



Sustainable EU Corporate Law for Sustainable Development: An Interdisclipinary View

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AMB EL SUPORT DE





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1. How can corporate law contribute to sustainable development? The notion of 'sustainable company'

odern corporate laws have yet to find the appropriate solutions for the pertinent issues of environmental and social impacts of current production systems and given the need to internalise these matters in corporate decision-making, academic activity on the topic is called for, especially in the light of biased interpretation of theoretical arguments for the use of the shareholder paradigm. Besides the lack of a clear legal obligation to that effect, historical reasons present in arguments supporting the shareholder value orientation point towards the fact that the inherent flaws of the latter have been noted since the period of Adam Smith, yet they have rarely been elaborated upon in the scholarship. Under the current 'radical shareholder value' paradigm, the market produced numerous negative externalities not accounted for by the market mechanisms, a flaw that arguably needs to be remedied by the changes 'at the core of the issue', the corporate governance and corporate law provisions. This article sets to explore the importance of the corporate legal framework for a change towards sustainable production processes, together with the pressing need for sustainability and with the importance of corporate influence on the general natural and social environment. By finding that the corporate law does matter for business development and that its impact on the society and environment is sizeable, this work explores the nature and the level of success of the corporate social responsibility in mitigating the shortcomings of the shareholder value maximisation and in achieving the internalisation of excessive corporate externalities, arguing that the soft-law approach to corporate social responsibility did not provide a sufficient impetus for a long-term change towards sustainable methods of production. It is in particular argued that a moderate modification of the existing combination of shareholder value maximisation and corporate social responsibility will not suffice to achieve the sustainable development in the timeframe demanded for the possible reversal of irreversible environmental damage. What is suggested through the game theory tools of prisoner's dilemma, the stag hunt and the mutual assured destruction is a firm EU legislative action on the matter in the form of mandatory corporate law rules, even in the absence of such action from other relevant jurisdictions. Under the argument of the first mover's advantage, it is suggested that the EU implementation of such mandatory rules is not only necessary for the achievement of sustainable development, but also beneficial in the long run for the EU itself.

1.1 Preliminary question: does corporate law matter for business development?

There is general agreement in the scholarship that a country's political, legal, economic, and social institutions affect its rate of economic growth. The inherent inability to insulate the exact institutions that spur economic growth brought about the arguments for importing the whole legal systems of the most successful world trade jurisdictions, resulting in theories on the supremacy of common law legal tradition, especially in the field of corporate law. These theories received a lot of scholarly attention, mostly in the field of corporate law and the efficient level of

¹ See e.g. Gerald W. Scully, 'The Institutional Framework and Economic Development' (1988) 96:3 Journal of Political Economy; Liam Brunt, 'Property Rights and Economic Growth: Evidence from a Natural Experiment' (2007) CEPR Discussion Paper no. 6404; Helje Kaldaru and Eve Parts, 'Social and institutional factors of economic development: evidence from Europe' (2008) 8:1 Baltic Journal of Economics; Dani Rodrik, One Economics Many Recipes: Globalization, Institutions, and Economic Growth (Princeton University Press 2009).

² Hence into using shareholder primacy globally, in all legal jurisdictions, as the most efficient corporate law paradigm. *See* Richard A. Posner, *Economic Analysis of Law* (8th edition Aspen 2011).

the rights of shareholders as determined by the latter, suggesting that the scholars see the legal rules regulating corporations as one of the institutions that do influence economic growth and business development.³ Despite the general disagreement as to which legal tradition produces the most efficient legal rules, there is an understanding that the efficiency of corporate legal rules does matter for the economic growth of the jurisdiction in question.⁴

Research has shown that in the absence of supporting legal institutions, companies will continue to be willing to sacrifice economic value in order to meet short-run earnings target due to the severe market reaction in the case of not doing so,5 by way of decreasing spending on research and development, 6 on advertising and maintenance 7 and even by way of delaying a new project when this entails a small sacrifice in value or overproducing and giving sales discounts to meet earnings targets.8 This trade-off between the short-term need to 'deliver earnings' and the long-term objective of making value-maximising decisions can be resolved only by legislative intervention.9 It is difficult to imagine that the market interpretation of a missing target as evidence of hidden corporate problems and uncertainty about company's prospects¹⁰ will spontaneously change without a legislative correction of this market failure, present for nearly forty years. 11 As the market currently does not produce prices reflecting the true cost of goods and services and leaves externalities to be dealt with by third parties, sustainability concerns cannot be financially rewarded by the market, at least not in the short run. Such concerns can lead to costs, and to avoid them, corporate officers often choose to sacrifice long-term value, 12 thereby saving their careers: ¹³ practice that is unlikely to change in the absence of fundamental changes in corporate law framework. A generalised statement in the framework of corporate policy that the sustainability concerns represent a pillar of corporate practice could and should send a signal to the markets that only after the corporate externalities have been internalised, competition based on share value and meeting corporate targets can legitimately begin, preventing the unnecessary market penalisation and further dissemination of incentives for short-term corporate behaviour. The following work argues for the need of such minimum standard-setting at the EU level, in the absence of which short-term oriented corporate behaviour will continue as the accepted corporate market practice.

1.2 The pressing need for sustainable and all-inclusive business framework

³ For a literature review see Guangdong Xu, 'The Role of Law in Economic Growth: A Literature Review' (2011) 25:5 Journal of Economic Surveys. On the "corporate law matters thesis" see also Rafael La Porta et al. 'Legal Determinants of External Finance' (1997) 52:3 Journal of Finance; Rafael La Porta et al. 'Corporate Ownership Around the World' (1999) 54:2 Journal of Finance; Rafael La Porta et al. (1506); Rafael La Porta et al. 'Agency Problems and Dividend Policies Around the World' (2000) 55:1 Journal of Finance; Rafael La Porta et al., 'Investor Protection and Corporate Governance' (2000) 58:1-2 Journal of Financial Economics.

⁴ For a more precise overview of the topic see sub-chapter 2.1.3.4.

⁵ John R. Graham, Campbell R. Harvey and Shiva Rajgopal, 'The Economic Implications of Corporate Financial Reporting' (2004) NBER Working Paper No.10550, p.1.

⁶ Ibid p.14.

⁷ Ibid.

⁸ Ibid.

⁹ Albeit the EU competition law tackles such short-termism through the rules on anti-competitive foreclosure and rules on predatory pricing, coupled with the rules on the abuse of dominant position, such legislative intervention does not suffice to curb the corporate short-term oriented incentives and the need for internalisation of rules preventing short-term oriented behaviour has been recognised in the literature. See more in Pavlos E. Masouros, Corporate law and economic stagnation. How shareholder value and short-termism contribute to the decline of the Western economies (Eleven International Publishing 2013); Andrea Bowdren, 'Contextualising Short-Termism: Does the Corporate Legal Landscape Facilitate Managerial Myopia?' (2016) 5:2 UCL Journal of Law and Jurisprudence; Lilian Moncrieff, 'Law, Scale, Anti-Zooming and Corporate Short-Termism' (2016) Law, Culture and the Humanities, available online: https://ssrn.com/abstract=2802536, last accessed 23,05,2018.

¹⁰ Graham et al. (n5) p.1.

¹¹ Ibid p.8.

¹² Ibid p.2.

¹³ Ibid p.12.

As the Gaia hypothesis states, 14 the ecosphere is co-dependent upon its various facets and forms a complete system. All components of the system are interdependent and equally necessary for the Earth to sustain life, which demands a different interpretation of corporate accountability.¹⁵ The world became increasingly interdependent and fragile due to the growing population, searching for more material wealth, the scarcity of resources, the loss of biodiversity and ecosystems, climate change, the described shifts in power between States and multinational companies, wars and international peace processes. ¹⁶ Scientific research indicates that worldwide emissions of greenhouse gases alone must be cut drastically if we are to prevent catastrophic climate change, which the business community recognised early on, but has not acted on it and neither have legislators.¹⁷ As Lord Nicholas Stern from the London School of Economics formulated it, "climate change is the result of the greatest market failure the world has seen", making the seriousness of risks from inaction or delayed action overwhelming, with threatening damage on a larger scale than caused by the two world wars combined.¹⁸ Concerns were raised about globally increasing consumption and production patterns; if the world as a whole followed the EU's pattern of consumption, global resource use could quadruple within 20 years, causing environmental and health problems and threatening economic growth due to decreasing natural resources and the cost of addressing such issues.¹⁹

The debate is not solely theoretical, neither limited to academia,²⁰ and it demands an interdisciplinary approach, which would result in a legal framework delivering appropriate incentives for various players to contribute to the final goal of sustainability in management and otherwise. The international community has been discussing the sustainability issues already in 1992 at the United Nations (hereinafter: UN) Conference on Environment and Development in Rio de Janeiro. Sustainability was defined as based on economic growth, ecological balance, and social responsibility,²¹ where the economic growth has not been seen an antipode to sustainability but rather as its constitutive part. As recent research has shown, the traditional arguments on shareholder value orientation destroying shareholder wealth, perceiving sustainability as a type of agency cost that arguably results in a comparative disadvantage for companies pursuing such strategy, proved to be false.²² Significant variation has been shown in accounting and stock market performance between the 'high sustainability' and 'low sustainability' companies, where the former outperformed the latter in the long run,²³ suggesting that the market underestimated the future profitability of companies with sustainable policies.

The regional level has mostly followed the same path. The EU, after the renewed impetus in the scope of its competence at the beginning of the 21st century,²⁴ has been promoting a policy

¹⁴ James E. Lovelock, The vanishing face of Gaia. A final warning (Basic Books 2009).

¹⁵ J.E. Lovelock, Gaia: A New Look at Life on Earth (Oxford University Press 1979)

¹⁶ Tineke Lambooy, 'Legal Aspects of Corporate Social Responsibility' (2014) 30:78 Utrecht Journal of International and European Law.

¹⁷ Ibid. See also Sigurd Vitols, The sustainable company: A new approach to corporate governance (European Trade Union Institute 2011), p.21.

¹⁸ Nicholas Stern, The Economics of Climate Change: The Stern Review (Cambridge University Press 2007).

¹⁹ European Commission, 'Green Public Procurement' (2016), available online http://ec.europa.eu/environment/gpp/faq_en.htm, last accessed 23,05.2018.

²⁰ See e.g. Megan H., 'Why is Sustainability Important?' (2016) Permaculture Research Institute, available online: https://permaculturenews.org/2016/01/07/why-is-sustainability-important/, last accessed 23.05.2018; Unilever, 'Report shows a third of consumers prefer sustainable brands' (2017), available online: https://www.unilever.com/news/Press-releases/2017/report-shows-a-third-of-consumers-prefer-sustainable-brands.html, last accessed 23.05.2018; Devito/Verdi, 'What Does Consumers' Increased Awareness of Sustainability Mean For Advertisers?' (2018), available online: https://www.devitoverdi.com/what-does-consumers-increased-awareness-of-sustainability-mean-for-advertisers/, last accessed 23.05.2018.

²¹ Rio Declaration on Environment and Development, UN Doc. A/CONF.151/26 (vol.I)/31 ILM 874 (1992).

²² See Fernando Gómez-Bezares, Wojciech Przychodzen and Justyna Przychodzen, 'Corporate Sustainability and Shareholder Wealth—Evidence from British Companies and Lessons from the Crisis' (2016) 8 Sustainability. See also Robert G. Eccles, Ioannis Ioannou and George Serafeim, 'The Impact of Corporate Sustainability on Organizational Processes and Performance' (2014) 60(11) Management Science p. 2835-2857.

²³ Eccles et al. (n22) p. 2835-2857.

²⁴ Treaty of Amsterdam amending the Treaty on European Union, the Treaties Establishing the European Communities and Certain Related Acts, 1997 OJ C 340/1.

on CSR as part of its Sustainable Development Strategy for Europe.²⁵ The social cohesion and environmental protection were found vital for long-term economic growth, to be incorporated in business on a voluntary basis.²⁶ While some of the companies known for activities based on social responsibility and sustainability have improved their competitiveness and their financial results,²⁷ this has not caused in the EU a significant self-enlightened shift in corporate policies as to shy away from the shareholder orientation.

The more urgent and the more sizeable pressures for policy changes are, the more likely the crisis leads to policy reform, ²⁸ making a large number of actors re-evaluate their preferences, ²⁹ bringing a more significant role to the EU to solve the challenges present. ³⁰ In the following sections, the precise role of corporations in the current circumstances of unsustainable business making is explored. Arguments for the EU to act as the pioneering force of global sustainability are presented through an interdisciplinary lens, suggesting that there is an advantage of being the first to act under the current global framework.

1.3 The sphere of corporate influence

By the end of the 20th century, almost 60,000 parent corporations existed worldwide, with more than half a million foreign corporate subsidiaries and affiliates, and these multinational companies were said to be responsible for 80% of the investment by developed nations in developing nations.31 Their current power and importance is unprecedented. With the international developments on the topic of sustainability, providing a new impetus for the stakeholder orientation, a simultaneous shift in the perception of the role of corporations in society and their contribution to sustainable society occurred.³² Corporations are no longer expected solely to contribute by mitigating the externalities they impose on society, but also to assume an active role as corporate citizens.³³ Corporations are alternating the society not only through spatial but also through temporal externalisation, without offering any effective remedies for it.³⁴ Not only are corporations transferring costs to other entities in the current time period through environmental degradation, imposing costs upon society at large by polluting and disposing waste and in general transferring costs to a third world country, but they are at the same time transferring these costs into the future through the depletion of finite natural resources and the lack of research and development.³⁵ The role of 'corporate citizens' is said to be determined through a consensus among the players involved, each of them carrying the same weight in decision-making,³⁶ which proved to be no more than a myth. The conditions of the growing inequality in the global society, coupled with a small number of multinational companies dominating their respective sectors, are

²⁵ European Commission Green Paper 'Promoting a European framework for Corporate Social Responsibility' COM (2001) 366 final and European Commission, 'Corporate Social Responsibility: New Commission Strategy to Promote Business Contribution to Sustainable Development' (European Commission 2002).

²⁶ European Commission 2002 (n25) p.7.

²⁷ Klaus J. Zink, 'Stakeholder orientation and corporate social responsibility as a precondition for sustainability' (2005) 16:8-9 Total Quality Management & Business Excellence, p.1047.

²⁸ Gerda Falkner, 'The EU's current crisis and its policy effects: research design and comparative findings' (2016) 38:3 Journal of European Integration, p. 222.

²⁹ Ibid p.227.

³⁰ Ibid p.229.

³¹ Bryan Horrigan, '21st Century Corporate Social Responsibility Trends – An Emerging Comparative Body of Law and Regulation on Corporate Responsibility, Governance and Sustainability' (2007) 4 Macquarie Journal of Business Law, p.91.

³² Michael E. Porter and Mark R. Kramer, 'Creating Shared Value' (2011) 89:1-2 Harvard Business Review.

³³ The notion of 'corporate citizenship' appeared already in 1992 Rio Earth Summit but was criticized as resulting in 'greenwash' without any real change taking place and the 2030 Agenda for Sustainable Development is seen as a possible factor of shift towards progressive role of businesses in achieving the goals of sustainability.

³⁴ See David Crowther and Güler Aras, Corporate Social Responsibility (David Crowther, Güler Aras & Ventus Publishing ApS 2008) p.23. 35 Ibid.

