutional evolution on the international and global level. Although New Institutional Economics (NIE) has developed a number of helpful theories for explaining institutions as devices for reducing transaction costs or limiting agency problems, it has not been very successful in explaining the evolution of institutions. The main reason is that NIE is primarily based upon static neoclassical equilibrium models that do not allow the analysis of dynamic, evolutionary processes of economic, technological, and institutional change. Evolutionary economics, based upon ideas of Schumpeter and Hayek, and closely linked with modern innovation economics, might be able to provide a better approach for explaining institutional change. From this perspective institutional evolution can be analyzed as the result of innovation and imitation of institutions, of their variation and selection, and as the result of path dependencies.

The analysis of how evolutionary economics can be used for explaining the evolution of the governance of cross-border transactions will be carried out within the following theoretical frameworks:

(1) There are both private and public governance solutions for negotiating and enforcing contracts for transactions, which partly can substitute each other but which also can be complements (hybrids). Therefore, the evolution of governance solutions for the enforcement of cross-border transactions can be seen as the result of an evolution along this dimension of private and/or public governance.

(2) The process of globalization has led to a very complex multi-level legal structure, in which a large number of jurisdictions offer legal services as, e.g., facilitative legal rules, court services and enforcement assistance. Due to choice of law for cross-border transactions, private parties can choose between different public governance solutions. We will see that the ensuing processes of horizontal and vertical competition between legal rules and public courts can be a powerful driving force for the evolution of governance solutions.

The paper is structured as follows. Section 2 presents a general introduction into evolutionary economics. Particular emphasis is given to the evolutionary concept of competition as innovation-imitation process as well as to an overview about approaches for explaining institutional change from the perspective of evolutionary economics. The main section (section 3) will demonstrate that both the evolution of public/private governance solutions as well as horizontal and vertical processes of regulatory competition within a multi-level legal system can contribute to the explanation of the evolution of "transnational commercial law". The final section (section 4) will conclude that the transnational governance solutions are the outcome of complex and interrelated evolutionary competition processes between private and public solutions on one hand and between public solutions of different jurisdictions on the other hand. However, in this brief article, only a crude sketch of how these evolutionary economics approaches can be used for explaining this institutional evolution can be given.

B. Evolutionary Economics and Institutional Change

I. Evolutionary Economics

Evolutionary economics encompasses a broad array of different approaches which emphasize the dynamic character of economic processes. Beyond all their differences, they share the conviction that mainstream neoclassical economics with its basic tenets of optimization and static equilibrium models is not capable to grasp properly the dynamic dimension of economic development, especially innovations and technological progress as the main determinant for long-term economic growth.[2] Therefore it is not surprising that the broad interdisciplinary field of innovation research is closely connected with evolutionary economics. From the perspective of the history of economic thought, particularly Schumpeter and Hayek can be seen as the most influential figures who contributed to the basic tenets of evolutionary economics. In his seminal book "Theory of Economic Development" Schumpeter introduced the theoretical concepts entrepreneur, innovation, and

[2] For broad overviews see Giovanni Dosi, *Sources, Procedures, and Microeconomic Effects of Innovation*, 26 JOURNAL OF ECONOMIC LITERATURE 1120 (1988); GEOFFREY M. HODGSON, ECONOMICS AND EVOLUTION. BRINGING LIFE BACK INTO ECONOMICS (1993); Richard Nelson, *Recent Theorizing about Economic Change*, 33 JOURNAL OF ECONOMIC LITERATURE 48 (1995); PAOLO P. SAVIOTTI, TECHNOLOGICAL EVOLUTION, VARIETY AND THE ECONOMY (1996); STAN J. METCALFE, EVOLUTIONARY ECONOMICS AND CREATIVE DESTRUCTION (1998); Richard Nelson and Sidney G. Winter, *Evolutionary Theorizing in Economics*, 16 JOURNAL OF ECONOMIC PERSPECTIVES 23 (2002); CARSTEN HERRMANN-PILLATH, GRUNDRIß DER EVOLUTIONSÖKONOMIK (2002); ULRICH WITT, THE EVOLVING ECONOMY: ESSAYS ON THE EVOLUTIONARY APPROACH TO ECONOMICS (2003); THE EVOLUTIONARY FOUNDATIONS OF ECONOMICS (Kurt Dopfer ed., 2005).

economic development into economic theory. He claimed that economic development cannot be explained by general equilibrium theory but needs a fundamentally different theoretical approach.[3] Building upon Schumpeter's basic ideas, dynamic (and evolutionary) concepts of competition as an innovation-imitation process have been developed.[4] This is also true for modern innovation economics. Nelson and Winter with their evolutionary simulation models for technological progress and economic growth have integrated the biological notion of evolution as processes of variation, selection, and retention into this Schumpeterian tradition of innovation economics.[5] Another important strand of evolutionary thought in economics is Hayek with his idea of cultural evolution as a process of variation and selection of behavioral rules and his concept of competition as a discovery procedure, which views market competition as a trial and error process.[6] Other approaches of evolutionary economics encompass, for example, "old institutionalists" (Veblen), evolutionary game theory, and new biological approaches to evolutionary economics.[7]

What are important tenets of evolutionary economics?

(1) The dynamic advantages through innovation and technological progress are viewed more much more important for the long-term increase of wealth than solving the problem of static inefficiencies as in neoclassical welfare economics. Therefore evolutionary economists emphasize the eminent importance of dynamic efficiency (innovations) in comparison to static efficiency (efficient allocation).

(2) Evolutionary economics is very critical to the model of purely rational human actors (*homo oeconomicus*) and prefers the taking into account of additional dimensions as, e.g., bounded rationality, subjectivism, learning and cognitive processes (mental models and creativity), and the insights of behavioral economics.

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[3] JOSEPH A. SCHUMPETER, THEORY OF ECONOMIC DEVELOPMENT, 2.ed. (1934) (1.ed., 1911).

[4] JOHN M. CLARK, COMPETITION AS A DYNAMIC PROCESS (1961); ERNST HEUSS, ALLGEMEINE MARKTTHEORIE (1965); DYNAMIC COMPETITION AND PUBLIC POLICY: TECHNOLOGY, INNOVATION, AND ANTITRUST ISSUES (Jerry Ellig ed., 2002).

[5] RICHARD NELSON AND SIDNEY G. WINTER, AN EVOLUTIONARY THEORY OF ECONOMIC CHANGE (1982).

[6] Friedrich A. von Hayek, *Notes on the Evolution of Systems of Rules of Conduct*, in NEW STUDIES IN PHILOSOPHY, POLITICS, ECONOMICS, AND THE HISTORY OF IDEAS, 66 (Friedrich A. von Hayek, ed.,1978); FRIEDRICH A. VON HAYEK, LAW, LEGISLATION AND LIBERTY, VOL.1: RULES AND ORDER (1973).

[7] HODGSON , *supra* note 2; See article by Bart du Laing, *Dual Inheritance Theory, Contract Law, and Institutional Change –Towards the Co-evolution of Behaviour and Institutions*, in Vol. 9 No. 04 GERMAN LAW JOURNAL (2008).

(3) Evolutionary economists are skeptics. They do not believe that the best solutions are already known. In particular, Hayek asserted vehemently that both the economic agents and policy makers suffer from severe knowledge problems. How to deal with these knowledge problems is one of the crucial questions from an evolutionary economics perspective. This is linked to the notion of structural uncertainty and the ontological openness of the future, caused by the non-predictability of innovations and of economic and social change.

(4) Therefore, the generation and diffusion of innovations as new solutions for old and new problems is crucial (innovative problem-solving behavior). Market competition, understood as a process of parallel experimentation and mutual learning, is seen as a device for searching for innovations and dealing with these knowledge problems.

