european corporate governance institute

ecgi

Disintegrating the Regulation of the Business Corporation as a Nexus of Contracts: Regulatory Competition vs. Unification of Law

Law Working Paper N°.102/2008

March 2008

Stefano Lombardo
Free University of Bolzano and ECGI

Piero Pasotti
University of Bologna and University of Siena

© Stefano Lombardo and Piero Pasotti 2008. All rights reserved. Short sections of text, not to exceed two paragraphs, may be quoted without explicit permission provided that full credit, including © notice, is given to the source.

This paper can be downloaded without charge from:
http://ssrn.com/abstract=1112091

www.ecgi.org/wp

european corporate governance institute

ECGI Working Paper Series in Law

Disintegrating the Regulation of the Business Corporation as a Nexus of Contracts: Regulatory Competition vs. Unification of Law

Working Paper N°.102/2008

March 2008

Stefano Lombardo

Piero Pasotti

We wish to thank Rainer Kulms, Francisco Marcos and Ernesto Savaglio for their helpful comments. We furthermore thank Luca Enriques, Luigi Alberto Franzoni and Emanuela Carbonara for their comments on a very preliminary version of this paper. We also thank all the participants at the EMLE Midterm Meeting 2005/2006 at the University of Hamburg and at the EALE Conference 2006 and at the SIDE Conference 2006. Usual disclaimers apply. Although this article was elaborated by the authors together, for the purpose of academic evaluation it has to be stressed that sections 2 and 3 were written by Stefano Lombardo while sections 4.1, 4.2 and 5 were written by Piero Pasotti.

© Stefano Lombardo and Piero Pasotti 2008. All rights reserved. Short sections of text, not to exceed two paragraphs, may be quoted without explicit permission provided that full credit, including © notice, is given to the source.

Abstract

We apply the paradigm of the firm as a nexus of contracts to the debate on regulatory competition vs. unification of law as an alternative way of regulating the business corporation. This approach views the business corporation as a set of coordinated contracts among different parties. Agency problems and related agency costs are the result of this interaction. The economic analysis of corporate law, securities regulation and bankruptcy law identifies law as a means to minimize such agency costs. In this paper we develop a model where companies are heterogeneous in their preferences about the legal regulation of contractual relationships. We then compare a regime of regulatory competition to a regime of single supply of regulation and we analyse their relatives costs and benefits.

Keywords: corporate governance, regulatory competition, forum shopping, unification of law, theory of the firm, agency costs, corporate law, securities regulation, bankruptcy law, choice of law.

JEL Classifications: K20, K22, L51

Stefano Lombardo
Center for Research in Law and Economics (CRELE)
School of Economics and Management
Free University of Bolzano
Serneistrarasse 1 - Via Sernesi, 1
39100 Bozen-Bolzano (BZ)
Italy
phone: +39 0471 315 363
e-mail: stefano.lombardo@unibiz.it

Piero Pasotti
University of Bologna
Piazza Scaravilli 2
40126 Bologna
Italy
e-mail: pasotti@unisi.it

Contents

1 Introduction **2**

2 Regulatory competition vs. unification of law **4**

3 The economic theory of the corporation and of its regulation **6**
3.1 Corporate law 8
3.2 Securities regulation 10
3.3 Bankruptcy law 12

4 The basic model **16**
4.1 Single vs. competing jurisdictions 18
4.2 Equilibrium outcomes 19
4.2.1 Single jurisdiction 20
4.2.2 Two competing jurisdictions 20
4.2.3 Welfare comparison 22

5 The extended model: bundled vs. unbundled provision of laws **23**
5.1 Equilibrium outcomes 24
5.1.1 Two competing jurisdictions with bundled provision of laws 24
5.1.2 Two competing jurisdictions with unbundled provision of laws 26
5.1.3 Comparison 29

6 Conclusions **30**

1 Introduction

In recent years the paradigm of regulatory competition has gained considerable attention both in the United States and in the European Union as an alternative mechanism to reach an integrated internal market among jurisdictions where economic resources, particularly capital, are allocated to their most efficient uses.[1] The regulatory competition paradigm is strictly linked with the paradigm of fiscal competition among jurisdictions. Originally the idea that jurisdictions can compete and produce public goods, as firms produce private goods, comes from public economics. In a well known article of 1956, Tiebout[2] provides a model where citizens are free to choose the pattern of public goods they want to consume by choosing the jurisdiction of residence. The intuitive idea of the paper is that local jurisdictions (state and municipal jurisdictions as opposed to the federal one) can supply public goods (in the same way that firms supply

[1] From a legal perspective even if the European Union is not a federal system we consider it as one for the sake of simplicity.

[2] Tiebout, 1956, A pure Theory of Local Expenditures, in J. of Political Economy, 64:416-424.

private goods) and that such competitive supply is efficient with respect to a monopolistic federal supply.

American law and economics scholarship has used the paradigm of the Tiebout model to argue that law must not necessarily be supplied by a monopolistic supplier but can be also supplied by competition among jurisdictions. In her seminal article of 1985 Roberta Romano provided both theoretical and empirical evidence that the state's production of corporate law in the United States may be efficient in comparison to a monopolistic supply at the federal level.[3]

More in particular, in the United States the regulatory competition paradigm has been used to propose the abandonment of the monopolistic federal supply of legislation in several crucial areas of US law. Indeed, securities regulation[4], bankruptcy law[5], and environmental regulation[6] have been analyzed using the regulatory competition paradigm. From this perspective, the commonly accepted idea that a monopolistic federal supplier of regulation is preferable to a regulatory competition regime among jurisdictions has been deeply criticized.

The new law and economics approach in favour of regulatory competition has become a term of reference for analysis and policy discussion in Europe as well.[7]

In this paper we develop a framework of regulatory competition in order to model some issues with respect to the legal regulation of the business corporation. A branch of the theory of the firm describes the business corporation as a nexus of contracts among different contractual parties. Agency problems and related agency costs originate from the interaction between them. Economic analysis of corporate law (as well as securities and bankruptcy law) identifies law as a means to minimize such agency costs.

The questions this paper tries to answer are: i) when the regulation of the corporation should be supplied by a single regulator or on the contrary, when it is better to have a set of competing jurisdictions; ii) whether competition between jurisdictions leads to a greater differentiation in the law produced or, instead whether it leads to a convergence; and finally iii) whether, in the case of regulatory competition, it is better to have a bundled or unbundled provision

[3] Romano, 1985, Law as a Product: Some Pieces of the Incorporation Puzzle, in J. of Law, Economics and Organization, 1:225-283. See also Romano, 1993, The Genius of American Corporate Law, AEI Press.

[4] See section 3.2.

[5] See section 3.3.

[6] See Revesz, 1992, Rehabilitating Interstate Competition: Rethinking the "Race-to-the-Bottom" Rationale for Federal Environmental Regulation, in University of New York Law R., 67: 1210-1254.

[7] The literature on regulatory competition in Europe is extensive. By way of introduction, see Reich 1992, Competition between Legal Orders: A New Paradigm of EC Law?, in Common Market Law R., 29:861-896; Van den Bergh, 1994, The Subsidiarity Principle in the European Community. Some Insights from Law and Economics, in Maastricht J. of European and Comparative Law, 1:337-366; Sun/Pelkmans, 1995, Regulatory Competition in the Single Market, in J. of Common Market Studies, 36:67-89; Ogus, 1999, Competition between National Legal Systems: A Contribution of Economic Analysis to Comparative Law, in International and Comparative Law Quarterly, 48:405-418.

of laws.

With respects to these questions our results show that i) useful conclusions regarding the more efficient regime cannot be reached without a knowledge of the costs structure of lawmaking; ii) under reasonable assumptions, even though the preferences of companies are heterogeneous in the model, we observe a convergence between the kind and the quality of the laws provided by the competing regulators; iii) things change when companies are free to choose different laws from different jurisdictions. In fact, with unbundled provision of laws, regulators may have lower incentives to offer a high quality of the law.

We follow the approach adopted by authors such as Hadfiled/Talley who try to model some issues relating to the provision of corporate law/corporate governance.[8]

The paper is organized as follows. In section 2 we briefly describe the paradigm of regulatory competition as opposed to harmonization or unification of law by pointing out the advantages and disadvantages of the two systems. This section also provides a picture of the economics of conflict of law rules, describing the rationale for forum shopping. Conflict of law rules are in fact the means by which parties are allowed to choose (or not to choose) the law that will apply to their contractual relationship and the judge that will decide the issue in case of litigation. Section 3 describes the economics of the business corporation and the law and economics approach to its regulation, concentrating on the economic dimension of corporate law, securities regulation and bankruptcy law. The discussion also includes a short reference to the legal systems of the United States and of the European Union. On the basis of sections 2 and 3, sections 4 and 5 develop a basic and an extended model where the questions described are formally analyzed.

2 Regulatory competition vs. unification of law

According to basic microeconomic theory, competitive markets provide the maximum of social efficiency (when usual assumptions are satisfied, as stated by the two theorems of welfare economics). From an efficiency perspective, in such a context the regulator should not intervene and should leave market forces to act freely.[9] Only in the case of market failures (public goods, asymmetric information, market power and externalities) may a form of public intervention by way of regulation be justified, but only if the costs of the regulatory provisions are lower than their benefits. The costs of the regulatory intervention may increase if we take into consideration not only the objective costs of the regulation provided by a benevolent government, but also the costs incurred from public choice considerations. Society normally bears these costs because regulation

[8] The article concentrates on the relative efficiency of a private vs. a public competitive regulatory regime. See Hadfiled/Talley, 2006, On Public versus Private Provision of Corporate Law, in J. of Law, Economics & Organization, 22:414-441.

[9] Of course intervention may be justified on the basis redistributional concerns.

may be the product of interested groups (or lobbies) achieving specific gains.[10]

From an efficiency perspective, single jurisdictions (generally national-state jurisdictions) are faced with this regulatory puzzle when evaluating the decision whether to regulate a particular issue or a particular market or to leave market forces unregulated to reach efficiency by themselves.