³⁶ See Johannesburg Declaration on Sustainable Development, A/CONF.199/20, Chapter 1, Resolution 1, Johannesburg, September 2002 and Plan of Implementation of the World Summit on Sustainable Development, A/CONF.199/20, Chapter 1, Resolution 2, Johannesburg, September 2002.

unbalancing the needed level-playing field. They are unduly influencing governments, causing, for example, the latter to struggle to reach binding targets on environmental issues or agreement as to how to tackle the negative consequences of trendy outsourcing.³⁷ While some companies voluntarily pioneered as sustainability contributors, most global corporations continued with 'business as usual', suggesting that a voluntary approach to the issue will not provide the results sought by the current sustainability goals.³⁸

John Ruggie in his two mandates as the UN Secretary General's Special Representative on business and human rights developed a framework and implementation techniques for respect of human rights by the corporations.³⁹ His findings are also useful in the context of sustainability and business in general, however, if businesses are not aware of their impact on society at large, then demonstrating due diligence in understanding and mitigating their potential impact on society is impossible.⁴⁰ Taking into account the global shift in expectations on corporate conduct, for multinational companies to be able to play the role of corporate citizens, they need to be aware of the influence they exert on the society.⁴¹ Furthermore, for the notion of corporate citizenship to be more than 'greenwashing',⁴² it has to be further explored whether voluntary action in the form of a 'self-enlightened' action could be reasonably expected from them⁴³ or should governmental affirmative action be envisaged as a more plausible alternative.⁴⁴

A UN commissioned report into the activities of the three thousand biggest public companies (including all 500 companies on the Standard & Poor index) in the world found that the estimated combined damage to the natural environment by these corporations was worth US\$2.2 trillion in 2008, measuring more than the national economies of all but seven countries in the world that year.⁴⁵ It has been argued that this cost of damage to the natural environment amounted to diminishing more than one-third of their profits if the companies in question were held financially accountable for that loss,⁴⁶ suggesting that a part of the maximised corporate profits is a spatial and temporal expropriation of corporate stakeholders. Although these corporations claim that CSR is an expensive sport, a rough half of them do not mind spending a hefty amount on lobbying: of the top two hundred companies of the world, ninety-four of them maintain "government relations" office next to Washington, the lobbying capital of the world.⁴⁷ When they are choosing between spending for responsible action and avoiding the future obligation of acting responsibly, the data shows that they rather voluntarily engage in the latter. In Europe, fifteenthousand lobbyists are based in Brussels, almost one for each staff member of the European Commission. The expenditure connected with them has been estimated at one billion Euros.

³⁷ See Barbara Adams and Jens Martens, Fit for whose purpose? Private funding and corporate influence in the United Nations (Global Policy Forum 2015); Susan George, Shadow Sovereigns: How global corporations are seizing power (Polity Press 2015).

³⁸ See in detail in sub-chapter 2.1 The impact of CSR hereunder.

³⁹ John Ruggie, 'United Nations Guiding Principles on Business and Human Rights' (2012), available online: http://www.ohchr.org/Documents/Publications/GuidingPrinciplesBusinessHR_EN.pdf, last accessed 23.05.2018.

⁴⁰ Special Representative of the Secretary-General on the Issue of Human Rights and Transnational Corporations and Other Business Enterprises, Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework, U.N. Doc. A/HRC/17/31 (Mar. 21, 2011).

⁴¹ See in general Edward Freeman, Strategic Management: A Stakeholder Approach (Pitman 1984).

⁴² A term used to describe corporate pretence of socially responsible behaviour through artful reporting.

⁴³ Some multinational companies became innovators in developing mitigation or adaptation initiatives and some even became prominent lobbyists in support of more concerted government action; e.g. Daimler's Car2Go initiative; partnership between Unilever and Oxfam in studying the impacts of the company's supply chain on poverty in Indonesia and Munich Re's support for a renewable energy project in North Africa.

⁴⁴ While it is argued that corporate citizenship will be driven by market competition and civil society scrutiny, it is at the same time highlighted that a stronger, more nuanced government regulation is needed. See Ralph Hamann, 'Corporate Citizenship' (2001) 28 Journal of Corporate Citizenship.

⁴⁵ Richard Mattison, Mark Trevitt and Liesel van Ast, 'Universal Ownership: Why Environmental Externalities Matter to Institutional Investors' (Trucost 2011, commissioned by UNPRI and UNEP Finance Initiative), p.24 ff, accessible online http://www.longfinance.net/images/reports/pdf/trucost_universalownershipfinal_2011.pdf, last accessed 23.05.2018.

⁴⁷ Sarah Anderson and John Cavanagh, 'Top 200: The Rise of Corporate Global Power' (Institute for Policy Studies 2000), available online: https://www.iatp.org/files/Top 200 The Rise of Corporate Global Power.pdf, last accessed 23.05.2018.

70% of those expenses represent business interest.⁴⁸ These corporations led the globalisation, emphasising economic integration without internalising its costs.⁴⁹

If governments do not address the corporate externalities in a better way than separate environmental regulation as it stands today, the resulting depletion of national resources could be fatal.⁵⁰ Regulation of the matter with novel approaches is a necessity, since the old tactics of enacting legislation in separate, environmental field only, did not produce the expected results.⁵¹

The broad definition of sustainability as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs [,]"⁵² encompasses also the right to decent work for all,⁵³ in contrast to the modern outsourcing practices under the shareholder value maximisation paradigm. While the outsourcing of noncore activities provided a cost advantage and competitive edge to multinational companies by enabling cost restructuring, speed to market and increased revenue, it also caused job losses in home countries,⁵⁴ the flow of currency abroad, and a decrease in sales as well as tax revenues,⁵⁵ benefiting shareholders and their financial interests and harming other stakeholders. Under the shareholder value maximisation paradigm, the corporations often permanently relocate their manufacturing processes to developing countries and encourage social dumping, indirectly affect violations of labour standards, exploit the natural resources irresponsibly and avoid compliance with environmental regulations⁵⁶ despite their public 'commitment to CSR'. Under a stakeholder approach, developed in accordance with the new definition of sustainability, such practices would be seen as illegitimate, as the cost-cutting practices would have to be done in accordance with the minimum standards imposed by the demands of sustainable business.

2. Corporate Social Responsibility as a partial remedy

he growing interest in CSR coincides with the recognition that shareholder value does not address social and environmental needs,⁵⁷ but it has not resulted in a unified meaning of CSR in time and geographical space.⁵⁸ CSR initiatives arose as the response to growing discrepancy between the social costs caused by companies and the limited scrutiny they

⁴⁸ Manzur Rahman, 'Corporate Governance in the European Union: Firm Nationality and the 'German' Model' (2009) 17:4 Multinational Business Review.

⁴⁹ Ibid.

⁵⁰ See in general 'OECD Environmental Outlook to 2050: The Consequences of Inaction' (OECD Publishing 2012), warning about the fact that delay in tackling environmental challenges can bring to potentially irreversible changes in the future.

⁵¹ Mattison, Trevitt and van Ast (n45) p.24ff.

⁵² The definition provided by the World Commission on Environment and Development in the Report of the World Commission on Environment and Development: Our Common Future 1987, Transmitted to the General Assembly as an Annex to document A/42/427 - Development and International Co-operation: Environment, Chapter 2.

⁵³ There are 19 sustainability goals under the UN 2030 Agenda for sustainable development; besides decent work and economic growth also eradicating poverty and hunger, ensuring good health and well-being, providing quality education, ensuring gender equality, ensuring clean water and sanitation and affordable and clean energy, building resilient infrastructure and foster innovation, reducing inequalities and building sustainable cities and communities, ensuring responsible consumption and production, combating climate change, conserving life under water and protecting life on land, ensuring peace, justice and strong institutions as well as strengthening the enforcement of these goals. See more in United Nations (UN) Transforming Our World: the 2030 Agenda for Sustainable Development (2015) Resolution adopted by the UN General Assembly on 25 September 2015, A/RES/70/1.

⁵⁴ While scholarship has been stressing the negative impact of outsourcing more than the positive one, some scholars have argued that the job losses in home countries are not connected with offshore outsourcing; see more in Gregory N. Mankiw and Phillip Swagel, 'The politics and economics of offshore outsourcing' (2006) AEI Working Paper Series, Working Paper 12398.

⁵⁵ K. Matthew Gilley and Abdul Rasheed, 'Making More by Doing Less: An Analysis of Outsourcing and its Effects on Firm Performance' (2000) 26:4 Journal of Management, p. 766.

⁵⁷ Vitols and Kluge eds (n17) p.20.

⁵⁸ Jenny Fairbrass, 'Exploring Corporate Social Responsibility Policy in the European Union: A Discursive Institutionalist Analysis' (2011) 49:5 Journal of Common Market Studies, p.952.

faced connected to those costs,⁵⁹ as incentives for proper corporate conduct.⁶⁰ They started as a complement to the shareholder-oriented model of corporate governance and as an alternative to stakeholder orientation; one left matters to a significant degree in the hands of businesses themselves, trusting they will self-regulate and enforce the efficient outcomes on themselves, ensuring collective rationality that will favour socially responsible solutions. Representing a set of vague, discretionary and non-enforceable corporate responses to social expectations, ⁶¹ CSR as a soft law solution served as a plan B, since harder law forms were deemed unpractical.⁶² It is characterised by three properties: by the company taking into account its responsibility towards environmental, social or societal progress through an integrated decision-making structure which is reported on publicly;63 going beyond its legal obligations and doing so voluntarily.64 The whole setting resembled students grading their papers: while some of them objectively carry out the task, the majority takes the opportunity to grade themselves by their individual rationality, trying to maximise their own outcome. ⁶⁵ While some companies create a truly CSR-oriented corporate culture and implement CSR practices into their core operations, others use the CSR mainly as a publicity exercise, implementing and reporting solely on practices that help build their reputation and omit the reporting on other negative practices. 66 CSR as a voluntary exercise, many times considered as mere corporate philanthropy, ⁶⁷ resembles corporations taking over governmental duties: 68 being vested with the power and motivation to cause harm in the society, while profiting out of it and discarding the externalities imposed through such conduct.⁶⁹ Changing these traditional roles resulted in inefficient outcomes, mainly due to the transboundary issues of global climate change, health epidemics, immigration and other conflicts, 70 with which governments as the guardians of the public interest are already struggling themselves.⁷¹

CSR has been traditionally formulated with a view to mitigating the damage caused by corporations to their outside environment,⁷² albeit this has not always been done through the same

⁵⁹ Roya Ghafele and Angus Mercer, "Not starting in sixth gear': An assessment of the U.N. Global Compact's use of soft law as a global governance structure for corporate social responsibility' (2010) 17:1 University of California, Davis, p.43.

⁶⁰ Virginia E. Harper Ho, 'Beyond Regulation: A Comparative Look at State-Centric Corporate Social Responsibility and the Law in China' (2013) 46 Vanderbilt Journal of Transnational Law, p.384.

⁶¹ Christine Parker, 'Meta-regulation: legal accountability for corporate social responsibility' in Doreen McBarnet, Aurora Voiculescu and Tom Campbell (eds), *The New Corporate Accountability: Corporate Social Responsibility and the Law* (Cambridge University Press 2007), p.207-237.

⁶² Ghafele and Mercer (n59) p.41.

⁶³ Paul Honen and Jason Potts, 'Corporate social responsibility. An implementation guide for business' (2007) International Institute for Sustainable Development, available online: https://www.iisd.org/sites/default/files/publications/csr_guide.pdf, last accessed 23.05.2018, p.

⁶⁴ Ulrich Mückenberger, Chances and obstacles for international trade union strategies in the CSR field in Vitols and Kluge eds (n17) p.146. 65 Indeed, as my own experience shows, giving repeatedly opportunity to students to grade their own class participation, they are eager to reward themselves even for the smallest effort presented at the class, and the better students were more likely to be reserved in deciding as to whether they deserve additional points or not.

⁶⁶ See more in Igor M. Alves, GREEN SPIN EVERYWHERE: HOW GREENWASHING REVEALS THE LIMITS OF THE CSR PARADIGM (2009) II:1 Journal of Global Change and Governance.

⁶⁷ Fairbrass (n58) p. 955.

⁶⁸ Ibid.

⁶⁹ Corporate Watch, 'WHAT'S WRONG WITH CORPORATE SOCIAL RESPONSIBILITY? The arguments against CSR' (2006), available online: http://www.wrongkindofgreen.org/about/csrreport/, last accessed 23.05.2018.

⁷⁰ Ian Davis, 'The biggest contract' (2005) The Economist, available online http://www.economist.com/node/4008642, last accessed 23,05,2018.

⁷¹ Ibid.

⁷² Businesses have a responsibility to the natural environment as well as "stakeholders," including customers, employees, suppliers, creditors, and the communities impacted by the company; the so-called 'ex-post' approach. See Andrew W. Markley, 'The Limits of "Corporate Social Responsibility" (2008) The Center for Vision & Values, available online http://www.visionandvalues.org/docs/A.Markley-Limits-of-Corporate-Social-Responsibility.pdf?x70441, last accessed 23.05.2018. The earlier CSR definitions follow Carroll's statement from the late 1970s that "the social responsibility of business encompasses the economic, legal, ethical, and discretionary expectations that society has of organizations at a given point in time". See Ivan Montiel, 'Corporate Social Responsibility and Corporate Sustainability Separate Pasts' (2008) 21:3 Organization & Environment, p.245-269.

channels as those through which the negative externalities have been imposed,73 which resulted in accusations of 'greenwashing' and the imposition of additional externalities on the impacted communities.⁷⁴ By way of example, a particular CSR practice often satisfies a present community need and does not address the underlying issue: building a health centre for a community does not take into consideration the efforts and resources required for sustaining that centre, neither it tackles the negative externality actually imposed in the form of environmental degradation and resource depletion.⁷⁵ While scholarship sometimes used the notions of 'corporate citizenship' and 'sustainability' as synonyms for corporate social responsibility, 76 some scholars have noticed subtle and not so subtle differences between those concepts and differentiated between their impacts on corporate behaviour.⁷⁷ Sustainability as a notion originates in the forestry of the 18th century, where the limitation of use of wood as a natural resource was imposed as a method of protection of the tree population for the future generations,⁷⁸ in contrast to the notion of CSR, which at its best implies acting responsibly to the current stakeholders.⁷⁹ In the 1980s it has been understood as consisting of equal consideration of environmental, social and economic aspects to meet present and future needs, 80 representing the idea of multigenerational balance. As such, it has been named 'a natural evolution of the stakeholder theory,'81 distinct from the CSR. concepts in its focus and obligations it imposes on corporations. Sustainable development lies somewhere between the two notions; it has been defined in Principle 8 of the Rio Declaration as a balance of consumption (the number of people and the consumption per person) with resources (a fixed amount of resources and the productivity per resource that ensures the resources being replenished and not used up for future generations).82 It has been inappropriately re-defined by governments as the continuation of profits for a few years, without any measure of long-term balance and protection or continuity of people and communities in their environments over generations, directly contradicting Rio principles.83

By way of example, if a company uses natural resources in a particular community, CSR demands for it to 'do good' for that community in any manner that the corporation deems beneficial and necessary in that society,⁸⁴ while the concept of sustainability demands the corporation to use the resources responsibly and ensure that the future generations will be able

⁷³ Jennifer Uchendu and Adiya Atuluku, 'Between Corporate Social Responsibility & Business Sustainability' (2016) 5/13 The Business Sustainability in Nigeria Series, available online http://sustyvibes.com/corporate-social-responsibility-business-sustainability/, last accessed 23,05,2018.

⁷⁴ Ibid

⁷⁵ See e.g. Wendy J. Werner, 'Corporate Social Responsibility Initiatives Addressing Social Exclusion in Bangladesh' (2009) 27:4 Journal of Health, Population and Nutrition; Michael Hopkins, Corporate Social Responsibility and International Development. Is Business the Solution? (Taylor and Francis 2012), p.7 and p.44.

⁷⁶ David Crowther and Esther Ortiz Martinez, Corporate social responsibility: history and principles in Penang, Social Responsibility World (Ansted University Press 2004), p.105.

⁷⁷ According to the World Commission on Environment and Development in 1987, "Sustainable Development is a development that meets the needs of the present without compromising the ability of future generations to meet their own needs". (GH, Brundtland, and World Commission on Environment and Development, *Our Common Future: Report of the World Commission On Environment and Development* (1987 Oxford University). On the other hand, corporate social responsibility does not carry unified definition and is carries different hue and focus depending on the country and region, its history and ideology. *See more* in Daniela Ebner and Rupert J. Baumgartner, 'The relationship between Sustainable Development and Corporate Social Responsibility' (2006) Corporate Responsibility Research Conference 2006 Dublin, available online http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.485.5912&rep=rep1&type=pdf, last accessed 22 05 2018 p.2

⁷⁸ Ebner and Baumgartner (n77) p.2.

⁷⁹ Alexander Dahlsrud, 'How Corporate Social Responsibility is Defined: An Analysis of 37 Definitions' (2008) 15:1 Corporate Social Responsibility and Environmental Management.

⁸⁰ The so-called triple-bottom-line concept see World Commission on Environment and Development (n52).

⁸¹ Ebner and Baumgartner (n77) p.8.

⁸² Rio Declaration (n21).

⁸³ David Lempert and Hue Nguyen, 'The global prisoners' dilemma of unsustainability: why sustainable development cannot be achieved without resource security and eliminating the legacies of colonialism' (2011) 7:1 Sustainability: Science, Practice and Policy, p.20.