(5) An important method for analyzing evolutionary economic processes is the use of the variation-selection framework, which views developments as processes of (random) variation and (systematic) selection of products (or technologies, institutions etc.). From that perspective, the (often observed) heterogeneity of firms is a productive resource and need not indicate market failure (as in neoclassical economics).

(6) History matters. Evolutionary economists have always emphasized the path-dependence of economic development. Dynamic economies of scale, network effects, technological paradigms and mental models can cause path dependencies - with potentially serious "lock in"-effects of inefficient technologies or institutions.

Since in this paper regulatory competition will be considered as one of the major drivers for institutional change, the evolutionary dimension of competition should be elaborated more clearly.[8] In contrast to neoclassical microeconomics and the model of perfect competition, in which the best products and technologies are usually assumed as known by the firms, the evolutionary concept of competition starts from Hayek's assumption that the firms do not have perfect knowledge about the preferences of the consumers and how to fulfill them best. Rather, this knowledge about superior products and production technologies is generated

[8] See in much more detail Friedrich A. von Hayek, *Competition as a Discovery Procedure*, in NEW STUDIES IN PHILOSOPHY, POLITICS, ECONOMICS, AND THE HISTORY OF IDEAS, 179 (Friedrich A. von Hayek, ed.,1978); Wolfgang Kerber, *Wettbewerb als Hypothesentest: Eine evolutorische Konzeption wissenschaffenden Wettbewerbs*, in DIMENSIONEN DES WETTBEWERBS: SEINE ROLLE IN DER ENTSTEHUNG UND AUSGESTALTUNG VON WIRTSCHAFTSORDNUNGEN, 29 (Karl von Delhaes and Ulrich Fehl eds., 1997); Wolfgang Kerber and Nicole Saam, *Competition as a Test of Hypotheses: Simulation of Knowledge-generating Market Processes*, 4 JOURNAL OF ARTIFICIAL SOCIETIES AND SOCIAL SIMULATION (JASSS), No.3 (2001); available at <http://www.soc.surrey.ac.uk/JASSS/4/3/2.html>, last accessed 27 March, 2008.

through the competition process. Therefore, competition is viewed as a trial and error process, in which firms create and test hypotheses about superior products (or services) and cheaper ways to produce them. These hypotheses can be seen as fallible hypotheses in the Popperian sense, which are tested in the market. The positive or negative feedback from the market (through profits and losses) reveals which of the hypotheses of the firms are superior to others. This allows for a learning process, which also includes the imitation of the superior hypotheses by other competing firms. This can be seen as a process of parallel experimentation with mutual learning. From that evolutionary perspective competition of firms in markets can also be analyzed as a variation and selection process. The innovation of new products can be interpreted as variation, whereas the market test represents the systematic selection process, which ensures that only those products survive in the market that correspond best to the preferences of the consumers. Consequently, competition on markets can be viewed as a process of variation and selection of products and production technologies, which lead to a gradual process of knowledge accumulation. From that perspective, the diversity of tested products and technologies is crucial for the knowledge-generating effect of competition.[9] This concept of competition as a test of hypotheses is based upon Hayek's idea of competition as a discovery procedure but is also compatible with the Schumpeterian concept of competition as a dynamic process of innovation and imitation as well as the general evolutionary approach of Popper about "growth of knowledge".[10] Such an evolutionary concept of market competition can also be applied to competition among institutions or regulatory competition.[11]

II. Evolutionary Theories of Institutional Change: an Overview

Since the main focus of evolutionary economics has been on the explanation of the process of the innovation and diffusion of new products and technologies, the issue of institutional change has been discussed mainly only in recent years. However, this must be qualified in several respects. One of the most stimulating evolutionary approaches was Hayek's theory of cultural evolution. His basic idea is that the rules of behavior that are used in a society are the outcome of a very long process of variation and selection of rules, in which the superior rules survive and less

[9] For a thorough recent analysis of the potential positive effects of (maintaining) diversity in market competition see GISELA LINGE, COMPETITION POLICY, INNOVATION, AND DIVERSITY (2008).

[10] KARL R. POPPER, OBJECTIVE KNOWLEDGE – AN EVOLUTIONARY APPROACH (1972); DAVID A. HARPER, ENTREPRENEURSHIP AND THE MARKET PROCESS: AN ENQUIRY INTO THE GROWTH OF KNOWLEDGE (1996).

[11] For a direct comparison of market competition and institutional (or regulatory) competition from an evolutionary economics perspective, see Viktor Vanberg and Wolfgang Kerber, *Institutional Competition Among Jurisdictions: An Evolutionary Approach*, 5 CONSTITUTIONAL POLITICAL ECONOMY 193 (1994).

suitable rules are sifted out. Since these rules are learnt by each new generation, this notion implies that these rules encompass knowledge about the solution of problems, which we often do not know explicitly. From a Hayekian perspective this process of cultural evolution can be seen as a spontaneous order which emerge from human actions, but which is not the result of human design (closely linked to "invisible hand" explanations).[12] The details of Hayek's theory of cultural evolution have been criticized to a large degree, but the basic idea that rules of behaviour are the outcome of an unintended process of variation and selection has been very influential and is compatible with the basic tenets of evolutionary economics. The second qualification refers to the insight that some approaches to institutional and legal change have used an implicit evolutionary approach, e.g. Posner's theory of the efficient common law process. Thirdly, a number of theoretical arguments that have been developed for explaining technological change can also be applied to institutional change, i.e. they can be used for analyzing processes of innovation and imitation in the legal realm. The next paragraphs will give a very brief overview about approaches to institutional change from an evolutionary economics perspective.[13]

Legal change is driven both by legislation and by the jurisprudence of courts. Especially the legal evolution that emerges through the ongoing decisions of courts has been the focus of ex- or implicit evolutionary approaches. Hayek had previously posited that judge-made law as the result of an evolutionary process of trial and error.[14] When new situations turn up, judges try out new legal solutions (legal innovations). Since they are not able to predict all the consequences of these new legal rules, a kind of experimental process ensues. Such an approach can also be found much more elaborated in the Law and Economics literature about the evolution of common law, which seems to be driven much more by jurisprudence than by legislation. The evolution of the common law is explained as the result of an ongoing sequence of cases that are decided by courts and which also include precedents and step-by-step refinements of the law. An implicit evolutionary process emerges through the kind of cases that are brought by the litigants, through the legal innovations of the judges (including unintended mistakes), and the hierarchical judicial system, which works as a selection device. Posner's hypothesis

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[12] HAYEK, *supra* note 6; Friedrich A. von Hayek, *The Results of Human Action but not of Human Design*, in STUDIES IN PHILOSOPHY, POLITICS, AND ECONOMICS, 95 (Friedrich A. von Hayek ed., 1967).

[13] For a much more detailed overview see Martina Eckardt, *Explaining Legal Change from an Evolutionary Economics Perspective*, in Vol. 9 No. 04 GERMAN LAW JOURNAL (2008); MARTINA ECKARDT, TECHNISCHER RECHTSWANDEL UND RECHTSEVOLUTION. EIN BEITRAG ZUR ÖKONOMISCHEN THEORIE DES RECHTSENTWICKLUNG AM BEISPIEL DES DEUTSCHEN UNFALLSCHADENSRECHTS IM 19. JAHRHUNDERT (2001).

[14] HAYEK, *supra* note 6.

that this process leads to an ever larger proportion of efficient legal rules, because primarily the inefficient ones are challenged by litigants (efficient common law process thesis), has been criticized convincingly, e.g., because litigants will not only attack legal rules due to their inefficiency but also because of distributional effects.[15] However, the basic approach to interpret the evolution of judge-made law as an ongoing process of trial and error or variation and selection of legal rules offers promising perspectives for an economic analysis of legal change by scrutinizing the specific mechanisms of the judicial system in regard to their impact on the innovation, diffusion, and selection of legal solutions.

