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Is Harmonization of Environmental Liability Rules needed in an Enlarged European Union?

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INTRODUCTION

On 13 June 2003, the EU Member States reached political agreement on the European Commission's proposal for a Directive on Environmental Liability with regard to the prevention and remedying of environmental damage.[1] The Council agreement is an important step towards creating an Environmental Liability Directive, although it does not mean that such a directive will take effect in the short term.[2]

With the proposal, the Commission aims to establish common liability rules for professional activities in all Member States in order to ensure the recovery of future environmental damage. The proposed directive would cover water pollution, damage to biodiversity, as well as land contamination. Based on the polluter-pays principle, the directive would impose strict liability on operators of risky or potentially risky activities, which are listed in the annex of the proposal. Fault-based liability would apply to operators of non-listed activities, but only for damage to biodiversity.[3]

Preceded by more than a decade of studies, analyses and working documents, the Commission's proposal, itself published in January 2002, resulted in animated political and academic debates on the scope of the subsidiarity principle and on the question whether centralization or harmonization of liability rules in the EU would better protect the environment from damage and guarantee restoration than national liability rules.[4]

The results of the EU enlargement on 1 May 2004 may invigorate this 'necessity of harmonization' debate. Indeed, in its proposal, the Commission offers several justifications for enacting an Environmental Liability Directive at the Community level, rather than leaving the issue at national level. Besides the desire to guarantee that the polluter-pays principle would be effectively applied across the Community and that clean-up would be ensured, it is argued by the Commission in its proposal that, without a harmonized framework at Community level, industry might take advantage of differences in Member States' legislation to create artificial legal constructions in order to avoid liability.[5] However, as the proposal still has to go through the legislative process before it can be adopted, and as Member States will then have approximately 2 years to implement the directive into national legislation,[6] differences in Member States' rules, including the new Member States, will still exist for a certain period of time. Hence, the central questions remain whether the lack of a uniform liability regime in the (enlarged) EU indeed would cause distortions, as mentioned above, and, consequently, for what reasons might a harmonized liability regime be necessary.

These questions will be the central focus of this article. The article will not provide another assessment of the proposed liability regime, rather, it will examine whether harmonization of environmental liability in an enlarged EU would be desirable from an economic perspective. The methodology that will be used to address the need for harmonization of environmental liability rules is the economics of federalism. This

[1] See *Report of the 2517th Council Meeting (Environment)* (Luxembourg, 13 June 2003), 10273/03 (Presse 165) and European Commission, Proposal for a Directive on Environmental Liability with regard to the Prevention and Restoration of Environmental Damage, COM (2002) 17 final (23 January 2002).

[2] E.H.P. Brans, 'Het akkoord van de EU-Lidstaten over het voorstel voor een Richtlijn Milieuaansprakelijkheid', Actualiteiten Milieuaansprakelijkheid, 03:5 *Tijdschrift voor Milieuaansprakelijkheid* (2003), 124, at 124 and 128.

[3] European Commission, Press Release, *Making the Polluter Pay: Commission Adopts Liability Scheme to Prevent and Repair Environmental Damage* (Brussels, 23 January 2003). See also L. Bergkamp, 'The Commission July 2001 Working Paper on Environmental Liability: Civil or Administrative Law to Prevent and Restore Environmental Harm?', 9:5 *Environmental Liability* (2001), 207, at 207.

[4] See, for example, L. Bergkamp, ibid.; M. Faure and K. De Smedt, 'Should Europe Harmonize Environmental Liability Legislation?', 9:5 *Environmental Liability* (2001), 217.

[5] Proposal for a Directive on Environmental Liability, n. 1 above, at 5.

[6] E. Hattan, 'The Environmental Liability Directive', 10:1 *Environmental Liability* (2002), 3, at 10.

literature has extensively dealt with the optimal level of regulation within federal systems. Economic efficiency criteria will be used to examine the appropriate federal structure for environmental liability rules. This involves a careful weighing of arguments for and against assigning responsibility to a certain level of government. Based on the Tiebout Model, a bottom-up approach towards centralization will be used, and arguments for centralization and harmonization will be critically examined.

It is appropriate here to clarify the meanings of centralization and harmonization. Often these two notions are used interchangeable. There is, however, an important distinction. Centralization means that the decision-making power is transferred to a higher governmental level; but centralization does not coincide with uniformity. For example, a certain policy can be set at a central level, but the standards may vary across States according to different geographical conditions. Harmonization, on the other hand, means uniformity of standards.[7]

This article is structured as follows. First, the 'bottom-up federalism' of Tiebout will be explained. Next, the criteria for (de)centralization advanced in the economic literature will be discussed and, in particular, how these criteria can be applied to the harmonization of environmental liability rules will be examined. Finally, an overall assessment will be conducted.

BOTTOM-UP FEDERALISM OF THE TIEBOUT MODEL

The optimal level of regulation within federal systems has been addressed in the economics of federalism. The starting point for the analysis usually is the Tiebout Model on the optimal provision of local public goods.[8] In 1956, Charles Tiebout developed a model of fiscal competition between independent governments. Tiebout stated that, with decentralized – horizontally arranged – competitive governments, well-informed citizens could move along local jurisdictions to select that community with a regulatory combination that best satisfied their personal preferences for public goods. Governments would try to attract residents on the basis of differing tax and benefit structures. As everybody would go and live where the set of regulations would fit best to his or her preferences for public goods, competition between local authorities would, under certain restrictive conditions like perfect information and absence of externalities, maximize social welfare.[9] Tiebout's idea is now commonly known as 'voting with the feet' by citizens.