⁸⁴ See Kash Rangan, Lisa A. Chase and Sohel Karim, 'Why Every Company Needs a CSR Strategy and How to Build It' (2012) Harvard Business School Working Paper no.12-088, available online: https://www.hbs.edu/faculty/Publication%20Files/12-088.pdf, last accessed 23.05.2018, p.3-4.

to use those resources in their own production. While CSR is backwards-oriented, reporting on corporate actions made to contribute to society in the past, sustainability is often forward-looking and focusing on the changes companies can make to secure their future. While CSR tends to target opinion-formers like politicians, pressure groups, and media, sustainability targets the whole value chain from suppliers to final consumers. In this sense, CSR became about compliance while sustainability is about actions and business, and while the former is managed by communications teams, sustainability is to be tackled by operations and marketing. While in CSR investment is rewarded by politicians through achieving the minimum compliance standard, the sustainability investment is rewarded by market valuation: the highly sustainable companies in the long term outperform the less sustainable ones. Sustainability can be seen as a value added to the notion of CSR and not as its synonym neither its hyponym. Seeing CSR simply as sustainability in the corporate sphere would be misleading, albeit both entail consideration of stakeholders and shy from the shareholder value maximisation in its pure form.

2.1 The impact of CSR

As the CSR movement fell short in finding the answers as to how corporations should mitigate their societal impact, the use of sustainability rhetoric now tries to make up for the pitfalls of a soft-law approach to the matter. Together with the CSR development, the number of corporate scandals or instances of law violation did not decrease, despite the proliferation of CSR codes and standards, and the number of corporations named in scandals due to whistle-blowing is increasing. Two key sustainability indicators developed unfavourably; targets for climate change and increased use of renewable energy resources have not been met.

Practical examples of CSR failure can be traced through several industries. In the automotive sector, the recent Volkswagen scandal of deliberate circumvention of the emissions control by emitting forty-times the legal limit of nitrogen oxide to obtain an unfair competitive advantage portrays the frequent use of CSR as a marketing tool.⁹⁵ This scandal carried a cost of €33 billion, next to the damage to its brand and the damage to environment and public health;⁹⁶ a sum

⁸⁵ For conceptual difference between the CSR and sustainability see Marcelo van Marrewijk, 'Concepts and Definitions of CSR and Corporate Sustainability: Between Agency and Communion' (2003) 44:2-3 Journal of Business Ethics, p.102-105.

⁸⁶ Daniel C. Esty and Todd Cort, 'Corporate Sustainability Metrics: What Investors Need and Don't Get' (2017) 8:1 Journal of Environmental Investing, available online http://corporate-sustainability.org/wp-content/uploads/Corporate-Sustainability-Metrics.pdf, last accessed 23.05.2018.

⁸⁷ CSR has been seen as a tool to enhance the reputation of the corporation in question; see e.g. Mette Morsing, Majken Schultz and Kasper Ulf Nielsen, 'The 'Catch 22' of communicating CSR: Findings from a Danish study (2008) 14:2 Journal of Marketing Communications. On the other hand, sustainability demands corporations to be pro-active and the results of their actions are yet to be seen, so such actions cannot be used for immediate enhancement of their reputation. See e.g. Eugen Nicolăescu, Cristina Alpopiand Constantin Zaharia, 'Measuring Corporate Sustainability Performance' (2015) 7 Sustainability.

⁸⁸ See e.g. The business of sustainability: McKinsey Global Survey results (2011). Available online http://www.mckinsey.com/business-functions/sustainability-mckinsey-global-survey-results, last accessed 23.05.2018.

⁸⁹ See Eccles et al. (n22).

⁹⁰ Richard E. Smith, 'Defining Corporate Social Responsibility: A Systems Approach For Socially Responsible Capitalism' (2011) Master of Philosophy Theses, available online http://repository.upenn.edu/cgi/viewcontent.cgi?article=1009&context=od_theses_mp, last accessed 23.05.2018.

⁹¹ See e.g. Nancy Bocken et al., 'A literature and practice review to develop sustainable business model archetypes' (2014) 65 Journal of Cleaner Production

⁹² Kanji Tanimoto, 'The Failure of CSR and Public Policy' (2009), available online $\frac{\text{http://kosif.org/data/event/csrconference-2009-6-18/session1/(draft)Tanimoto-HitotsubashiUniv-eng.pdf,}{\text{hast accessed 23.05.2018, p.7.}}$

⁹³ See The Economist, 'The age of the whistleblower' (2015), available online: https://www.economist.com/news/business/21679455-life-getting-better-those-who-expose-wrongdoing-companies-continue-fight, last accessed 23.05.2018.

94 Vitols and Kluge eds (n17) p.22.

⁹⁵ Enrique Dans, 'Volkswagen And The Failure Of Corporate Social Responsibility' (2015) Forbes, available online https://www.forbes.com/sites/enriquedans/2015/09/27/volkswagen-and-the-failure-of-corporate-social-responsibility/#113403b44405, last accessed 23.05.2018.

96 Jérôme Chaplier, 'Trusting corporations to be responsible: a failed EU experiment' (2015) Euractiv, available online: https://www.euractiv.com/section/trade-society/opinion/trusting-corporations-to-be-responsible-a-failed-eu-experiment/, last accessed 23.05.2018.

significant enough to cover serious overhaul of corporate culture into genuinely sustainable practices, and it was enabled by the defective EU regulatory and monitoring framework at all levels of governance, representing a symbol of a systemic failure.⁹⁷ In the electronics industry, Apple with its reactive CSR strategy acts solely when there is a complaint or protest against the company and had no CSR leadership or team until 2011.98 Its lack of transparency and stakeholder engagement suggest that its CSR acts are used as a marketing tool.⁹⁹ In the apparel industry, Abercrombie & Fitch tried to put CSR to marketing use too with its #FitchTheHomeless campaign, clothing homeless to gain popularity in its focus group of 18 to 34-year-olds, and failed: consumers want more than a philanthropic spree from a corporation, serving as an example of changed expectations of good corporate citizenship. 100 Puma also used its CSR efforts selectively by applying its CSR policy on a single supplier to portray itself as socially responsible, not enforcing its code of conduct on its whole supply chain.¹⁰¹ In time it reformed its practices and is now one of the first global corporations to practice a comprehensive voluntary nonfinancial reporting. 102 Nike's sweatshop scandal from the mid-1990's hardly taught the company a right lesson: the issue received some marketing-oriented CSR actions, but the real problem remains unresolved. 103 In the food industry, McDonald's serves as an example of a failure of voluntary CSR in the global supply chain by breaking its own Supplier Code of Conduct in the U.S. where even the audit missed all the violations on one of the supplier's farm. 104 In the same industry, Heinz only decided to act on the issue of overkilling of dolphins while fishing for tuna when caught in the act and switched to being 'dolphin friendly tuna source' after the fact. 105 And Monsanto, by developing genetically modified food, lessened the food industry's environmental impact but misinterpreted the needs of society and was destroyed due to consumer opposition. 106 In the retail industry, Walmart was accused of 'greenwashing': using CSR to distract from the less flattering news. Its CSR reports are not addressing fundamental non-sustainability issues such as selling low-quality non-durable products, minuscule reducing waste, lagging on renewable energy, increasing greenhouse gases, voraciously consuming land, financing anti-environmental candidates, consolidating and industrialising food production, degrading organic products and spreading poverty.¹⁰⁷ The oil industry provided several examples of CSR failure, the British Petroleum disasters of 2010 being the most notorious ones. First, the Macondo oil prospect leaked 4.9 million barrels of oil into the ocean and later in the same year the explosion of Deepwater Horizon platform caused the most massive marine oil spill in the history of the petroleum

⁹⁷ Ibid. See also Issachar Rosen-Zvi, 'You Are Too Soft!: What Can Corporate Social Responsibility Do For Climate Change? (2011) 12:2 Minnesota Journal of Law, Science & Technology, p.535-551.

⁹⁸ John Dudovski, 'Apple Inc. Report' (2018) Research Methodology, available online: https://research-methodology.net/apple-inc-report-2-2/, last accessed 23,05,2018.

⁹⁹ Raz Godelnik, '5 Reasons Why Apple's CSR Strategy Doesn't Work' (2012) Triple Pundit, available online: http://www.triplepundit.com/2012/05/5-reasons-apples-csr-strategy-doesnt-work/, last accessed 23.05.2018.

¹⁰⁰ Jamie Matthews, 'Abercrombie & Fitch: complete CSR fail' (2013) The Drum, available online: http://www.thedrum.com/opin-ion/2013/05/17/abercrombie-fitch-complete-csr-fail, last accessed 23.05.2018.

¹⁰¹ China Labor Watch, 'Puma's Failure in CSR: Supplier's Critical Conditions' (2008), available online: http://www.chinalaborwatch.org/report/21, last accessed 23,05,2018.

¹⁰² Oliver Balch, 'Verdict on PUMA's innovative accounting system for sustainability' (2012) The Guardian, available online: https://www.theguardian.com/sustainable-business/puma-environment-accounting-reviewed, last accessed 23.05.2018.

¹⁰³ Daily Mail, 'Nike workers 'kicked, slapped and verbally abused' at factories making Converse' (2011), available online: http://www.dailymail.co.uk/news/article-2014325/Nike-workers-kicked-slapped-verbally-abused-factories-making-Converse-line-Indonesia.html, last accessed 23.05.2018. See also Kevin Jackson, 'Global Corporate Governance: Soft Law and Reputational Accountability (2010) 35:1 Brooklyn Journal of International Law, p.51.

¹⁰⁴ International Labor Rights Forum, 'Golden Veneer: How McDonald's Empty CSR Promises Failed Workers at Taylor Farms' (2015) International Labor Rights Forum.

¹⁰⁵ Geoffrey Heal, 'Corporate Social Responsibility: An Economic and Financial Framework' (2004), available online: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=642762, last accessed 23.05.2018.

¹⁰⁷ Institute for Local Self-Reliance, 'Top 10 Ways Walmart Fails on Sustainability' (2012), available online: https://ilsr.org/top-10-ways-walmart-fails-sustainability/, last accessed 23.05.2018.

industry.¹⁰⁸ The irony of the situation was that despite British Petroleum being the first major oil company to brand itself as 'socially responsible' in the late 1990s, spending over 200 million US dollars on advertising campaign "Beyond Petroleum", it has a history of safety and environmental breaches that continues until today in the shade of short-term profit chase, representing the prime example of "greenwashing'.¹⁰⁹ Their unsustainable emissions practices were known and also condemned by their outside auditors in 2008.¹¹⁰ As the fossil fuel represents a lead contributor to climate change, companies in this sector should not still have broad discretion as to which environmental data to highlight and what to hide, using informational overload as a tool to confuse.¹¹¹ These practices serve as a practical example of findings of a negative relation between CSR communication and CSR activities, i.e. the more a company disclosed about their CSR practices, the worse its environmental performance was.¹¹²

Yet not all companies overlooked the opportunity a truly sustainable action brings. Unilever, by way of example, presented its goals of doubling corporate sales through its sustainable living plan, simultaneously reducing its environmental impact, despite resistance from its shareholders and competitors. Unilever's CEO speaks openly about the need of implementing stakeholder value in the corporate world. Coca-Cola, the world's largest beverage company, represents another example, employing a long-term strategy on water consumption, the core ingredient in their products, by engaging the local community in improving the efficiency of their operations. But those are exceptions to the rule that the multinationals are failing on CSR goals by not focusing on transparency and supply chain operations, portraying the CSR limits as focused on improving the current capitalist system rather than transforming it through its linkage to specific projects and addressing the causes. In order to move from the inefficient equilibrium to the efficient equilibrium of the prisoner's dilemma, a nudge will be needed, arguably in the form of legislative intervention for the creation of credible commitment towards sustainable behaviour of all corporations.

2.2 From the regulation for business to the regulation of business

Governments hold an essential role in advancing CSR to create a level playing field for business:¹¹⁷ binding regulations are needed to improve social and environmental practices of companies and CSR can be seen as paving the way to hard law processes.¹¹⁸ Contrary to the neoliberal predictions of resistance to increased regulation and government regulation, the Nordic companies are proregulation, joined by other pioneering sustainable companies,¹¹⁹ to ensure a global level playing field for corporations and sustainable growth of world economy through the integration of CSR into

¹⁰⁸ Jeff Bone, 'Lessons Learned from the British Petroleum Disaster' (2012) Law Now, available online http://www.lawnow.org/lessons-learned-from-the-british-petroleum-disaster/, last accessed 23,05,2018.

¹⁰⁹ Ibid. Other safety and environmental breaches include the 2006 largest recorded oil spill on Alaska's North Slope due to rotten pipelines and the 2008 human error-caused tragedy in the Gulf of Mexico.

¹¹⁰ Rosen-Zvi (n97) p.546.

¹¹¹ Ibid p.542.

¹¹² Sylvie Berthelot, Denis Cormier and Michel Magnan, 'Environmental Disclosure Research: Review and Synthesis (2003) 22 Journal of Accounting Literature, p.1, 5, 8-9, 15, 20.

¹¹³ John Browne and Robin Nuttall, 'Beyond corporate social responsibility: Integrated external engagement' (2013) McKinsey & Company, available online http://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/beyond-corporate-social-responsibility-integrated-external-engagement, last accessed 23.05.2018.

¹¹⁴ Elizabeth Matsangou , 'Unilever CEO Paul Polman is redefining sustainable business' (2016) European CEO, available online http://www.europeanceo.com/business-and-management/unilever-ceo-paul-polman-is-redefining-sustainable-business/, last accessed 23.05.2018.

¹¹⁵ Albeit the arguments go as to CSR being the only feasible way for the company to continue due to its impact on world-wide obesity; see Smith (190).

¹¹⁶ Oxfam, 'Behind the Brands' (2013) 166 Oxfam Briefing Paper Summary.

¹¹⁷ Harper Ho (n60) p.386.

¹¹⁸ Maria Gjølberg, 'Explaining regulatory preferences: CSR, Soft Law, or Hard Law? Insight from a Survey of Nordic Pioneers in CSR' (2011) 13:2 Business and Politics, p. 1.

¹¹⁹ Ibid p.2.

the core business operations. 120 By way of example, since 2007 state-owned companies in Sweden have been legally required to publish sustainability reports according to the Global Reporting Initiative framework, 121 which first and foremost strengthened the reporting activities 122 and enabled the Swedish government to proceed with imposing substantive rules on sustainability in 2012, 123 thereby shortening the corporate learning curve. The "new CSR" should contain elements of environmental sustainability, responsible citizenship, corporate accountability, integrity as well as the credibility of character, preventing brands of multinational companies to suffer from reputational harm following the breaches of the social contract. 124 Corporations were mistakenly thought not to be able to distinguish between knowing what moral choices are and consciously making those choices, 125 and this "new CSR" is designed to follow this finding. The suggested name for this improved CSR was "corporate social responsiveness", emphasising the action and activity instead of obligations and accountability, 126 encompassing informational, economic, and legal instruments¹²⁷ to encourage and support moral and sustainable corporate behaviour. For corporations to understand that ownership entails limited rights where its use would be harmful to others, 128 mandatory legal obligations towards society should be envisaged, as it was the case in environmental law with the principle of 'polluter pays.' The creation of corporation should be regarded as a privilege, not a right, making it legitimate for the state to impose certain obligations in return for the granted privilege. 129

Businesses need to develop sustainable operations, plan for a future lacking required resources and increase the efficiency of the use of those resources.¹³⁰ Without drastic changes to current corporate laws, ethical and responsible business behaviour will not spontaneously occur due to inherent conflicts of interest in the corporate world,¹³¹ as corporations currently have weak incentives to reflect the environmental impact of their accounting, deflating their overstated value creation.¹³²

Implementing sustainability does not imply economic stagnation but rather sustainable growth, defined as "a rise in per-capita real income or per-capita gross national product that is capable of continuing for a long time", 133 countering consumerism. By way of example, as CSR traditionally demands to 'give back to the society' in an arbitrary, company chosen way, (environmental) sustainability entails instruments such as 'industrial ecology' requiring zero waste to landfill, that need to be embedded in internal corporate practices and that by default

¹²⁰ Ibid p.12.

¹²¹ Dr. Matthew Gardner and Dr. Stephan Lienin, 'Impact of NFR Directive' (2015) Environmental Leader, available online https://www.environmentalleader.com/2015/08/impact-of-the-eu-directive-on-non-financial-reporting/, last accessed 24.05.2018.

