A EUROPEAN ENVIRONMENTAL SPACE?
INTERNATIONALIZATION, ENVIRONMENTAL REPORTING AND THE POSITION OF EUROPEAN CORE PLAYERS

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ABSTRACT

Is there a chance that Europe becomes green quicker than the United States or Japan? This paper examines the extent to which the world's one hundred largest enterprises – coming from Europe, Japan and the United States in comparable portions - show a more green or brown face by relating environmental reporting to degrees of internationalization. Firms with a higher internationalization degree turn out to have more pro-active environmental reporting strategies (and vice versa). National bargaining arenas clearly have an influence on both internationalization and reporting strategies, and combined could constitute different 'environmental spaces' leading to a different approach towards the environmental problem. Two different types of reporting strategies from core companies within the European Union can be discerned: from medium sized and from smaller (neo-corporatist) countries. Both types of internationalisation and reporting strategies share a number of "European" characteristics that distinguish them from the strategies of core players coming from larger countries (in particular the United States and Japan). One might, therefore, witness a European environmental space developing, both by default as well as through pro-active self-induced practices.

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I. INTRODUCTION: A COHERENT AND STABLE ENVIRONMENTAL SPACE?

Solving environmental problems is influenced by the identification of the environment as a public good/problem, a private good/problem, or something in between ('club goods'). (Self)regulation dealing with environmental problems has to cope with actors with varying interests, which are organized at different levels. Private actors like big and multinational operating firms often define their interest in the environment quite different from public actors like national governments that are more bound to a particular territory. Internalization and externalization effects (whether negative or positive) differ between the two types of actors, strongly influencing the bargaining process that is necessary to come up with appropriate regulation. Under these circumstances a relevant question becomes: at what managerial level (local, national, regional, global) should one try to create coherent environmental regulation and what could affect the effectiveness of the thus introduced rules and operating practice. The latter question relates to the problem of creating appropriate institutions (Cf. Hall, 1986). Institutions can more easily coordinate the action of actors once they are subjectively shared by the actors involved. Institutions regulate particular bargaining arenas. The two prime actors making up the environmental bargaining arena are private firms and public governments. In case they can come up with a coherent position as regards the environment, one can talk of an *environmental space*, a regime in which it becomes easy to find a unified approach to environmental problems and thus solve the conflict between the mixed public/private good nature (represented by weak appropriability regimes and an unequal distribution of negative and/or positive externalities) of environment problems. Searching for a relevant "space" to adress environmental problems is inspired by the French regulationist debate that has focused on spaces enabling particular accumulation regimes at the national scale. A major problem is that the biggest firms and governments are often organised at different levels – creating different interest constellations - thus making it very difficult to come with coordinated and stable strategies (cf. Boyer, Hollingsworth, 1998; cf. Carillo, Lung, Van Tulder, 2001). Other relevant theoretical approaches on this issue can be found in neo-institutionalist literature (cf. Powell, Di Maggio, 1991), in political sciences studies that sketch policy making as a network strategy (cf. Kickert, 1998) and in the International Business literature that adress the relevance of the 'home base' for multinational corporations (cf. Rugman, Verbeke, 1998; Dunning, 1993; Van Tulder, Van den Berghe, Muller, 2000).

Governments are still the prime regulators of the environment and are organised at the national level, and in Europe also slightly at the macro-regional level such as in the European Union. The "space" governments remains primarily national. The relevant space of firms on the other hand is increasingly international. The question that will be adressed in this paper is whether – under the influence of internationalisation strategies of (multinational) firms – still relative coherent and stable national bargaining arenas can exist, creating an environmental space that could lead to coordinated policies. And in case such a space can be identified in either the Japan, the United States or within Europe – as the three most important areas with the highest absolute intensity of the environmental problem – what would the outcome of the bargaining be: very reactive or very pro-active environmental policies. In case the most important company constituents of a particular "space" represent very diverse environmental strategies, it is

very unlikely that any coherent and coordinated environmental strategy could come out of the clash of public and private interests involved. This paper tries to assess whether there are national patterns in environmental strategies of firms, and whether the patterns of important European players can be clustered so that it could be possible to start talking about a "European space" in the highly contested area of environment.

II. INTERNATIONALIZATION AND ENVIRONMENTAL STRATEGIES

The environmental impact of foreign direct investment, and of multinationals as their main agents, has been the subject of substantial controversy in the past decades. The environment often strikes at the heart of the relations between nations/regions (such as the European Union) and enterprises, raising discussions about global principles, the role of agreements, and multinationals' transparency; concerns addressed in the final chapter of Vernon's inspired last book *In the hurricane's eye* (Vernon, 1998). As he put it already in a 1994 article (p. 149), environmental issues 'promise to figure in a major way in every aspect of future research on TNCs'.