Although there are more economic theories about political decision-making (as it is relevant for legislation and therefore for statutory legal change) than about judge-made legal change, evolutionary approaches have played only a much smaller role in the theories of political economy (public choice). Through the rigorous analysis of rent seeking activities of interest groups on political decision-making, the (re)distributional dimension of legislation has been an important issue. Despite the arguments of Hayek about the "pretence of knowledge" of policy makers, public choice theory has not sufficiently taken into account the severe knowledge problems of legislators or the theoretical implications of Schumpeterian political entrepreneurs.[16] However, several recent approaches can be mentioned which try to take into account some aspects of evolutionary thinking. The later writings of North are especially important in this respect.[17] Although initially firmly rooted in Public Choice and New Institutional Economics, he acknowledges the importance of bounded rationality, subjective theories and beliefs, ideologies and mental models for explaining institutional change and therefore opens up the perspective for an evolutionary approach, based also on cognitive science. An elaborated cognitive-evolutionary approach to policy-making was presented by Meier and Slembeck.[18]

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[15] George L. Priest, *The Common Law Process and the Selection of Efficient Rules*, 6 JOURNAL OF LEGAL STUDIES 65 (1977); Robert D. Cooter and Lewis Kornhauser, *Can Litigation Improve the Law Without the Help of the Judges?* 9 JOURNAL OF LEGAL STUDIES 129 (1980); Louis De Alessi and Robert J. Staaf, *The Common Law Process: Efficiency or Order?*, 2 CONSTITUTIONAL POLITICAL ECONOMY 107 (1991); RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW, 5.ed. (1998); Robert D. COOTER AND THOMAS ULEN, LAW AND ECONOMICS, 5.ed. (2007).

[16] See, for example, the textbook of DENNIS C. MUELLER, PUBLIC CHOICE III, 3.ed. (2003); for an overview about evolutionary approaches to public choice see Michael Wohlgemuth, *Evolutionary Approaches to Politics*, 55 KYKLOS 223 (2002).

[17] DOUGLASS C. NORTH, INSTITUTIONS, INSTITUTIONAL CHANGE AND ECONOMIC PERFORMANCE (1990); Arthur T. Denzau and Douglass C. North, *Shared Mental Models: Ideologies and Institutions*, 47 KYKLOS 3 (1994).

They depict a multi-level variation-selection approach to statutory legal change, in which problems of perception and knowledge, creative cognition and legal innovations, opinion formation and selection mechanisms are taken into account.

Both Hayek and North have emphasized path dependency as a very important aspect of institutional and legal evolution. Path dependence means that the future development of the law is dependent on the previous states of the law. This historical dimension of evolution has always been stressed by evolutionary economics. In evolutionary innovation economics, a number of theoretically well-founded arguments about reasons for path dependencies in regard to technological developments have been developed. Path dependencies can lead to "lock in" problems, i.e. that an industry might get stuck with an inefficient technology, because path dependence effects impede the ousting of this old technology through a superior new one. A well-known example is the (in the meantime) inefficient QWERTY keyboard on computers, which has not been replaced by a more efficient one because tens of millions of people have acquired the complementary capability of typewriting with this old keyboard. The switching costs would be too high. Important causes for path dependence effects are dynamic economies of scale, sunk costs, complementary (human) capital, network effects, but also uncertainty and mental models.[19] All of these economic arguments can also be applied to legal evolution.[20] For example, the well-known fact that the quality of a law increases with the number of decisions by courts which clarify the precise content of the law can be interpreted as the consequence of dynamic economies of scale from an economic perspective. This can lead to the typical path dependency problem that an older law with already much case law is superior to a potentially more efficient new law which still lacks sufficient jurisprudence.[21] A particularly important cause

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[18] Alfred Meier and Susanne Haury, *A Cognitive-Evolutionary Theory of Economic Policy*, in THE EVOLUTION OF ECONOMIC SYSTEMS. ESSAYS IN HONOUR OF OTA SIK , 77 (Kurt Dopfer and Karl-F. Raible eds., 1990); Tilman Slembeck, *The Formation of Economic Policy: A Cognitive-Evolutionary Approach to Policy-Making*, 8 CONSTITUTIONAL POLITICAL ECONOMY 225 (1997).

[19] Brian Arthur, *Self-Reinforcing Mechanisms in Economics*, in THE ECONOMY AS AN EVOLVING COMPLEX SYSTEM , 9 (Philip W. Anderson, Kenneth Arrow and David Pines eds., 1988); Paul David, *Clio and the Economics of QWERTY*, 75 AMERICAN ECONOMIC REVIEW 332 (1985); DOSI , *supra* note 2.

[20] NORTH , *supra* note 17; Oona A. Hathaway, *Path Dependence in the Law: The Course and Pattern of Legal Change in a Common Law System*, 86 IOWA LAW REVIEW 601 (2001); MARTINA ECKARDT, TECHNISCHER RECHTSWANDEL UND RECHTSEVOLUTION. EIN BEITRAG ZUR ÖKONOMISCHEN THEORIE DER RECHTSENTWICKLUNG AM BEISPIEL DES DEUTSCHEN UNFALLSCHADENSRECHTS IM 19. JAHRHUNDERT (2001); Wolfgang Kerber and Klaus Heine, *Institutional Evolution, Regulatory Competition and Path Dependence*, in EVOLUTIONARY ANALYSIS OF ECONOMIC POLICY, 191 (Pavel Pelikan and Gerhard Wegner eds., 2003).

[21] Marcel Kahan and Michael Klausner, *Path Dependence in Corporate Contracting: Increasing Returns, Herd Behavior and Cognitive Biases*, 74 WASHINGTON LAW QUARTERLY 347 (1996).

for path dependencies in legal evolution can be complementarities between legal rules, i.e. that the effectiveness of particular legal rules depend on the context of other legal rules.[22] It is also possible to apply the concept of "technological paradigms" and "technological trajectories", which was developed in innovations economics by Dosi using Thomas Kuhn's concept of "scientific paradigms",[23] to legal evolution (legal paradigms and legal trajectories) for explaining different legal developments in legal systems as the consequence of path dependencies.[24] North particularly emphasized (based upon historical examples) that path dependencies can lead to the danger that societies can get stuck permanently with inefficient institutional structures leading to economic decline instead of economic growth.[25]

The recent discussion on globalization with its emphasis on the importance of competition among states (interjurisdictional competition) for attracting production factors and regulatory competition has also led to a new approach for explaining institutional change. If skilled labor, capital, and firms are mobile between jurisdictions, then the jurisdictions have incentives to improve their institutions for increasing their attractiveness as a location for these mobile production factors. The services of a legal order might then be one part of the bundle of taxes and public services that jurisdictions offer on such a market for locations. From that perspective, the innovation and diffusion of new legal rules or other services of a legal order (quality and rapidity of court decisions and enforcement measures) might be explained as a consequence of evolutionary competition between jurisdictions. In contrast to the other above-mentioned approaches here legal evolution is driven more by competition with other jurisdictions instead of being determined by intrajurisdictional developments. The discussion about interjurisdictional competition is closely linked to the question of the advantages of centralization and decentralization, because interjurisdictional or regulatory competition can only flourish in fairly decentralised systems.[26] Due to the potential

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[22] KERBER AND HEINE, *supra* note 20, 211.

[23] Giovanni Dosi, *Technological Paradigms and Technological Trajectories: A Suggested Reinterpretation of the Determinants and Directions of Technical Change*, 11 RESEARCH POLICY 147 (1982).

[24] KERBER AND HEINE, *supra* note 20, 200 - 213.

[25] NORTH, *supra* note 17.