The regulatory paradigm becomes more complex if we take into account federal systems constituted by the federal level (or federal jurisdiction) and several lower jurisdictions. On the basis of Tiebout's model on fiscal competition, a significant part of law and economics literature has pointed out the potential benefits of a decentralized regulatory system.[11] This system does not necessarily rely on the provision of mandatory federal monopolistic regulation or unification or harmonization of regulations among the lower jurisdictions. On the contrary, it relies on a system of mutual recognition of legal phenomena based on a principle of free choice of law/forum by the interested contractual parties.

The advantages of such a regulatory competition regime in comparison to a centralised regulatory regime are: i) possibility for parties to have more options regarding whom to choose; ii) possibility for lower jurisdictions to achieve operational improvements both in terms of rapidity and correction of mistakes; iii) less opportunity for parties to be exploited by rent-seeking regulation.

Ideally, the regulatory competition paradigm requires some prerequisites for it to work properly: i) full mobility of parties; ii) full information of parties regarding the different regulatory regimes; iii) proper incentives for jurisdictions to react to the parties' necessities; iv) no externalities among jurisdictions.

The same paradigm also relies on a crucial assumption: contractual parties have the possibility to choose the legal regime they want their contractual relationship to be governed by. It is well known that this legal issue belongs to the realm of private international law or choice of law issues. In its essential terms, a free choice of law is an exit option[12] granted to contractual parties who are not obliged to physically move to another jurisdiction (as in Tiebout's model), but can physically remain in a jurisdiction different from the one they decide will govern their contractual relationship. The exit option may be also thought as a means to replace the voice option in order to avoid inefficient local regulation promoted by interested parties lobbying the regulator in order to reach their private interests.[13] In contract law, the general tendency on both sides of the Atlantic is to grant contractual parties a free choice of law. Both the Restatement (Second) of Conflicts of Law for the United States and the Rome Convention of 1980 on the Law applicable to Contractual Obligations provide parties with free choice of law. The free choice of law granted to parties'

[10] The classical references are the seminal works by Stigler, 1971, The Theory of Economic Regulation, in Bell J. of Economics and Management, 2:3-21 and Posner, 1974, Theories of Economic Regulation, in Bell J. of Economics and Management, 5:335-358.

[11] See references in sections 3.1., 3.2., 3.3.

[12] In terms of exit and voice: see Hirschmann, 1970, Exit, Voice, and Loyalty. Response to Decline in Firms, Organizations, and States, Harvard University Press.

[13] See O'Hara/Ribstein, 2000, From Politics to Efficiency in Choice of Law, in University of Chicago Law R., 67: 1151-1232.

autonomy is regarded to be useful and practical at the same time.[14]

In Europe, if parties do not choose ex ante the legal rule that will apply to their contractual relationship, the general rule is to apply the law of the country that has the closest connection. On the other hand, in the United States the general rule is to apply the law of the country with the most significant relationship. These principles share the same scope and philosophy.[15]

Economic analysis of law has pointed out the relative efficiency of a free choice of law in contractual relationships. The idea is that parties can share the surplus deriving from a contractual relationship they voluntarily enter into (that per se is Pareto-improving). Indeed, assuming that the law regulating the contractual relationship provides a form of "value added" to the material content of the contract, it follows that a free choice of applicable law grants an "extra-surplus" parties are able to extract by being free to ex ante choose the law that will govern their contract.[16]

Intervention by the state for correcting free choice of law is called for in cases of market failures related to the time of contract formation between the involved parties: particularly in cases of asymmetric information among parties, externalities on third parties not directly involved in the contract and market power exercised by one party.[17]

To sum up, the theory of regulatory competition assumes that parties are free to choose the law applicable to their contractual obligations independently from their physical location. Free choice of law (meaning here free choice of jurisdiction and applicable law) for contractual relationships is already substantially granted both in the US and in Europe. The next step is to analyze the contractual nature of the business corporation from an economic perspective in order to check whether the free-choice of law paradigm may be fruitfully applied to it.

3 The economic theory of the corporation and of its regulation

In economic terms a corporation as a particular type of firm is considered to be a nexus of contracts among different parties that interact by way of a complex set of contractual relationships.[18] This economic paradigm identifies the business

[14] Reimann, 1999, Savigny's Triumph? Choice of Law in Contract Cases at the Close of the Twentieth Century, in Virginia J, of International Law, 39:571-605, provides a good survey on this topic.

[15] See Reimann, op. cit., pp. 578.

[16] On the point see Parisi/Ribstein, 1998, Choice of Law, in Newman (edited), The New Palgrave Dictionary of Economics and the Law, 236-241, Stockton Press.

[17] For the discussion of this topic and in particular with respect to cases of asymmetric information for consumer protection regulation, see Lantermann/Schäfer, 2005, Jurisdiction and Choice of Law in Economic Perspective, German Working Papers in Law and Economics, available at www.bepress.com/gwp.

[18] Jensen/Meckling, 1976, Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure, in J. of Financial Economics, 3:305-360. The literature builds up on the

corporation as a nexus of contracts generating agency relationships among contractual parties and the related problems of agency costs among them. Building up on this model,[19] successive scholarship[20] has tried to better specify the different claims that the various parties or patrons have in the various sets of contracts. Shareholders, creditors, customers, suppliers, workers and managers present different claims according to the different organizational structure of the firm. In particular, with respect to the central question of the efficient allocation of ownership among the different patrons, we can identify several business forms or in other words, several types of firms. In the business corporation ownership is efficiently allocated in the hands of shareholders who are the residual claimers of the firm, obtaining the two residual rights of control and of profit distribution. All other patrons get fixed claims on the basis of ex ante fixed contractual terms and are creditors.

In particular, if we consider shareholders and creditors as the two relevant groups of parties we can identify in a typical principal-agent relationship three different kinds of agency costs: monitoring costs by the principal, bonding costs by the agent and residual losses.[21]

The economic theory of the firm and specifically of the business corporation has been completed and integrated by an economic theory of the law regulating the business corporation.[22]

The aim of legal regulation (broadly meant as statutory law and judicial enforcement) is to provide the legal mechanisms that increase the value of the complex of the contractual arrangements that parties who face a principal-agent relationship incur in order to maximize this value. The complex of the regulatory system provided for by the regulation of the business corporation as a nexus of contracts is called here corporate governance. It is fair to say that legal and economics as well as law and economics scholarship misses an accurate and precise definition of the concept of corporate governance. Broadly speaking the

seminal paper by Coase, 1937, The Nature of the Firm, reprinted in Coase, 1988, The Firm, the Market and the Law, The University of Chicago Press.

[19] The main idea of the article of Jensen and Meckling can be briefly summarised with the following example: in an ideal world without agency problems among parties and related agency costs the value of the contractual relationship among parties in the nexus of contracts business corporation would be maximized to e.g. 100. Due to the presence of the agency costs, the real value of the nexus decreases to e.g. 70. Given perfect information on the market, i.e. given the possibility for the involved principal to discount ex ante the agency costs of the agency relationship, no party can be exploited. However, there is a total loss of 30 that would not be present in the ideal world without agency costs. The core of the problem is to find out mechanisms that align the interests of the agent with the interest of the principal in order to try to maximize the value of the contractual relationship closer to 100 so as to reach the ideal optimum.

[20] See Hansmann, 1988, Ownership of the Firm, in J. of Law, Economics, and Organization, 4:267-304 and more systematically Hansmann, 1996, The Ownership of Enterprise, Harvard University Press.

[21] See Jensen/Meckling, op. cit., p. 308. Note that in the model, agency costs are borne by the agent.

[22] See Easterbrook/Fischel, 1991, The Economic Structure of Corporate Law, Harvard University Press; Johnston, 1993, The Influence of The Nature of the Firm on the Theory of Corporate Law, in J. of Corporation Law, 18:213-244.

corporate governance regime is the complexity of rules provided by a jurisdiction to regulate the agency problems of the business corporation. From this perspective, the corporate governance system can be divided into three subsystems or groups of rules: corporate law regulating the agency problem between managers and shareholders (or the agency problem between controlling shareholders and minority shareholders), debtor/creditors law and bankruptcy law providing for the regulation of the agency problem between shareholders (agent) and creditors (principal) and, finally, securities regulation providing for a system of information disclosure related to the substantive regulation given by corporate law and debtor/creditor law and bankruptcy law.

In the following sections we explain more accurately the single sets of regulation and also provide a short legal comparison between the US and the EU.

3.1 Corporate law

Corporate law is the legal mechanism that tries to align the interests of shareholders and managers (agency problem between shareholders and managers) or minority shareholders and majority shareholders (agency problem between minority shareholders and majority shareholders) in order to minimize the deriving agency costs. Law and economics scholarship has tried to elaborate a theory of what such a regulatory mechanism should look like in terms of mandatory vs. enabling rules.[23]

The basic idea is that the freedom of contract between managers and shareholders should be granted and restricted only in cases of severe market failures. Scholarship seems to generally accept the assumption of efficient capital markets: shareholders are able to price and evaluate the contractual terms and to discount them ex ante. In particular, institutional investors have the correct incentives to inform themselves on the relevant contractual provisions (i.e. the different mixes of mandatory vs. enabling rules) and small investors free-ride on the efforts of institutional informed investors. It is (at least implicitly) on the basis of this assumption of efficient capital markets that a growing body of literature compares different systems of corporate law/corporate governance by examining the discount at which investors buy equity/debt securities, evaluating them according to their relative efficiency in dealing with agency problems.[24]

Fundamental in such a debate is also the question of the relative efficiency of a monopolistic regime in comparison to a regime of competition among jurisdictions.[25]

[23] For the American discussion see Symposium, 1989, in Columbia Law R. 89, pp. 1395; Easterbrook/Fischel, op. cit., passim. See more recently Hansmann, Corporation and Contract, American Law and Economics R., 8:1-19.

[24] See the seminal paper by La Porta/Lopez-de-Silanes/Schleifer/Vishny, 1998, Law and Finance, in J. of Political Economy, 106:1113-1155.

[25] See e.g. Romano, 1993, The Genius of American Corporate Law, AEI Press; more recently see also Romano, 2005, Is Regulatory Competition a Problem or Irrelevant for Corporate Governance?, working paper available on www.ssrn.com, discussing the main criticisms to the relative efficiency of the competitive regime.