Whereas the debate on multinationals and the environment originated from concern with the negative effects of 'industrial flight' on so-called 'pollution havens', more recent attention has focused on assessing whether evidence can be found for their more positive, even 'leading edge', role (Gentry, 1999; Kahn, 2000; Low, 1982; Mani and Wheeler, 1999; OECD, 1997; UNCTAD, 1999: 289-312; Zarsky, 1999). These studies suggest that, overall, no clear systematic evidence exists, neither for the 'pollution haven' hypothesis nor for better/worse performance of foreign firms. But these assessments are hampered by methodological problems including the lack of consistent data and the abundance of surveys as prime source of (relatively subjective) information.

In spite of the limitations, mainstream research does also encompass cases (e.g. Christmann and Taylor, 1999; Tsai and Child, 1997; Zarsky, 1999) of usually large, highly visible multinationals that underlines their positive environmental influence, both internally by reducing coordination and transaction costs, and externally. In view of their global operations and the potential to affect firms in their network and chains, the way in which multinationals co-ordinate, perceive and communicate about environmental issues may have a crucial impact. Degrees of internationalization are sometimes supposed to play a positive role in this regard (Kolk et al., 1999; Levy, 1995), underlining Vernon's observations on increased disclosure practices by multinational enterprises.

This article focuses in particular on the relationship between degrees of internationalization and environmental reporting – because these two indicators can be used as evidence for the appearance of an environmental space, that is: in case firms share comparable patterns of internationalisation **and** environmental reporting the preconditions for a coherent and stable environmental space could be presupposed (not proven). In case we want to identify the relevant "space" dimension in paritcular for Europe, it is important to use data (1) that do not originate from surveys or from the US context only, and (2) data from the largest players in a domestic economy. The latter players share the domestic bargaining environment in many areas – employment, technology as well as the environment. This requires at least a systematic analysis of the largest one hundred industrial multinationals worldwide.[1]

Degrees of internationalization and environmental reporting strategies respectively will be examined, accompanied by a brief explanation of the methodologies used. Subsequently, both findings are related in order to see whether higher levels of internationalization indeed correspond to more, and more elaborate, reporting. It will be checked whether national, regional or other patterns of explanation appear that might give a clue as to what bargaining arenas might be most appropriate to deal with the environmental face of internationalization: is it possible to identify a European Environmental Space in which firms share important characteristics and in which it could thus be possible to develop coherent policy strategies?

III. CORE FIRMS, CORE PLAYERS IN THE ENVIRONMENTAL SPACE

To analyze the relationship between internationalization and environmental reporting, the strategies of the world's one hundred largest 'core' firms in the world can be examined. Core firms are characterized by their size and importance in networks of supply and distribution, as big 'spiders in an industrial web' (Cf. Ruigrok and Van Tulder, 1995). The constitute the most important players in any national bargaining arena, either directly in their position as a home player, or through their subsidiaries in host economies. The category of core firms excludes in particular financial services' firms, which also cause the least direct environmental problems on a worldwide scale. Concomitantly, financial services firms amongst the global Fortune 250 firms have shown the least interest in showing any face at all in the debate on environmental reporting (Cf. Benchmark Environmental Consulting, 1999; KPMG/WIMM, 1999). The category of core firms not only includes the firms that directly or indirectly cause most environmental problems, but also have the largest research and development facilities to work on solutions for environmental problems. Only one firm on the core list is from developing countries (PDVSA from Venezuela).

The environmental face that in particular the largest core firms show towards society therefore does matter. Other students of international business have focused on comparable categories of leading firms, for instance by considering 'focal firms' or 'flagship firms' (Rugman and D'Cruz, 1997). The one hundred largest core firms have been selected from the 1995 Fortune global 500 list.[2]

The degree of internationalization of these core firms is calculated from the ratio between foreign assets (total fixed and current assets outside the home country) and total assets. The figures are derived from company sources, usually annual reports; where possible data have been complemented and checked with the firm in question. Assets were selected because these directly relate to environmental impact. Other indicators were not used, such as sales and employees, or the combination of the three – the transnationality index (TNI) as calculated in UNCTAD's annual World Investment Report. In studies on the link between internationalization and (mostly financial) performance, the Degree of Internationalization (DOI) is almost always based on sales' data (Sullivan, 1996; Ruigrok, Wagner, 2000). The availability of sales' data has been the prime motive for this selection process. However, sales internationalization are a less relevant indicator for international environmental strategies. The international spread of sales have a more indirect bearing on environmental issues, for instance on patterns of international trade and transport required to ship sales abroad. Environmental problems (as well as the solutions) relate in the first place to the production strategies of firms, exemplified by the international spread of assets and production sites (foreign/total assets).

IV. DEGREES OF INTERNATIONALIZATION AND NATIONAL BARGAINING ARENAS

Table 1 presents the data for the internationalization of assets of the largest one hundred core firms, including details for countries and sectors with considerable numbers of multinationals. From the average internationalization percentage of 30.19%, four classes of internationalization were created: negligible (0-5%), low (between 5 and 15%), medium (between 15% and 45%) and high degree of internationalization (more than 45%).