Although the Tiebout Model was designed for fiscal policies, academic scholars have introduced the model in other fields of regulation. The Tiebout Model became the starting point for scholars to state that public policies in various fields of regulation should be decentralized, except where there exist significant spillovers from a jurisdiction to neighbouring jurisdictions, market failure, transaction costs or imperfect information.[10] In cases where such externalities and high transaction costs overcome these externalities, oversight of a higher governmental level might be appropriate. Hence, taking the Tiebout Model as a starting point, the key question is: for what reasons would a harmonized environmental liability regime become necessary in an enlarged EU?

Although different scholars might use slightly different classifications, the reasons for harmonization of regulation can be grouped into four main arguments: the transboundary character of an externality argument; the race-to-the-bottom argument; the market access argument; and the minimum level of protection argument. The starting point of each argument is why centralization is needed. The approach used in this article is defined by Van den Bergh as 'bottom-up federalization'.[11] For every argument, two questions have to be addressed. First, centralization of liability rules often cannot be separated from the debate on centralization of regulation, as liability rules frequently are used as a complement to regulation. Therefore, it will have to be analysed whether the argument requires centralization of liability rules or centralization of regulation. Second, a distinction has to be made whether the argument calls for centralization or even for a much more far-reaching harmonization. Hence, each argument will be examined in two successive steps. Initially, environmental regulation will be discussed. Following this, the argument will be applied to environmental liability rules. In summary, these criteria will provide information on whether a harmonized European environmental liability regime is needed.

[7] See also A. Arcuri, 'Controlling Environmental Risk in Europe: The Complementary Role of an EC Environmental Liability Regime', 2 *Tijdschrift voor Milieuaansprakelijkheid* (2001), 37, at 42.

[8] C. Tiebout, 'A Pure Theory of Local Government Expenditures', 64:5 *Journal of Political Economy* (1956), 416. See also R.P. Inman and D.L. Rubinfeld, 'Federalism', in B. Bouckaert and G. De Geest (eds), *Encyclopedia for Law and Economics* (Edward Elgar Publishing, 2000), 661; R. Van den Bergh, 'The Subsidiarity Principle in European Community Law: Some Insights from Law and Economics', 1:4 *Maastricht Journal of European and Comparative Law* (1994), 337.

[9] C. Tiebout, n. 8 above, at 415–424. See also D.C. Esty, 'Revitalizing Environmental Federalism', 95:570 *Michigan Law Review* (1996), 608.

[10] Van den Bergh, for instance, uses the Tiebout Model to provide criteria for (de)centralization within the EU. See R. Van den Bergh, n. 8 above.

[11] Ibid., at 340.

ARGUMENTS FOR (DE)CENTRALIZATION OF ENVIRONMENTAL LIABILITY RULES

TRANSBOUNDARY CHARACTER OF ENVIRONMENTAL DAMAGE

The Tiebout Model, favouring decentralization of the provision of public goods, only holds if decisions of one jurisdiction have no external (negative) effects on other jurisdictions. When policies of a certain jurisdiction have a transboundary effect on a neighbouring jurisdiction, these externalities provide an argument for centralization. The reasoning is twofold. First, internalization of transboundary externalities could be ensured by shifting powers to a higher governmental level. Second, economies of scale could be reached by a certain level of centralization.[12]

The first strand of the transboundary externality argument concentrates on the internalization of transboundary spillovers through centralization. The problem of inter-State externalities or spillovers arises when the effects of a particular activity to a certain extent accrue beyond the boundaries of a jurisdiction. For example, a State might benefit from an (economic) activity, whereas it might not bear the full costs of the activity, as part of the costs are endured by neighbouring States in the form of pollution.

It is not much disputed in the academic realm that these externalities indeed need to be corrected through some form of inter-jurisdictional collaboration. The reason is that States will not take into account the consequences of their actions that accrue across their borders. However, as Van den Bergh indicates, the need to internalize transboundary externalities should not lead *a priori* to centralization or harmonization of regulation.[13] Indeed, if property rights are clearly defined and if transaction costs of negotiating compensation for damage are low, then, according to economic theory, Coasean bargaining between jurisdictions would lead to a welfare-maximizing result.[14]

Therefore, the presence of transboundary spillovers does not automatically justify harmonization or even centralization of regulation. Moreover, if centralization of regulation is considered, it should be limited and targeted to the transboundary externalities and total harmonization, in such circumstances, should not be an option. Indeed, total harmonization of regulation might not take local circumstances into account and might even be counterproductive.[15]

Besides the internalization of externalities, it might be argued that centralization of certain tasks, like technical and scientific research, would generate economies of scale. Technical and scientific research may require expertise and significant investments, which might be difficult to achieve for small jurisdictions. Therefore, it might be better to join forces. Moreover, if the results are readily available to other jurisdictions, a single jurisdiction will have no incentive to carry out the (expensive) research on its own. This reasoning appears to be more lenient towards centralization of certain tasks, not only to solve transboundary spillovers but also to solve problems that are common over different jurisdictions. However, centralization of certain tasks is not equal to, and should not justify, harmonization and fixed uniform standards. On the other hand, the fact that differing local circumstances and preferences have to be taken into account also does not provide support for decentralized regulation without cooperation, but for flexible regulatory policies and strategies.[16]

To summarize, the presence of transboundary externalities would not on its own justify centralization and certainly would not justify harmonization of regulation. Instead, in order to take local circumstances into account, federal regulation of transboundary externalities should be preferred. Although transboundary externalities do not justify centralization or harmonization, the issues may be raised as to whether certain tasks could be centralized (e.g. scientific research). This is because economies of scale should be examined for each problem in order to establish whether

[12] M. Faure, 'How Law and Economics May Contribute to the Harmonization of Tort Law in Europe', in R. Zimmermann (ed.), *Grundstrukturen des Europäischen Deliktsrechts* (Nomos, 2003), 31, at 38–39. See also A. Ogus, 'Competition Between National Legal Systems: A Contribution of Economic Analysis to Comparative Law', 48 *The International and Comparative Law Quarterly (*1999), 405.