¹²² Tommy Borglund, Magnus Forstenson and Karolina Windell, 'Increasing responsibility through transparency?: A study of the consequences of new guidelines for sustainability reporting by Swedish state-owned companies' (2010) Swedish Ministry of Enterprise, Energy and Communications, available online: http://uu.diva-portal.org/smash/record.jsf?pid=diva2%3A353402&dswid=6326, last accessed 23.05.2018.

¹²³ Sweden demanded the state-owned companies to set several sustainability goals and report on them. See more online: http://www.government-policy/state-owned-enterprises/goals-for-state-owned-companies/, last accessed 23.05.2018.

¹²⁴ Jackson (n103) p.45.

¹²⁵ Jackson (n103) p.46.

¹²⁶ Ibid p.52. Corporate social responsiveness was suggested also to mean company's responsiveness to stakeholders, its contribution to economic and environmental sustainability, closely connected with good corporate citizenship as in corporate effort to adhere to moral and ethical norms and making a positive impact on society. See more in Harper Ho (n60) p.382.

¹²⁷ Reinhard Steurer, 'The role of governments in corporate social responsibility. Characterising public policies on CSR in Europe' (2010) 43:1 Policy Sciences, p.56

¹²⁸ See generally A.M. Honore, 'Ownership' in A.G. Guest (ed.) Oxford Essays in Jurisprudence (Oxford University Press 1961) and Svetozar Pejovich, The Economics of Property Rights: Towards a Theory of Comparative Systems (Kluwer Academic Publishers 1990).

¹²⁹ Joseph Heath, 'A Market Failures Approach to Business Ethics' in Heath, Joseph: Morality, Competition, and the Firm (Oxford University Press 2014), p.1.

¹³⁰ Crowther and Aras (n34) p.15.

¹³¹ Ibid p.54.

¹³² Ibid p.22.

¹³³ Douglas Greenwald and Henry Arnold, Henry C. F., The McGraw-Hill dictionary of modern economics. A handbook of terms and organizations (McGraw-Hill 1973).

ensure sustainable operations of the corporation in question. ¹³⁴ Embedding corporate obligations in the same legal branch that created their rights would rise to the governmental responsibility in meeting sustainable development. ¹³⁵ By doing so, by the 'thinking at the margin' concept of incentivising corporations, ¹³⁶ a level playing field would be constructed for the corporations that have not yet acknowledged CSR's self-enlightened interest and the CSR pioneering corporations, creating incentives for the former to engage in sustainable practices. ¹³⁷ International business urgently needs to restore trust, and the EU needs to improve its competitiveness, which can be achieved through the creation of a 'sustainable' EU corporate law framework.

3. The obsoleteness of the EU CSR and the topicality of the EU sustainable company

espite the European Union being regarded today as a leader in CSR and CSR policies, ¹³⁸ these policies have been subject to serious political controversies. ¹³⁹ While the EU CSR developments until 2004 followed a pro-active stakeholder approach, ¹⁴⁰ seeing CSR as an investment and not a cost, ¹⁴¹ the EU institutions took an active role in encouraging the voluntary adoption of codes of conduct after the year 2004 in order to increase the public awareness about the necessity for multinational companies to abide by specific health, environmental and social standards. ¹⁴² This change has been inspired by ILO and OECD conventions ¹⁴³ and did not reach beyond the voluntary approach before the year 2014. From this point on, EU CSR has been aligned with market liberalism, facilitating regulatory competition and rejecting mar-

¹³⁴ RICOH follows such sustainable practice, resulting in only 13% of their products going to waste; *see* Crowther and Aras (n34) p.58. 135 Bruce Byiers and Justin Bessems, 'Costs if you do, costs if you don't: Promoting responsible business and reporting - challenges for policy makers' (2015) ECDPM Discussion Paper 175, p.27.

See Ward Farnsworth, The legal analyst. A toolkit for thinking about the law. (University of Chicago Press 2007), Chapter 3. Corporations that were already thinking about implementing sustainable business practices would be incentivised to do so; the law only changes the behaviour 'at the margin' and rarely the behaviour of all addresses.

¹³⁷ Enforcement could serve as an incentive; see Byiers and Bessens (n135).

¹³⁸ Steurer (n127) p.54.

¹³⁹ Ibid. The change has also been described as "a change from social-liberal standard-setter to neo-liberal cheerleader and back. See Daniel Kinderman, 'Corporate Social Responsibility in the EU, 1993–2013: Institutional Ambiguity, Economic Crises, Business Legitimacy and Bureaucratic Politics' (2013) 51:4 Journal of Common Market Studies, p.702.

¹⁴⁰ Ibid. Such developments were the 1999 Resolution of European Parliament on EU standards for European Enterprises Operating in Developing Countries: Towards EU Code of Conduct, advocating inclusion of essential environmental, labour and human rights norms in EU company law as compulsory; 2001 Interpretative Communication of the Commission on the EU law applicable to Public Procurement, carrying social considerations; 2002 Resolution of European Parliament on Commission Green Paper on promoting EU framework for CSR, essentially calling for non-financial reporting directive and 2002 European Multi-Stakeholder Forum on CSR, creating enabling environment for CSR.

¹⁴¹ Catherine Barnard and Simon Deakin, 'Reinventing the European corporation? Corporate governance, social policy and the single market' (2002) 33:5 Industrial Relations Journal, p.496.

According to the recommendations of the Final Report of the EU Multistakeholder Forum on CSR, CSR should be understood as the voluntary integration of environmental and social considerations into business operations, over and above legal requirements and contractual obligations. See European Multistakeholder Forum on CSR, 'Final results & recommendations' 29 June 2004, available online https://www.businesseurope.eu/sites/buseur/files/media/imported/2004-01424-EN.pdf, last accessed 24.05.2018.

¹⁴³ Nicolas Croquet, Asif Hameed and Tolga R. Yalkin, 'Corporate social responsibility in the European Union' (2009) University of Oxford Pro Bono Publico, p.6. Available online: https://www.business-humanrights.org/sites/default/files/reports-and-materials/CSR-soft-law-in-EU-Oxford-Pro-Bono-Publico-for-Ruggie-30-Jul-2009.pdf, last accessed 28.05.2018.

ket correcting supranational legislation.¹⁴⁴ A neo-liberal conversion of EU CSR occurred, given by European employers, and 'social case' was translated to 'business case'. CSR Europe became business-driven.¹⁴⁵ The Commission for some time prioritised competitiveness and the reduction of administrative costs over social and environmental objectives.¹⁴⁶ It eventually renewed its 'socially oriented' CSR with its redefinition of CSR as corporate responsibility for its impacts on society. Its voluntary character changed¹⁴⁷ due to the recent financial and economic crises, unemployment and social deprivation, institutional investors' pressure for risk disclosure and the global CSR policy developments which re-empowered the standard setting.¹⁴⁶

Despite a certain level of hard legal efficacy being achieved in the EU by the soft law measures, 149 the final outcome of the CSR measures has not been satisfactory. While 'soft-law orientation' is understandable as it has been legally motivated - any soft law measure adopted ultra vires would not be subject to a direct challenge before EU courts and would be presumed to be valid, 150 it does not achieve the desired outcome and does not contribute sufficiently to the achievement of international EU sustainability objectives. A better example of a successful legislative action to that effect represents the EU procurement law, which requires public authorities to condition the attribution of specific public contracts upon the satisfaction by corporations of standardised social and environmental clauses, 151 such as the condition of employing long-term unemployed and environmental concerns. 152

The EU non-financial disclosure directive¹⁵³ could serve as a stepping stone to determining mandatory corporate sustainability provisions, as it results in publicised information on non-financial aspects of certain EU corporations.¹⁵⁴ It obliges EU based companies, regarded as public-interest entities, averaging 500 or more employees, to report on their non-financial performance. As of 2017, the management report must include a statement on corporate policies, outcome and environmental, social and employment risk, as well as information on due diligence.¹⁵⁵ This non-financial reporting is perceived as a hard law CSR reporting obligation, creating new

¹⁴⁴ Kinderman (n139) p.702. Some of such neo-liberal developments are the 2005 Opinion of the European Economic and Social Committee on Information and Measurement Instruments for CSR in a globalised economy; in 2005 various projects on CSR and SMEs were co-financed by the European Commission in response to the Call for Proposals on 'Mainstreaming CSR among SMEs'; 2006 Commission Communication to the European Parliament, the Council and the European Economic and Social Committee implementing the Partnership for Growth and Jobs: making Europe a Pole of Excellence on CSR, encouraging voluntary corporate adoption of CSR; 2006 ECOSOC Opinion on the Commission Communication to the European Parliament, the Council and the ECOSOC, seeing CSR as a voluntary exercise and emphasizing it's impact on long-term performance; 2007 Resolution of European Parliament on CSR called 'A New Partnership', coming closer to "social policy CSR", recommending expansion of mandate of bodies supervising corporate behaviour to multinational companies operating overseas; 2007 European Expert Group on CSR and SMEs Report, entailing best practise in six topic areas; 2007 Commission Communication to the European Parliament, the Council , the ECOSOC and the Committee of the Regions: Opportunities, Access and Solidarity in 21st century Europe discussing challenges EU is facing in terms of skills, health, poverty, social exclusion and discrimination; 2008 European Competitiveness Report concluding CSR ca have a positive effect on a company's competitiveness; 2008 EU announcement on co-financing initiatives to support CSR in various industrial sectors; 2008 European Alliance on CSR, working on the topic of eco-efficiency, sustainable production and consumption.

¹⁴⁵ Ibid p.708.

¹⁴⁶ Ibid p.709.

¹⁴⁷ Ibid p.711-712.

¹⁴⁸ Ibid.

¹⁴⁹ Croquet et al. (n143) p.7.

¹⁵⁰ Ibid p.9.

¹⁵¹ Ibid p.10.

¹⁵² Case C-31/87 Gebroeders Beentjes BV v State of the Netherlands [1988] ECLI:EU:C:1988:422, judgment issued on the basis of Council Directive 71/305/EEC of 26 July 1971 Concerning the Coordination of Procedures for the Award of Public Works Contracts, applicable to Directive 2004/17/EC and Directive 2004/18/EC. Such considerations are allowed under three conditions: they must comply with the general principles of EU law; they must be consistent with substantive and procedural rules of the directives in question and it such condition must be explicitly indicated in the contract notice.

¹⁵³ the Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups, OJ L 330.

¹⁵⁴ It obliges EU based companies, regarded as public-interest entities, averaging 500 or more employees, to report on their non-financial performance. *See* Report of Committee on Employment and Social Affairs on Corporate Social Responsibility: promoting society's interests and a route to sustainable and inclusive recovery (2012/2097(INI)).
155 Ibid.

substantive duties, albeit still under the 'comply-or-explain' neoliberal approach.¹⁵⁶ Affecting around six thousand large companies across the EU, and entailing an underestimated additional direct corporate cost from 91,000 EUR to 331,000 EUR for larger entities,¹⁵⁷ the directive has not been well received by the business community. This cost was seen as sunk, putting European companies at a severe disadvantage regarding their international competitiveness, but it did not dissuade the reporting institutions from staying in the EU.¹⁵⁸ Indeed, by brief comparative analysis, Chapter 1502 of the Dodd-Frank Act in the U.S. entails an initial compliance cost higher than the new EU Directive,¹⁵⁹ demonstrating that the 'harder' regulatory solutions are a global phenomenon and not an isolated European anti-competitive invention.

The EU furthermore pioneered as the first supranational entity to institute a mandatory emissions trading program for carbon dioxide, the so-called EU Emissions Trading Scheme, which is the most significant scheme of its kind in the world. Starting by emission permits being allocated free of charge to companies, resulting in the Member States making excessively generous permit allocations and causing an initial increase in greenhouse emissions, she the scheme in its third phase imposed an effective constraint on corporate behaviour. An essential hard law step towards sustainability is also represented by the renewable energy certificate system, helping to facilitate the creation of a market for green electricity.

As a survey among the actors in capital markets has shown, the traditional 'comply or explain' approach for incentivising companies to disclose sustainability information was insufficient, and compulsory reporting was perceived as more efficient. Companies with poor environmental and social performance have an interest in not publicising their results; as such disclosure may be harmful to their image. They need to be incentivised for such disclosure through a mandatory reporting framework. But it is not only the investors who prefer the introduction of compulsory rules: brokers also seek to avoid reporting negative information, fearing the loss of access to investee corporate boards. As a such disclosure through a mandatory rules: brokers also seek to avoid reporting negative information, fearing the loss of access to investee corporate boards.

The EU CSR approaches can be seen as a 'trial and error' exercise, coupled with the possibility to learn from one's own mistakes, as well as errors of other jurisdictions, to be able to create a novel approach. This approach could be called 'CSR 3.0', 169 shying away from the reactive CSR version to proactive sustainability-oriented core business strategies, incentivised by a mandatory EU legislation. With this, we are returning to the topic of EU sustainable company as a new form of European corporations. Mitigating or preventing the negative consequences of corporate activity is a sine qua non for achieving global sustainability. At the EU level, the fragmented, dispersed corporate legal obligations do not suffice; a corporate legal policy entailing sustainable orientation would represent a better starting point. Despite the expected corporate resistance, the EU should acknowledge the fact that regulation is a governmental obligation, not to be left

¹⁵⁶ Byiers and Bessens (n135) p.17.

¹⁵⁷ Ibid.

¹⁵⁸ Ibid.

¹⁵⁹ Ibid p.21.

¹⁶⁰ Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC, OJ L 275.

¹⁶¹ Andrew Watt, Signal change: environmentally sustainable corporate behaviour requires a change in incentives in Vitols and Kluge eds (n17) p.245.

¹⁶² Ibid p.257, 258.

¹⁶³ Ibid p.258.

¹⁶⁴ Rosen-Zvi (n97) p.536.

¹⁶⁵ European Commission, 'Summary of the Responses to the Public Consultation on Long-term and sustainable investment (2016), available online http://ec.europa.eu/information_society/newsroom/image/document/2016-44/feedback_final_pc_30068_en_19173.pdf, last accessed 24.05.2018, p.9.

¹⁶⁶ Ibid p.10.

¹⁶⁷ Ibid.

¹⁶⁸ Ibid p.20.

¹⁶⁹ Building upon the idea of calling the new definitions of CSR "CSR 2.0". See Wayne Visser, CSR 2.0: Reinventing Corporate Social Responsibility for the 21st Century (Springer 2014).

to the businesses themselves. A corporate agreement on the matter is in fact not needed,¹⁷⁰ as today a small number of multinational companies dominates each sector and exerts a strong influence on governments. Under these conditions, the concept of partnership represents a myth of collective endeavour and equality of players, meaning that conflicts of interests cannot be resolved by consensus but must be addressed by the government.¹⁷¹

3.1 CSR 3.0: Sustainable Company and the EU Corporate Law

Under the recent discovery that greenhouse gases threaten to raise the temperature of the Earth to such an extent that human life as we know may soon become no longer viable, 172 the urgency arose for governmental actions to change incentives for corporate behaviour, due to the causal link between production, consumption, emissions and human survival. 173 What has been suggested as an explanation for the non-sufficient activity of global political actors was the "game of chicken"174 played by the U.S., China, and the EU. By the U.S. refusing to make significant reductions in emissions unless China and EU do so first, an environmental disaster is inevitable. 175 Waiting for who will be the first to swerve will not produce the necessary changes and reverse or stop the environmental degradation and the accompanying societal changes. Timely action is called for, and the waiting game will only bring to the mutually assured destruction scenario. The EU represents only one of the global actors with responsibility for changing the game in for the destructive macro- and microeconomic principles to discontinue; the rest of the world will inevitably need to follow for the change to be sufficient to ensure the sustainability of the planet. As the governments themselves are facing a collective action problem, suffering from prisoner's dilemma, they refuse to take the first step due to the perceived lack of credible commitments from the side of the other actors.