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In total, almost half of the firms have a medium, and one quarter a high degree of internationalization. Asset intensity and internationalization are linked (although at a lower level than sales and internationalization). A 'small-country effect' can be observed: multinationals from smaller (EU) countries are highly internationalized. UNCTAD/ERASMUS listings of the most internationalized firms (the 100 Top TNCs) corroborates this phenomenon: TNCs originating in small domestic markets have on average a higher degree of transnationality (UNCTAD, 1998: 45-46; UNCTAD, 1999: 83). Throughout the 1990s, firms from smaller and more open economies such as Canada, the Netherlands, Sweden and Switzerland had average DOIs ranging from 78% to 92%. The largest Transnational Corporations from bigger and much more closed national economies such as the United States and Japan registered transnationalization indices between 26% and 48% at the end of the 1990s. The American context provide a setting of core firms with the widest variety in degree of internationalization, whereas in other countries more than 2/3 of core firms are clusterd around two adjacent DOI categories. Firms from the European Union as a whole (including in particular the highly international firms from the largest member states) were somewhere in between the smaller and larger countries with an average internationalization degree of 63% in 1997 (UNCTAD, 1999:84).

The overall picture confirms the existence of divergent 'national' internationalization strategies as observed in the literature (e.g., Van Tulder, 1999; Whitley, 1999; Rugman, 2000). The size of the domestic economy and the degree to which neighboring countries are institutionally linked (for instance through Regional Integration Agreements) remains a strong factor in internationalization processes. Firms are to varying degrees rooted in their national (bargaining) environment. Three different types/styles of interaction exist that might have an impact on the more or less green face of internationalization: a small country, a medium-sized country, and a large country perspective.

First, the internationalization patterns reveal a small country challenge: open economies have the most international firms within their borders. Small countries in general have less political leverage on international environmental issues, some of them are even faced with more than average environmental problems due to their geographical location (the Netherlands and Belgium for instance at the extremities of major European rivers bringing in the pollution of large neighboring countries such as Germany and France). They face a greater challenge in internalizing external effects

caused by the larger economies (See Katzenstein, 1985). At the same time their largest home-based core firms have the bulk of their activities abroad. The bargaining arena of smaller countries is thus very open. What would make firms from smaller countries be interested in showing a green face to their home-countries?

Secondly, there is a medium-sized countries perspective. In particular firms from the medium-sized European economies have a medium to high degree of internationalization and are primarily internationalizing inside the European Union through mergers and acquisitions (UNCTAD, forthcoming). Core firms from Japan and the United States respectively are either faced with no formal regional integration initiatives, or with much less pervasive initiatives (Nafta versus the European Union). The national bargaining arena of the medium-sized European countries thus is becoming semi-open/closed, creating less problems of balancing positive and negative environmental externalities. Because firms of the medium-sized economies (as well as from the small countries) for the moment internationalize primarily inside the European Union, the bargaining arena contains an increasingly important European component. But other than in the case of the smaller European countries, the macro-regional bargaining arena can be better influenced by the larger member states, enabling European regulation as a complement to national regulation. Does this scenario perhaps contain the ingredients for a green regional face?

Thirdly, the largest industrial countries – the United States and Japan – have a much more closed bargaining arena in which the leading core firms have a low to medium degree of internationalization. Comparable degrees of internationalization do not preclude firms from taking different ideological statements on the issue of globalization. Ford and Toyota are a case in point. Ford is clearly one of the firms showing an explicit 'global' face, highlighted for example by its advertisement campaigns (see Eden's introduction to this special Symposium) or the name of one of its best-selling cars (*Mondeo*). With an asset internationalization degree of 30%, however, the 'globalization' claim could already be disputed. Toyota, on the other hand, with a slightly higher internationalization of assets (and TNI), officially proclaimed its 'global car' strategy dead in the mid-1990s. Internationalization therefore does not necessarily mean globalization. US and Japanese firms share relatively closed markets, but have qualitatitively different internationalization strategies. In theory a better guarded national bargaining arena should facilitate bargaining over environmental issues, because positive and negative externalities are confined to the same territory, whereas the loyalty of the players are likewise more attached. But does this also lead to a greener face?

A sectoral look provides additional discretional characteristics in the internationalization patterns of the world's largest core firms. Core firms operating in process industries such as oil, chemicals and food, show high degrees of asset internationalization. Their markets are often separated from their resource bases. Core firms operating in batch-good sectors such as cars, trade, computers, electronics share medium to high degrees of internationalization. They have more often engaged in an international labor division between supplying and assembly factories (assets) around the world. Core firms focused on utilities are the least internationalized. Their national background still matters most, due to the relatively recent commencement of privatization processes in their sector. It seems probable to expect that these sectoral characteristics have an impact on environmental reporting. The question would be whether this is relatively independent from national characteristics. It could imply that instead of bargaining arenas in which national governments (and individual

multinationals) play an all important role, sectoral bargaining arena becomes important with multinational firms from the same sector showing comparable green faces.