[13] R. Van den Bergh, 'Economic Criteria for Applying the subsidiarity Principle', in R. Revesz, P. Sands and R.B. Stewart (eds), *Environmental Law, the Economy and Sustainable Development: The United States, the European Union and the International Community* (Cambridge University Press, 2000), 80, at 88.

[14] In 1960, Ronald Coase developed, in his seminal article 'the Problem of Social Cost', the Coase Theorem, stating that when transaction costs are zero, an efficient use of resources can result from private bargaining, regardless of the initial legal assignment of property rights. See R.H. Coase, 'The Problem of Social Cost', 3 *Journal of Law and Economics* (1960), 1–44.

[15] R. Van den Bergh, 'Subsidiarity as an Economic Demarcation Principle and the Emergence of European Private Law', 5 *Maastricht Journal of European and Comparative Law* (1998), 129, at 143–144.

[16] D.C. Esty, n. 9 above, at 617.

there are economies of scale and advantages of expertise that can be profited from without having to give in on diversity. Hence, the transboundary externality argument would allow for a mixed system that would benefit from the merits/expertise of both government levels, but would not justify excessive centralization or harmonization.

The transboundary externality argument can be applied to environmental liability rules in particular. As far as the internalizing of externality reasoning is concerned, it can be concluded that, although the transboundary character of environmental damage would provide an argument for centralization, environmental damage, caused by an accident, frequently will stay within the boundaries of the jurisdiction. Moreover, the causes and consequences of damage can vary significantly within a jurisdiction and over jurisdictions. In these circumstances, regulation tailored to local needs and preferences seems appropriate. Therefore, as in the general case, the transboundary externality argument indeed provides no justification for harmonization of domestic laws. Hence, harmonization or even centralization of liability rules to restore damage might not be justified from an economic perspective. When dealing with accidents, States should be able to set liability rules for environmental damage according to their preferences and needs. Yet, alternative solutions could be examined to solve transboundary spillovers. An appropriate regulatory response might consist of cooperation between States, instead of centralization or harmonization.[17] However, economies of scale in technical research might plead for cooperation or centralization of certain tasks. Regulation of environmental damage certainly is a realm that requires highly technical information, and economies of scale could be reached by centralizing scientific research and information. Yet, again, the promise of economies of scale in scientific research does not support centralization in an excessive sense.[18]

Summarizing, if a European Environmental Liability Directive aims to solve spillovers from one Member State to another, the regime preferably would not go further than a kind of transboundary regime that focuses only on special areas to remedy transboundary damage. This might, however, be completed by the centralization of supporting scientific research and data analysis, as all Member States and citizens might benefit from it. Nevertheless, a harmonized environmental liability regime might be justified for other reasons.

RACE TO THE BOTTOM

The race-to-the-bottom rationale might be the most heavily debated and most frequently advanced economic argument in the EU to justify federal environmental liability regulation. The question, however, is whether a race to the bottom in environmental quality indeed has to be feared in the EU, in particular, after enlargement.

The term 'race to the bottom' refers to an ongoing relaxation of State regulatory standards, caused by inter-State competition to attract industry. This relaxation of regulatory standards would result in a reduction of social welfare below the social welfare level that would exist in the absence of this race.[19] If there is a risk that such destructive competition would arise, centralized standard setting might be advanced as a remedy to prevent States from engaging in this welfare-reducing race to the bottom.

If differences in environmental standards, and thus differences in environmental costs, induce firms to relocate to States with the lowest environmental standards a race to the bottom, which in environmental cases is referred to as the 'pollution haven' phenomenon, might occur.[20] In other words, if industry relocates to States with the lowest standards, there might be pressure on States to lower their environmental standards in order to attract industry. In such circumstances, there may be an economic argument for centralization.

The race-to-the-bottom argument is sometimes confused with the creation of a 'level playing field', especially in the EU. Indeed, federal regulations enacted under a race-to-the-bottom rationale, in reality, might aim to create a 'level playing field', or the harmonization of conditions of competition between States.[21] In such cases, the aim is more to reduce inter-State competition and the significance of geographic features, which would allow certain States to have lower quality standards, than to actually overcome a race to the bottom as defined above. The prevention of lower quality standards is not the same though as the prevention of a race to the bottom. Lower quality standards could be efficient, whereas a race to the bottom would result in economic inefficiency, which needs to be remedied. Indeed, to prevent States from using their geographic advantages might reduce economic efficiency, as it is exactly this geographic diversity that allows gains from trade.[22]

Various scholars have tried to prove theoretically and empirically the existence or the absence of a race to

[17] M. Faure, n. 12 above, at 39.
[18] D.C. Esty, n. 9 above, at 622.

[19] K.H. Engel, 'State Environmental Standard Setting: Is There a "Race" and Is it "to the Bottom"?', 48:2 *Hasting Law Journal* (1997), 271, at 274.
[20] For an extensive analysis, see K.R. Gray, 'Foreign Direct Investment and Environmental Impacts – Is the Debate Over?', 11:3 *RECIEL* (2002), 306. See also M. Faure, n. 12 above, at 48.
[21] Ibid., n. 12 above, at 51–53. See also R. Van den Bergh, n. 13 above, at 87.
[22] K.H. Engel, n. 19 above, at 293–295.

the bottom in environmental regulations. The results vary and the existence of a race to the bottom in environmental regulations remains debated.