Hereunder the game theory concepts are employed, coupled with underlying microeconomic assumptions, not to generate empirical results, but rather to provide a set of logical assumptions of human behaviour, offering a form of testing the set hypothesis through modelling. This may generate additional hypotheses for further testing. Under the doctrine of mutual destruction, a theory of military strategy, full-scale usage of weapons of mass destruction by at least two opposing sides is envisaged, leading to the complete destruction of the defender as well as the attacker. This doctrine is based on the deterrence theory under which any threat of using potent weapons against the enemy is designed to keep the enemy from using similar or same weapons. ¹⁷⁶ It is a game of sequential bargaining with imperfect information, attesting to the fact that uncertainty created by incomplete information is an important cause of the crisis as competition in taking risks. ¹⁷⁷ It presumes credibility of a threat of counter-strike as a rational decision of carrying it out since the expected cost of implementing the threat is less than the expected cost of not doing so. ¹⁷⁸ While this doctrine developed at the time of the Cold War, it can be used for the modern fight against climate change which due to the scale, complexity, and speed of

¹⁷⁰ Johannesburg World Summit 2002: Environment and sustainable development: implementation of Agenda 21 and the Programme for the Further Implementation of Agenda 21. Available online $\frac{\text{http://www.un.org/ga/search/view_doc.asp?symbol=A/C.2/57/L.83\&Lang=E,}{\text{last accessed 24.05.2018}}.$

¹⁷¹ Martin Beckenkamp, 'Environmental dilemmas revisited: structural consequences from the angle of institutional ergonomics' (2009) 2009:1 Max Planck Institute for Research on Collective Goods, p.2.

¹⁷² Ibid.

¹⁷³ Ibid p.247.

¹⁷⁴ A game of chicken is a model of conflict for two players in game theory, where it is to both players' benefit if one player yields, the other player's optimal choice depends on what his opponent is doing: if his opponent yields, the player should not, but if the opponent fails to yield, the player should. *See more* in Drew Fudenberg and Jean Tirole, *Game theory* (MIT Press 1991), p.18-20.

¹⁷⁵ Dawn Stover, 'Climate MADness' (2012) Bulletin of the Atomic Scientists, available online http://thebulletin.org/climate-madness, last accessed 23,05,2018.

¹⁷⁶ Robert Powell, 'Crisis Bargaining, Escalation and Mad' (1987) 81:3 The American Political Science Review, p.718.

¹⁷⁷ Ibid p.717, 718

¹⁷⁸ Ibid.

the task¹⁷⁹ demands collective efforts and incredible rate of innovation, as the slowly-but-surely pace of transitions solves economic, but not the environmental and societal issues.¹⁸⁰ While the modern environmental and societal crisis is not a classical mutually assured destruction scenario. it nonetheless exhibits similar traits under dissimilar conditions. The original game entails at least two world forces which under the threat of the reaction of other shy away from action, and in the environmental and societal game those forces wait for the actions of the other in order to act themselves, where the inaction leads to mutually assured destruction of the natural systems on which all life depends. 181 Today mutually assured destruction represents a race for the Earth's vital resources, threatening to undermine the stability in key regions of the world. The world looks at the rich developed countries to make the first move since they have been the historically dominant emitters of greenhouse gases, but currently, China, Brazil, and Indonesia joined them. 182 The reasons as to why for example the EU should make the first move need to be found elsewhere. 183 Under this doctrine, an immediate global response is necessary to prevent catastrophic, irreversible consequences, even though in the environmental mutually assured destruction a single actor (in)directly threatening other players does not exist, curtailing food or energy exports, but rather all of them collectively bear the systemic risks. 184

As the global use of resources has been made without a coordinated plan, today many environmental resources display the characteristics of a developing tragedy of the commons, 185 to which solution cannot be a voluntary action, but rather a collective agreement to reduce all use to the sustainable level, necessitating legislative action. The nature of this action cannot be individual; global jurisdictions must address the issue collectively, ensuring sustainable steps are being taken in their respective national economy¹⁸⁶ in the absence of world government which would tackle the problem of carbon as a global pollutant, whose influence cannot be limited locally. While the individually taken measures might carry extraterritorial effects if applied to the business active on the EU market, much as the ones inherent in the EU competition law¹⁸⁷ and the EU data protection legislation, 188 their territorial application will not suffice to reverse or detain the scale and speed of the depletion of natural resources. Furthermore, on the corporate level, as the costs of overusing the commons appear uncertain, remote in time or fall primarily on third parties, and company's success or survival is threatened by taking on a competitive disadvantage, unilateral reduction in the use of commons is not probable. 189 Successful legal regulation of the use of commons assures all common users that their restraint will preserve a proportionate share of resources for their future use and that overuse will result in costly sanctions rather than in benefits. 190 What holds for individual companies a fortiori holds for

190 Ibid p.6.

¹⁷⁹ Venkatesh Rao, 'Why Solving Climate Change Will Be Like Mobilizing for War' (2015) The Atlantic, available online https://www.theatlantic.com/science/archive/2015/10/why-only-a-technocratic-revolution-can-win-the-climate-change-war/410377/, last accessed 24.05.2018.

¹⁸⁰ James Bennet, 'We Need an Energy Miracle' (2015) The Atlantic, available online $\frac{https://www.theatlantic.com/magazine/archive/2015/11/we-need-an-energy-miracle/407881/, last accessed 24.05.2018.$

¹⁸¹ Jonathan Hoekstra, 'From Cold War to Hot Peace: The Stakes at Copenhagen' (2009), available online $\frac{http://blog.nature.org/conservanc/?post=8456, last accessed 24.05.2018.$

¹⁸² See more in Intergovernmental Pannel on Climate Change, 'Climate Change 2014: Mitigation of Climate Change' (Cambridge University Press 2014), available online: https://www.ipcc.ch/pdf/assessment-report/ar5/wg3/ipcc_wg3_ar5_full.pdf, last accessed 24.05.2018. 183 Hoekstra (n181).

¹⁸⁴ Alejandro Litovsky and Michael Schaefer, 'Assured Mutual Dependence' (2014) El Pais, available online http://elpais.com/el-pais/2014/01/30/planeta-futuro/1391105494-355043.amp.html, last accessed 23.05.2018.

¹⁸⁵ Tragedy of the commons occurs when many independent agents derive benefits from a subtractable resource that is threatened by their aggregate use; personal sacrifice to preserve the commons tends to be self-eliminating, as the scrupulous users lose their livelihood to the unscrupulous or those who reasonably doubt that all will voluntarily reduce their use. See Garret Hardin, 'The tragedy of the commons' (1968) 162:3859 Science, p. 1243–1248. See also Beckenkamp (n171).

¹⁸⁷ See more in Peter Behrens, 'The extraterritorial reach of EU competition law revisited: The "effects doctrine" before the ECJ' (2016) Discussion Papers 3/16, Europa-Kolleg Hamburg, Institute for European Integration.

¹⁸⁸ See more in Cedric Ryngaert, 'Symposium issue on extraterritoriality and EU data protection' (2015) 5:4 International Data Privacy Law. 189 Beckenkamp (n171) p.5.

individual states and their legislation: if unilateral restraint cannot reasonably be expected to achieve its purpose, there is no reason to adopt it, 191 and a collective global policy is needed to incentivise individual states for action. 192 While such policy could be said to exist, it has been criticised for its non-binding nature and for falling short of the necessary CO₂ reductions to a level preventing predicted global warming. 193

Under the principle of physical constraint and the time scarcity due to the cumulative acceleration of externalities, 194 solutions should not be limited to academic and political debates but implemented through legislation with appropriate enforcement mechanisms as soon as possible. Such action requires a high level of trust in academic and public institutions, which together with politics need to establish a way to allocate high costs today, while still affordable, to benefit future generations and prevent disasters for the current generations. 195 Under the principle of intra-generational justice¹⁹⁶ individual, voluntary actions cannot be relied upon to find sustainable solutions as individuals cannot reap the rewards of their actions and as the burden of climate change is necessarily born by the coming generations. Without mutually assured cooperation towards global corporate sustainable development which would successfully tackle the externalities, a scenario of mutual assured environmental destruction is inevitable, 197 leading to a possible societal collapse. Compulsory corporate cooperation towards sustainability is needed, as it will not spontaneously develop on the market, or if it does, it will not be timely and sizeable enough to prevent the adverse consequences of 'business as usual' and will cause poverty in environmental and social conditions. Complexity is an essential part of today's world, and the proposed solutions will have to embrace such complexity. It cannot be left to the voluntary action of the actors involved, following the shareholder value maximisation as the easy, less complex solution. As historically shown, there is always a first time for a new level of complexity and scale in human cooperation. 198 As in the previous six energy revolutions (wind, water, oil, coal, electricity and nuclear) high focus on single core technology was present, also from the legislative point of view, with the sustainability battle, several fields at once will need to be tackled, demanding simultaneously pro-activity of the market and the legislature.

The construction of the mutually assured destruction game tree for the EU could be done in the following manner: in the first stage, the EU needs to decide whether to implement hard law obligations for sustainable corporate behaviour, not only on separate issues like the greenhouse emissions within the EU trading scheme, but also policy level solutions embedded to ensure sustainable business practices on all levels and in all fields of corporate activity. Facing the stag hunt problem, where everyone is doing what the others are doing, due to the tragedy of the commons, it can choose between ignoring the issue and creating a prisoner's dilemma, when cooperation is never the equilibrium of the game due to the lack of prompt enforcement, or continuing with partial solutions, embedded in different legal areas. With keeping the same solutions or by not addressing the issues, credible financial or another penalty for non-compliance

¹⁹¹ Ibid.

¹⁹² Ibid.

¹⁹³ While globally successful attempts have been made for transition from oil and coal to natural gas, emitting less carbon, this solution still contributes to global warming and is insufficient in long term. See Bennet (n180).

¹⁹⁴ Viriato Soromenho-Marques, Global Sustainability: Principles for a new Climate Change Regime after Kyoto (Instituto Superior Técnico Lisbon 2008).

¹⁹⁵ Rao (n179).

¹⁹⁶ Ibid.

¹⁹⁷ Lester R. Brown, Plan B 2.0: Rescuing a Planet Under Stress and a Civilization in Trouble (W.W. Norton 2006).

¹⁹⁹ The stag hunt is a situation in game theory that describes a conflict between safety and social cooperation; it has been described as a situation in which two individuals go out on a hunt. Each can individually choose to hunt a stag or hunt a hare. Each player must choose an action without knowing the choice of the other. If an individual hunts a stag, they must have the cooperation of their partner in order to succeed. An individual can get a hare by himself, but a hare is worth less than a stag. This has been taken to be a useful analogy for social cooperation, such as international agreements on climate change. See more in Brian Skyrms, The stag hunt and the evolution of social structure (Cambridge University Press 2004).

is missing for companies, making 'business as usual' the strictly dominant corporate strategy, always preferable and costless. But the EU can also choose to be the pioneer and tackle the issue at its roots, creating a stag hunt game in which the mandatory legal rules force the players to decide to cooperate and brings them to the more efficient outcome. In the latter case, the EU assumes the cost of political engagement, the cost of creation and implementation of hard law solutions and the cost of enforcement of such solutions; in the former it reports its costs for the next period, paying later in the form of environmental degradation, global warming, and societal unrest. The EU is caught in its own Prisoner's Dilemma: if it implements the necessary legal solutions and other nations, as well as regional and international entities, do not, it went hunting for a stag alone and will come up empty-handed, as all others decided to hunt for their hares. Despite the global community being better if it implements similar legal solutions, lacking a credible commitment to achieve the efficient outcome in the form of mandatory and enforceable international legal solutions, it is possible that the non-efficient road will persist. As the compliance costs occur long before other countries' actual intent to comply is known, the rational strategy is to pretend to be willing to comply while having no real intention of doing so. ²⁰⁰ As this is the optimal strategy for everyone involved, there can be no trust that the others will eventually comply.

Nonetheless, this outcome is not considering the sub-game equilibrium: if this strategy continues to be played, mutual destruction is inevitable. In this sense, the environmental mutual destruction game is distinct from the nuclear one: while in the former the cooperative behaviour of more than two countries is needed, the latter demands actions only from two nations. While in the latter we found ourselves in a stag hunt with two possible equilibria, the former acts more like a Prisoner's Dilemma, offering only one dominant strategy. Furthermore, the compliance with disarmament treaties is less costly than non-compliance, making the disarmed state a strictly efficient Nash equilibrium²⁰¹ even in the absence of mutual penalties. The challenge lies in converting the sustainability debate into a stag hunt by imposing hard law obligations to corporations as the first step towards building a model of credible commitments, ensuring a leap between the two canonical games and simultaneously presenting an argument as to why the EU should make such pioneering efforts in the first place.

The global community calls for novel solutions. The decision theory can be applied: either legislative solutions are found, offering credible commitments for sustainable development, either resource depletion and the end of society as we know it will follow. The equilibrium strategy cannot be 'business as usual', as the world is not atrophic, a model of mutual destruction needs to be constructed and looked at for rich developed countries, especially the China, U.S., and EU.²⁰² These countries represent the most massive carbon footprint in the world, and for the emission goals to be reached, they cannot be adding any more carbon by 2050. Their "obligation to act" additionally stems from the fact that to avoid the climate change, fast solutions are needed, demanding substantial investment, that can be borne by said jurisdictions, for the developing countries to be able to implement it at a reduced cost later on.²⁰³ In the proposed model, the U.S. and China are used as the second-mover in the game, for the model to be able to influence the global sustainability indicators. The model's pre-existing assumption is the existence of circumstance heading towards the adverse global environmental and societal consequences, as

²⁰⁰ Government fear of being invaded and having the country's resources taken or destroyed by more economically powerful outsiders; economic policies are sometimes directly linked with the need for security and the lack of international stability. *See* Lempert and Nguyen (n83) p.24.

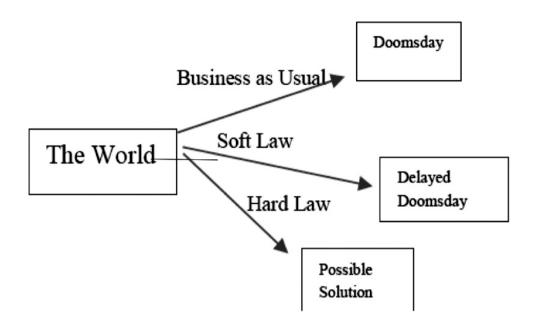
²⁰¹ The concept of strict Nash equilibrium represents an evolutionarily stable strategy that cannot be invaded by another strategy. A pair of strategies is a strict Nash equilibrium if neither player can unilaterally switch to another strategy without reducing its payoff; it represents a refinement of the concept of Nash equilibrium. *See more* in Avinash K. Dixit, Susan Skeath and David H. Reiley, *Games of strategy* (4th edition) (W.W. Norton & Company 2015).

²⁰² See Part 1.1.

²⁰³ Bennet (n180).

discussed in parts 1.1 to 2. The global game in extensive form is as follows:

DIAGRAM 1: THE GLOBAL SUSTAINABILITY SOLUTIONS AS A GLOBAL GAME



Incentives for implementing the hard law solutions are needed, which can be found by solving the game of mutually assured environmental destruction as a particular prisoner's dilemma between the EU and other jurisdictions. This game represents the case for non-profitability of single player deviation, and its equilibrium enables complete elimination of non-sustainable incentives for the players involved. This particular prisoner's dilemma is politically significant as it represents a strategic game between the small and large States, offering the choice between sustainable development and high consumption,²⁰⁴ the latter being more appealing for both types of countries due to the pressures from major powers, putting in jeopardy the planet's future. For the efficient outcome of low consumption to be achieved, a multilateral system protecting sustainability is needed, and such system depends on the will of the large countries, where the small countries have a limited say. For the purposes of the analysis that follows, the EU is due to its international influence as an international organisation regarded as one State, side by side to the U.S. and China. The prisoner's dilemma based mutual destruction model of this work will focus on the actions of large, economically strong countries as the decisive factor for the achievement of the sustainability goal.

A two-player mutual environmental destruction game can serve as a model for all the large players in the world; the subgame perfect Nash equilibrium²⁰⁵ of one such game is at the same time the solution to all the games between the world's large economic forces. Starting with the decision on whether to continue with 'business as usual' (defection), meaning either without implementing any changes to corporate legislation either continuing with soft law solutions, which under the time constraint results in insufficient progress towards sustainability (just like in the case of no changes), or to implement hard corporate law solutions (cooperation), which

²⁰⁴ Lempert and Nguyen (n83).