V. EXTENT AND TYPES OF ENVIRONMENTAL DISCLOSURE

To obtain data on environmental disclosure, all one hundred core firms have been requested to send their most recent corporate environmental report, corporate health, safety and the environment report, or another publication with the same kind of information.[3] All reports were analyzed with a standardized framework and set of questions, based on a state of the art and existing scoring systems for environmental reporting (e.g., UNEP, 1994; Deloitte Touche Tohmatsu, 1997; GRI, 1999; Kolk, 1999; KPMG/WIMM, 1999).

Subsequently, four different reporting strategies were distinguished: none, tentative, active and pro-active. The 'none' category means that firms do not show attempts at environmental communication, i.e. no face at all (which not necessarily implies a 'brown' face). In the case of 'tentative' reporting, firms release environmental brochures, other public information (on paper or electronically) or refer to environmental matters in their annual reports. Both 'active' and 'pro-active' multinationals publish an environmental report, but the pro-active reports are externally verified or include information on both supplier requirements and financial aspects of the environment. The categories in fact range multinationals that have 'no face' on environmental issues on one extreme, to those with a green face on the other.

Table 2 summarizes the results of this analysis, using the same format as table 1. The percentage of core firms with an environmental report (the active and pro-active categories) is extremely high with seventy, exceeding by far the numbers found in other recent research on large multinational enterprises from different nationalities (Benchmark Environmental Consulting, 1999; Kolk et al., forthcoming; KPMG/WIMM, 1999). Part of this pattern can be explained from the selection criteria of the core firms (particularly the exclusion of financial firms). Even compared to the results of only industrial firms, however, the outcome still remains exceptional. Apparently, these largest firms have a particular profile that encourages them to show a green face. It is plausible that this is related to the fact that core firms are the least able to ignore societal debates on important questions such as the environment. In the phrases used in the wider debate on 'corporate social responsiveness' one could observe that the 'license to operate' of in particular large core firms depends on their willingness to show a face. But table 2 also reveals that that face shows widely varying characteristics. It turns out that the nature of products, sector and country characteristics are important factors.

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A first observation on the reporting practices of large core firms is that considerable differences can be found between diverging national origins. Firms from small countries show the greenest face, those from US and France the least green face, with Japan, Germany and Italy in between. Societal pressure and regulatory developments clearly

play a role here (Adams et al., 1998; Kolk et al., forthcoming). Regulatory pressure shows comparable characteristics as in the case of internationalization: respectively a small country, a regional and a large countries' perspective.

Firstly, although none of the firms' home countries legally obliged the publication of environmental reports in this period, regulatory requirements on disclosure are gradually increasing, in particular in the smaller countries with more open bargaining arenas. In Denmark, firms with a significant environmental impact have been required to publish an environmental report since 1996; a comparable law applies to approximately 250 firms in the Netherlands from fiscal year 1999 onwards. In Norway and Sweden, government regulations oblige firms to include environmental information in their financial reports. Firms from the smaller countries have the strictest reporting practices with high degrees of verification, but also include more 'soft' and qualitative strategies on the environment, including pleas for covenants and other forms of stakeholder management on the environment.

Secondly, the macro-regional perspective is best developed in Europe. At the European level strict requirements on including environmental information in financial reports does not exist. But the EU's voluntary Eco-Management and Audit Scheme (EMAS) requires participating sites to produce an annual environmental report. The number of EMAS-registration is particularly high in Germany, where the government explicitly supports it, sometimes offering relaxation of other environmental requirements in return. Apart from regulation, societal attention seems to play a considerable role as well. In the UK, for example, societal pressure on firms to report on environmental and particularly social issues is relatively high. This also appears from the relatively high percentage of verified environmental reports, in which firms in the UK by far exceed those in other countries (KPMG/WIMM, 1999). Higher levels of societal interest also apply to Germany and the Netherlands; here, however, green movements are much more important than in the UK. In France, the situation is partly different (see below).

Thirdly, the largest countries create a different bargaining environment for environmental reporting strategies. A more quantitative approach is practised. These strategies clearly develop in interaction with national regulatory measures. In the United States (and Canada), firms are required to report on emissions for a national pollutant or toxic release inventory. Preparations to move into this direction are under way in Japan. To what extent such legislation has stimulated environmental reporting can be debated. The strict imposition of standards, coupled with the litigious tradition in particular in the United States, seems to have had a rather deterrent effect. Therefore, although US firms figure prominently in expressing environmental strategies (making them the prime object of research, see introduction), the above internationally comparative analysis shows that these largest core firms are much less (pro)active than is sometimes proclaimed.