Scholars have based the race-to-the-bottom theory upon non-cooperative game theoretical models of which the 'Prisoner's Dilemma' is the best known example.[23] The Prisoner's Dilemma refers to a situation in which individual welfare maximizing behaviour leads to an outcome that is socially suboptimal, whereas, with cooperation, all parties would have been better off. However, based on the neoclassical model developed by Oates and Schwab, opponents of the race-to-the-bottom theory, like Revesz, argue that inter-State competition leads to efficiency and welfare-enhancing behaviour. It is not claimed, however, that States will not lower their standards, only that this behaviour might be welfare enhancing.[24] Moreover, Revesz indicates that game–theoretical interactions might also lead to overregulation instead of under-regulation.[25] This could occur where certain States do not want to have particular industries located in their jurisdictions.[26] In those cases, federal intervention would require maximum standards instead of minimum standards. Hence, according to Revesz, even if there was imperfect competition, there would be no clear evidence of a race to the bottom, and hence the race-to-the-bottom argument would not be justification for minimal federal environmental standards.[27] This neoclassical approach stands in contrast to the game–theoretical approach, according to which the same behaviour would lead to the opposite result: suboptimal low regulatory standards and reduced social welfare.

It remains unresolved which theoretical approach best reflects the real world for environmental regulation and thus whether a race to the bottom for environmental regulation may occur. Yet, as it is not possible to prove the validity of the race-to-the-bottom argument in cases of environmental regulation on theoretical grounds alone, empirical evidence of pollution havens exist.

Empirical evidence of a race to the bottom is scattered and hard to discover. Nevertheless, there are three different indicators that may point to its existence. The first indicator is the relative power of industries versus States, as this might indicate that there is not perfect competition and that market distortions could arise. The second aspect is whether industry would respond to the lowering of environmental standards by location decisions. The third indicator is, regardless of industrial response, whether there is a willingness of States to engage in strategic interactions in order to attract industry and whether States would compete for industry by lowering their environmental standards.[28]

First, the relative power of industry and States could be an indication that a risk of destructive competition could exist, as it would give information on whether the market for environmental regulation resembles perfect competition or whether it is distorted. Nevertheless, an indication of the relative power of industry versus States is not sufficient to formulate a conclusion concerning the existence of pollution havens.

The second indicator that has to be examined is whether environmental quality standards would influence industry location decisions. Indeed, a commonly used justification for centralized regulation to prevent a race to the bottom in environmental regulation is that the stringency of environmental standards would be an important determinant for locating a business.[29] Yet, despite much effort, empirical evidence of relocation of industry because of stringent environmental regulation is weak.[30] Based on an extensive survey of existing location studies,[31] Jaffe *et al.* conclude that the effect of environmental regulation on business location decisions is either small or statistically insignificant.[32] Nevertheless, they add that, although the stringency of environmental regulations will not induce existing firms to relocate, it might influence decisions for new plant locations.[33] This

[23] Ibid., at 274. See also D.C. Esty and D. Geradin, 'Environmental Protection and International Competitiveness, A Conceptual Framework', 32 *Jourrnal of World Trade* (1998), 5, at 16.
[24] R. Revesz, 'Rehabilitating Interstate Competition: Rethinking the "Race-To-The-Bottom" Rationale for Federal Environmental Regulation', 67 *New York University Law Review* (1992), 1210, at 1219, stating that a race to the bottom requires not just the existence of a race, but also that the race be 'to the bottom'.
[25] R. Revesz, 'Federalism and Regulation: Some Generalizations', in D.C. Esty and D. Geradin (eds), *Regulatory Competition and Economic Integration: Comparative Perspectives* (Oxford University Press, 2001), 3, at 5.
[26] J.D. Wilson, 'Capital Mobility and Environmental Standards: Is There a Theoretical Basis for a Race to the Bottom?', in J. Bhagwati and R. Hudec (eds), *Fair Trade and Harmonization: Prerequisites for Free Trade?*, Vol. 1 (The MIT Press, 1997), 393, at 394–395.
[27] R. Revesz, 'Federalism and Environmental Regulation: An Overview', in R. Revesz, P. Sands and R.B. Stewart (eds), n. 13 above, at 46.
[28] K.H. Engel, n. 19 above, at 315.
[29] Ibid., at 321.
[30] M. Faure, n. 12 above, at 48.
[31] See, for example, T. Bartik, 'The Effects of Environmental Regulation on Business Location in the United States', 19:3 *Growth Change* (1988), 22; V.D. McConnell and R.M. Schwab, 'The Impact of Environmental Regulation on Industry Location Decisions: The Motor Vehicle Industry', 66:1, *Land Economics* (1990), 67; J. Friedman, D.A. Gerlowski and J. Silberman, 'What Attracts Foreign Multinational Corporations? Evidence from Branch Plant Locations in the United States', 32:4 *Journal of Regional Science* (1992), 4:3; A. Levinson, 'Environmental Regulations and Manufacturer's Location Choices: Evidence from the Census of Manufacturers', 61:1 *Journal of Public Economics* (1996), 5; P. Low and A. Yeats, 'Do "dirty" Industries Migrate?', in P. Low (ed.), *International Trade and the Environment* (World Bank, 1992).
[32] A. Jaffe *et al.*, 'Environmental Regulation and the Competitiveness of US Manufacturing: What does the Evidence Tell Us?', XXXIII *Journal of Economic Literature* (1995), 132, at 157–158.
[33] Ibid., at 148.

finding can be explained by the fact that other factors, such as tax levels, public services, proximity to markets and raw materials, availability of transportation networks and the unionization of the labour force, are much more important determinants of competitiveness. Environmental regulation appears to be only a minor determinant in industrial location decisions.[34] The Jaffe *et al.* survey, however, has been refined somewhat by the study of Xing and Kolstad.[35] Xing and Kolstad found that lenient environmental regulations may indeed be a significant determinant for foreign direct investment of heavily polluting industries, like chemicals and primary metals. However, conforming to the study by Jaffe *et al.*, they find that lenient environmental regulations are insignificant for less-polluting industries.