To briefly sum up the debate on regulatory competition regime in corporate law, the fundamental idea is that this regime (in which Delaware is the state of incorporation of the majority of American business corporations) grants a superior system in the production and development of corporate law than the one provided by a monopolistic federal supplier. The argument is that even if it is not perfect, the current system ensures managers to incorporate the company in the jurisdiction they prefer. At the same time shareholders are able to price that choice and evaluate the corporate law regime of the different states. As in the case of the choice between different mixes of mandatory and enabling rules, the capital market is able to price and evaluate the corporate statutes of the different states and to price its comparative advantage in dealing with the problem of reduction of agency costs. Certainly, more recent scholarship points out that the threat to Delaware supremacy from other states could come from a challenge at federal level of Delaware's position in corporation law.[26]

The idea that a system of regulatory competition may be an alternative to the traditional perspective of ex ante harmonization of law is becoming popular also in the European context.[27] It is fair to say that until very recently harmonization of corporate law as provided for by the EC Treaty in Article 44(2)(g) as a prerequisite to allow freedom of establishment and mutual recognition of companies ex Articles 43 and 48 EC Treaty was considered to be crucial for the establishment of the internal market. European scholars comparing the US system of regulatory competition based on freedom of incorporation and mutual recognition of companies have only recently started an economic analysis of the costs of such a harmonization to reach a single integrated European market. The European Court of Justice did provide judicial support to the new paradigm of regulatory competition in several recent cases.[28]

According to these cases, it is currently possible to incorporate a company in a European jurisdiction, following the incorporation theory, such as the UK or Ireland or the Netherlands and to do business in each Member State. Furthermore, the new directive on international merger[29] as well as the European Company Statute[30] should also grant the legal possibility to reach a US style

[26] On the point, see Choi/Guzman, 2001, Choice and Federal Intervention in Corporate Law, in Virginia Law R., 87:961-990. See also Roe, 2003, Delaware's Competition, in Harvard Law R., 117:588-646. For the interconnection between federal securities regulation and Delaware corporate law particularly with respect to the Sarbanes-Oxley Act of 2002 see, Thompson, 2004, Delaware, the Feds, and the Stock Exchange: Challenges to the First State as First in Corporate Law, in Delaware J. of Corporate Law, 29:779-804. See also Kahan/Rock, 2005, Symbiotic Federalism and the Structure of Corporate Law, in Vanderbilt Law R., 58:1573-1644.

[27] On the current European debate see e.g. Enriques, 2005, Company Law Harmonization Reconsidered: What Role for the EC?, ecgi working paper available at www.ecgi.org; Armour, 2005, Who should make corporate law? EC legislation versus regulatory competition, ecgi working paper available at www.ecgi.org. See also the empirical study by Becht/Mayer/Wagner, 2006, Corporate Mobility and the Costs of Regulation, ecgi working paper available at www.ecgi.org.

[28] Case C-212/97 Centros, 1999, ECR I-1459, Case C-208/00 Überseering, 2002, ECR I-9919, Case C-167/01 Inspire Art, 2003, ECR I-10155, Case C-411/03 Sevic, 2005.

[29] Directive 2005/56/EC.

[30] EC Regulation 2157/2001.

reincoporation by way of a new-shell company incorporated in a Member State just for the purposes of permitting the reincoporation with change of applicable law of the old-parent company.[31]

3.2 Securities regulation

The core of securities regulation is the level and content of disclosure of the agency relationship: if corporate law provides the material rule of conduct, securities regulation provides the level and content of disclosure of information about this rule of conduct.

The disclosure regime includes the agency problem between shareholders and managers and the agency problem between shareholders and creditors (creditor-debtor law). Generally speaking, securities are intended to be shares and bonds as well as all possible mixed and derivatives financial products in between.

To the extent that insiders, i.e. managers, know more about the company than investors do, the need for a disclosure regime both for the primary and the secondary market is generally justified in terms of an asymmetric information rational.

The debate on securities regulation has traditionally been related to the optimal amount of disclosure and to the necessity of mandatory disclosure regulation with respect to investors' protection.[32] IIt has to be noted that the regulatory approach to securities is quite similar among jurisdictions.[33]

In fact the principal ones typically distinguish between a regulatory regime for the s.c. primary market (i.e. initial public offering, IPO) and a regulatory regime for the s.c. secondary market (i.e. after IPO day-to-day trading activity of investors). The information normally disclosed refers to the characteristics of the securities, the financial and business situation of the company as well as information related to the company structure of control. Generally the regulatory schema also provides for antifraud provisions and related issues of market manipulation and/or insider trading.

Coming more specifically to the US and European situations, we can identify the following regulatory structure. In the US, interstate securities are primarily regulated by federal monopolistic regulation via the Securities Act of 1933 regulating the primary market by way of a registration statement by the SEC and the publication of an issuer's prospectus, and the Securities and the Securities Exchange Act of 1934 covering the information regime of permanent and continuous disclosure required for the correct functioning of the secondary market.[34]

[31] On this possible role of the European Company as a means to reach regulatory arbitrage see Enriques, 2004, Silence Is Golden: the European Company as a Catalyst for Company Law arbitrage, in J. of Corporate Law Studies, 4:77-95.

[32] See as a general introduction Kraakman/Davies/Hansmann/Hertig/Hopt/Kanda/Rock, 2004, The Anatomy of Corporate Law, Oxford University Press, pp. 194.

[33] Kraakman/Davies/Hansmann/Hertig/Hopt/Kanda/Rock, op. cit., p. 197.

[34] As an introduction, see Cox/Hillmann/Langevoort, 1997, Securities Regulation, Aspen Law and Business, pp. 3

In Europe, the same regulatory strategy is structured on several directives that provide for basically the same schema.[35]

The major substantial difference between the US and European regulatory approach is that the American one is provided for by a single federal regulation and enforced by a single agency (the SEC), whereas the European approach relies on a form of ex ante harmonization of law to reach a minimum level of coordination that allows mutual recognition as well as the coordination of national regulatory agencies.[36]

The American debate on the optimal amount of disclosure and on the necessity of mandatory disclosure has been ultimately influenced by the idea that a single monopolistic supplier of securities regulation may not be efficient. The idea that regulatory competition can be a valid alternative to the federal regime has reached a very high level of academic attention.[37] This perspective relies on two points.

The first point is that issuers have the right incentive to choose ex ante the regulatory regime and that this regime will be evaluated ex ante and priced by those investors who have the incentive to evaluate legal regimes, i.e. institutional investors. All other investors relay on this price formation by free-riding on the public market.[38]

The second point relates to the idea that different companies have different needs on the optimal amount of disclosure. From this perspective the criticism is that different firms need different amount of information to be disclosed and that homogeneity in the supply of disclosure is inferior compared to a system of heterogeneity. This is the typical economic argument of heterogeneity of preferences.[39]

The so-called law and finance literature certainly provides empirical evidence that a kind of regulatory competition is already in force on a global level. Given (increasing) worldwide capital mobility, at present legal regimes are already priced and investors indeed discount ex ante the price at which they buy securities.[40]

---

[35] Directive 2001/34 as amended by directive 2003/71 and by directive 2004/109. For a picture of the European situation also with respect to the issue of regulatory competition in EU securities regulation see Enriques/Trögen, 2007, Issuer Choice in Europe, ecgi working paper available at www.ecgi.org.

[36] This is, as well known, a typical European regulatory strategy to implement the common market.

[37] For a review of the debate and the historical reason of this evolution see Kitch, 2001, Proposals for Reform of Securities Regulation: An Overview, in Vanderbild Journal of International Law, 41:629-652. See also Romano, 2002, The Advantage of Competitive Federalism for Securities Regulation, AEI Press.

[38] Particularly this rationale underpins the proposal by Romano, 1998, Empowering Investors: A Market Approach to Securities Regulation, in Yale Law J., 107:2359-2430. The idea that securities regulation is in force in order to inform what they call information traders (a category composed by institutional investors and analysts) and not small investors has been also recently made by Goshen/Parchomovsky, 2005, The Essential Role of Securities Regulation, in Duke Law J., 55:711-782.

[39] This rationale is used by Choi/Guzman, 1998, Portable Reciprocity: Rethinking the International Reach of Securities Regulation, in Southern California Law R., 71:903-952.

[40] See La Porta et al, op. cit..

By permitting free choice of law in securities regulation one would allow for instance an Italian company to apply, say, the US regime in order to top the Italian market. Assuming that capital markets evaluate the US regime better than the Italian one, the possibility for the Italian company to opt for a qualitatively positive regime leads to a positive revaluation of the company's share prices as investors would be willing to pay more for the benefits of an improved regulatory setting. In fact this would be a Pareto-improvement transaction in the agency problem concerning managers-shareholders or creditors-shareholders.[41]

3.3 Bankruptcy law

Bankruptcy law provides the set of rules that regulate the agency problem between shareholders and creditors when corporations are insolvent. In the debtor-creditor relationship and during the insolvency time, creditors are the principal and shareholders the agent. In other words, the procedure is made in order to satisfy creditors with the assets of the distressed corporation. From this perspective, bankruptcy law exists because creditors have a collective action problem in collecting their claims by way of a sum of individual actions: the individual actions would create such transaction costs in terms of non-cooperative strategies that it is efficient to have a single structured procedure to minimize these costs.[42]

The objectives of bankruptcy law are to maximize the ex post (insolvency) value of the insolvent firm in order to maximize the value for creditors and to minimize the ex ante probability of insolvency by providing managers with the efficient incentives to avoid it.[43]

Scholars have identified basically two procedures to deal with an insolvent corporation. The first one is a procedure of liquidation where the assets of the company are sold and creditors are satisfied according to their priorities. This procedure presents the problem that the firm as a going concern may be lost. This creates an inefficiency that could justify the second procedure, i.e. reorganization. By this procedure the company is reorganized and creditors are satisfied by the selling of some assets or by the acquisition of residual rights. In other words, they become shareholders of the restructured company. As is well known, liquidation is regulated under Chapter 7 of the American Bankruptcy Code, whereas reorganization is regulated under Chapter 11. It is fair to say that almost all developed jurisdictions provide for similar alternatives.

In each jurisdiction bankruptcy law is intimately related to debtor-creditor law and in particular to secured interests law. Ideally, the bankruptcy proceeding should respect the priority regime among creditors provided for by law and

[41] This conclusion assumes that taking the US regime without necessarily entering the US capital market increases the level of investment in the Italian company.