The average degree of environmental reporting amongst the largest US firms (n=28) is 2.53, which is the lowest of the Triad. Japanese large firms (n=33) on average score 2.81, whereas European large firms (n=38) on average score 3.07. Japanese firms thus share a somewhat more active face towards environmental reporting than US firms. In this respect the national bargaining environments of the smaller countries compare to that of Japan (collaborative in stead of adversarial as in the United States). Toyota for example adopted a much more pro-active environmental strategy than Ford. As opposed to Ford, Toyota's environmental reports are verified, contain clear financial figures, as well as specific supplier requirements. Using the latter indicator, a further specification of Japanese strategies is possible. There is a difference between vertical and horizontal

Keiretsu. Vertical *Keiretsu* contain core firms that are more vertically integrated, which increases their interest in using all sorts of control mechanisms (next to financial participation which is the control mechanism of horizontal *Keiretsu* and US Fordist firms) to coordinate their supply chain. Therefore, Vertical *Keiretsu* amongst the one hundred largest core firms, such as Toyota, Nissan, NEC and Canon, have developed stricter supplier requirements as part of their environmental reporting.

Sectoral differences can be noted as well. Generally speaking, the most polluting sectors have the highest propensity towards developing environmental strategies and releasing environmental reports. This applies particularly to sectors such as chemicals, cars, oil and (energy) utilities. Production characteristics inhibit firms to show a green face and a bandwagon effect takes place once important multinationals have started to publish reports or to hire third parties to verify the contents. Reporting is considerably less common in sector with lower levels of pollution, such as trade and retail, postal services, food stores and telecommunications. This also applies to the banks and insurance firms that have been excluded for this study (see section 1 on core firms).

The national bargaining arena seems to increase in importance with its strategic nature: public reporting on the environment depends on the strategic nature of the sector as perceived by national policy makers. The French arena is the best illustration for this mechanism (this also applies to developing countries as explained above). In strategic sectors such as oil, electricity, telecommunication and water utilities, French firms have the least pronounced environmental reporting strategies compared to firms from other countries. [4] Together with limited societal attention to these issues, this may explain the low level of environmental reporting in France overall (KPMG/WIMM, 1999).

The degree of direct pollution is, nevertheless, not a entirely sufficient factor in understanding environmental strategies. Somewhat exceptional sectors for example are electronics and computers. Although the direct environmental impact is relatively low compared to heavy industry sectors, many firms in these sectors publish environmental reports. Research on multinationals' environmental reporting confirms this tendency (Benchmark Environmental Consulting, 1999; KPMG/WIMM, 1999). Peculiar to these sectors is that the international environmental management standard ISO 14001 has become a market requirement, originating from Japan (USAEP, 1997). Although this standard does not require the publication of an environmental report, it seems likely that it has been an incentive for showing a greener face overall. In addition, (regulatory) attention to take-back and recycling has been relatively high with regard to computers and electronics.

VI. INTERNATIONALIZATION AND REPORTING CONFRONTED

Confronting internationalization and environmental reporting strategies leads to Figures 1 and 2. They reveal the patterns that consequently can be observed for the one hundred largest firms in the world.