Several authors, moreover, indicate that multinational corporations, doing business in various jurisdictions, might choose to meet the most stringent standards, because of cost-efficiency reasons. Indeed, by doing so, they might use the same production process for each location and have a single, company-wide environmental management system. Therefore, multinational corporations might be insensitive to local environmental regulations.[36]

Based on these studies, many scholars, Revesz in particular, argue that there is no support for a race to the bottom in environmental regulation. However, to subscribe to the position that there is no support for a race to the bottom seems a little bit premature, as the behaviour of the States themselves, as a third indicator of pollution havens, still has to be examined.

Engel suggests that many States indeed are concerned about industrial relocation and that this concern could at times influence their policies towards protection of the environment and their policies for environmental quality standards.[37] This does not necessarily mean that States would actually relax their environmental standards. Indeed, as Esty and Geradin claim, probably the most important risk of regulatory competition is a 'political drag' or a 'regulatory chill'.[38] This would occur when State officials, fearing industrial relocation, avoid lowering their standards, but under political pressure do not adopt, raise, implement or effectively enforce environmental standards. It is very difficult to prove the existence of a political drag.[39] However, to declare that States will always lower their environmental quality standards as a result of inter-State competition is premature. Indeed, there exists some evidence that States may actually strive for stringent environmental standards, even if this would put extra costs on their industries. There are two main reasons that might explain this phenomenon.

First, stringent domestic environmental standards might offer market opportunities to firms that export pollution-control equipment. For example, as a result of their own strict emission limits for coal burning power plants, Germany and Japan succeeded in dominating the world market in scrubbers.[40] Second, and although disapproved of by the World Trade Organization (WTO),[41] a State could, through stringent environmental regulations, make it more difficult for foreign producers to sell their products, as they might not fulfil all environmental requirements. This would give a competitive advantage to domestic industry.[42]

Hence, for a number of environmental regulations, a phenomenon, defined by Vogel as the 'California effect', could occur.[43] In general terms, the California effect is used to describe the upward ratcheting of regulatory standards when economically powerful nations, with stringent standards, can force producers from other States, with lower standards, to adopt these strict standards in order to maintain market access.[44] For environmental standards, this would mean that stringent environmental (product) standards of a certain State would encourage producers of other States, and eventually other States themselves, to adopt these higher standards to be able to sell their products in this market.

[34] Ibid., at 148–149.
[35] Y. Xing and C. Kolstad, 'Do Lax Environmental Regulations Attract Foreign Investment?', in *Working Papers in Economics* (University of California, 1995), at 16.
[36] D.C. Esty and D. Geradin, n. 23 above, at 13; A. Levinson, 'Environmental Regulations and Industry Location: International and Domestic Evidence', in J. Bhagwati and R. Hudec (eds), n. 26 above, 429, at 451.
[37] K.H. Engel, n. 19 above, at 336–340.
[38] D.C. Esty and D. Geradin, n. 23 above, at 19.
[39] Ibid., at 19.
[40] D. Vogel, 'Environmental Regulation and Economic Integration', in D.C. Esty, and D. Geradin (eds), n. 25 above, 330, at 334–335.
[41] D.A. Farber and R.E. Hudec, 'GATT Legal Restraints on Domestic Environmental Regulations', in J. Bhagwati and R.E. Hudec (eds), n. 26 above, at 59.
[42] See D. Vogel, n. 40 above, at 334–335. See, for example, the *Tuna Cases*: *United States – Restrictions on Imports of Tuna*, BISD 39S/155 (1991) and WTO DS 16 June 1994, *United States – Restrictions on Imports of Tuna*, DS29/R; and the *Dolphin Cases*: GATT, *United States – Restrictions on Imports of Tuna*, Report of the Panel, Not Adopted, Submitted to the parties on 16 August 1991, 30 ILM (1991), 1594–1623, GATT, *United States – Restrictions on Imports of Tuna*, Report of the Panel, Not Adopted, Released in June 1994, 33 ILM (1994), 839–903; WTO DS 15 May 1998, *United States: Import Restrictions of Certain Shrimp or Shrimp Products*, WT/DS58/R, available at <http://www.wto.org/english/tratop_e/dispu_e/distab_e.htm>, and WTO AB 12 October 1998, *United States: Import Restrictions of Certain Shrimp or Shrimp Products,* WT/DS58/AB/R (AB-1998-4), available at <http://www.wto.org/english/tratop_e/dispu_e/distab_e.htm>.
[43] D. Vogel, n. 40 above, at 335–337.
[44] Ibid.

Nevertheless, the finding that industry mostly will not respond to lenient environmental standards, combined with the fact that States still believe that they can attract industry by lenient environmental standards, might indicate that the risk is probably not so much a race to the bottom, but a 'regulatory chill' or 'political drag'. This risk of a political drag in environmental regulations should not be neglected. The question arises, however, as to whether federal intervention would be appropriate to prevent or overcome such a 'political drag'.

The risk of a race to the bottom, or more likely a 'regulatory chill' in environmental regulation, would not necessarily call for full centralization of all environmental standards. As Revesz indicates, even if States use lenient environmental standards to attract industry, centralized regulation or harmonization of environmental standards might not necessarily solve the problem. Indeed, States might compete for industry on many fronts. Therefore, Revesz warns that, as a response to centralized environmental standards, States might reduce standards in other regulatory fields, like healthcare or taxes, to attract industry.[45] Moreover, harmonization would not leave opportunities open for more stringent standards or cooperation between States, according to States' preferences.