[42] For a general introduction to the theory of bankruptcy law see Cabrillo/Depoorter, 1999, Bankruptcy Proceedings, in Encyclopaedia of Law and Economics, available at http://encyclo.findlaw.com/tablebib.html.

[43] See Cabrillo and Deeporter, op. cit., and Aghion, Bankruptcy and its Reform, in Newman (edited), The New Palgrave Dictionary of Economics and the Law, pp. 143-148, Stockton Press.

by contractual terms of credit contracts.

Single jurisdictions provide a bankruptcy regime that in theory presents the objectives and the devices described above. The problem becomes more complex if one considers bankruptcy cases of corporations that present assets and business in several jurisdictions. In these cases there are basically two possible legal solutions: universalism and territorialism.[44]

Universalism is when a single jurisdiction - usually the home-country jurisdiction of the insolvent company - becomes the sole one to deal with the entire bankruptcy proceeding: all assets are adjudicated and managed by this single jurisdiction according to its law (i.e. choice of forum and choice of law). According to two prominent scholars, universalism is more efficient than territorialism because it does not ex ante distort a corporation's investment strategy.[45]

On the other hand, the choice of the home-country jurisdiction may not be entirely clear ex ante as supporters of the theory argue by referring to its ex ante predictability. In fact the home-country test could lead to different solutions according to the connecting factors used to specify it.[46]

The second legal solution generally referred to, in order to deal with transnational insolvencies is territorialism. According to this system there are as many procedures as the number of jurisdictions where the insolvent company has assets. Each jurisdiction deals with local assets and with local creditors. This system is thought to be more favourable to local creditors because they have to deal with a procedure they know and that is less expensive than the foreign one. Territorialism furthermore ensures that jurisdictions manage the bankruptcy proceeding more in line with their objectives. These may also include redistributional concerns in favour of particular categories of parties as employees, suppliers or the local community.[47]

In the USA, the Bankruptcy Code is federal regulation and provides a coherent system to deal with insolvencies that present assets split countrywide.[48]

It is worth noting that even in the presence of a monopolistic supply of federal regulation, the US system is currently experiencing the phenomenon of forum shopping in the application of such regulation. Indeed, in the USA large public corporations seem to prefer to file bankruptcy proceeding for Chapter 11 in Delaware.[49]

[44] See as a general introduction to the topic Franken, 2005, Three Principle of Transnational Corporate Bankruptcy Law: A Review, in European Law J., 11:232-257.

[45] See Bebchuk/Guzman, 1999, An Economic Analysis of Transnational Bankruptcies, in J. of Law and Economics, 42:775-808.

[46] On the point see Franken, 2005, op. cit., p. 236.

[47] To these other goals of a bankruptcy system sponsored by "traditionalists" as he calls them, critically refers Schwartz, 1998, A Contract Theory Approach to Business Bankruptcy, in Yale Law J., 107:1807-1851, p. 1815.

[48] We do not take into consideration bankruptcy proceedings that are transnational for the USA, i.e. involve the USA and one or more several foreign countries. These proceedings are regulated under the new Chapter 15 of the Bankruptcy Code. On the new regime see Rüfner, 2005, Neues internationales Insolvenzrecht in den USA, in ZIP, 26:1859-1865.

[49] The real consequences of such a phenomenon of forum shopping are object of debate. See on opposite positions Rasmussen/Thomas, 2000, Timing Matters: Promoting Forum Shopping by Insolvent Corporations, in Northwestern University Law R., 94:1357-1408 and LoPucki,

This phenomenon replicates for bankruptcy proceeding the same pattern we know for corporate law. However, this is true solely with respect to the choice of the forum and not to the applicable law which is and remains monopolistic federal regulation (on the contrary, Delaware corporate judges apply Delaware statutory law).

The European Union has implemented a Regulation that deals with European transnational insolvencies.[50]

The Regulation provides a mixed bankruptcy system where universalism and territorialism work together. According to Article 3 Reg., the court of the Member State where the company has its centre of main interests is competent for opening the insolvency procedure (so-called Centre of Main Interest -COMI). For companies or legal entities this centre of interest is furthermore supposed (until contrary proof) to coincide with the place where the company's registered office is located.[51]

This is the main proceeding or principal insolvency procedure. Article 3.2 provides that courts of other Member States can open a secondary procedure (i.e. one for each Member State) if the company has an establishment within their territories. These procedures are the secondary procedures and are limited to the management of the assets located in the Member State where they are opened. With respect to the issue of applicable law, according to Articles 4 and 28 Reg. each court will apply the law of its State (lex fori concursus the content of which is more specifically provided by Article 4.2). In the Regulation, universalism and territorialism work together because the system provides for a coordination between principal procedure and secondary procedures in the management of assets particularly with respect to mutual recognition of the openings of main proceeding (Article 16 Reg.), powers of liquidators of the several procedures (Article 18) and their coordination (Article 31) and most importantly rights and obligations of creditors particularly with respect to lodging of claims (Article 32). Finally, the Regulation provides for a system of mutual recognition of courts' decisions (Articles 17, 25 and 27).

As mentioned, the connecting factor for determining the jurisdictional competence of the principal procedure according to Article 3.1 is the centre of main interest (COMI). The COMI is not really defined by the Regulation but only qualified in Recital 13 as the place where the debtor conducts the administration of his interests on a regular basis and is therefore ascertainable by third parties. In spite of intuitive simplicity, this connecting factor seems to be quite unclear thereby leaving space for judicial interpretations that lead to the simultaneous presence of several centres of main interests where a principal procedure may be opened.[52]

2001, Can the Market Evaluate Legal Regimes? A Response to Professors Rasmussen, Thomas, and Skeel, in Vanderbilt Law R., 54:331-355.

[50] Regulation EC 1346/2000.

[51] According to the conflict-of-law rules of several Member States, following both the real seat theory and the incorporation theory, the place (i.e. the Member State) where the company's registered office is, should coincide with the place of incorporation (i.e. the Member State of incorporation).

[52] On this point see Kübler, Der Mittelpunkt der hauptsächlichen Interessen nach Art. Abs 1

On the other hand, some scholars report that the lack of clarity regarding the connecting factor COMI may lead to its misuse on the part of the management of a company: where a choice of Member State for filing the insolvency procedure (venue choice) exists, this may be made according to personal decisions that do not take into consideration creditors' interest.[53] In economic terms this would be a form of ex post opportunism.

This means that also the context of the European Union where conflict-of-law issues in bankruptcy law have been unified to coordinate transnational insolvencies may become germane to a regulatory competition system for filing bankruptcies procedures.

So far we have analyzed the current real and legal situation both in the United States and in Europe. Now we pass to the next stage and we briefly analyze the literature that argues that regulatory competition should be granted also in the area of bankruptcy law. Indeed, also in the bankruptcy context the theory of regulatory competition has proved to be pertinent for new theoretical developments. The idea is that as corporations are able to choose ex ante their jurisdiction of incorporation so they should be allowed to choose ex ante their applicable law and maybe also the forum. The basic idea is that corporations are not homogeneous structures and that a single regulatory solution is not optimal.[54]

Some American scholars have argued in favour of a decentralization of bankruptcy law. One of them proposed the decentralization of bankruptcy law as an alternative to federal monopolistic supply.[55] The idea is to combine corporate law and bankruptcy law, giving competence for both to the states.

More recently, another author proposed to resolve international insolvencies giving corporations the possibility to choose ex ante the forum that will provide bankruptcy law applying its own law by putting a clause in the corporate charter.[56]

This contractarian approach to bankruptcy law that applies principles of free choice of law and of forum has found attention also in the European debate. In the context of the European Union, some scholars have started to think about

---

EuInsVO, in Schilken/Kreft/Wagner/Eckardt, (hrsg.) 2004, Festschrift für Walter Gerhardt, RWS Verlag, pp. 427-562, pp. 540. On the COMI standard and a first decision by the European Court of Justice, see Bachner, The Battle over Jurisdiction in European insolvency Law, in European Company and Financial law R., 3:310-329.

[53] On this point see Eidenmüller, 2005, Free Choice in International Insolvency Law in Europe, in European Business Organization Law Rev., 6:423-447, p. 428; see also Franken, 2005, op. cit., pp. 248. Stressing the same point as well as the fact that also creditors could force forum shopping see Enriques/Gelter, 2005, How the Old World Encountered the New One: Regulatory Competition and Cooperation in European Corporate and Bankruptcy Law, working paper available at www.ecgi.org.wp, pp 45.

[54] On the same idea that a single regulation is not necessarily optimal for all companies is the starting intuition of Schwartz, op. cit., for his freedom of contract approach to corporate bankruptcy inside the Bankruptcy Code.

[55] See Skeel, 1994, Rethinking the line between corporate law and corporate bankruptcy, in Texas Law R., 72:471-553.

[56] See Rasmussen, 1997, A New Approach to Transnational Insolvencies, in Michigan Journal of International L., 19:1-36; see also Rasmussen, 2000, Resolving Transnational Insolvencies through Private Ordering, in Michigan Law R., 98:2252-2275.

the possibility of extending free choice of law also to bankruptcy law to solve transnational insolvencies in the EU. Scholars disagree on the opportunity to permit companies to choose a bankruptcy law different from the Member State that provides corporate law.[57]

Substantially, this problem is one of compatibility between company law and bankruptcy law in terms of coordination mechanisms between the two regulations as regard to protection of creditors.

4 The basic model

We develop a simplifying model for our analysis taking into consideration the demand side and the supply side.

On the demand side, referring to Jensen and Meckling (1976), we implicitly assume the existence of two agency problems inside the corporation.[58] We then imagine a situation in which shareholders-managers have to decide where to incorporate the company. The jurisdiction of incorporation will provide the corporate law of the company. Shareholders-managers have also to decide the jurisdiction that will provide securities regulation and the bankruptcy law. For simplicity we assume that all three systems of regulation follow the rule of the lex fori. This means that jurisdiction and applicable law do coincide. In other words if the company is incorporated in jurisdiction A, a court of this jurisdiction will be competent and will apply the company law of jurisdiction A.[59]

The corporate charter of the company will include a choice of applicable law-jurisdiction with respect to company law as provided for by the jurisdiction of incorporation. This corporate law will provide all the rules generally referred to as the internal affairs doctrine of the corporation. This concept is an American one but does have a companion also in Europe and is generally referred to as the personal statute of the company (Gesellschaftsrechtstatut). The corporate charter of the company will also include a choice with respect to the securities

[57] See Eidenmüller, op. cit., proposing a combination of corporate law and bankruptcy law provided both by the same Member State and enforced by its unique forum (same lex fori concursus and societatis) and Franken, op. cit., who arguing on the basis of a supply side perspective (i.e. the incentives to provide efficient bankruptcy law) proposes the possible divergence of applicable bankruptcy law and company law but retaining the principle of the lex fori for both.