²⁰⁵ A subgame perfect Nash equilibrium is a refinement of a Nash equilibrium used in dynamic games, representing a Nash equilibrium of every subgame of the original game. Informally, this means that if the players played any smaller game that consisted of only one part of the larger game, their behaviour would represent a Nash equilibrium of that smaller game. Every finite extensive game has a subgame perfect equilibrium. *See more* in Dixit et al. (n201).

through their enforcement produce more tangible results in a shorter period of time and either stop the pace of environmental and societal degradation or preferably reverse it. To determine the payoffs, several considerations were suggested in the scholarly analysis: the value of the environmental resources, the future costs of climate change, the degree to which emissions policies can affect those future costs, the cost of these policies, how much each actor can actually afford to spend or lose, inertia in adopting new technologies and policies, externalities of emissions policies, elections and the shifting public opinion and the changing immediacy of the costs of climate change, ²⁰⁶ where the difficulty of actual measuring or assessing those considerations needs to be acknowledged.

The game today stands as a game of single Nash equilibrium,²⁰⁷ where substantive action is missing to address the scale of the threat—to the environment. It follows that the behaviour of the players proceeds to a significant degree as though the threat did not exist, exploiting the natural resources to the degree necessary to keep or increase the current levels of production.²⁰⁸

TABLE 1: THE GAME UNDER THE PRESUMPTION OF NO ENVIRONMENTAL THREAT

EU/CHINA	SUSTAINABILITY	EXPLOITATION OF RESOURCES
SUSTAINABILITY	0,0	0,1*
EXPLOITATION OF RESOURCES	1*,0	2*,2*

If the EU chooses to embark on the sustainability path, it will use its resources to create emissions policies affecting future costs, creating positive externalities also for China, all of it without an existing threat of a climate change, voluntarily incurring costs. On the other hand, if the EU continues to exploit the resources, it does not harm its production and does not incur any additional costs, which is justified under the presumption of no imminent environmental threat. Given these considerations, both countries perceive 'business as usual' as the only Nash equilibrium of the game.

Under the imminent threat of environmental change, the game changes its form. The sustainable practices here do not entail only costs without real benefits. To envisage a future for global production, actions need to be taken today to ensure the sufficiency of resources tomorrow. Besides the value of environmental resources and the costs of legislative intervention, the future costs of climate change matter and the degree to which emissions policies can affect those future costs, as well as how much each actor can afford to spend together with externalities of those legislative policies. But it depends on when these environmental threats are bound to manifest themselves. Under the current perception, the environmental threat is perceived as distant, changing the game into a classical prisoner's dilemma, where both countries are the best off by exploiting the resources since the cost of the defection of the other side while the first party decides to legislate for sustainability is high. The dominant strategy equilibrium is based on the dominant strategy of exploitation of resources. The matrix can be constructed as follows:

²⁰⁶ See Vann R. Newkirk II, 'Is Climate Change a Prisoner's Dilemma or a Stag Hunt?' (2016) The Atlantic, available online: https://www.theatlantic.com/notes/2016/04/climate-change-game-theory-models/479340/, last accessed 24.05.2018.

²⁰⁷ A Nash equilibrium is a concept of game theory, representing a stable state of a system involving the interaction of different participants, in which no participant can gain by a unilateral change of strategy if the strategies of the others remain unchanged. See more in Dixit et al. (n1448).

²⁰⁸ By way of example, regarding the CO₂ emission the current targets set by disclosing companies are still only 25% of the way to meeting necessary emissions reductions, and not all are achieved. See more in CDP, 'Out of the starting blocks: Tracking progress on corporate climate action' (2016), available online: https://b8f65cb373b1b7b15feb-c7od8ead6ced55ob4d987d7co3fcdd1d.r81.cf3.rackcdn.com/cms/reports/documents/000/001/228/original/CDP_Climate_Change_Report_2016.pdf?1485276095, last accessed 24.05.2018.

TABLE 2: GAME UNDER THE PRESUMPTION OF A DISTANT ENVIRONMENTAL THREAT

EU/CHINA	SUSTAINABILITY	EXPLOITATION OF RESOURCES
SUSTAINABILITY	2,2	-1,3*
EXPLOITATION OF RESOURCES	3*,-1	0*,1*

Emission policies have a cost regarding direct investment and productivity losses. To construct the model, the estimate of present and future costs of perceived as distant climate change are o on an arbitrary scale for the EU and China, to portray the global lack of resources for further production under the current production systems. A further assumption is that each country's emissions policy can only mitigate the costs of climate change by three points that apply globally,²⁰⁹ resulting in the payoff of 3 for the player benefiting from the opposite player's implementation of sustainability policies. In case both players implement sustainability policies, the benefits of both fall to 2 since they both entail the implementation costs, and both enjoy the benefits of such actions. As the sustainability policies are costly and given the global nature of climate change, if one player acts alone, the returns are diffuse compared to the costs. The policy, at least in the short run,²¹⁰ costs more than the benefit of one country's contribution, resulting in a payoff of -1 for the actor.²¹¹

While it would be preferable for both players to opt for sustainable legislation, the cost of the other side defecting is too high, as in the original game of prisoner's dilemma. Both sides therefore opt for the exploitation of resources and soft law approach to the issue. Here the tragedy of the commons consists in making the resources scarcer, the resources being the sum of the ecosystem itself, degrading in time as it is exploited and polluted. The payoff of exploitation diminishes to zero, making the sustainability path increasingly attractive, to a point near environmental collapse where the countries will start to protect the environment, a point that will arguably be reached in the year 2020. It is only at this point that the above prisoner's dilemma changes into a stag hunt; a game in which coordination is dominant over defection.

TABLE 3: GAME UNDER THE PRESUMPTION OF FORESEEABLE ENVIRONMENTAL THREAT

EU/CHINA	SUSTAINABILITY	EXPLOITATION OF RESOURCES
SUSTAINABILITY	2*,2*	0,1
EXPLOITATION OF RESOURCES	1,0	1*,1*

In the absence of legislative intervention, this change into a stag hunt will occur at the point coming close to when the environment was already gone; as the costs of climate change become more immediate, clear, and relatively high, the smallest amounts of mitigation gain a higher relative payoff, that offsets the costs of action, despite being shared among players. The optimal level of damage to the climate and environment cannot be zero, as that would imply no

²⁰⁹ See more in Nicholas H. Stern: 'The economics of climate change. The Stern review' (Cambridge University Press 2008), p. i- xxvii. 210 There have been arguments that even from the national point of view, such action is net-beneficial. See more in Fergus Green, 'Nationally self-interested climate change mitigation: a unified conceptual framework' (2015) Centre for Climate Change Economics and Policy Working Paper No. 224, available online: http://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2015/07/F_Green_Nationally_Self_Interested Climate Change Mitigation.pdf, last accessed 24.05.2018.

²¹¹ See e.g. Robert Stavins and Lori Snyder Bennear, 'Second-Best Theory and the Use of Multiple Policy Instruments' (2007) 37:1 Environmental and Resource Economics.

²¹² See more in Anisha Shankar and Charles Pavitt, 'Resource and Public Goods Dilemmas: A New Issue for Communication Research' (2002) 2:3 The Review of Communication.

²¹³ Newkirk (n206).

²¹⁴ See Christiana Figueres et. al, 'Three years to safeguard our climate' (2017) 546 Nature.

production and no population on Earth and as the concept of sustainability itself allows for a certain level of regeneration of resources. As corporate policies work to mitigate future global temperature rises or emissions, exploitation still carries its benefits, representing a risk dominant equilibrium of the game, in which both players risk less and a unilateral switch of a strategy of one player does not result in losses. As scientific proof speaks of a reasonably immediate environmental threat,²¹⁵ the role of legislation is to incentivise players to switch to the payoff dominant equilibrium,²¹⁶ serving as a credible commitment that unilateral switch of a strategy of any of the players will not be possible due to their legal obligations or will not be wanted in the light of the offered benefits for compliance. Even in the absence of stronger legislative instruments of the international community, the immediate and credible threat of environmental catastrophe could serve as a credible commitment for players not to be incentivised for deviation from the payoff efficient outcome, making it costly for the player to deviate from his strategic move.

The following matrix represents the game under the assumption of an imminent environmental threat:

TABLE 4: GAME UNDER THE PRESUMPTION OF IMMEDIATE ENVIRONMENTAL THREAT

EU/CHINA	SUSTAINABILITY	EXPLOITATION OF RESOURCES
SUSTAINABILITY	2*,2*	0*,1
EXPLOITATION OF RESOURCES	1,0*	0*,0*

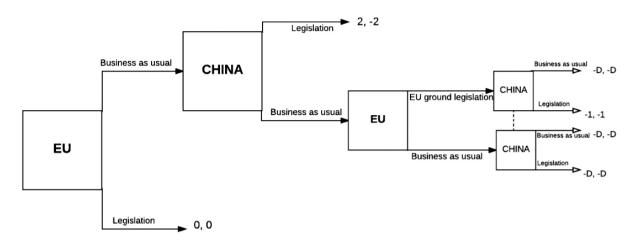
By corporate legislation internalising the corporate externalities, the exploitation of resources becomes costlier, making the threat of low payoff less credible by adding incentives to deviate towards the sustainability strategy. Since of all three scenarios, the last one is the one offering the most guarantees for achieving the desired outcome of sustainability; it would be advisable that the world's most significant economic powers embark on the path of complementing the soft law developments with hard law solutions. In many instances, the goal of diplomacy, green technology, and climate education is to turn the game into a stag hunt before the world gets too close to destruction, entailing the increase of payoff and reducing the costs of sustainability policy implementation. While this section speaks of the inevitability of global action on sustainability, it does not yet introduce the notion of first mover's advantage for the EU. The latter will be discussed in the following sections, arguing for timely EU sustainability action.

3.1.1 The extension of the prisoner's dilemma: The Mutual Assured Environmental Destruction Game

The game of environmental preservation and national action could also be extended to the mutually assured destruction problem, trying to understand the dynamics of the game between the most significant economic players in time, as they are currently taking place. Seeing the interplay of the countries' decisions as a one-time non-repetitive scenario does not conform to reality: the policy decisions are continuous and interdependent. A change in the EU's corporate policy influences the decision-making environment of other global economic entities; a situation that fits the pure prisoner's dilemma framework. A more appropriate strategic tool in such situation is the use of mutually assured destruction scenario, which could provide the answer to the question of the unavoidability of a proactive legislative approach and provide incentives to the EU policymakers to act firmly and promptly.

²¹⁵ Ibid. See also William J. Ripple et al., 'World Scientists' Warning to Humanity: A Second Notice' (2017) 67:12 BioScience.
216 Either in the form of incentivising with benefits, either through mechanisms of deterrence. See more in Matthew Potoski and Aseem Prakash, 'The Regulation Dilemma: Cooperation and Conflict in Environmental Governance' (2004) 64:2 Public Administration Review.

GRAPH 1: THE EXTENSIVE FORM OF MUTUAL ASSURED ENVIRONMENTAL DESTRUCTION GAME



The payoffs chosen for 'business as usual' can be set as -D, signalling a complete disaster, like in the original mutual destruction game. Conversely, if the EU embarks on the path towards hard corporate law solutions, its payoffs depend on the actions of one or all of the other significant global players. For illustration, the game tree portrays China as the second player, due to its status as the world's current greatest polluter, whose individual sustainable actions can produce global changes if taken together with EU's similar steps.²¹⁷ If China also opts for mandatory legal rules, the outcome for both players is satisfactory; the planet will be fast on the way to sustainability, obtaining the result 2, like in the Table 4 stag hunt game. ²¹⁸ On the contrary, if China continues with 'business as usual', both players enter a simultaneous game in which they each have two available strategies. The extent to which the EU and China would need to change their corporate laws to effect meaningful change is beyond the scope of this work, as it requires significant research of the already existing legal instruments of environmental law, employment law and the existing corporate laws. The EU can choose to apply its corporate law obligations only to the EU or also to the Chinese companies operating on its territory. As exterritorial laws will impose the EU requirements also to Chinese companies, that can represent an incentive for the latter to implement sustainable principles on their global operations, once in place to satisfy the EU conditions for their operations on the EU grounds.²¹⁹ China, on the other hand, decides to insist on implementing no changes chooses to cooperate with the EU and opt for mandatory solutions. This simultaneous part of the mutual environmental destruction game can be represented in the normal form:

²¹⁷ Euronews, 'World's biggest polluter China ratifies Paris climate change deal, available online http://www.euronews.com/2016/09/03/ world-s-biggest-polluter-china-ratifies-paris-climate-change-deal, last accessed 24.05.2018. China and the EU recently voluntarily created a stag hunt game in response to the U.S. decision to leave the Paris agreement. See more in Daniel Boffey and Arthur Nelsen, 'China and EU strengthen promise to Paris deal with US poised to step away' (2017) The Guardian, available online: https://www.theguardian.com/environment/2017/may/31/china-eu-climate-lead-paris-agreement, last accessed 24.05.2018 and Annex 1 of the Commission Implementing Decision on the 2016 Annual Action programme for the Partnership Instrument Action Fiche for Platform for Policy Dialogue and Cooperation between EU and China on Emissions Trading 820179, available online: http://ec.europa.eu/dgs/fpi/documents/2016-aap/20160527_1 at - c 2016 2989 f1 annex en v1 p1 850173 en.pdf, last accessed 24.05.2018.

²¹⁸ China and the EU account for 39% global CO₂ emissions according to the data from 2011, so by reducing the levels of pollution in those two jurisdictions could have a significant impact on the global levels of CO₂. See T.A. Boden, G. Marland and R.J. Andres, 'Global, Regional, and National Fossil-Fuel CO₂ Emissions' (2015) Carbon Dioxide Information Analysis Center, U.S. Department of Energy, available online: http://cdiac.ess-dive.lbl.gov/trends/emis/overview_2011.html, last accessed 24.05.2018.

²¹⁹ By analogy, such was the case with the extraterritorial effects of EU competition law, see Marcus Pollard, 'More Than a Cookie Cutter: The Global Influence of European Competition Law' (2014) 5:6 Journal of European Competition Law & Practice. See also Mark Scott and Laurens Cerulus, 'Europe's new data protection rules export privacy standards worldwide' (2018) Politico, available online: https://www.politico.eu/article/europe-data-protection-privacy-standards-gdpr-general-protection-data-regulation/, last accessed 24.05.2018, for the similar effects of EU data protection legislation.

TABLE 5: SIMULTANEOUS SUBGAME OF THE ENVIRONMENTAL MAD

EU/CHINA	BUSINESS AS USUAL	LEGISLATION
BUSINESS AS USUAL	-D*,-D*	-D, -D*
LEGISLATION EU GROUND	-D*, -D	-1*, -1*

There are two Nash equilibria in this subgame: in one China and the EU opt for legislation, and in the other, they opt for 'doomsday'. In this second step, it can be argued that in the final subgame the EU benefits from an early implementation of legislative solutions, as it invested in the necessary know-how and as its corporations already assimilated the changes needed by developing new processes and techniques for complying with the demanded sustainable standards.²²⁰ By the EU corporate legal rules also applying to Chinese companies operating on the EU territory, shifting production to China can be prevented as a strategy for exporting pollution and environmental damage,²²¹ contributing further to the common goal of global sustainability.

The reality is not necessarily as black and white. China continuing with 'business as usual' would not necessarily result in a doomsday as there are infinite strategies between coordination and defection. In the case of other large forces deciding to opt for legislative action on the matter, it is nonetheless plausible that such behaviour by two or three of the world's most significant polluters would result in a catastrophic outcome. Other strategies, which may only differ by minimum amount spent or a single ton of emissions reduced, would be insufficient to tackle the problem due to the severity of the unsustainability issue in the environmental and societal sense.²²² As it is not reasonable to expect for China to be the sole authority in the world deviating from sustainable solutions, but it would more plausibly be joined by other jurisdictions, portraying the logical outcome as doomsday can be accepted as a reasonable approximation of reality.²²³

The two subgame equilibria serve as a foundation for the solution to the final game. The two subgames are represented graphically hereunder. The equilibrium strategies, therefore, are that the EU chooses mandatory corporate legislation and that China follows this example.