In conclusion, the risk of a race to the bottom in environmental regulation is not a convincing argument for harmonized environmental regulation. Limited centralization, or other proposals enhancing the efficiency of environmental regulation, to prevent a regulatory chill should instead be considered. However, which response would be best depends on the circumstances and the environmental problem under examination. A context-specific analysis might thus be required. Only then will optimal cooperation between the federal and State level be found, in order to prevent a race to the bottom or a 'political drag' in environmental regulation.

The question that arises is whether differences in liability rules could lead to a race to the bottom, justifying federal intervention in liability regulation. Theoretically, it seems doubtful that a race to the bottom in environmental liability rules would occur. On the one hand, there are more important factors that influence industrial location decisions than environmental liability regulation, and, on the other hand, States gain no advantages from having a lenient liability regime.[46]

Indeed, in theory, a State could try to attract industry by reducing the burdens that might be imposed on industry through domestic law. For example, a State might impose a higher burden of proof on the victims of environmental damage or a State might require a clear cause–damage relationship. Moreover, as noted above, a State might neglect the enforcement of its environmental quality standards.[47] Nevertheless, Faure suggests that, if environmental liability rules were to have an effect, a race to the top would be more likely than a race to the bottom. Indeed, a lenient environmental liability regulation would limit a State's possibilities to claim restoration for environmental damage caused by (foreign) industry. Therefore, a lax liability regime might be contradictory to a State's interests.[48] Still, political pressure and risk of political drag should not be ignored.

We can now turn to the specific situation of the enlarged EU. It seems doubtful, maybe even more than for environmental regulation in general, that a race to the bottom in environmental liability regulation would happen, especially because Member States would gain no advantage from a lenient liability regime. Yet, although there is no evidence of relaxed liability rules, it might be possible that State officials might believe, or are under political pressure to believe, that a stringent liability regime might repulse industry from locating in their Member State and that industry might move to a new Member State. Hence, they might fail to adopt stringent quality standards and a stringent liability regime, or neglect the enforcement of this regime. Further research in this area could provide more information on governmental behaviour. Nevertheless, it is doubtful that, in Europe, States would engage in a game in which they would strive for a low level of environmental liability and renounce restoration claims in order to attract industry. Moreover, even in the case of a 'regulatory chill' or 'political drag', this would not justify full centralization of environmental liability regulation. Some scholars might even doubt whether any federal intervention in environmental liability regimes, like minimum requirements, would be necessary. Indeed, other solutions to enhance the efficiency of environmental liability rules should be examined as well.

MARKET ACCESS CONCERNS

Market access presents another frequently advanced argument for the harmonization of environmental liability rules, certainly in the EU.

It is sometimes claimed that harmonization of environmental regulation would be justified in order to ease the tensions created by the differences in the stringency of environmental regulations of various

[45] M. Faure, n. 12 above, at 49.
[46] Ibid., at 49.
[47] R.M. Ackerman, 'Tort Law and Federalism: Whatever Happened to Devolution?', Symposium Issue, 14 *Yale Law and Policy Review* (1996), 429.
[48] M. Faure, n. 12 above, at 49.

jurisdictions.[49] The argument consists of two strands: 'harmonization of marketing conditions'; and 'reduction of transaction costs through harmonization of legal rules', which both will be examined regarding environmental regulation, in general, and regarding environmental liability.

It is sometimes argued that different levels in the stringency of safety regulations, like environmental regulation, might cause trade distortions and hamper access to foreign markets.[50] Therefore, proponents of harmonization argue that harmonization would create a 'level playing field', and ease the various competitiveness and market access concerns arising from the intersection of trade liberalization and safety regulations, such as environmental protection policies.[51]

The argument that harmonization of legal rules would be necessary, in order to avoid trade distortions and to guarantee market access, implies that a level playing field would be a *conditio sine qua non* for the functioning of a common market. Yet, differences in marketing conditions may vary because of different local circumstances, and it is these differences that make gains from trade possible. Therefore, it must be possible to develop a framework of rules that would guarantee market access, without harmonizing all rules and standards, which would eliminate gains from trade. Hence, market access concerns would justify, for instance, the harmonization of certain product standards in order to reduce barriers to trade. However, in the environmental realm, the fact that harmonization of product standards might be sought, in order to guarantee market access, is sometimes used to justify the harmonization of process standards as well. However, this aims to harmonize conditions of competition.[52] It therefore merits making a distinction between environmental product and environmental process standards when examining whether harmonization would be justified.

As far as environmental product standards are concerned, it could be argued that differences in safety standards indeed might create barriers to entry and hamper inter-State trade.[53] Accordingly, trade liberalization might require some degree of integration in other fields, including environmental regulation. It is questionable whether this would justify a total harmonization of standards. Indeed, it is possible to achieve market integration with less comprehensive instruments than total harmonization, as there are a variety of refined policy tools to respond to market access concerns caused by differing product standards.[54]

Process-based trade restrictions, on the other hand, try to regulate the way a product is produced, even where this would be outside the jurisdiction of the importing State. In these circumstances, market access is denied because of competitiveness concerns rather than due to the desire to protect a State's citizens from the (environmentally) harmful effects of certain products.[55] In order to respond to competitiveness concerns caused by differing environmental process standards, countries may introduce trade restrictions to imports from jurisdictions that apply lenient environmental standards. Yet, it can be questioned whether harmonization of process standards would be justified in order to ease these competitiveness concerns. It can be argued that, if the effect of environmental process standards would be purely domestic in the exporting country, it would be hard to justify the introduction of trade sanctions by the importing country and equally hard to find a justification for harmonization of these process standards. However, when externalities exist, there might be a justification for centralization of process standards.[56] Yet, other solutions might be available, other than total harmonization, to guarantee market integration. Finally, it would be hard to justify that rich countries may take trade measures or require total harmonization of certain environmental standards. Indeed, distributional aspects might arise and there might be a risk as well of disguised protectionism.[57] Centralization of basic standards through international treaties, requiring all countries to meet certain ecological standards, might ease the concerns of both environmentalists and free-trade advocates.