[58] From a strictly technical point of view, the model we are dealing with is not a principal-agent model. Nevertheless, the profit function that we use for the corporation can be seen as a reduced form of the traditional framework. Moreover, the main focus of our analysis is not on relations inside the firm but rather on the effect of a regulatory competition regime on the corporation as a whole.

[59] In fact we could imagine a more complex situation where jurisdictional competence and applicable law are provided by two different jurisdictions, this meaning e.g. a court of jurisdiction A will apply the securities regulation of jurisdiction B. Scholars who are familiar with issues of international private law know that this is possible. Other scholars have enriched the regime, proposing for the EU that an arbitration body and not a national court applies the law of the Member State of incorporation. See Kirchner/Painter/Kaal, 2005, Regulatory Competition in EU Corporate Law after Inspire Art: unbundling Delaware's Product for Europe, in European Corporate and Financial Law R., 2:159-206.

regulation regime corresponding to the jurisdiction of registration. This regime will provide the disclosure requirements as generally intended to in the field of securities regulation. The corporate charter will also provide a clause that will identify the bankruptcy law corresponding to the jurisdiction of filing for bankruptcy. This choice will per se imply a choice in relation to a reorganization system or a liquidation system and will also imply a choice for a universalist approach meaning that the substantive bankruptcy law of the chosen jurisdiction will be applied.

We specify that our model is a one period model, i.e. the ex ante choice of applicable law for the three regulations cannot be modified ex post. Of course one could complicate the model imagining a world where ex post modification is possible by unanimity or majority.

We then imagine that managers by means of an IPO sell 100% of the equity securities as well as debt securities respectively to shareholders and bondholders. As a result the company will have dispersed ownership. In order to decrease the costs of equity and debt (i.e. the costs of financing of the corporation that in our model corresponds to the agency costs of equity and debt) they have to choose the combination of the jurisdictions that minimizes such agency costs (or costs of financing). As in Jensen and Meckling, shareholders and bondholders do not really suffer from an asymmetric information problem and are able to evaluate the goodness of managers' choice by discounting ex ante the price at which they buy securities. In other words managers (in the relationship shareholders-managers) and shareholders (in the relationship shareholders-creditors) bear the agency costs of the principal-agent relationship (i.e. bonding costs, monitoring costs and residual losses).[60]

In our model, shareholders and bondholders are able to discount ex ante the agency problem/costs. These include the costs associated with the quality of the incentive structure provided by the different jurisdictions as combined by the managerial choice of applicable laws/forums. In other words, shareholders and bondholders are able to discount ex ante the coordination problems caused by a divergence in the substantive provisions of the three regimes between e.g. the company law of jurisdiction A, the securities regulation of jurisdiction B and the bankruptcy law of jurisdiction C. These coordination problems create costs that we qualify as agency costs that are ex ante evaluated by the principles and properly discounted.

On the supply side we imagine a federal system like the EU or US but for the sake of simplicity composed solely by a federal jurisdiction and two lower jurisdictions. In each jurisdiction a regulator has lawmaking power with respect to the regulation of companies. The regulator bears the costs of creating, improving and enforcing the laws. On the other side, each regulator raises a franchise fee from each company that decides to adopt the laws made by that regulator. The aim of the regulator is to maximize the net fees (the difference

[60] As in the Jensen/Meckling model we assume that capital markets are efficient and all actors are characterized by rational expectation. We stress that the law & finance literature basically confirms that the price of securities is evaluated and discounted ex ante in a comparative way among jurisdictions.

between fees raised and costs of lawmaking), choosing the type and the quality[61] of the law produced. We build two different models and then we carry out a comparative static exercise in order to characterize the equilibrium choices of the two sides.

Basic Model: this model sketches a situation where either (i) one single jurisdiction (the federal one) provides one corporate governance package including corporate law, securities regulation and bankruptcy law and companies have to buy this single package or (ii) the two lower jurisdictions each provide a corporate governance package and companies may buy the corporate governance package from the jurisdiction they prefer. In the second case, the two lower regulators compete one against the other by choosing the type and the quality of the law provided.

In this model we compare the costs and benefits of the two alternatives (single supply or competitive supplies) in efficiency terms.

Extended Model: this extension allows us to analyze the situation where the different jurisdictions do not provide the single package of corporate governance, but instead provide the single products i.e. corporate law, securities regulation and bankruptcy law and companies are able to pick up the single laws from one jurisdiction, mixing for example company law of jurisdiction A with securities regulation of jurisdiction B and bankruptcy law from jurisdiction C. In this case we compare this decentralized supply of the three laws with the supply of a bundled package of the three by each regulator. For simplicity the model discusses the case of two symmetric jurisdictions where each jurisdiction provides two law products: a company/securities law product and a bankruptcy law product. This restriction does not modify in any way the generality of our findings.

4.1 Single vs. competing jurisdictions

In this model companies are heterogeneous in the sense that each company i has its one ideal type of corporate governance package t_i and its profit will be greater the more the type provided by the regulator is similar to the ideal type of that corporation.[62] Each type of corporate governance package can be provided by the lawmakers with different levels of quality $q \in [0, \overline{q}] \subseteq \mathbb{R}_+$ (a higher q means a greater reduction in legal uncertainty due to a better definition and coordination of terms among corporate, bankruptcy and security provisions, faster court decisions due to a higher number of judges and better enforcement).

Companies differ in their value of t_i and these values belong to the closed interval $t_i \in \left[\underline{t}, \overline{t}\right] \subseteq \mathbb{R}_+$. If $T \in \left[\underline{t}, \overline{t}\right]$ is the type of corporate governance package provided by the regulator in the jurisdiction chosen by company i and f is the franchise fee paid to the regulator by the company, the pay-off of company i is

[61] With the term quality we refer to the effort, that the regulator may apply, to refine provisions and/or to establish a higher level of enforcement.

[62] The importance of heterogeneity of companies in relation to their needs is discussed and assumed also by Hadfield/Talley, op. cit.

given by

$$\pi(t_i) = q - (t_i - T)^2 - f \quad (1)$$

Each jurisdiction faces some costs in providing the regulation. The costs increase with the quality level ($q \in [0, \overline{q}]$) of the law provided. The cost function of each jurisdiction is given by

$$c(q) = mq + F \quad (2)$$

where m is the marginal cost of quality and F are the fixed costs, $h(t)$ is the density function of the companies belonging to the jurisdiction and H is the support of $h(t)$.

In each jurisdiction the law is provided by a regulator that raises a sum of franchise fees proportional to the share of the companies choosing its jurisdiction. The aim of regulators is to maximize the net value of the fees (the difference between raised fees and the costs of providing and enforcing the legislation). Thus the objective function of the generic regulator is

$$\max_{q,T} V = \int_{t \in H} f \cdot h(t)\, dt - c(q) \quad (3)$$

In order to avoid multiple equilibria in the case of a single jurisdiction we make the following assumption.[63]

Assumption 1 *If different values of (q, T) allow for a raise in the same level of fees then the regulator will choose the value that maximizes the sum of the companies' payoffs: $\int \pi(t)\, h(t)\, dt$.*

With this behavioral assumption we are simply stating that the regulator has no reason to harm companies if it cannot gain anything from such an action.

4.2 Equilibrium outcomes

From now onwards, for the sake of simplicity we will assume that companies are distributed uniformly[64] over the support $[\underline{t}, \overline{t}]$.

In the following subsections we will characterize the market equilibria both in the case of a single self-interested regulator and in the case of multiple competing self-interested regulators. In the last subsection we compute the social welfare in both cases and we draw some conclusions.

[63] We stress that the single jurisdiction case is just a benchmark that we will use later in order to evaluate the welfare properties of the regulatory competition regime. Discussing the multiple equilibria issue would make the analisys less straightforward without adding any interesting insight.

[64] This assumption is common to many models of product differentiation. See for instance the well known Linear City model in Mas-Colell/Whinston/Green, 1995, Microeconomic Theory, Oxford University Press. Nevertheless we are aware that if the distribution is not uniform some of the results shown in the following subsections may be subject to slight changes.

4.2.1 Single jurisdiction

Without competition the single regulator has no incentive to improve the qualitative level of legislation. In fact all the firms are forced to choose the only existing corporate governance package and any improvement in the quality of the legislation is costly but does not increase the revenues for the jurisdiction. Thus the regulator will provide the lower possible law quality: $q = 0$. Since for any choice of T the regulator will raise the same level of fees, from assumption 1 it follows that its choice will be to maximize the sum of the companies' payoffs.

$$T^* = \arg\max \int \pi(t)\, h(t)\, dt = \arg\max \int_{\underline{t}}^{\overline{t}} \left[q - (t - T)^2 - f \right] \frac{1}{\overline{t} - \underline{t}} dt \tag{4}$$

Hence the type of law produced by the regulator will be the one preferred by the median company $T^* = \frac{[\overline{t}+\underline{t}]}{2}$. Thus it must be true that the following lemma holds.

Lemma 1 *A single regulator will provide the kind of corporate governance package that is preferred by the median firm with the least possible qualitative level.*

4.2.2 Two competing jurisdictions

Let now analyze the case of two competing jurisdictions. If freedom of choice is allowed, each company may choose the preferred kind of corporate governance package by choosing the jurisdiction of incorporation. Thus, each company will choose the regulator that maximizes the company pay-off. Thus, company i in choosing between jurisdiction j and k will decide for the incorporation in jurisdiction j if and only if

$$q_j - (t_i - T_j)^2 - f > q_k - (t_i - T_k)^2 - f \tag{5}$$

Equation 5 allows us to define the behavior of the companies for each possible choice made by regulators with just one exception: the case in which both regulators choose the same kind of law with the same level of quality. In order to give a complete definition of firms' behavior we make another assumption.