[26] Charles M. Tiebout, *A Pure Theory of Local Expenditures*, 64 JOURNAL OF POLITICAL ECONOMY 416 (1956); VANBERG AND KERBER , *supra* note 11; Jeanne-Mey Sun and Jacques Pelkmans, *Regulatory Competition in the Single Market*, 33 JOURNAL OF COMMON MARKET STUDIES 67 (1995); William W. Bratton and Joseph A. McCahery, *The New Economics of Jurisdictional Competition: Devolutionary Federalism in a Second-Best World*, 86 THE GEORGETOWN LAW JOURNAL 201 (1997); Wallace E. Oates, *An Essay on Fiscal Federalism*, 37 JOURNAL OF ECONOMIC LITERATURE 1120 (1999); Anthony Ogus, *Competition between National Legal Systems: A Contribution of Economic Analysis to Comparative Law*, 48 INTERNATIONAL AND COMPARATIVE LAW QUARTERLY 405 (1999); Roger J. Van den Bergh, *Towards an Institutional Legal Framework for*

advantages of competition as a process of parallel experimentation, a number of scholars have emphasized the advantages of decentralized systems and competitive federalism for the innovation and diffusion of superior legal rules and institutions.[27] However, the thesis about a "race to the top" through regulatory competition is hotly disputed by other scholars who demonstrate convincingly that also "race to the bottom" processes might be possible.[28] Although this discussion about the advantages and problems of regulatory competition is mainly driven by policy questions, the arguments can also be used for the explanation of legal evolution. This regulatory competition approach will be used primarily in the following sections for the explanation of the emergence and evolution of transnational commercial law.

Regulatory Competition in Europe, 53 KYKLOS 435 (2000); REGULATORY COMPETITION AND ECONOMIC INTEGRATION. COMPARATIVE PERSPECTIVES (DANIEL C. Esty and Damien Gerardin eds., (2001); FROM ECONOMIC TO LEGAL COMPETITION. NEW PERSPECTIVES ON LAW AND INSTITUTIONS IN EUROPE (Alain Marciano and Jean M. Josselin eds., 2003); Wolfgang Kerber, *European System of Private Laws: An Economic Perspective*, in THE MAKING OF EUROPEAN PRIVATE LAW (Fabrizio Cafaggi and Horatia Muir Watt eds., forthcoming 2008).

[27] See, for example, Peter Behrens, *Voraussetzungen und Grenzen der Rechtsfortbildung durch Rechtsvereinheitlichung*, 50 RABELS ZEITSCHRIFT 35 (1986); Frank H. Easterbrook, *Federalism and European Business Law*, 14 INTERNATIONAL REVIEW OF LAW AND ECONOMICS 125 (1994); Roger Van den Bergh, *Subsidiarity as an Economic Demarcation Principle and the Emergence of European Private Law*, 5 MAASTRICHT JOURNAL OF EUROPEAN AND COMPARATIVE LAW 129 (1998); particularly from an evolutionary economics perspective see Wolfgang Kerber, *Applying Evolutionary Economics to Economic Policy: the Example of Competitive Federalism*, in ECONOMICS, EVOLUTION AND THE STATE: THE GOVERNANCE OF COMPLEXITY, 296 (Kurt Dopfer ed., 2005).

[28] For this discussion see Wallace E. Oates and Robert M. Schwab, *Economic Competition among Jurisdictions: Efficiency Enhancing or Distortion Inducing?*, 35 JOURNAL OF PUBLIC ECONOMICS 333 (1988); Heinz Hauser and Madeleine Hösli, *Harmonization or Regulatory Competition in the EC (and the EEA)?*, 46 AUSSENWIRTSCHAFT 497 (1991); Richard L. Revesz, *Rehabilitating Interstate Competition: Rethinking the 'Race to the Bottom' Rationale for Federal Environmental Regulation*, NEW YORK UNIVERSITY LAW REVIEW 1210 (1992); SUN AND PELKMANS , *supra* note 26; DAVID VOGEL, TRADING UP: CONSUMER AND ENVIRONMENTAL REGULATION IN THE GLOBAL ECONOMY (1995); BRATTON AND MCCAHERY , *supra* note 26; Hans-Werner Sinn, *The Selection Principle and Market Failure in Systems Competition*, 88 JOURNAL OF PUBLIC ECONOMICS 247 (1997); Francisco Garcimartín, *Regulatory Competition: A Private International Law Approach*, 8 EUROPEAN JOURNAL OF LAW AND ECONOMICS 251 (1999); Joel P. Trachtman, *Regulatory Competition and Regulatory Jurisdiction*, 3 JOURNAL OF INTERNATIONAL ECONOMIC LAW 331 (2000); VAN DEN BERGH , *supra* note 26; ESTY AND GERARDIN , *supra* note 26; EVA MARIA KIENINGER, WETTBEWERB DER PRIVATRECHTSORDNUNGEN IM EUROPÄISCHEN BINNENMARKT (2002); Klaus Heine and Wolfgang Kerber, *European Corporate Laws, Regulatory Competition and Path Dependence*, 13 EUROPEAN JOURNAL OF LAW AND ECONOMICS 43 (2002); MARCIANO AND JOSSELIN , *supra* note 26; KERBER , *supra* note 26.

C. Explaining the Evolution of Transnational Commercial Law in Multi-Level Legal Systems

I. Research Questions from an Evolutionary Economics Perspective

The most important developments about the governance of cross-border transactions can be summarized as follows:[29] The globalization process has led to the development of international and often global markets with the implication of a huge expansion of cross-border transactions with an increasing demand for effective governance of these contracts. So far, the nation states have not succeeded (or even seriously attempted) in establishing a legal order for cross-border transactions that will lead to similar legal certainty as for domestic transactions. The soaring demand for governance of cross-border contracts has been increasingly satisfied by a number of new modes of private governance (e.g., private arbitration). In addition, there are often new combinations of private governance modes with public solutions of the nation states. These "recombinant governance" modes refer both to the combination of private and public governance solutions as well as to the combination with public solutions from different jurisdictions (through choice of law). In any case, the relevance of the public governance solutions of the nation states is considerably reduced in comparison to domestic transactions. Therefore, the evolution of this "transnational commercial law" is also characterized by the generation and diffusion of new forms of governance (legal innovations).

What research questions can be asked about this development from an evolutionary economics perspective?

(1) Why do we have this development to more cross-border transactions? This is the question for the causes of the globalization process itself, which we will not pursue in this article. From an evolutionary economics perspective, this is, on one hand, the consequence of decreasing costs for transportation and communication caused by technological progress in the course of normal economic development. Harder to explain (not only for evolutionary economics) is the second cause for globalization, i.e. the tremendous policy shifts to liberalization and deregulation in many countries all over the world since the 1990s.

(2) In this article, we will focus on the research question of how evolutionary economics might be applied to explain the emergence and diffusion of these new modes of governance for alleviating cross-border transactions. As a first step, the

[29] See Calliess et al. (2007), *supra* note 1.

evolution of the relation between private and public solutions for the governance of contracts generally will be discussed. (section II). Secondly, the complexity of horizontal and vertical processes of regulatory competition in a multi-level legal system from an evolutionary economics perspective will be analyzed. (section III and IV). The thesis is that the evolution of these new governance modes are the overall result of a number of complex evolutionary processes of regulatory competition, innovation of private governance modes and choice of law rules.

(3) Evolutionary economics can also contribute to policy questions[30] about the best way to improve legal certainty for cross-border transactions. Should the nation states try to close the gap by establishing a global harmonized contract law? Or should they strengthen their efforts for enacting international rules for a mutual recognition of the decisions of public courts in order to ensure a better enforcement for cross-border contracts? Since regulatory issues are also important in that respect, this research question aims at addressing the general problem how a global institutional framework for such a multi-level legal system should look. This includes both the question of the extent of convergence and harmonization as well as of the appropriate conflict and choice of laws rules. This research question cannot be dealt with here. However, in section IV, some policy conclusions to ensure the long-term possibility of innovation and learning processes for improving public and private governance mechanisms are offered.