These results now can be applied to environmental liability. Yet, although the realization of free trade could justify the harmonization of elementary environmental product or process standards, to avoid incompatibilities, which would create barriers to entry or distortions of competition, it is questionable whether the realization of free trade would justify the harmonization of private law, such as environmental liability rules. Indeed, it is possible to have free trade without the total harmonization of all legal rules. Moreover, equal marketing conditions would not necessarily be achieved through the harmonization of (environmental) liability rules. As Faure indicates, harmonization of tort law would not create a level playing field,

[49] Ibid., at 51.
[50] D.C. Esty and D. Geradin, 'Market Access, Competitiveness, and Harmonization: Environmental Protection in Regional Trade Agreements', 21:2 *Harvard Environmental Law Review* (1997), 265, at 266–269.
[51] M. Faure, n. 12 above, at 52.
[52] Ibid., at 55.
[53] Ibid.
[54] D.C. Esty and D. Geradin, n. 50 above, at 266.
[55] R. Revesz, n. 25 above, at 21–23. See also R. Revesz, n. 27 above, at 75–77.
[56] D.C. Esty and D. Geradin, n. 23 above, at 46.
[57] R. Revesz, n. 25 above, at 21–23.

as there are other, far more important factors that determine the conditions of competition.[58] Indeed, differences in the availability of natural resources or labour standards still would create variations in marketing conditions. Furthermore, if countries prefer liability rules to target environmentally unfriendly products, instead of using regulatory restrictions (which might be under WTO restrictions), this would not hamper free trade; on the contrary, it would have a significant advantage. Indeed, the use of liability rules would prevent disguised protectionism, as a stringent liability regime will not impede the importation of a certain product, and a causal link between the environmental harm and the product concerned still must be proven.[59] Product or process standards, on the other hand, might in name apply as well to domestic products and imports, but in practice it might be more difficult for importers to comply with the standards. Hence, it seems doubtful that environmental liability rules would act as a trade barrier or cause competitiveness concerns, and that a total harmonization to ensure market access and fair marketing conditions would be necessary. Countries could set their liability rules according to their preferences and still guarantee market access, whereby disguised protectionism might be prevented.

The same reasoning may hold for the EU. Indeed, harmonization of environmental liability rules would not create a level playing field, as other factors are far more important. This, however, should not be a problem. As stated above, the use of liability rules might even prevent disguised protectionism, as a causal link between the environmental harm and the product concerned must be proven. Therefore, Member States should be able to tailor their liability rules according to their needs and preferences, and at the same time market access can be guaranteed.

The second strand of the market access argument, the 'reduction of transaction costs through harmonization of legal rules' reasoning, concentrates on the concern that differences in legal rules might cause high transaction costs, and hence that this equally might hamper market access. The reduction in transaction costs through harmonization would improve market access. A careful weighing of the advantages of harmonization against the advantages of decentralization must be made. Indeed, the central question to be posed is whether the eventual transaction cost savings of harmonization outweigh the benefits of differentiated legal rules, adapted to the preferences of the citizens.[60]

For the general case, the assumption that a harmonized legal system will always be more efficient than decentralization, due to transaction cost savings and legal certainty, may be unfounded. Certainly in the field of private law, this reasoning neglects the benefits of decentralization, as legal rules can be adapted to the preferences and needs of the citizens. Moreover, differences between legal systems and legal cultures might be substantial, hence, the costs of harmonization might be large and the transaction cost savings might be small. In such circumstances, harmonization might, in fact, increase legal uncertainty.[61]

When applied to environmental liability rules, the questions that arise are, first, whether centralization or harmonization would improve legal certainty and reduce transaction costs, and, second, whether harmonization would then improve market access. Yet, it must be noted that transaction cost savings do not require a total harmonization of a certain liability rule, which might neglect differences in citizens' preferences. Indeed, it is possible that, for a certain civil law tort, the applicable liability rule would be harmonized, for example a negligence rule, but the content of the due care standard would be left at State level, according to the preferences and needs of citizens. Hence, centralization of a specific liability rule for certain activities might be combined with differentiation regarding the specific contents of the rule. In that case, transaction costs could be lowered and differing preferences could be still respected. Therefore, harmonization of liability rules in order to reduce transaction costs might allow for a certain level of centralization, but not for full harmonization.[62]

Nevertheless, analyses of working documents preceding the Commission's proposal on a European Environmental Liability Directive have indicated that increased legal certainty and a reduction in transaction costs, through harmonization of environmental liability, are not easy to realize.[63] Indeed, most Member States have provisions to deal with environmental damage. Moreover, environmental damage can be very diverse and one single pollution case might cause different types of damage. The consequences of harmonization must therefore be very carefully examined. There indeed might be a risk of increased legal complexity if different rules at the European and Member State levels apply to various types of environmental damage caused by a single pollution case. Increased legal uncertainty would obviously hamper the reduction

[58] M. Faure, n. 12 above, at 55.
[59] L. Bergkamp, *Liability and Environment: Private and Public Aspects of Civil Liability for Environmental Harm in an International Context* (Kluwer Law International, 2001), at 381–382.
[60] M. Faure, n. 12 above, at 59.
[61] P. Legrand, 'The Impossibility of "Legal Transplants"', 4 *Maastricht Journal of European and Comparative Law* (1997), 111. See also M. Faure, n. 12 above, at 59 and R. Van den Bergh, n. 13 above, at 146–148.
[62] M. Faure, n. 12 above, at 61.
[63] See, for example, L. Bergkamp, n. 3 above; M. Faure and K. De Smedt, n. 4 above.

in transaction costs.[64] Apart from this problem, environmental protection may have deep roots in a Member State's culture and in its legal rules. Therefore, the cost of harmonization of environmental liability rules might be high and the transaction cost savings might be less then expected.