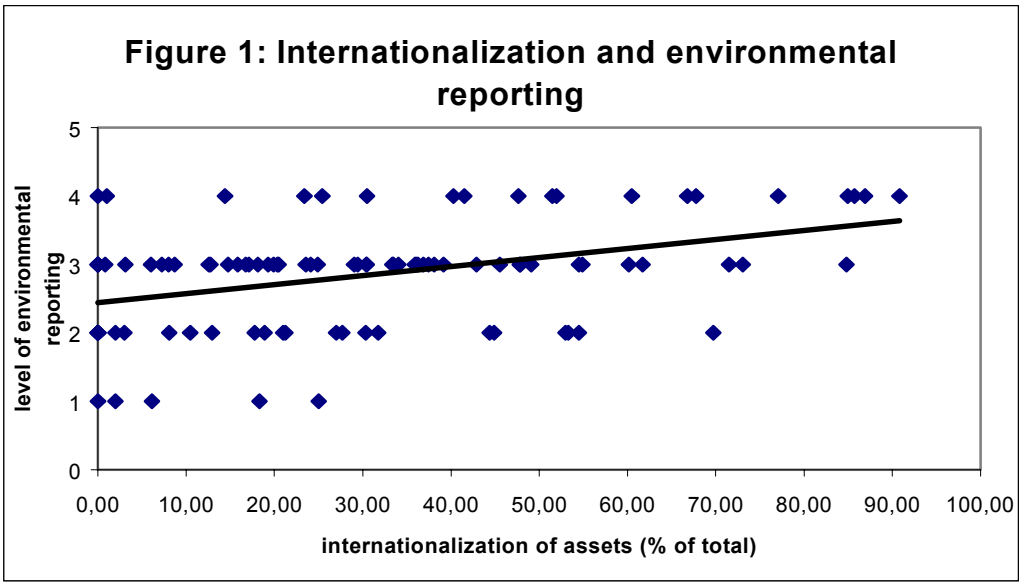
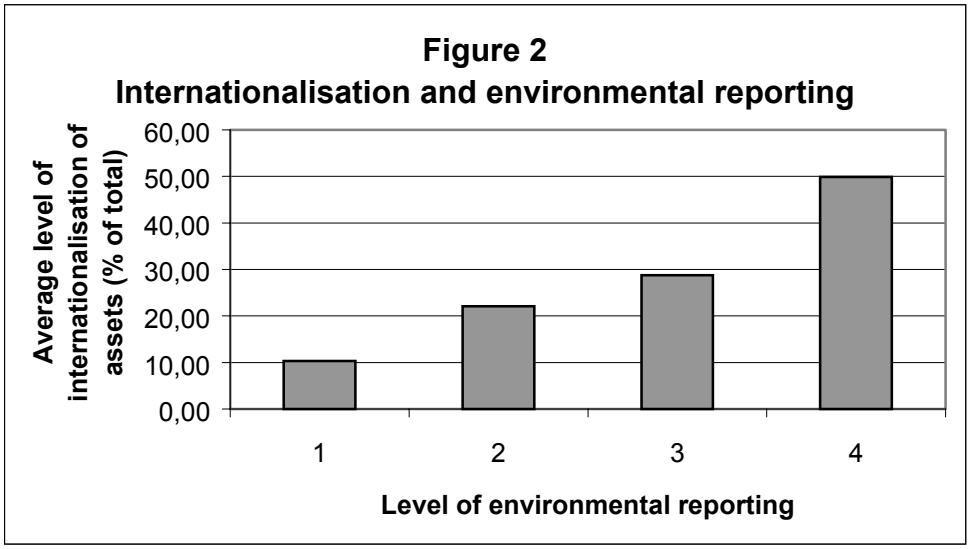


Figure 1 spots all one hundred core firms with the internationalization degree of their asset on the horizontal axis, while the four different environmental reporting strategies are listed on the vertical axis. There is a statistically significant correlation between the two indicators with a correlation coefficient of 0.41.[5] The most international core firms tend to share a much higher propensity towards showing a green face than the least international firms, i.e. those firms that are still chiefly operating national. Green is indeed strong related to global. Figure 2 shows a more emphatic profile of environmental accountability: a perfectly and gradually rising average degree of the international spread of assets related to increasing level of (pro-active) environmental reporting. Most of the core firms that have been taken for the sample had already reached their level of internationalization before they issued an environmental report. So it is more likely that globalization leads to environmental reporting than vice versa.



So whereas the previous sections revealed that sectoral and country characteristics are important factors in understanding the green face adopted by core firms, the above analysis suggests that the degree of internationalization might be the most important factor. Clearly, environmental reporting does not develop in isolation, but in interaction with governments. This interaction is most influenced by relative degrees of internationalization, i.e. with the degree to which a core company has interests within the national bargaining environment. The country origin influences the degree and nature of environmental reporting of firms. This has been confirmed by other research (Kolk et al, 2000: 14). The present research suggests, moreover, that there is a mediating variable influencing the interaction between the home country and the firm: the degree of internationalization. Three different perspectives have been typified and supported by the data from reporting as well as internationalization strategies.

The small country perspective has proven to be the most interesting in international environmental strategies. In the case of small countries, one might expect these relatively weak governments to take a more modest position on environmental reporting practices, certainly with regard to their biggest constituents that have bigger interests abroad than at home and therefore might be inclined to escape to other countries as soon as home governments increase regulatory pressure. The opposite is the case. Why? A possible explanation is that the more proactive stance of governments could also be the *result* of the more proactive stance of major home-based core firms that internationalized, generally in a much earlier phase than other multinational corporations. Commonly these firms adopted multi-domestic strategies (cf. Ruigrok and Van Tulder, 1995) which proved to be good entry strategies, but created sizable coordination problems in later stages. At the same time, firms from smaller countries have always experienced a stronger predicament in presenting themselves as 'good citizens' in the host country because they lacked the backing of strong home governments. Both developments have strengthened the willingness of large firms from small countries to engage in environmental reporting even long before there was a legal obligation to do so. Concomitantly, this attitude has facilitated initiatives of governments to come up with more strict regulation in the home market, even if they would not be followed by larger countries. The large core players thus created a 'level playing field' in their home countries. Originating in the smaller countries a stronger pressure towards adopting international environmental standards such as ISO 14001 can

be observed. In this process, governments and big core multinationals join hands leading to interesting international initiatives.