II. Private vs. Public Solutions for Governance: Evolution between Competition and Cooperation

Within nation states, the legal order provides legal services for helping private parties in the governance of their transactions. These public governance solutions encompass the provision of standard contracts (as default solutions which save bargaining costs for the private parties within their freedom of contract) as well as the support for enforcing contracts. The latter entails both the services of public civil courts for settling disputes and the help of the state to enforce claims and court decisions. From an economic perspective, these public governance solutions for facilitating transactions have the task of reducing transaction costs (facilitative or enabling law). The quality of these public governance solutions can be very different, leading to different levels of transaction costs by using domestic contract law and civil courts. Most of the services of these public governance solutions can also be provided by private agencies. Transaction cost-saving legal standard solutions for certain types of contracts can also be written and offered by private

[30] For a discussion about the specific problems for policy recommendations from an evolutionary economics perspective see Gerhard Wegner, *Economic Policy from an Evolutionary Perspective*, 153 JOURNAL OF INSTITUTIONAL AND THEORETICAL ECONOMICS, 485 (1997).

law firms. The settling of disputes about the precise content of a contract or the correct performance of the parties can also be carried out by private arbitrators, to whom the parties agree *ex ante.* More difficult is the ultimate enforcement of claims of the contract or of arbitration. However, economic theory has demonstrated that there are a number of possibilities for self-enforcing contracts, i.e. that the parties have an incentive for performing, even in the absence of powerful enforcement agencies. Well-known examples are long-term relationships with repeated transactions (repeated games), reputation mechanisms or the exchange of "hostages". All of these solutions can be called private governance solutions for enforcing transactions.[31] Currently, within a national legal order, these public and private governance solutions act as substitutes due to a certain degree of "functional equivalence"[32]. Private parties will choose between these private and public governance solutions according to their relative transaction costs. However, private and public solutions need not always be substitutes but can also complement each other, e.g., if parties agree on private arbitration for their contracts but rely on the public enforcement of the decisions of the private arbitrator. Those hybrid solutions may require the public provision of interfaces between private and public solutions, as, e.g., the recognition of the decision of a private arbitrator by the public legal order.

Also within a national legal order the relation between these private and public governance solutions will evolve. Since the firms as users of these governance solutions compete with each other, they have large incentives in searching for new and better solutions that reduce their transaction costs or allow for more sophisticated transactions that increase the gains from their cooperation. From an evolutionary economics perspective, it can be expected that the firms will search for and experiment with new private governance solutions. If these experiments are successful, then their competitors (and also firms in other markets) will imitate them, leading to a competition-driven diffusion of these new private governance solutions. Lawyers, as specialists in "legal engineering", will help them or even be

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[31] For the many forms of private governance see OLIVER E. WILLIAMSON, THE ECONOMIC INSTITUTIONS OF CAPITALISM: FIRMS, MARKETS, RELATIONAL CONTRACTING (1985); ROBERT C. ELLICKSON, ORDER WITHOUT LAW: HOW NEIGHBOURS SETTLE DISPUTES (1991); Gillian K. Hadfield, *Privatizing Commercial Law*, 24 REGULATION 40 (2001); AVINASH K. DIXIT, LAWLESSNESS AND ECONOMICS: ALTERNATIVES MODES OF GOVERNANCE (2004); FURUBOTN, ERIK AND RUDOLF RICHTER, INSTITUTIONS AND ECONOMIC THEORY: THE CONTRIBUTION OF THE NEW INSTITUTIONAL ECONOMICS, 2.ed. (2005); THRÁINN EGGERTSSON, IMPERFECT INSTITUTIONS: POSSIBILITIES AND LIMITS OF REFORM (2005); Oliver E. Williamson, *The Economics of Governance*, 95 AMERICAN ECONOMIC REVIEW 1 (2005); AVNER GREIF, INSTITUTIONS AND THE PATH TO THE MODERN ECONOMY: LESSONS FROM MEDIEVAL TRADE (2006); Fabrizio Cafaggi, *Rethinking Private Regulation in the European Regulatory Space*, in REFRAMING SELF-REGULATION IN EUROPEAN PRIVATE LAW, 3 (Fabrizio Cafaggi ed., 2006).

[32] Calliess et al. (2007), *supra* note 1.

the entrepreneurs themselves by creating new governance solutions and offering them to the firms.[33] This evolutionary process of experimentation with new governance solutions encompasses also the search for new, sophisticated combinations of private and public governance solutions (new hybrids). Much more difficult is the question of whether there will be an evolution of public governance solutions. Most important is that the national legal order is traditionally a monopolistic institution funded by the taxpayer. Therefore, there are no comparable clear-cut incentives for improving the public governance solutions provided by the national legal order and the judicial system. This does not preclude a slow evolutionary process of step-by-step improvement, analyzed by evolutionary theories of judge-made law or political economy; but this process can also fail. A particularly large problem can be path dependencies in the evolution of the public governance solutions with the possibility of "lock in" situations. If the public governance solutions for facilitating domestic transactions are ineffective (as is the case within a number of countries), then a more or less capable system of private governance solutions will emerge in order to compensate for the failing of the legal order provided by the state. In general, we can expect that market competition will lead to the evolution of private governance solutions for transactions, which also encompass new combinations with presumably slowly evolving public governance solutions.

This evolution also depends on the extent of freedom of contract in comparison to mandatory regulations and on the number and quality of interfaces between private and public governance solutions. Both are very important for the extent of competition and cooperation between private and public governance. If we take into account the possibility of cross-border transactions on international markets, then two considerations are important. First, due to the lack of effective public governance solutions on international markets, private governance has to fulfill a much larger role than within a nation state. In addition to that, through international mobility and choice of law, the "legal engineers", who try to improve private governance, can now also use the public governance solutions of different countries for their search of optimal combinations in order to reduce transaction costs. This, secondly, can lead to regulatory competition between the public governance solutions and can change the conditions for their evolution considerably. Therefore, the problem of competition and cooperation between private and public governance solutions is closely intertwined with the horizontal

[33] Therefore the Schumpeterian entrepreneur can also be applied to legal innovations; see, for example, Doreen McBarnet, *Legal Creativity: Law, Capital and Legal Avoidance*, in LAWYERS IN A POSTMODERN WORLD: TRANSLATION AND TRANSGRESSION, 73 (Maureen Cain and Christine Harrington eds., 1994); Peter Gardner, *A Role of the Business Attorney in the Twenty-First Century: Adding Value to the Client's Enterprise in the Knowledge Economy*, 7 MARQUETTE INTELLECTUAL PROPERTY LAW REVIEW 17 (2003).

and vertical processes of regulatory competition, which are analyzed in the next two sections.

III. Institutional Evolution as Result of Horizontal Regulatory Competition between Legal Systems

Horizontal regulatory competition can take place on any level of a multi-level legal system. For example, the famous competition among corporate laws in the US is a competition between several US federal states for the incorporation of large firms.[34] In accordance with the literature, we will use the term regulatory competition very broadly. It can refer to all types of legal rules as well as to the services of the judicial system of the state (courts, enforcement agencies). In the following analysis, we need not focus on the much more difficult problem of competition of mandatory regulations but can limit ourselves to competition among facilitative law. We will see that some hotly disputed problems of regulatory competition are of minor importance, if the legal rules have no other regulatory aims than helping the private parties to reduce their transaction costs. The evolution of legal rules through regulatory competition can also work very differently due to different transmission mechanisms; this leads to different types of regulatory competition. In the next paragraph, we will see that, in terms of facilitative law, we can mostly limit ourselves to one type of regulatory competition, which emerges through choice of law. Another particular focus will be the evolutionary dimension of regulatory competition, i.e. the aspect of variation and selection of new public governance solutions (legal innovations).