Hence, total harmonization of environmental liability rules does not seem desirable. However, general legal principles to protect the environment could be defined centrally, or a specific liability rule for certain activities could be set centrally, combined with differentiation of the specific contents of this rule. In such circumstances, transaction costs might be lowered, market access might be promoted and differing preferences could be respected.

In summary, the market access argument does not justify a total harmonization of environmental regulation, nor of environmental liability in an (enlarged) EU. Nevertheless, centrally defined principles might ensure market access and free trade, and reduce transactions costs. A cooperative approach could be adopted, with central minimum requirements of protection, but which also allows regions to implement the standards or to adopt more stringent measures in accordance with the objectives of free trade and competition, and conform to the citizens' preferences.[65]

HARMONIZATION TO GUARANTEE A MINIMUM LEVEL OF PROTECTION

The final argument that is frequently advanced at the European level, notably the need for harmonization in order to guarantee a minimum level of protection, falls beyond the pure economic arguments for harmonization of liability rules. Some authors stay within the economic reasoning and argue that harmonization would be justified in order to guarantee a minimum level of protection. This is because unacceptably low environmental standards in one State could present negative externalities to citizens in other States.[66] Other authors consider environmental protection as a human right, freed from economic justification.[67]

If the minimum level of protection argument is accepted, it must be emphasized that the reason for harmonization would not be based on economic efficiency, but on the desire to provide a minimum level of protection against environmental accidents.[68] Yet, it must be made clear that the minimum level of protection argument guarantees all citizens minimum quality standards through the harmonization of regulation. Therefore, this argument might be used, in some circumstances, to justify the harmonization of regulation, but it is more difficult to justify the harmonization of liability rules. It is questionable whether the harmonization of liability rules law would be the appropriate instrument to achieve such a minimum level of protection. Indeed, it might be more efficient to develop minimum quality standards that must be achieved, before and after an accident, rather than to harmonize the liability rules in the different jurisdictions.[69] Different types of liability rules might reflect differences in preferences of citizens. Moreover, in the EU, for instance, it is doubtful that the different liability rules in some Member States would not provide a minimum level of protection for their accident victims. Hence, there would be no need for harmonization of liability rules. Therefore, regulation or other means, such as through the European Convention on Human Rights,[70] could be more appropriate to guarantee such a minimum level of protection, rather than the harmonization of environmental liability rules.[71] Hence, the minimum level of protection argument seems weak for justifying the harmonization of liability rules.

Moreover, the argument would not justify total harmonization of quality standards either. Indeed, there might be other options than total harmonization of environmental quality standards, such as centralization or coordination of minimum standards, allowing States to go further, so that differing circumstances and preferences in different jurisdictions would be taken into account. Nevertheless, as Revesz indicates, it is questionable whether environmental quality standards should be harmonized in order to guarantee a minimum level of protection, if, for example in the EU, there is no minimum social security, no provision of general healthcare nor any harmonization of minimum wages.[72]

CONCLUSION

Based on the results of the analysis of the four arguments advanced for centralization, notably the transboundary character of an externality, the risk of a race to the bottom, the market access concern and the

[64] M. Faure, n. 12 above, at 62.
[65] C. Kimber, 'A Comparison of Environmental Federalism in the United States and the European Union', 54 *Maryland Law Review* (1995), 1658, at 1689–1690.
[66] D.C. Esty, n. 9 above, at 638–648. See also J. Ferejohn, 'Political Economy of Pollution Control in a Federal System', in R. Revesz, P. Sands and R.B. Stewart (eds), n. 13 above, 96, at 99–100.
[67] K.H. Engel, n. 19 above, at 289. See also C. Kimber, n. 65 above, at 1690.
[68] M. Faure, n. 12 above, at 67.
[69] L. Bergkamp, n. 59 above, at 378.
[70] Council of Europe, Convention for the Protection of Human Rights and Fundamental Freedoms (Rome, 4 November 1950).
[71] M. Faure, n. 12 above, at 68.
[72] R. Revesz, n. 27 above, at 68.

minimum level of protection argument, it is possible to formulate some conclusions.

It appears that none of the arguments for centralization that are advanced by the European Commission would justify a total harmonization of environmental liability rules in the EU. Fears of a race to the bottom or unfair marketing conditions due to different liability rules in the Member States, including the new Member States, seem unlikely to become substantiated. Yet, the provision of information and scientific research might be coordinated at the European level, as specialized scientific research might require expertise and significant investments, which might be difficult to achieve for the individual Member States. Economies of scale might be reached and information on soil contamination and clean-up methods might be shared among Member States. Besides that, the Commission might develop solutions for transboundary damage or for special conservation areas. Furthermore, general principles of law to protect the environment could be defined centrally or a specific liability rule for certain activities could be centrally set, combined with the differentiation of the specific contents of this rule. In such circumstances, transaction costs might be lowered, market access might be promoted, a minimum level of protection could be guaranteed and the differing preferences of Member States could be respected.

Based on the economics of federalism methodology, a presumption could be made for a multi-level regulatory structure. The main power of decision making could be with the Member States, whereby the European Commission could provide a supporting framework of data-gathering and technical information provision. Moreover, the European Commission could provide a solution for transboundary damage and could define general principles to protect the environment. However, no argument for centralization seems strong enough to justify, from an economic perspective, a fully harmonized environmental liability regime in the EU.

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