Assumption 2 *If the two regulators choose to provide the same type of law ($T_j = T_k$) with the same level of quality ($q_j = q_k$) then half of the companies will choose to adopt the laws of the first jurisdiction and the second half will choose to adopt those of the second jurisdiction.*

Since our main interest is to study the choices of the competing regulators with respect to the type of law produced and its quality level, we assume that the regulators take as given the level of the franchise fees paid by each company and choose only the type and the quality of the laws created. Thus, for the sake of symplicity we assume that

Assumption 3 *The two jurisdictions always require the payment of the same franchise fee.*

Moreover we add two additional assumtpions

Assumption 4 $f > 2F$ *and* $\overline{q} \leqslant \frac{1}{m}\left(\frac{1}{2}f - F\right)$

Assumption 4 guarantees that the cost functions are such that the existence of two jurisdictions is sustainable. If it's not satisfied, in the long run one of the two, at least, must go bankrupt, if additional sources of funds are not available.

Assumption 5 $\frac{f}{2m} > \left(\overline{t} - \underline{t}\right)^2$

This assumption states that the degree of differentiation between the types of law provided by the regulators cannot be too wide.

Lemma 2 *For any value of T choosen by the competitor the lawmaker will choose the highest level of quality.*

Proof. Let us assume that in equilibrium $T_j = T_k$. The regulator that chooses the highest level of quality will attract all the companies. The one with the lower level of quality will earn negative profits since it pays the costs of the lawmaking but it does not raise any fee. Thus both the regulators will choose the highest quality value.

Let us assume that in equilibrium $T_j \neq T_k$. Without any loss of generality we can assume that $T_j > T_k$. From equation 5 it follows that any company i such that $t_i > \frac{1}{2}\left(\frac{q_k - q_j}{T_j - T_k} + T_j + T_k\right)$ will incorporate in jurisdiction j. All the others will choose jurisdiction k. Hence the demand for incorporation in jurisdiction j will be

$$D_j\left(q_j, T_j\right) = \frac{1}{\overline{t} - \underline{t}}\left[\overline{t} - \frac{1}{2}\left(\frac{q_k - q_j}{T_j - T_k} + T_j + T_k\right)\right] \tag{6}$$

and the demand for incorporation in jurisdiction k will be

$$D_k\left(q_k, T_k\right) = \frac{1}{\overline{t} - \underline{t}}\left[\frac{1}{2}\left(\frac{q_k - q_j}{T_j - T_k} + T_j + T_k\right) - \underline{t}\right] \tag{7}$$

Since each jurisdiction aims to maximize its own fees it will face the following problem

$$\max_{q,T} V = fD\left(T, q\right) - g\left(q\right) - F \tag{8}$$

If we compute the first order condition with respect to quality for the two regulators we find the following

$$\frac{\partial V_j}{\partial q_j} = \frac{f}{2\left(\overline{t} - \underline{t}\right)}\left[\frac{1}{T_j - T_k}\right] - m \tag{9}$$

$$\frac{\partial V_k}{\partial q_k} = \frac{f}{2\left(\overline{t} - \underline{t}\right)}\left[\frac{1}{T_j - T_k}\right] - m \tag{10}$$

Given assumption 4, the two derivatives are always greater than zero thus lemma 2 holds. ■

Lemma 3 *In equilibrium the two regulators will provide the same type of law* $T_j = T_k = \frac{[\overline{t}+\underline{t}]}{2}$.

Proof. If $T_j \neq T_k$, without any loss of generality we can assume that $T_j > T_k$. From equations 6, 7 and 8 we can compute the first order conditions with respect to the type

$$\frac{\partial V}{\partial T_j} = \frac{f}{2\left(\overline{t} - \underline{t}\right)} \left[\frac{q_k - q_j}{\left(T_j - T_k\right)^2} - 1 \right] \tag{11}$$

$$\frac{\partial V}{\partial T_j} = \frac{f}{2\left(\overline{t} - \underline{t}\right)} \left[\frac{q_k - q_j}{\left(T_j - T_k\right)^2} + 1 \right] \tag{12}$$

Since from lemma 2 we know that in equilibrium $q_k = q_j = \overline{q}$, then condition 11 is always negative and condition 12 is always positive. This implies that for any choice of T made by the opponent the best reply is to choose a value for the type which is as close as possible to that value.

On the other hand if $T_j = T_k = T$, without any loss of generality we can assume that $T > \frac{[\overline{t}+\underline{t}]}{2}$. Since from lemma 2 $q_k = q_j$ then each of the two regulators may increase its revenues by a slightly reduction in its choice of T but only up to the point in which $T_j = T_k = \frac{[\overline{t}+\underline{t}]}{2}$. Thus lemma 3 is true. ■

4.2.3 Welfare comparison

Comparing the results and summing up the welfare effects we reach the following conclusions.

Proposition 1 *If the degree of differentiation between the types of law provided by the regulators cannot be too wide, then the comparison between the single jurisdiction case and the two jurisdictions case leads to three conclusions.*

a) *The regulators are better off in the case of a single regulator. The welfare of regulators is maximum.*

b) *The companies are better off when two regulators compete one against the other. The welfare of companies is maximum.*

c) *A regulatory competition regime is welfare improving if and only if the value given by the company to a high quality legislation ($q = \overline{q}$) is greater than the increment in fixed costs of an additional jurisdiction plus the value of all the variable costs arising from the increase in the quality of legislation in both jurisdictions.*

Proof. Let us prove each sub-proposition individully.

a) To prove this part it is sufficient to see that in the case of a single jurisdiction the welfare of the regulator is $V_s = f - F$ thus, from assumption 4 $V > 0$. On the contrary, when two jurisdictions compete, from lemma 2 it follows that

$$V_j = V_k = \frac{1}{2} f - m\overline{q} - F \tag{13}$$

and

$$V_j + V_k = f - 2m\overline{q} - 2F < f - F = V_s \tag{14}$$

b) Lemma 2 and 3 state that the equilibrium level of q is the only difference between the equilibrium with a sole regulator and the equilibrium when there are two regulators. Thus the welfare of any company will be greater when the regulators compete. In fact for any company t_i holds

$$\overline{q} - (t_i - T)^2 - f > -(t_i - T)^2 - f$$

c) The social welfare with a single regulator is just $SW_s - F - \int_{\underline{t}}^{\overline{t}} \left(t_i - \frac{[\overline{t}+\underline{t}]}{2} \right)^2$ and, from equation 13 it follows that in the case of competing jurisdictions the social welfare is:

$$SW_c = -2m\overline{q} - 2F + \overline{q} - \int_{\underline{t}}^{\overline{t}} \left(t_i - \frac{[\overline{t}+\underline{t}]}{2} \right)^2$$

Thus, having a regulatory competition regime lead to an increase in the social welfare if and only if $\overline{q} > 2m\overline{q} - F$. ■

5 The extended model: bundled vs. unbundled provision of laws

In order to discuss the choice between allowing or forbidding forum shopping for different laws (e.g. the possibility of taking corporate/securities law from jurisdiction j and bankruptcy law from jurisdiction k), we extend the model presented in the previous sections. The ideal type of corporate governance package of company i is here identified by two different parameters: $t_{i,c}$, the type of the corporate/securities law included in the package provided by the regulator and $t_{i,b}$, the type of the bankruptcy law included. As in the case of the simpler model, the company's gain will be greater the more similar the type provided by the regulator are to the ideal couple of that corporation. Each type of corporate governance package can be provided by the regulators with different levels of quality $q \in [0, \overline{q}]$. Since the quality is linked with common elements of different laws provided by the same jurisdiction (such as, the effectiveness of courts) we assume that the different laws in the same jurisdiction will be provided with the same qualitative level.

Companies differ in their value of the couple $(t_{i,c}, t_{i,b})$ and these values belong to the Cartesian product $[\underline{t}, \overline{t}] \times [\underline{t}, \overline{t}]$. Thus, if j is the jurisdiction from which the company takes the corporate/securities laws and k is the jurisdiction chosen for the bankruptcy law, the pay-off of company i is given by

$$\pi(t_{i,c}, t_{i,b}) = \frac{1}{2}q_j - \frac{1}{2}(t_{i,c} - T_j)^2 + \frac{1}{2}q_k - \frac{1}{2}(t_{i,b} - T_k)^2 - \frac{1}{2}(T_j - T_k)^2 - f \tag{15}$$

where $\frac{1}{2}(T_j - T_k)^2$ is a measure of the additional costs arising from the lack of harmonization when a company does not take all the laws from the same jurisdiction. The cost function of lawmaking is the same used in Model 1:

$$c(q) = g(q) + F \tag{16}$$

where F are the fixed costs and g is a strictly increasing function such that $g\prime > 0$, $g" > 0$, $g(0) = 0$, $\lim_{q \to +\infty} g'(q) = +\infty$.

As in the previous model each regulator raises a sum of franchise fees (f) proportional to the share of companies choosing its jurisdiction and its aim is to maximize the net value of the fees.

5.1 Equilibrium outcomes

Here too, for the sake of simplicity, we assume that the companies are distributed uniformly over the support $[\underline{t}, \overline{t}] \times [\underline{t}, \overline{t}]$. We begin with the case in which the companies are forced to take all the laws from the same jurisdiction. Then, since no harmonization costs arise $(T_j - T_k)^2 = 0$.

5.1.1 Two competing jurisdictions with bundled provision of laws

With two jurisdictions, each company may choose the preferred kind of corporate governance package by choosing the jurisdiction of incorporation. Thus, each company will choose the regulator that maximizes the company pay-off. Thus, company i in choosing between jurisdiction j and k will decide for the incorporation in jurisdiction j if and only if

$$q_j - \frac{1}{2}(t_{i,c} - T_j)^2 - \frac{1}{2}(t_{i,b} - T_j)^2 > q_k - \frac{1}{2}(t_{i,c} - T_k)^2 - \frac{1}{2}(t_{i,b} - T_k)^2 \tag{17}$$

Condition 17 allows us to define the behavior of the companies for each possible choice made by regulators with just one exception: the case in which both regulators choose the same kind of law with the same level of quality. In order to give a complete definition of companies' behavior we make the following assumption.