The specific incentives and competitive pressures that ensue from regulatory competition depend very much on the extent of mobility of firms, capital, goods, or the legal rules and services themselves. Therefore different types of regulatory competition can be distinguished: [35]

- Indirect regulatory competition through yardstick competition: In this case, only mobility of information between different jurisdictions is necessary. In different jurisdictions different public governance solutions for transaction problems are used, which might have a different quality. Here no direct competition between the firms or the jurisdictions themselves are assumed, however, the governments,

[34] Roberta Romano, *Law as a Product: Some Pieces of the Incorporation Puzzle*, 1 JOURNAL OF LAW, ECONOMICS, AND ORGANIZATION 225 (1985).

[35] For this distinction see Wolfgang Kerber and Oliver Budzinski, *Towards a Differentiated Analysis of Competition of Competition Laws*, 1 JOURNAL OF COMPETITION LAW (ZWER) 411 (2003); KLAUS HEINE, REGULIERUNGSWETTBEWERB IM GESELLSCHAFTSRECHT. ZUR FUNKTIONSFÄHIGKEIT EINES WETTBEWERBS DER RECHTSORDNUNGEN IM EUROPÄISCHEN GESELLSCHAFTSRECHT (2003).

citizens, and/or academic scholars (e.g., comparative lawyers) can compare the performance of these different solutions, and the jurisdictions with inferior solutions can learn from those with better solutions by imitating them. The history of legal evolution provides many examples in which legal orders have learnt from other systems of law, either by directly copying them or by using their experience for the development of their own law. From an evolutionary perspective, this can be interpreted as a process of parallel experimentation and mutual learning, in which different legal orders make experiences with different new solutions (variation) and an ensuing process of selection through imitation of the best solutions ("yardstick"). However, here only intrajurisdictional incentives for the innovation and imitation of better public governance solutions are assumed, as, e.g., intrajurisdictional competition of political parties for the majority of votes.[36]

- Indirect regulatory competition through international trade: More outside pressures for improving facilitative law emerges if domestic firms compete with foreign firms on international markets. More efficient public governance solutions for transactions reduce the production costs of domestic firms and increase their international competitiveness. The decisive difference in comparison to the former type of regulatory competition is that the jurisdictions have considerably more incentives for improving their facilitative law, because the ensuing competitive advantages on export markets lead to an increase of domestic welfare.

- Direct regulatory competition through interjurisdictional competition: If we take additionally into account that firms and production factors (esp. capital) is mobile between jurisdictions, then the transmission mechanism of interjurisdictional (or locational) competition emerges. In contrast to the indirect competition between facilitative law in the last paragraph, here the users of public governance solutions have the possibility to choose directly between the legal systems through their interjurisdictional mobility. The quality of a public legal system is part of the bundle of public services and taxes, which are offered by a jurisdiction for attracting mobile firms and production factors. From that perspective, a superior quality of public governance solutions (e.g., high legal certainty and a well-educated judiciary) is an advantage in interjurisdictional competition. Therefore, jurisdictions have an incentive for improving their facilitative law and their judicial system. However, the quality of the public governance solutions is only a (perhaps

[36] In public choice theory the term "yardstick competition" is used for the specific intrajurisdictional mechanism that the voters, who decide on the re-election of their government, compare the performance of their government with the performance of the governments of other countries. See T. Besley and A. Case, *Incumbent Behavior, Tax-setting, and Yardstick Competition*, 85 AMERICAN ECONOMIC REVIEW 25 (1995); the basic idea can be found in Pierre Salmon, *Decentralisation as an Incentive Scheme*, 3 OXFORD REVIEW OF ECONOMIC POLICY 24 (1987).

small) part of the whole bundle of public services offered by jurisdictions; thus its relevance both for mobile firms and for governments who want to increase the attractiveness of their jurisdictions might be limited.

- Direct regulatory competition through free choice of law: This changes dramatically, if the firms have the right to choose between the facilitative law of different legal orders without having to migrate to another jurisdiction.[37] Free choice of law and free choice of forum might lead to a very intensive competition between public governance solutions, because the users have much lower switching costs and they can choose specific governance solutions from different legal orders. Since the right to choose between the facilitative law of different countries was always the dominant conflict of law rule for cross-border transactions, it is this type of regulatory competition which might be most relevant for contributing to the explanation of the evolution of governance solutions. Whereas the facilitative law of a legal order is under competition for cross-border transactions, this is not true for the much larger number of domestic transactions, where the private parties usually have no right to choose foreign law. Therefore, especially in large countries, where the proportion between cross-border and domestic transactions might be small, the facilitative law of the legal order might not be under much competitive pressure due to its monopolistic position in regard to domestic transactions. This has implications for the incentives of a legal order to react to the losing of market shares on the market for public governance solutions for cross-border transactions. This demonstrates the crucial importance of the extent of choice of law: if private parties would also have the possibility to choose foreign law for their purely domestic transactions, then it would also be possible that an inefficient facilitative law might disappear completely.

The results of the general discussion about the advantages and problems of regulatory competition (race to the top vs. race to the bottom) can be summarized as follows:[38] the initially strong contrast between those, who think that regulatory competition leads to an improvement of the law, and their opponents, who denounce regulatory competition as a process of deterioration, has been replaced by a much more differentiated view. Regulatory competition can have a number of advantages and problems and it depends on the specific legal rules, the type of regulatory competition as well as on the size of the positive and negative effects, whether regulatory competition is on balance beneficial or harmful. There is a

[37] For a brief economic analysis of choice of law in general, see Francesco Parisi and Larry E. Ribstein, *Choice of Law*, in THE NEW PALGRAVE DICTIONARY OF ECONOMICS AND THE LAW, Vol.1, 236 (Peter Newman ed., 1998).

[38] For overviews and contributions to this discussion, see the references in note 28.

broad consensus as to what the most important potential advantages and problems are. Important advantages of regulatory competition are a higher efficiency of legal rules in regard to the fulfillment of preferences (or solving the problems of the users of law), less rent-seeking through lobbyism of interest groups (through the exit options of those who do not benefit from the distributive effects of legal rules), and more innovation and adaptability of legal rules in regard to changing problems. Deemed as important problems are the danger of race to the bottom processes (because jurisdictions might lower their standards in order to attract more users of their law), the problem of circumventing regulations, higher information and transaction costs (through the existence of several facilitative laws instead of one), the possible lack of incentives for politicians to improve the legal rules, and the problem of combining the legal rules of different legal orders (legal transplant problem). Another more recent discussion refers less to the question of whether the law will improve or deteriorate through regulatory competition, but asks whether free choice of law might be insufficient for triggering a dynamic process of regulatory competition at all. In the following, the relevance of some of these arguments in regard to the evolution of facilitative law will be discussed.

In contrast to the field of mandatory regulations, which have the task of solving market failure problems or of protecting third parties, there need not be much concern in regard to race to the bottom problems. Since the legal rules have only the task of reducing the transaction costs of the parties, there are no incentives for jurisdictions to lower their quality in order to induce more private parties using them. Also no serious circumvention problems can emerge. At first sight, it might be a problem that regulatory competition can lead to higher information and transaction costs, because the firms have to spend resources in order to get acquainted with foreign law. However, the firms can decide themselves whether they want to bear these information costs and use the advantages of a better governance solution from another legal order or not. Law firms can reduce these costs by fulfilling the role of information intermediaries, who specialize on the collection and processing of this information. The problem that the use of the legal solution of one legal order might lead to different effects within the context of another legal order due to complementarities between different legal rules (implying institutional path dependencies) might be important. This is one of the reasons for the famous "legal transplant" problem.[39] Complementarities between legal rules within a legal order can limit considerably the scope for combining the public governance solutions of different legal orders, and therefore also the extent

[39] See for the legal transplant problem Paul Legrand, *The Impossibility of Legal Transplants*, MAASTRICHT JOURNAL OF EUROPEAN AND COMPARATIVE LAW 111 (1997); Daniel Berkowitz, Katharina Pistor and Jean-Francois Richard, *The Transplant Effect*, 51 AMERICAN JOURNAL OF COMPARATIVE LAW 163 (2003).