From the medium-sized countries one can observe a stronger inclination towards regional and voluntary standards such as EMAS, as explained in the preceding section. The prime aim of regional standards is to complement the national bargaining arena as well as influence it in support of the regional internationalization strategies of their core firms.

From the perspective of the larger countries one can observe in general less strong urges for any type of international regulation. National regulation by stronger governments prevails, whereas firms are less international and share less strict and/or pro-active reporting strategies. These factors are clearly mutually reinforcing. But there are substantial differences between the US and the Japanese company position. In the international arena one can hardly observe concerted and pro-active action in particular of US companies and the American governments. American companies have been the least enthousiastic in adopting ISO 14000, whereas Japanese and European firms have substantially more ISO 14000 registrations (Christmann, Taylor, 2000: 12). US firms are 'trapped' in the American bargaining arena in which they fear the legal consequences of self-incrimination in case of environmental violations (Delmas, 2000). Japanese firms have been adopting ISO 14000 because of their strategy to act as "corporate citizens" in their home countries, and ISO provides them with a standard that is accepted in both the US and the EU (their most important targest for internationalization of production networks and thus of assets). Japanese firms share a remarkable profile of DOI and environmental reporting. In case US (and Japanese) firms internationalize and support international regulatory reform, it can be expected that this is primarily related to the sectoral dynamism rather than to international political and regulatory relations.

VII. CONCLUSOIN: A EUROPEAN ENVIRONMENTAL SPACE

Different national bargaining arenas show different characteristics. Will they converge for instance at a regional level? If the above analysis is correct, the degree of internationalization of core firms could be an important analytical building for assessing this question. The global bargaining arena on the environment centres around ISO standards and the question of implementing environmental benchmarks agreed upon in big interngovernmental Conferences like Kyoto and UNCED. The latter bargaining arena is certainly diffused and dominated by national and or regional governments (while only indirectly firms and NGOs are represented). In the multilateral bargaining arena, the three different strategies – as exemplified above – have to be balanced. This looks very difficult, not in the last place because different firms also support different governmental strategies. In case core firms from the US and Japan will further internationalize, in the future international rules could converge towards more green. In the meantime, however, different styles will probably persist.

Data as presented in Figure 1 could help to further speculate about the shape of policy initiatives to come. Combining internationalization and environmental reporting strategies a clustering can of relatively coherent strategies for American, Japanese and European core companies can be made. Figures 3 and 4 reveal that in the set of one

hundred core companies it is – by and large – possible to discern between an American space, a Japanese space and a European space. In each of these spaces on the one hand a large part of the core companies (with 28 US, 33 Japanese and 35 EU firms relatively even spread over the Triad) from one Triadic region is represented, whilst on the other hand the majority of the core firms in this space are from the same Triadic region (see the characteristics below figure 4).

The Japanese space is the most coherent – representing almost all Japenese core players. The American space is the least coherent – partly overlapping the Japanese space to ultimately represent two-thirds of the American core firms. The European space is somewhere in between. But the number of companies that are exclusively represented in the designed space is higher than for the Americans and Japanese – making the space more exclusive and therefore sort of a 'club good' for the participating members (see introduction). Considering policy making the outcome of especially the interaction between governments and core players, in which the degree of internationalization is an important intervening factor, the American policy arena is clearly the most diffuse and polarized, thus difficult to create consensus The industrial flight/pollution haven debate has been strongest in the United States partly due to these polarized positions. On the other hand, the American Environmental Space includes most core players with both the least international and environmentally sophisticated strategies, which will make the Americans likely to be the least interested in international regulation.