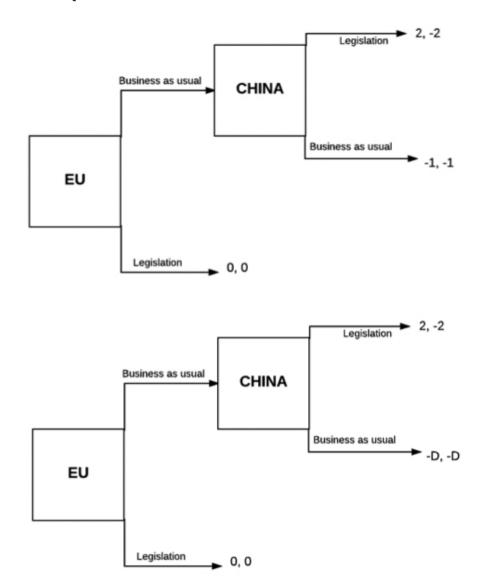
²²⁰ In the case of sustainability, first mover's advantage has been shown at the corporate level and it can be applied on the collective level of the EU policy, providing such advantages to the EU market as a whole. See Eccles et al. (n22) for the corporate level and Panagiotis Karkatsoulis et al., 'First mover advantages of the European Union's climate change mitigation strategy' (2016) 40:6 International Journal of Energy Research.

²²¹ Lempert and Nguyen (n83) p.23.

²²² Hari M. Osofsky and Lesley K. McAllister, Climate change law and policy (Wolters Kluwer Law & Business 2012), Chapter 1.C.

²²³ The policies and measures adopted at the EU level are of importance not only for sustainability legislation in its Member States, but also for the evolution of the international sustainability regime. See Atle C. Christiansen and Jørgen Wettestad, 'The EU as a frontrunner on greenhouse gas emissions trading: how did it happen, and will the EU succeed?' (2003) 3:1 Climate Policy, p.4.

GRAPH 2: POSSIBLE EQUILIBRIA OF THE MUTUAL ASSURED ENVIRONMENTAL DESTRUCTION GAME



Under these equilibria, the EU should either opt to legislate for sustainability in the first step as the initial answer to the sustainability issue or at the last stage, where the last move should be legislating for sustainability. The same could be envisaged by using the U.S. as the second player or conversely, using China or U.S. as the first player and the EU as the second one. Playing the sustainability MAD equilibria will not diminish the corporate competition. It would instead ensure the level-playing field for countries and corporations to engage in competition, this time on the needed sustainable terms. Sustainability does not represent the end of competition but rather a higher level of competition that is sustainable in the long run, ²²⁴ ensuring viable production and in the best case also prevent further social unrest. ²²⁵ Finding new corporate law solutions will

²²⁴ See Kaysie Brown, 'Turning Sustainability into a Competitive Race to the Top Takes All of US' (2017) UN Foundation Blog Global Connections, available online: http://unfoundationblog.org/turning-sustainability-competitive-race-top-takes-us/, last accessed 24.05.2018. 225 As the current production system and the financial and economic crises caused further social unrest; see e.g. 2009 ECOSOC coordination segment- Panel II "The impacts of the financial and economic crises on sustainable development, particularly their social implications' Concept Note, available online: https://www.un.org/en/ecosoc/julyhls/pdf/09%20cs%20panel%20ii%20-%20concept%20note.website.pdf, last accessed 24.05.2018.

benefit the society, making it more productive by lessening the social inequalities, ²²⁶ providing incentives against short-termism and for long-term sustainable solutions. ²²⁷

The costs of legislating and enforcing such corporate legislation need to be considered, and as shown by the example of another major overhaul of EU legislation with extraterritorial effects, the Data Protection Legislation, 228 they are expected to be significant. Yet in the case of sustainability, it has been argued that the costs of implementing legislation to that effect are outweigh by the costs savings by the improved business operations and the reduced use of resources.²²⁹ Moreover, as the EU has already legislated on the issue of sustainability throughout different EU legal fields, now also through the non-financial reporting directive, developing coherent corporate law-based obligations could be based on the already existing solutions. Due to the EU's progress in implementing soft law solutions because of politically induced failures in adopting EU-wide mandatory instruments,²³⁰ a substantial knowledge is now available to the EU, entailing the possibility of proposing mandatory legislative solutions that are better tailored also for political compromise. Using the example of the EU emission's trading policies, 231 fast decision-making procedures are plausible.232 In this case, the speed can be contributed to the inactivity of the Member States in the field, due to which the unified Commission developed a particular entrepreneurial role.²³³ In this role, the Commission drew from the U.S. emissions trading lessons after the U.S. left the Kyoto Protocol in 2001, leaving the EU as the leading global climate change player.²³⁴ Due to the lack of unified policies, a need for an EU mandated levelplaying field is present, enabling corporate competition on a new level, guaranteeing sustainable practices as a necessary but not sufficient condition to swerve away from an environmental and societal disaster. As the U.S. is currently contemplating signing out of the Paris Accord,²³⁵ the EU might once again be left with the role of the leading global environmental authority. Under such circumstances, the EU's learning curve can be shorter; its institutions are well developed and adapted to hard legal solutions for sustainability. Its network of national authorities for enforcement of possible hard corporate legal solutions already exists, promising fast development of novel solutions to tackle the sustainability issue, providing incentives for EU to use its first mover's advantage, presenting this subgame perfect Nash equilibrium as a more stable outcome of the game when EU is involved.

3.1.2 The presence of EU's first-mover advantage: time to act!

²²⁶ See more in Rémi Genevey, Rajendra K. Pachauri and India Laurence Tubiana, Reducing inequalities: A Sustainable Development Challenge: A Planet for Life (The Energy and Resources Institute TERI 2013).

²²⁷ See more in EU High-Level Expert Group on Sustainable Finance, 'Financing a sustainable European economy: Final Report' (2018), available online: https://ec.europa.eu/info/sites/info/files/180131-sustainable-finance-final-report_en.pdf, last accessed 24.05.2018, p.40. 228 Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data and repealing Directive 95/46/EC (General Data Protection Regulation) OJ L 119. On the costs connected with its implementation see e.g. Deloitte, 'Economic impact assessment of the proposed European General Data Protection Regulation' (2013), available online: https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/about-deloitte/deloitte-uk-european-data-protection-tmt.pdf, last accessed 24.05.2018, warning about the prohibitive costs of its implementation. Despite these warnings the legislation was considered necessary.

 $^{229 \ \}textit{See e.g.} \ \text{Tensie Whelan and Carly Fink, 'The Comprehensive Business Case for Sustainability'} (2016) \ \text{Harvard Business Review, available online:} \\ \underline{\text{https://hbr.org/2016/10/the-comprehensive-business-case-for-sustainability,}} \ \text{last accessed 24.05.2018.}$

²³⁰ Christiansen and Wettestad (n223).

^{231 &}quot;The Proposal on emissions trading represents a major innovation for environmental policy in Europe. We are defacto creating a big new market, and we are determined to use market forces to achieve our climate objectives in the most cost-conscious way [...]. The emissions trading system will be an important cornerstone in our strategy to reduce emissions in the most cost-effective way" Environment Commissioner Margot Wallström, Commission Press Release IP/o1/1465.

²³² Jørgen Wettestad, 'The Rapid EU Process: Causes and Consequences' (2004) 46:9 Environment, p.43. 233 Ibid.

²³⁴ Ibid. See also Christiansen and Wettestad (n223).

²³⁵ Oliver Milman, Jonathan Watts and Tom Phillips, 'Worried world urges Trump not to pull out of Paris climate agreement' (2017) The Guardian, Available online https://www.theguardian.com/environment/2017/may/07/trump-climate-change-officials-worried, last accessed 24.05.2018.

An essential assumption of the present model is the existence of the first-mover advantage at the implementation of such corporate law solutions, which can be derived from the experience of companies that were the first to implement sustainable business plans and are now reaping the benefits through better financial performance than the latecomers.²³⁶ In corporate jargon, first-mover's advantage represents the company's ability to benefit from being the first to enter a given market and is arguably the greatest in the case of smooth market growth and continuous technological improvement.²³⁷ Benefits could, in particular, be represented by learning and experience effects, cost advantages and economies of scale due to pre-emptive investment in R&D.²³⁸ These could easily be translated into cost advantages in the case of EU via learning economies, mainly due to imperfectly imitable knowledge, institutions, and practices.²³⁹ While by analogy a new market would need to be entered for the benefits to manifest, the creation of a higher level-playing field in regulation of corporate behaviour could represent sufficient novelty for it to be compared to the entering into a whole new market. The 'sustainable' legal innovation corresponds to the first stage of the technology life cycle, requiring increasing 'development effort'. 240 Since the necessity for action creates incentives for fast development, the second stage as the period of increasing returns will be enjoyed by the early-comers, ²⁴¹ where the EU can incur experience curve advantages, 242 mainly due to its sui generis position as a supranational organisation. The possible trade and growth benefits are expected from technological leadership in technologies required to implement transition to a sustainable economy.²⁴³ It is postulated that the learning (or economies of scale) achieved by the early entrant provides cost advantages which allow maintaining leadership in global markets, 244 and with the assumption of other jurisdictions joining the sustainability chase under the immediate environmental threat, the early action can through specialisation bring an "early action premium." ²⁴⁵ It has been argued that by early action the EU can take advantage of a faster growing EU market, which will enable the consolidation of economies of scale and other learning by doing advantages.²⁴⁶ The existing national 'sustainable' legal solutions can serve the EU as a basis for its legislative development, making it more politically feasible and more stable as it has already been tried out at the national level. By analogy, the third stage of technology life cycle, the phase of maturity and decreasing returns, ²⁴⁷ does not readily fit the notion of legislative action for sustainability. Hard legal solutions aim to incentivise development in the field of sustainable technologies, meaning that as the legislative solutions will "mature", the market developments will progress for companies to search for competitive advantages under this new legal framework, creating new, different market conditions: a higher level-playing field. Indeed, the second mover's advantage here is difficult to imagine, as individually adapted legal solutions need to be developed by every jurisdiction to find the appropriate sustainability-oriented solution for the entity in question, making benefits from copying the first mover extremely limited.

As in the case of CSR, which delivers sustainable competitive advantage to early-movers only when it is central to the company's mission when it provides firm-specific benefits and is

²³⁶ Carol-Ann Tetrault Sirsly and Kai Lamertz, 'When Does a Corporate Social Responsibility Initiative Provide a First-Mover Advantage?' (2007) 47:3 Business & Society, p. 348.

²³⁷ Fernando Suarez and Gianvito Lanzolla, 'The Half-Truth of First-Mover Advantage' (2005) Harvard Business Review, available online https://hbr.org/2005/04/the-half-truth-of-first-mover-advantage, last accessed 24.05.2018.

²³⁸ Ibid.

²³⁹ Ibid.

²⁴⁰ Ibid.

²⁴¹ Ibid.

²⁴² Karkatsoulis et al. (n220) p.818.

²⁴³ Ibid p.817.

²⁴⁴ Ibid p. 818.

²⁴⁵ Ibid p.817.

²⁴⁶ Ibid p.831.

²⁴⁷ Suarez and Lanzolla (n237).

made visible to external audiences,²⁴⁸ the EU's corporate legislative action must step up with a mandatory cloak. In that manner, the level playing field among corporate sustainability-oriented business practices will be ensured, serving as a credible commitment that all EU corporations will be following the same path, thereby resolving the prisoner's dilemma, and offering incentives for opting for the Pareto efficient equilibrium of the game, which enables the EU to obtain the first mover's advantage through the reduction of the use of natural resources and pollution as the companies innovate to meet the new standards.²⁴⁹ Furthermore, as the sustainability-oriented EU corporate rules are expected to have an extraterritorial effect, the companies that wish to operate on the EU market will need to compete on this higher level-playing field, which suggests that a mandatory legislation of this kind might have significant spill-over effects that might further aid the achievement of global sustainable development.²⁵⁰ The argument here is not that unilateral EU action will suffice to solve the global sustainability issues, but rather than under the given necessity of global action, its early action will result in a first mover's advantage, which cannot be achieved without a substantive change of corporate law, under which the corporations are either incentivised to compete on these new sustainable terms or are obliged to do so under the new corporate law obligations.

The notion of corporate first mover's advantage cannot be applied to the issue of legislating on sustainability in its entirety. In the latter case, the goal is sustaining comparative advantage and preventing copying of unique resources that are rare, valuable, non-substitutable and hard to imitate.²⁵¹ In the case of the EU corporate legislative solutions aiming at sustainable business creation, replicating the solutions suggested is beneficial for the global society to achieve the needed sustainability in the timeframe indicated.²⁵² In this light, the global issue would be tackled with less global cost, meaning that the remaining assets could be employed not for legislative but for technological innovation, speeding up the global process of remedying the harm already caused, resulting not only in positive changes to our environment but also in preventing additional social conflicts. There are more than just altruistic motives involved: by enjoying its early-movers advantage, the EU also has the opportunity to develop and implement sustainability policy that suits it best, promoting its solutions and point of view, 253 which could be built upon and disseminated at least by the formerly colonised nations and other jurisdictions that transposed European legislative solutions in the field of corporate law. A mere replica of the EU solutions in those jurisdictions will not be sufficient to find the appropriate answer; like in the case of companies, unique enhancements to the solutions found will need to be made to achieve optimal sustainable results.²⁵⁴

The EU's first movers advantage will be based on its unique resources occupying a 'market niche' due to its multinational legislative inputs, entailing a learning-curve effect by national and EU environmental and corporate legal solutions, offering experience and capabilities allowing it to reduce costs of developing legislative solutions.²⁵⁵ As scholarship argued through a practical example, the EU's well-functioning and liquid emission's trading system could lead by example as for how to make the Kyoto mechanisms workable, providing evidence of EU's leadership

²⁴⁸ Sirsly and Lamertz (n236) p.344.

²⁴⁹ See more in Karkatsoulis et al. (n220).

²⁵⁰ As it has been argued in the case of EU regulation of carbon footprint; see Natalie L. Dobson, 'The EU's conditioning of the 'extraterritorial' carbon footprint: A call for an integrated approach in trade law discourse' (2017) 27:1 Review of European, Comparative and International Environmental Law.

²⁵¹ Ibid p.345.

²⁵² Figueres et. al (n214) and Ripple et al. (215).

²⁵³ Steve Percy, 'BP's sustainability strategy: capturing returns from first-mover advantage' (2013) 28:2 American Journal of Business, available online https://doi.org/10.1108/AJB-08-2013-0057, last accessed 22.05.2018.

²⁵⁴ Sirsly and Lamertz (n236) p.345.

²⁵⁵ Ibid p.346. See also Marvin B. Lieberman and David B. Montgomery, 'First-Mover Advantages' (1988) 9:Special Issue Strategy Content Research, p.41-58.

in mitigating climate change.²⁵⁶ As to the resistance of companies against hard law solutions under the claims of regulation damaging competition, stifling innovation and leading to too much standardisation.²⁵⁷ economic benefits from well-designed sustainability standards should be emphasised as they can be self-financing by prompting cost-savings, capable of incentivising whole industries for sustainability innovation.²⁵⁸ The EU can furthermore profit from such a bold move in gaining in pragmatic and moral legitimacy and reputation, satisfying the demands of civil society for sustainability, leading to social approval and support.²⁵⁹ For such gains to manifest themselves, separate directives tackling the issues, not directly connected with European businesses, and not determining the general corporate policy of sustainability will not suffice. Integration of sustainability in EU corporate law is necessary to signal to the society, as well as other international players, a firm and credible commitment towards resolving the issue without 'greenwashing'.260 Considering that the EU already possesses the know-how on reconciling different political views, diverse stakeholder views and balancing function between both of them when searching for acceptable compromise,261 it holds a strategic advantage of repetition and experimentation over traditional national states.²⁶² Such advantage enables it to take a stronger stance on the sustainability issues and add them on the list of corporate obligations also as a general corporate policy. These learning effects arising from unique experiences may produce sustainable advantages for EU in as a reputation of leading problem-solver, 263 adding further to its importance in the international arena. The initial EU weakness of achieving a political compromise can become its strategic capability when solutions in the field of sustainability are sought for.264

There are possible disadvantages for the EU as a first-mover: free-riding on first-mover's investments, since imitation costs are lower than innovation costs, ²⁶⁵ by resolving market uncertainty and by experiencing incumbent inertia, where other jurisdictions would be unwilling to change their legislative approach due to the cost it entails. ²⁶⁶ But in the case of sustainability, these externalities are actually wished for. As each national or supranational authority needs to adapt the identified legislative solutions to its environment, the effort put into finding one's solutions cannot be avoided. The sooner the solutions are envisaged, the more time is left for necessary adaptations and the construction of the learning curve. The incremental changes over a period of time will allow for adaptation and planning, as opposed to shocking the economic system by acting under immediate necessity. ²⁶⁷ And as time is a scarce resource in the sustainability chase, this is a significant advantage arising out of possible disadvantages of being the first mover; the time to develop necessary adaptations to initially suggested solutions is crucial in finding appropriate legislative tools.