of regulatory competition.[40] Another important problem for regulatory competition in regard to facilitative law might be the incentive problem, at least in the long run. What are the incentives for jurisdictions to improve their facilitative law and for public courts to attract additional litigation by providing good and fast decisions? In the example of competition among US corporate laws, the federal states have incentives through franchise taxes.[41]

The advantage of regulatory competition to limit rent-seeking problems is less relevant, because interest groups do not have large incentives to influence facilitative law. A much more important advantage is that choice of law leads to the possibility that the private parties can select the best public governance solutions from a much broader set of alternative solutions. Since the private parties might have very different transaction problems, choosing from a larger set of different solutions increases the efficiency of the governance of cross-border transactions. Choice of law not only implies a better matching between the transactions and their governance but also leads to a selection effect, i.e. the market shares of the facilitative laws from different legal orders changes over time. Inferior public governance solutions are replaced by better ones, leading to an increase of the average efficiency of the applied governance solutions. Therefore even without a direct dynamic reaction of the legal order with the inferior solutions, such a systematic selection process with the consequence of sifting out inefficient legal solutions leads to an evolution of the governance of cross-border transactions.[42] The situation changes, if, in addition to that, the jurisdictions also react to their falling market shares by improving their facilitative law, either by imitating others or by searching for innovative solutions. Another possibility would be a differentiation strategy, i.e. that legal orders try to defend their market shares by specializing upon certain kinds of transaction problems and types of contract.[43]

Most interesting from an evolutionary economics perspective is the innovation dimension of regulatory competition.[44] Even if a dynamic (action-reaction like)

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[40] For an analysis of this effect in regard to competition among corporate laws see HEINE AND KERBER, *supra* note 28.

[41] It should be noted that this problem increases with the extent of choice of law, because choice of law also reduces the incentives for domestic interest groups to lobby for a better facilitative law.

[42] For an evolutionary model of technological progress, which is only based upon a pure selection effect, see METCALFE, *supra* note 2.

[43] For a comprehensive analysis of variation-selection models in regard to their impact on innovation see generally LINGE , *supra* note 9.

[44] The famous empirical article of ROMANO , *supra* note 34 about competition of US corporate laws emphasized particularly this dimension of innovation and imitation of new corporate law innovations.

process of competition between jurisdictions in regard to public governance solutions for cross-border transactions might not work well due to incentive problems and institutional rigidities, at least a process of parallel experimentation with different new governance solutions and a certain degree of mutual learning between legal orders might take place. Since in a rapidly changing world a lot of new transaction and governance problems emerge regularly, to which at least the jurisprudence must react in their decisions about facilitative law cases, a certain amount of different new responses to these problems (legal innovations) can be expected. The evolutionary theories of judge-made law can be used in that respect. The resulting diversity of legal solutions feeds the evolutionary selection mechanism of regulatory competition, driven by choice of law through private parties. Consequently, an evolutionary process of variation and selection ensues which can lead to a cumulative process of improvements of public governance solutions, if there are no serious problems of market failure. Particularly important is that such a process can also encompass the finding of new forms of combinations of private and public governance solutions (hybrids), e.g. through the innovation of better interfaces between both. For example, a jurisdiction can get a competitive advantage in this regulatory competition, if its legal order provides better possibilities of how its public governance solutions can be used for making the internationally vital private governance solutions more effective.

IV. The Vertical Dimension of Multi-level Legal Systems: Its Impact on Institutional Evolution

In order to explain the evolution of transnational commercial law in the governance of transaction, the vertical dimension in a multi-level legal system is also important. Facilitative law can be supplied on all jurisdictional levels of such a system, and free choice of law can imply that private parties might additionally choose between the public governance solutions of different levels. From that perspective, an evolutionary process of vertical competition as a driving-force for institutional evolution can also ensue. Let us take as example the project of the introduction of an optional European contract law. In the EU, there are very well established contract laws in all Member States. When concerning cross-border transactions, the private parties have the right to choose between these national contract laws. Since the European Commission deemed the existence of different national contract laws as an impediment to the internal market due to the ensuing transaction costs, the project of a common European contract law emerged. Mainly for political reasons, it is conceived as an optional instrument, i.e. that it is offered in addition to the

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For explicit evolutionary approaches to regulatory competition see VANBERG AND KERBER , *supra* note 11 and KERBER , *supra* note 27.

national contract laws (and does not replace them).[45] This project will not be discussed here in detail. However, as far as the EU offers an additional facilitative law, which the private parties can choose for their cross-border transactions, the national contract laws and the future European contract law would compete with each other. It would be a good example for vertical regulatory competition.[46]

This example can also be used for demonstrating some of the problems of vertical regulatory competition, which can have considerable impact on the legal evolution.[47] One of the biggest problems for the introduction of an optional European contract law is that it might fail entirely, if a sufficient number of private parties do not use it for their cross-border transactions. Since we know that the quality of a law increases with the extent of its applications (and therefore the emerging case law), a "critical mass" of users is necessary for achieving a similar high quality as the well-established national contract laws. From an evolutionary economics perspective, this is the consequence of dynamic economies of scale, which lead to path dependencies and potential "lock ins". If this threshold of a minimum application of the European contract law is not achieved, then it might not survive, even if it is more efficient than the national contract laws. However, a European contract law could have the competitive advantage as firms can use the European law for all cross-border transactions within the EU, which would imply economies of scale effects, especially for large firms. Therefore, in the long run, one possible result of such a vertical competition could also be the monopoly of the European contract law. Very important for the outcome of this evolution is the specific design of the choice of law-rules about the optionality (opt in or opt out-rule?). It can be expected that the European contract law would have better chances, if in the case of cross-border transactions European contract law is automatically applied (as a default rule) except the private parties choose to opt out, than in the reverse case that the private parties must explicitly decide to opt into the European contract law. This demonstrates that the specific conflict of law and choice of law rules can be very important for the evolution of the law. Although the ultimate result of this vertical regulatory competition process is

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[45] See for the optional European contract law Stefan Grundmann, *The Optional European Code on the Basis of the Acquis Communautaire - Starting Point and Trends*, 10 EUROPEAN LAW JOURNAL, 698 (2004); Moritz Röttinger, *Towards a European Code Napoleon / ABGB / BGB? Recent EC Activities for a European Contract Law*, 12 EUROPEAN LAW JOURNAL 807 (2006).

[46] For another very complex example of vertical competition see Katarina Röpke and Klaus Heine, *Vertikaler Regulierungswettbewerb und europäischer Binnenmarkt - die Europäische Aktiengesellschaft als supranationales Rechtsangebot*, 56 ORDO 157 (2005).

[47] See for the following argumentation Wolfgang Kerber and Stefan Grundmann, *An Optional European Contract Law Code: Advantages and Disadvantages*, 21 EUROPEAN JOURNAL OF LAW AND ECONOMICS 215, 227-230 (2006).

uncertain, it can be argued from an economic perspective that it might be beneficial for the evolution of contract law in the EU, if facilitative law is also supplied on the European level in addition to the national public governance solutions for (cross-border) transactions.[48]

Another important development in multi-level legal systems is the often-observed tendency towards harmonisation and centralisation, i.e. the gradual shifting of the competencies for providing legal rules to higher levels of the system. Although there are attempts to explain problematic centralization processes by using political economy theories, economic theory cannot offer much in this regard. This is also true for evolutionary economics, which - in addition to the above-mentioned mechanism of vertical regulatory competition through choice of law - so far cannot contribute to the explanation of the tendency to harmonisation and centralization in the evolution of law. The decisive question is: Does this process only respond to the requirements of a more globalized economy or is it the result of some deficient process of institutional evolution? Both in regard to the EU and the global level, there is a widespread debate whether the observed tendency to convergence and centralization might not go too far, at least in some fields of the law. Based upon economic theories of federalism and regulatory competition, a number of economic criteria can be developed, which can be used for assessing whether the competence for enacting legal rules should be centralized or remain with lower-level jurisdictions, whether (and what type of) regulatory competition should be recommended, and what the most appropriate conflict of law rules would be.[49] Similar to the assessment of regulatory competition, the question of the optimal vertical allocation of the competencies for enacting legal rules can also only be answered by balancing the often manifold advantages and disadvantages of centralization and decentralization. This policy question is not pursued further here. However, the following implication of centralization and harmonization for institutional evolution should be emphasized.