Assumption 6 *If the two regulators choose to provide the same type of law ($T_j = T_k$) with the same level of quality ($q_j = q_k$) then half of the companies will choose to incorporate in the first jurisdiction and the second half will choose to incorporate in the second jurisdiction.*

Also in this model we keep the assumption that

Assumption 7 *The two jurisdictions always require the payment of the same franchise fee.*

Also in this model we get the following result

Lemma 4 *With bundled provision of laws there is no simmetric equilibrium with $T_j \neq T_k$.*

In this case too, the result is quite easy to prove by contradiction.

Proof. Let us assume that in equilibrium $T_j \neq T_k$. Without any loss of generality we can assume that $T_j > T_k$. From equation 17 it follows that any company i such that $t_{i,c} + t_{i,b} > (T_j + T_k) - \frac{(q_j - q_k)}{(T_j - T_k)}$ will incorporate in jurisdiction j. All the others will choose jurisdiction k. Hence, defining $\Phi(T_j, T_k, q_j, q_k) = \left[(T_j + T_k) - \frac{(q_j - q_k)}{(T_j - T_k)}\right]$, the demand for incorporation in jurisdiction j will be

$$D_j(q_j, T_j) = \begin{cases} 1 & iff \quad \Phi \leqslant 2\underline{t} \\ 1 - \frac{(\Phi - \underline{t})^2}{2(\overline{t} - \underline{t})^2} & iff \quad 2\underline{t} < \Phi \leqslant \underline{t} + \overline{t} \\ \frac{(2\overline{t} - \Phi)^2}{2(\overline{t} - \underline{t})^2} & iff \quad \underline{t} + \overline{t} < \Phi \leqslant 2\overline{t} \\ 0 & iff \quad \Phi > 2\overline{t} \end{cases} \tag{18}$$

and the demand for incorporation in jurisdiction k will be

$$D_k(q_k, T_k) = \begin{cases} 0 & iff \quad \Phi \leqslant 2\underline{t} \\ \frac{(\Phi - \underline{t})^2}{2(\overline{t} - \underline{t})^2} & iff \quad 2\underline{t} < \Phi \leqslant \overline{t} + \underline{t} \\ 1 - \frac{(2\overline{t} - \Phi)^2}{2(\overline{t} - \underline{t})^2} & iff \quad \underline{t} + \overline{t} < \Phi \leqslant 2\overline{t} \\ 1 & iff \quad 2\overline{t} < \Phi \end{cases} \tag{19}$$

Each jurisdiction aims to maximize its own fees and faces the following problem

$$\max_{q,T} V = fD(T, q) - g(q) - F \tag{20}$$

Since the regulators have the same cost function, we restrict our analisys to the set of symmetric equilibria; namely the ones in which $T_j = \overline{t} + \underline{t} - T_k$ and $q_j = q_k$, hence $\Phi = \underline{t} + \overline{t}$. Without loss of generality we analyse the first order condition for regulator j. The first order condition for the choice of quality for regulator j is

$$f \frac{(\Phi - \underline{t})}{2(\overline{t} - \underline{t})^2 (T_j - T_k)} = g'(q_j) \tag{21}$$

thus the lower the difference between the type of law chosen by the two regulators is, the higher the quality level chosen by the two regulators in the simmetric equilibria will be.

At the same time the derivative of the net revenues with respect to T is always negative for any simmetric choice of q and T.

$$\frac{\partial V}{\partial T_j} = -f \frac{\left[1 + \frac{(q_j - q_k)}{(T_j - T_k)^2}\right](\Phi - \underline{t})}{(\overline{t} - \underline{t})^2} < 0 \tag{22}$$

Hence for any choice of T and q made by the opponent the other regulator may increase its profits by choosing a value of T closer to the one chosen by the opponent and adjustung the quality level in order to satisfy equation 27. Thus, every symmetric choice of (T, q), with $T_j \neq T_k$, is not a Nash equilibrium. ■

Lemma 5 *With two competing regulators, there is a unique symmetric Nash equilibrium. In such equilibrium the type of law provided by the two regulators is the same in both jusrisdictions and the equilibrium quality level of the legislation is the highest possible* $q_{j,k} = \overline{q}$

Proof. Lemma 4 implies that if a symmetric equilibrium exists then it cannot be true that $T_j \neq T_k$. Let assume $T_j = T_k$. In this case a symmetric equilibrium exists only with $T_j = T_k = \frac{\overline{t}+t}{2}$. Then from condition 22 it follows that no regulator can gain anything by changing the value of T. At the same time, since $T_j = T_k$, the regulator that sets the higer level of q will attract all the companies. Thus, for any choice of q made by the opponent any regulator can gain by choosing a higher level of q. Then the unique symmetric choice of strategies such that none of the regulators can gain with a unilateral departure is the couple of strategies $(q_j, T_j) = (q_k, T_k) = \left(\overline{q}, \frac{\overline{t}+t}{2}\right)$. ■

5.1.2 Two competing jurisdictions with unbundled provision of laws

Here the generic company i faces two further alternatives: it could take both the components of the corporate governance package (corporate/securities laws and bankruptcy law) from the same jurisdiction or take the two components from different jurisdictions. In the latter case it will face the additional legal uncertainty arising from the lack of harmonization that may be present. In fact if a company chooses different laws from different jurisdictions, it will face a harmonization cost $(T_j - T_k)^2$ that is greater the bigger the distance between the types of law provided by the two jurisdictions is.

The profit function of the company will depend by its choice with respect to the laws taken; in the following s_1 is the jurisdiction chosen for the corporate/securities laws and s_2 is the jurisdiction chosen for the bankruptcy law.

$$\pi(s_1, s_2) = \begin{cases} q_j - \frac{1}{2}(t_{i,c} - T_j)^2 - \frac{1}{2}(t_{i,b} - T_j)^2 & s_1 = s_2 = j \\ \begin{array}{l} \frac{1}{2}q_k - \frac{1}{2}(t_{i,c} - T_k)^2 + \frac{1}{2}q_j + \\ -\frac{1}{2}(t_{i,b} - T_j)^2 - \frac{1}{2}(T_j - T_k)^2 \end{array} & s_1 \neq s_2 = j \\ q_k - \frac{1}{2}(t_{i,c} - T_k)^2 - \frac{1}{2}(t_{i,b} - T_k)^2 & s_1 = s_2 = k \\ \begin{array}{l} \frac{1}{2}q_j - \frac{1}{2}(t_{i,c} - T_j)^2 + \frac{1}{2}q_k + \\ -\frac{1}{2}(t_{i,b} - T_k)^2 - \frac{1}{2}(T_j - T_k)^2 \end{array} & s_1 \neq s_2 = k \end{cases}$$

Using the profit function it is possible to compute the demand of law adoption faced by each jurisdiction. There will be four groups of companies with different demands: a) those that take both the laws from jurisdiction j, whose

maximum gain is given by $\pi(j,j)$ and whose share of the companies' population will be $D_{j,j}$, b) those that take only bankruptcy law from jurisdiction j and whose share will be $D_{k,j}$, c) those that take only corporate law from jurisdiction j $(D_{j,k})$ and, finally, those that take both the laws from jurisdiction k $(D_{k,k})$.

In order to simplyfy the notation let us define

$$\alpha \equiv \frac{(q_j - q_k)}{(T_j - T_k)} \quad \text{and} \quad \Phi \equiv \left[(T_j + T_k) - \frac{(q_j - q_k)}{(T_j - T_k)}\right]$$

If we assume $T_j \neq T_k$ and, without any loss of generality, we take the case $T_j > T_k$ then the demand functions are

$$D_{j,j}(\Phi) = \begin{cases} 0 & \Phi \geqslant 2\bar{t} \\ \frac{1}{(\bar{t}-\underline{t})^2}\left[\left(\bar{t} - T_k + \frac{1}{2}\alpha\right)^2 - \frac{1}{2}(T_j - T_k)^2\right] & 2\underline{t} < \Phi < 2\bar{t} \\ 1 & \Phi \leqslant 2\underline{t} \end{cases} \tag{23}$$

$$D_{j,k}(\Phi) = D_{k,j}(\Phi) = \begin{cases} 0 & \Phi \geqslant 2\bar{t} \\ \frac{1}{(\bar{t}-\underline{t})^2}\left(T_k - \frac{1}{2}\alpha - \underline{t}\right)\left(\bar{t} - T_j + \frac{1}{2}\alpha\right) & 2\underline{t} < \Phi < 2\bar{t} \\ 0 & \Phi \leqslant 2\underline{t} \end{cases} \tag{24}$$

$$D_{k,k}(\Phi) = \begin{cases} 0 & \Phi \geqslant 2\bar{t} \\ \frac{1}{(\bar{t}-\underline{t})^2}\left[\left(T_j - \frac{1}{2}\alpha - \underline{t}\right)^2 - \frac{1}{2}(T_j - T_k)^2\right] & 2\underline{t} < \Phi < 2\bar{t} \\ 0 & \Phi \leqslant 2\underline{t} \end{cases} \tag{25}$$

In order to simplify the computation but without any loss of generality we make the following assumption.

Assumption 8 *Let us secondly assume that the companies that decide to cross incorporate (i.e. taking corporate/securities laws from the first jurisdiction and the bankruptcy one from the second jurisdiction) pay half of the fees to the first jurisdiction and half to the second.*

Also here we get the usual result. Since there is no bundling each regulator faces two demand functions: the demand for the corporate/securities law D_c and the demand for the bankruptcy law D_b.

Lemma 6 *With two competing regulators and unbundled provision of laws, in the Nash equilibria, the quality level of legislation will be the same in both jurisdictions:* $q_i = q_j$.

Proof. Let us assume that in the Nash equilibrium $T_j = T_k$. In this case the regulator that provides the highest level of quality will clear the market. Thus, the competition between the two will push both the regulators to choose the

maximum level of quality under the constraint that the net value of the fees is not lower then zero. Since the regulators have the same cost function and given assumption 2, in the equilibrium they must choose the same level of quality. Thus if $T_j = T_k$, also $q_i = q_j$ must hold.