As the prisoner's dilemma is not present only at the corporate but also at the state level, the argument is that competitiveness of EU industry will be harmed by such legislative action

²⁵⁶ Christiansen and Wettestad (n223) p.5.

²⁵⁷ Fairbrass (n58) p.963.

²⁵⁸ Ibid p.349. Authors use as example Johnson&Johnson's redesign of packaging, saving 330 acres of forest and \$2.8 million annually as well as Dow Chemical's production process redesign with cost of \$250.000 and annual savings of \$2.4 million, reducing caustic waste by 6000 tons and hydrochloric waste by 80 tons.

²⁵⁹ Ibid.

²⁶⁰ Percy (n253).

²⁶¹ Albeit it has been argued that the EU is unable to enforce its global leadership due to its particular nature as a sui-generis organisation. See Joyeeta Gupta and Lasse Ringius, 'The EU's Climate Leadership: Reconciling Ambition and Reality' (2001) 1:2 International Environmental Agreements: Politics, Law and Economics.

²⁶² Sirsly and Lamertz (n236) p.356.

²⁶³ Ibid p.358.

²⁶⁴ As it has been argued, the successful ratification of the Lisbon Treaty represents the greatest achievement of this learning process as a firm basis for future success. *See* Daniel Finke, *Reforming the European Union. Realizing the impossible* (Princeton University Press 2012). 265 Lieberman and Montgomery (n255) p.47.

²⁶⁶ Ibid.

²⁶⁷ Karkatsoulis et al. (n220).

in the absence of a parallel introduction of such legislation by other countries. 268 Considering that the obligation of best effort is now insufficient for resolving global issues, 269 an obligation of result must be envisaged by individual countries and international organisations. Any other decision brings us to the mutually assured destruction scenario. Nit-picking at this moment as to who moves first and loses its comparative advantage is not only obsolete, but it also entails an inaccurate claim of losing instead of gaining a comparative advantage. It is a relic of old theoretical constructs where profit maximisation could take the floor before worrying about the externalities and the scarcity of resources; the luxury that was taken away by the environmental and societal realities and predictions. Furthermore, here the prisoner's dilemma is not occurring solely among two players; it is taking place among N-players, furthering, even more, the potential benefits of cooperation, necessitating legislative action which under the international legal system's culturally pluralistic approach to sustainability and equity needs to be adapted to the culture in question.²⁷⁰ The solutions to the sustainability problem will therefore need to be carefully tailored to every jurisdiction in question and they will not be easy to copy. The EU moving as soon as possible is therefore in the EU's self-interest, as delaying action could result in not only irreversible damage to the environment but also in economic losses for the EU itself.²⁷¹

3.2 Embedding sustainability in EU corporate law framework

To achieve the necessary level of sustainability across the EU as well as globally, separate environmental legislation, based merely on the 'polluter pays' principle, will not suffice. For long-term sustainable solutions, change of production and consumption is needed, and for that the actions of corporate decision-makers need to be sustainable themselves, necessitating a change and a clear statement of EU corporate legal policy. For the construction of appropriate legal framework, the existing EU environmental policy can serve as an example, as it has been prepared with due account of available scientific and technical data, present EU environmental conditions, of potential benefits and costs of action or lack of action and the economic and social development of the EU.²⁷² These considerations can serve as a compelling argument for changes to the existing corporate obligations in the EU.

While sustainability concerns merit their embedding in the corporate law policy as a part of CSR²⁷³ with a view to "helping to mitigate the social effects of the current crisis", corporate resistance against such policy determination is foreseeable. Nevertheless, the spill-over process of connecting new, expanded policy concerns into the EU legal framework was often not gradual and it was politically charged, especially in times of political crisis, providing a possibility of transcending to a higher level of integration by forcing the Member States to accept new aims to preserve the gains from the original agreement.²⁷⁴ The current EU output legitimacy crisis, e.g. the results of legislation being meaningful and beneficial, could provide such impetus for regulating sustainability efforts; even more so by being accompanied by financial, economic and sustainability crisis, creating a 'policy window' of Member State receptiveness to new proposals.²⁷⁵

²⁶⁸ Chris Whitehead, 'What role should government policy play in driving sustainable business efforts?' (2013), available online https://www.2degreesnetwork.com/groups/2degrees-community/resources/what-role-should-government-policy-play-driving-sustainable-business-efforts/, last accessed 24.05.2018.

²⁶⁹ An obligation of best efforts as a relative obligation to achieve sustainable development has been criticised as insufficient for the attainment of the objective. *See more* in Virginie Barral, 'Sustainable Development in International Law.' (2012) 23:2 European Journal of International Law.

²⁷⁰ Lempert and Nguyen (n83) p.19.

²⁷¹ Karkatsoulis et al. (n220).

²⁷² Article 191(3) of the TFEU.

²⁷³ European Parliament, Committee on Employment and Social Affairs, 'Report on Corporate Social Responsibility: promoting society's interests and a route to sustainable and inclusive recovery' 2012/2097 (INI), p.11.

²⁷⁴ Mark A. Pollack, 'Creeping Competence: The Expanding Agenda of the European Community' (1994) 14:2 International Public Policy, p.98-99.

²⁷⁵ Ibid p.128. See also hereabove Chapter 3.1.2.

Despite the historical Member State resistance to the transfer of sovereignty to the EU institutions and their search of protection for their domestic producers,²⁷⁶ the issue of sustainability is not a classical EU issue: joint efforts from all nation-states are necessary for achieving the common good. The individual Member States legislation on the issue speaks about their concern about the unsustainable development. Any remaining temptation for the Member States to succumb to the pleas of domestic companies against implementing sustainable solutions in the corporate law framework can be surpassed by EU level determined sustainable corporate law policy.

To determine the substance of EU corporate law policy, Article 50 TFEU could serve as a legal basis, providing an EU competence in the matters of corporate law in order to achieve the freedom of establishment²⁷⁷ and any other fundamental freedom, provided that it protects company shareholders or third parties.²⁷⁸ Determining sustainability as the leading principle of EU corporate law would create a higher level-playing field for EU corporations and prevent distortions of competition on the internal market, while contributing to the attainment of EU's international obligations of achieving sustainability. Acting on the basis of Article 50 TFEU would be legally justified, as it protects corporate constituencies by promoting long-term viability of companies and environment. Sustainability as policy has already been implicit in other EU corporate law instruments adopted on the basis of Article 50 TFEU, e.g. Non-Financial Reporting Directive.²⁷⁹ As simple majority of votes cast is needed for legislation to pass under the ordinary legislative procedure,²⁸⁰ the process of adopting sustainability as a guiding principle of EU corporate law should be relatively uncomplicated under the Article 50 TFEU.

Article 50 TFEU does not represent the only possible legal basis for EU corporate law action for achieving sustainable corporate practices: Article 114 TFEU could also be relied upon to that effect.²⁸¹ Once again envisaging ordinary legislative procedure for determining measures regulating the functioning of the internal market, under which unanimity is an exception, and entailing a high level of health, safety, consumer and environmental protection, this article takes into account new development based on scientific facts and represents a perfect match for regulating the issue of sustainability. Legislative intervention is needed for the proper functioning of the internal market for the latter to internalise the externalities and provide a level-playing field for European corporations that corresponds to the modern economic, social, and natural environment.

Envisaging 'sustainable corporate policy' at this point could be said to only marginally pursue the noble goal of human non-extinction, primarily pursuing the internal market goals as well as compliance with the EU's international obligations, complying with the requirements of Article 114 TFEU and the CJEU interpretation of the latter.²⁸² As in the 1970s the environmental conservation was unregulated or weakly regulated at the EU level, the various national environmental regulations threatened to create non-tariff barriers to trade. As a consequence, the EU created an action programme in the field, broadening its competence by adding a new legislative area to the EU repertoire.²⁸³ Such EU action often takes the shape of replacing the different national laws with single European law.²⁸⁴ The EU environmental policy, determined in the Article 191 TFEU, pursuing preservation, protection and the improvement of the quality of the environment, protection of human health and prudent and rational utilisation of natural

²⁷⁶ Pollack (n274), p.103.

²⁷⁷ Article 50(1) TFEU and Article 50(2)(g) TFEU.

²⁷⁸ Stefan Grundmann, European Company Law (2nd ed., Intersentia 2012), p.56.

²⁷⁹ Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups, OJ L 330, p.1–9.

²⁸⁰ See Rules of Procedure of the European Parliament (8th parliamentary term - January 2017) Title II: Legislative, budgetary, discharge and other procedures, Chapter 3 Ordinary legislative procedure.

²⁸¹ Article 114 TFEU.

²⁸² Ibid p.9.

²⁸³ Pollack (n274), p.125.

²⁸⁴ Gareth Davies, 'Democracy and Legitimacy in the Shadow of Purposive Competence' (2015) 21:1 European Law Journal.

resources,²⁸⁵ aims at a high level of protection, based on the precautionary principle and preventive action, considering the diversity of national situations across the EU and recalling the principle of 'polluter pays'.²⁸⁶ It can serve as an appropriate stepping stone towards sustainable Europe, albeit it is still insufficient for its achievement as it entails paying for pollution instead of demanding its diminishment as a genuinely sustainable step. As it allows for Member States' provisional measures, it allows through balancing of economic with non-economic interests a higher weight being given to the former, which does not contribute to being truly sustainable.

4. Conclusions

s sustainability risks represent long-term systemic risks, relevant to all and not just specific sectors of industry,²⁸⁷ and today's risk assessment seems largely disconnected from the real economy by focusing only on a comparative analysis of financial risks, 288 shortterm incentives in the investment chain, resulting in herding behaviour, represent a serious systemic issue²⁸⁹ that cannot be resolved without the change to fundamental rules of the corporate game. Despite investors' awareness of the sustainability considerations being the key for long-term value creation and better long-term returns, ²⁹⁰ the voluntary self-regulatory correction of the shareholder value-oriented corporate governance proved to be insufficient to shift the market behaviour away from the costless corporate imposition of negative externalities on the environment and the society. The corporations are not the only unsustainable actors in the modern society, and ultimately individuals also need to act upon the sustainability issues to make a real difference, being incentivised and educated on sustainable development, fostering a sense of individual and collective responsibility, encouraging changes in behaviour.²⁹¹ The multinational corporations nonetheless carry the financial and political power to spur this awareness in the market, which is close to impossible under the so-called 'radical shareholder primacy' concept, penalising the board for following sustainability strategy,²⁹² financially rewarding management for not following it²⁹³ and encouraging short-term oriented actions.²⁹⁴

This work set out to illustrate the inherent challenges with soft law approaches to determining sustainable corporate obligations. While the EU CSR policy was envisaged as a complement to shareholder-oriented solutions, it nonetheless missed its target, primarily due to its voluntary nature and ambiguous definitions. These have only recently changed into providing corporate responsibility for its impact on the society, in line with the presented arguments on the necessity of determination of corporate obligations as an antipode to corporate legal personality and its limited responsibility. While the soft law CSR developments provided a learning field, culminating in developed legal institutions and corporate practices, the necessity of timely action calls for immediate action at the highest policy levels in a firmer form than by simple suggestions and recommendations. To that effect, EU sustainable corporate law policy was suggested, with

²⁸⁵ Article 191(1) TFEU.

²⁸⁶ Article 191(2) TFEU.

²⁸⁷ European Commission, 'Summary of the Responses to the Public Consultation on Long-term and sustainable investment (2016), available online http://ec.europa.eu/information_society/newsroom/image/document/2016-44/feedback_final_pc_30068_en_19173.pdf608, last accessed on 24.01.2019.

²⁸⁸ Ibid p.14.

²⁸⁹ Ibid.

²⁹⁰ Ibid p.5.

²⁹¹ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, A renewed EU strategy 2011-14 for Corporate Social Responsibility /* COM/2011/0681 final */, p.8.

²⁹² European Commission (n287) p.12.

²⁹³ European Commission (n287) p.15.

²⁹⁴ European Commission (n287) p.15.

the support of game-theory based arguments. Building upon the model of mutually assured destruction, its environmental version was presented, building the case for EU being the global sustainability leader. By portraying the necessity for prompt mandatory action at the highest policy levels, EU's comparative advantage based on its historically stakeholder-oriented corporate governance was presented, strengthened by its role as an environmental leader with its emissions trading scheme.

For the world to find its way out of prisoner's dilemma and to play the altruistic version of the centipede game, incentives need to be provided through the corporate legal framework, for the most potent global actors to chip in towards the common goal of sustainable development. Despite the expected governmental and corporate resistance to such 'hard' changes, under the time constraints, soft solutions do not suffice, and the EU possesses the necessary competences for enacting the needed legislative reforms. Furthermore, under the objectives of Lisbon Treaty, action in the field of corporate law is a necessary condition for achieving its goals of sustainable and inclusive growth, coupled with the environmentally responsible behaviour. Despite the EU's historical issues with the political agreement on diverse corporate law issues, achieving one in the case of sustainable development should be easier, based on the successful implementation not only of the Non-Financial Reporting Directive but also of the so-called 'green procurement' practices. If that would prove not to be the case, the EU action would still be legitimate under the Treaty provisions, its environmental policy and under its international environmental and social obligations, taken upon in the name of its Member States.

As the end of history for corporate law has not manifested itself, and the current legal solutions do not provide the appropriate answers to environmental and societal issues, a new corporate direction is required. Given the non-obligatory nature of shareholder value maximisation, the path to stakeholder-oriented solutions, envisaging corporate responsibility, is legally speaking wide open. Lacking the appropriate international instruments and incentives, individual countries and corporations continue with 'business as usual', contributing exponentially to the unsustainability of the modern economy, society, and our planet. Indeed, unregulated competition for incorporations arguably incentivises a race to the bottom.

Under the principle of physical constraint and time scarcity due to the cumulative acceleration of externalities, 295 solutions need not be limited to academic and political debates but implemented through legislation with appropriate enforcement mechanisms as soon as possible. Such action requires a high level of trust in academic and public institutions, which together with politics need to establish a way to allocate high costs today, while still affordable, to benefit the future generations and prevent disasters for the current ones.²⁹⁶ Under the principle of intra-generational justice²⁹⁷ individual voluntary actions cannot be relied upon to find sustainable solutions since individuals undertaking such efforts cannot reap the rewards of their action and due to the burden of climate change necessarily being borne by future generations. Without assured mutual cooperation towards the global corporate sustainable development, successfully tackling the issue of externalities, a scenario of mutual assured environmental destruction is inevitable, 298 leading to possible societal collapse. Compulsory corporate cooperation towards sustainability is needed, which will not spur spontaneously in the corporate world, or if it does, it will not be timely and sizeable enough to prevent the adverse consequences of 'business as usual', causing poverty in environmental and social conditions. Complexity is an essential part of the world today, so the proposed solutions will have to embrace that complexity, no longer leaving it to the voluntary

²⁹⁵ Viriato Soromenho-Marques, 'Global Sustainability: Principles for a new Climate Change Regime after Kyoto' (2008) Instituto Superior Técnico Lisbon.

²⁹⁶ Rao (n179).

²⁹⁷ Ibid.

²⁹⁸ Lester R. Brown, Plan B 2.0: Rescuing a Planet Under Stress and a Civilization in Trouble (W.W. Norton 2006).

action of the actors involved and cannot build upon the shareholder value maximisation as the easy, less complicated solution. There was always a first time for a new level of complexity and scale in human cooperation.²⁹⁹ In the previous six energy revolutions (wind, water, oil, coal, electricity and nuclear) high focus on single core technology was present, also in the legal sense. In the sustainability battle, several fields at once will need to be tackled, demanding simultaneous pro-activity of the market and the legislature. And in this reality, under the auspices of the MAD game, combined with the unique nature of EU as a supranational organisation, the timing for fresh, pioneering solutions at the level of EU corporate law policy is quite right. The EU should provide European corporations with the tools to overcome their prisoner's dilemma, once again serving as the pioneer, undertaking the leading role under its comparative advantages, not only for the common good but also to reap its first mover's advantages.

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²⁹⁹ Venkatesh Rao, 'Why Solving Climate Change Will Be Like Mobilizing for War' (2015) The Atlantic, available online https://www.theatlantic.com/science/archive/2015/10/why-only-a-technocratic-revolution-can-win-the-climate-change-war/410377/, last accessed 24.05.2018.

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