The positive effects of regulatory competition on the innovation of new legal rules and their adaptations to new circumstances have already been mentioned. In the economic theory of federalism as well as in the discussion about legal federalism the advantages of a decentralised legal order as a field of experimentation with the

[48] KERBER AND GRUNDMANN , *supra* note 47, 227.

[49] For sets of economic criteria see Roger Van den Bergh, *Economic Criteria for Applying the Subsidiarity Principle in the European Community: The Case of Competition Policy*, 16 INTERNATIONAL REVIEW OF LAW AND ECONOMICS 363 (1996); Wolfgang Kerber and Klaus Heine, *Zur Gestaltung von Mehr-Ebenen-Rechtssystemen aus ökonomischer Sicht*, in VEREINHEITLICHUNG UND DIVERSITÄT DES ZIVILRECHTS IN TRANSNATIONALEN WIRTSCHAFTSRÄUMEN, 167 (Claus Ott and Hans-Bernd Schäfer eds., 2002); KERBER AND GRUNDMANN , *supra* note 46; KERBER , *supra* note 26.

possibility of mutual learning have been stressed. In his survey article on fiscal federalism in the Journal of Economic Literature, Oates (as the leading economist in the field of federalism) developed the perspective of federalism as "laboratory federalism": "In a setting of imperfect information with learning-by-doing there are potential gains from experimentation with a variety of policies for addressing social and economic problems. Additionally, a federal system may offer some real opportunities for encouraging such experimentation and thereby promoting 'technical progress' in public policy."[50] Oates views these advantages as very important, although he is not able to integrate them consistently in his otherwise static welfare-theoretic approach to federalism. These advantages can be much better explained by an evolutionary approach to federalism, which analyzes the effects of decentralized experimentation and mutual learning (variation-selection process) in a multi-level legal systems.[51] A crucial consequence for our problem is that all processes of harmonisation and centralisation reduce the capability of a multi-level legal system to generate knowledge through decentralised experimentation and learning from the experiences of other jurisdictions. Therefore, from an evolutionary economics perspective harmonization and centralization processes are dangerous due to its effect of eliminating regulatory competition and decentralized experimentation. If we are convinced that the best public governance solutions for transactions have already been found and furthermore, if adaptations to new transaction problems are of minor importance in the future, then harmonization and centralization need not be a big problem. However, if we are skeptical about that, then harmonization and centralization processes can seriously impede the long-term capability of the evolution of public governance solutions.[52] Harmonization and centralization might also be a problem for the evolution of private governance solutions, because the possibilities for recombinations between private and public governance solutions might be shrinking considerably.

D. The Evolution of Transnational Commercial Law: The Result of Complex and Intertwined Evolutionary Processes

In this brief article it is not possible to include examples and analyze the results of empirical studies about these new modes of governance. Therefore I have described this development of transnational commercial law only in a very stylized form at

[50] OATES 1132 , *supra* note 26; for a simulation model that analyzes advantages of both centralization and decentralization see Ken Kollman, John H. Miller and Scott E. Page, *Decentralization and the Search for Policy Solutions*, 16 THE JOURNAL OF LAW, ECONOMICS, & ORGANIZATION 102 (2000).

[51] KERBER , *supra* note 27.

[52] See for the advantages of decentralized experimentation OATES , *supra* note 16.

the beginning of section C and focused instead on some theories from evolutionary economics that might help to explain this evolution. In a first step, we have seen that the development of private governance solutions for transactions is not specific for cross-border transactions but a general possibility to solve governance problems in the absence of effective public governance solutions. Even if workable public solutions exist, private governance solutions will always play an important role, either as alternative to more costly or slower public governance solutions (private arbitration) or as a complement to public governance solutions. For cross-border transactions, both the relative importance of private and public governance solutions as well as their modes of combination are very different from those observed within a national legal order. From an evolutionary economics perspective, however, both the private governance solutions and (although to a lesser extent) the public governance solutions will evolve over time as a consequence of the permanent search for new and better solutions for the governance of transactions.

Nevertheless, in regard to governance solutions for cross-border transactions, this search takes place within the context of a wide set of different public governance solutions, from which the private parties (or law firms as "legal engineers") are able to choose. Besides the mobility of capital (implying interjurisdictional competition), it is mainly this right to free choice of law in the case of cross-border transactions which leads to various processes of horizontal and vertical regulatory competition between public governance solutions within a multi-level legal system. These processes of regulatory competition can work very differently. They may only consist of selection processes (increasing the market share of superior solutions without inducing changes of the solutions themselves), but they often can also entail the innovation of public governance solutions and their imitation through other jurisdictions. Due to the large uncertainty of how the best governance solutions will look like under the conditions of the rapid technological and economic change in a globalized world, the search for firms and jurisdictions for better governance solutions appears as a manifold process of experimentation, in which different solutions are in competition with each other. Crucial for the complexity of this process is that several horizontal and vertical evolutionary processes of regulatory competition take place simultaneously, and are also intertwined with each other. They are also linked to and mutually influenced by the evolutionary search of firms and law firms for new sophisticated combinations of private and public governances. From an evolutionary economics perspective, it can be suggested that the evolution of this new "transnational commercial law" can be studied by an analysis of these different evolutionary processes of experimentation and their relation with each other. Such an analysis can be complemented by using additional evolutionary theories as, e.g., evolutionary theories of judge-made law as well as path dependency.

The evolution of transnational commercial law is here seen as the common result of the simultaneous existence of a number of different evolutionary processes of competition and parallel experimentation and mutual learning. Conflict of law and choice of law rules play a decisive role for the enabling and channeling but also restricting or even eliminating these evolutionary processes of regulatory competition. Changing these rules and therefore the extent to which firms can choose between (or recombine) public governance solutions of different legal orders will lead to a change of the extent or the direction of these evolutionary processes and therefore to a different development of governance solutions for cross-border transactions. Closely connected to these rules are the rules, which determine the vertical allocation of regulatory competencies. Harmonization and centralization can eliminate entirely certain evolutionary processes of parallel experimentation and mutual learning, whereas devolution enables additional variation and selection processes of legal solutions. Another important type of rules are the institutional interfaces between private and public governance solutions on one hand and between the public governance solutions of different legal orders on the other hand. The first refers to the possibilities that the legal order accepts and helps to enforce private governance solutions (as, e.g., private arbitration). The second one asks, for example, for the possibilities that public governance solutions of one state are recognized by other states (as, e.g., in the case of court decisions). In that respect, international treaties, which allow for the mutual recognition and enforcement of court decisions, such as the recently signed Hague Convention on Choice of Court Agreements, might be very important as institutional interfaces between different legal orders. They might enable extraterritorial litigation and therefore also a global market for judicial services with the perspective of competition between public courts of different countries.[53] As a consequence, all of these rules, which can be interpreted as part of the institutional framework for the multi-level legal system, are important suitable policy instruments for the improvement of the process of the evolution of transnational commercial law, in order to facilitate the governance of cross-border transactions.[54]

[53] Jens Dammann and Henry Hansmann, *A Global Market for Judicial Services*, YALE LAW & ECONOMICS RESEARCH PAPER No. 347 (2007).

[54] For the regulatory function of the conflict of laws rules see Horatia Muir Watt, *Choice of Law in Integrated and Interconnected Markets: A Matter of Political Economy*, 9 THE COLUMBIA JOURNAL OF EUROPEAN LAW, 383 (2003).