Let us now assume that in the Nash equilibrium $T_j \neq T_k$. Without any loss of generality we can analyse the case $T_j > T_k$. Thus, the demand functions will be the ones given by equations 23, 24 and 25. Given assumption 8, each regulator will face the following maximization problem

$$\max_{q_i,T_i} V = fD_{i,i}(\Phi)+\frac{1}{2}fD_{i,m}(\Phi)+\frac{1}{2}fD_{m,i}(\Phi)-g(q_i)-F \qquad i,m \in \{j,k\}, i \neq m \tag{26}$$

If we compute the first order conditions, with respect to q for the two regulators, we find that

$$\frac{dV_j}{dq_j} = 0 \Longleftrightarrow T_j - T_k = \frac{f\left(\bar{t}-\underline{t}\right)}{2\left(\bar{t}-\underline{t}\right)^2 g'(q_j) - f} \tag{27}$$

$$\frac{dV_k}{dT_k} = 0 \Longleftrightarrow T_j - T_k = \frac{f\left(\bar{t}-\underline{t}\right)}{2\left(\bar{t}-\underline{t}\right)^2 g'(q_k) - f} \tag{28}$$

and since in the Nash equilibria the two must hold simultaneously, and given that $g' > 0$ and $g" > 0$ this implies that also $q_i = q_j$ must hold in equilibrium. ■

Lemma 7 *With unbundled provision of laws there are three Nash equilibria. The first one is the same of the unbundled case: same type of law provided by both regulators and maximum quality. In the other equilibria, the regulators choose to provide different types of laws and the distance (differentiation) between the types of law provided is maximum:* $|T_j - T_k| = \bar{t} - \underline{t}$.

Proof. Let us assume that $T_j = T_k$. From lemma 6 we know that also $q_i = q_j$. It is straightforward to see that in this case none of the regulators may raise the net fees by changing T unilaterally, thus this is a Nash equilibrium.

Let us now assume that $T_j \neq T_k$. And let us take the case $T_j > T_k$. If we compute the f.o.c. with respect to T of problem 26 for the two regulators we find that

$$\frac{dV}{dT_j} = 0 \Longleftrightarrow T_j = \underline{t} - \frac{1}{2}\frac{(q_j - q_k)\left(\bar{t}-\underline{t}\right)}{(T_j - T_k)^2}$$

$$\frac{dV}{dT_k} = 0 \Longleftrightarrow +\frac{1}{2}\frac{(q_j - q_k)\left(\bar{t}-\underline{t}\right)}{(T_j - T_k)^2}$$

thus, given lemma 6 we find that in the second Nash equilibrium $(T_j, T_k) = \left(\underline{t}, \bar{t}\right)$ and $q_i = q_j$. Since $\underline{t}$ and $\bar{t}$ are the extreme values of the interval of feasible types of law, this means that we have a complete differentiation between the laws provided by the two regulators.

Finally, let us assume $T_j \neq T_k$. And let us take the case $T_j < T_k$. The case is the symmetric of the one already shown, and the Nash equilibria will be: $(T_j, T_k) = (\bar{t}, \underline{t})$ with $q_i = q_j$. ■

Moreover, with respect to the level of quality provided, we can prove also the following result.

Lemma 8 *With unbundled provision of laws the quality provided is the highest possible level in the equilibrium where $T_j = T_k$. In the other two equilibria it may be lower when the fixed costs of lawmaking are high with respect to the level of the franchise fees: $F \approx \frac{1}{2}f$.*

Proof. In the equilibrium where $T_j = T_k$ the regulator that provides the higher q will clear the market, thus the same argument we used to prove lemma 6 holds also here and the quality level provided by the regulators is

$$q^* = g^{-1}\left(\frac{1}{2}f - F\right) \tag{29}$$

In the other two equilibria, if one regulator raises the quality provided, it will gain just the companies that were indifferent between choosing among the two jurisdictions. In fact, condition 27 and 28 tell us that when $(T_j, T_k) = (\bar{t}, \underline{t})$ or $(T_j, T_k) = (\underline{t}, \bar{t})$, the quality level in the equilibrium is

$$\widehat{q} = g'^{-1}\left(\frac{f}{(\bar{t} - \underline{t})^2}\right) \tag{30}$$

Thus it follows that the quality level provided in the equilibria with differentiation is lower than the maximum when

$$f - g\left(g'^{-1}\left(\frac{f}{(\bar{t} - \underline{t})^2}\right)\right) > 2F$$

■

5.1.3 Comparison

Comparing the results and summing up we reach the following conclusions.

Proposition 2 *Comparing the bundled with the unbundled provision of laws within two jurisdictions that use the same lawmaking technology*

a) *If the provision of laws is bundled there will be a convergence in the equilibrium outcome between the kind and quality of the laws provided in the two jurisdictions. The quality level of the laws provided is the highest possible.*

b) *If the provision of laws is unbundled there are three equilibria. The first one is the same that we observe with the bundled provision of laws. In the two other equilbria there is a complete differentiation in the type of law provided by the two regulators and the qulity level may be lower than the maximum.*

c) *With unbundled provision of laws, in the equilibria with differentiation, the welfare for companies is lower than with bundled provision of laws.*

d) *With unbundled provision of laws, in the equilibria with differentiation, the welfare for the regulator may be higher than with bundled provision.*

Proof. The statement in point a) is simply a restatement of lemma 5.

The statement in point b) is simply a restatement of lemma 6, 7 and 8.

To prove the statement in point c) it suffices to compute the total welfare in the two cases. With bundled provision of laws the total gain for the companies is

$$q^* - \frac{1}{12}\left(\bar{t} - \underline{t}\right)^2 - f$$

and in the equilibria with differentiation is

$$\widehat{q} - \frac{1}{6}\left(\bar{t} - \underline{t}\right)^2 - f$$

and, since from lemma 8 we know that $q^* \geqslant \widehat{q}$ the lemma is proved.

To prove the statement in point d) it suffices to notice that with bundled provision of laws the net fees raised by the regulators are equal to zero and in the other case they are always greater ore equal than zero. The fees are greater than zero when $\widehat{q} < q^*$ and they are equal to zero if and only if $\widehat{q} = q^*$. ■

6 Conclusions

This paper takes the growing law and economics literature on regulatory competition vs. unification of laws in the field of corporate governance as a starting point in order to develop a model for comparing the two alternative regulatory regimes.

We have analyzed the effect of regulatory competition when companies have different preferences about the type of law that could be provided by the regulator and regulators may compete both with horizontal differentiation (offering different kinds of law) and vertical differentiation (offering the same kind of law with different standards of refinement and enforcement). Assuming that the costs of lawmaking are the same for all the jurisdictions and that the primary aim of regulators is to raise the maximal amount of fees, we have shown the following results.

Firstly, we have compared the case of a bundled provision of laws by a single regulator with the bundled provision by two competing regulators. Here we have found that in equilibrium there is a movement toward a convergence in the type of law provided by the competing jurisdictions. Moreover, the equilibrium type of law provided will be the same provided by a single regulator that cares about the profits of companies, if this does not harm the amount of fees the regulator is able to raise. However, since the single regulator lacks the incentive coming from competition, it will offer the bundle of laws with a qualitative level (refinement of provisions and effectiveness of the enforcement) lower than the

one provided by the competing regulators. Thus, even in the event of the single regulator regime being preferred by regulators that can raise higher net gains from fees and the regulatory competition regime being preferred by companies that can benefit from a higher qualitative level of the laws provided, it is not possible to say which is the more efficient. In fact, the social welfare maximizing regime depends upon the structure of the costs of lawmaking.

As a second step we compared the situation in which two regulators compete offering a bundled package of laws, covering all the needs of companies, and a situation in which companies are allowed to choose a different regulator for each type of law. In this case companies face also additional costs arising from the lack of harmonization between the different legislations. Assuming that the preferences are completely heterogeneous (each company expresses a different evaluation of each one of the laws bundled in the package), we have shown that when the provision of laws is unbundled there may be cases when instead of convergence in the type of law offered by the regulators, we see a complete differentiation in the law offered. In these cases, we find that competition may be not enough to push the regulator to offer the maximum level of quality and that companies may be worse of. It may seem counter-intuitive that an increase in the freedom of the corporations makes them worse off. Yet, as we have seen in the previous sections, if the regulators disintegrate the nexus of contracts, allowing companies to take even a single law from each jurisdiction, the final outcome could be a greater market power for regulators. In this case the regulators would be able to raise a greater rent from corporations, thus making the latter worse off in comparison with a regime where the freedom to pick up different laws from different jurisdictions is not allowed.

european corporate governance institute

about ECGI

The European Corporate Governance Institute has been established to improve *corporate governance through fostering independent scientific research and related activities.*

The ECGI will produce and disseminate high quality research while remaining close to the concerns and interests of corporate, financial and public policy makers. It will draw on the expertise of scholars from numerous countries and bring together a critical mass of expertise and interest to bear on this important subject.

The views expressed in this working paper are those of the authors, not those of the ECGI or its members.

www.ecgi.org

european corporate governance institute

ECGI Working Paper Series in Law

Editorial Board

Editor: Guido Ferrarini, Professor of Law, University of Genova & ECGI

Consulting Editors: Theodor Baums, Director of the Institute for Banking Law, Johann Wolfgang Goethe University, Frankfurt & ECGI
Paul Davies, Cassel Professor of Commercial Law, London School of Economics and Political Science & ECGI
Henry B Hansmann, Augustus E. Lines Professor of Law, Yale Law School & ECGI
Klaus J. Hopt, Director, Max Planck Institute for Foreign Private and Private International Law & ECGI
Roberta Romano, Allen Duffy/Class of 1960 Professor of Law, Yale Law School & ECGI
Eddy Wymeersch, Professor of Commercial Law, University of Ghent & ECGI

Editorial Assistant : Paolo Casini, “G.d’Annunzio” University, Chieti & ECARES, Lidia Tsyganok, ECARES, Université Libre De Bruxelles

www.ecgi.org\wp

european corporate governance institute

Electronic Access to the Working Paper Series

The full set of ECGI working papers can be accessed through the Institute's Web-site (www.ecgi.org/wp) or SSRN:

Finance Paper Series	http://www.ssrn.com/link/ECGI-Fin.html
Law Paper Series	http://www.ssrn.com/link/ECGI-Law.html