FIGURE 3 CLUSTERS OF ENVIRONMENTAL REPORTING

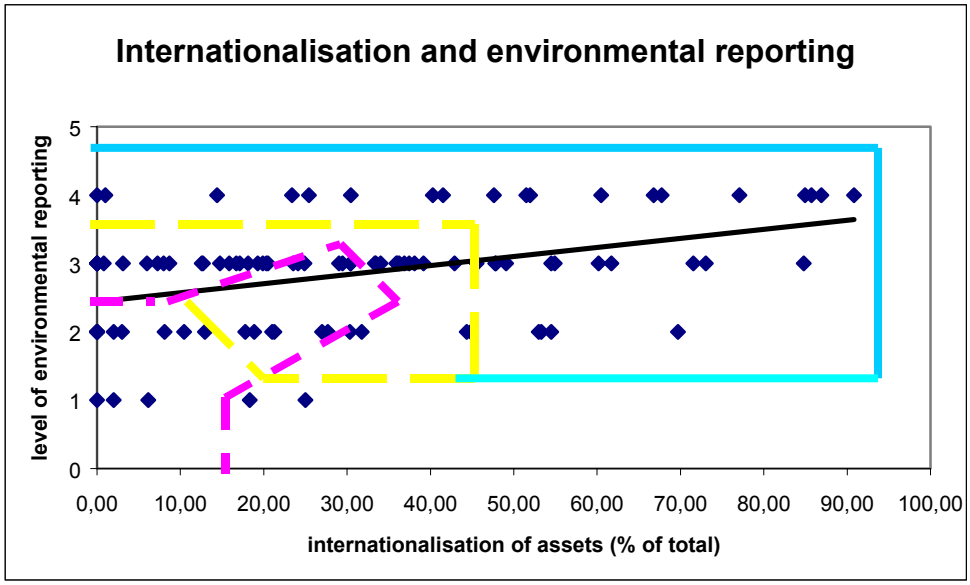
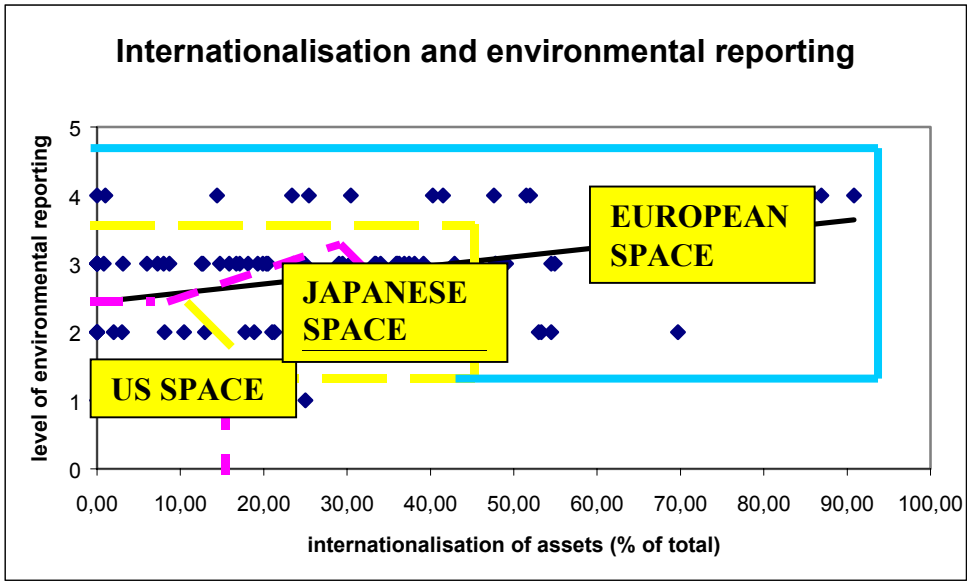


FIGURE 4 A EUROPEAN ENVIRONMENTAL SPACE



***Characteristics of each space**:*

- *US Space:* 69% of the 28 American core companies are situated in this area; whereas in this area more than 48% of the companies are of American origin (in the lowest rectangle 71% of the firms are American)
- *Japanese Space*: 85% of the 33 Japanese core companies are situated in this area; whereas in this area 56% of all core companies are of Japanese origin
- *European Space:* 60% of the 35 European core companies are situated in this area; whereas in this area 71% of all core companies are of European origin

The particular characteristics of the Japanese space fascilitates Japanese policy makers to develop relatively coherent policies (in consulation between MITI and core Japenese industrial firms as usual in the Japanese 'developmental state'; See Johnson, 1986). Adherence to relatively open and weak internatonal standards could be part of such a strategy, because it provides the core players with the biggest strategic flexibility as regards entering other countries, whilst at the same time keeping the national competive space (with specific environmental regulation geared towards the Japanese context) relatively closed.

Europe shares a surprisingly coherent environmental space as well, but the big problem is that European environmental regulation is not yet well developed, partly due to missing institutions. But because of the underlying strategic repertoire for European core players, it is very likely that these institutions will develop, either autonomously or in response to the actions undertaken by Japanese and American actors.

In conclusion, the commentators that state that multinationals are at the leading edge of environmental strategies are both right and wrong. This contribution has shown that a more nuanced approach needs to be adopted towards the question whether multinationals show a green face. This approach depends basically on a number of characteristics of core firms. National backgrounds (related to national institutions or bargaining arenas) have proven surprisingly relevant. In other instances sectoral characteristics have prevailed linking internationalization and a green face of firms. Particularly interesting in this respect is the European bargaining environment in which the most pro-active firms and (small) countries in combination with medium-sized countries with a more pronounced vision on the strategic nature of particular industries, try to create supra/international environmental regulation. At the global level, one can find firms with very green faces, but not much coherent and harmonized regulation. Therefore, the battle over putting the green face of the most international corporations also into practice still takes place at the national and regional level.

NOTES

[1] In a later phase of the research it is envisaged to include data on the top50 core companies in a larger number of 'home' countries. The present data first take a global perspective and only in second instance a national perspective. The small countries as a group and most large countries are represented by their biggest five to ten players in any case.

[2] List as published on 5 August 1996; South Korean firms and Pemex were excluded as it has proved impossible to obtain reliable internationalization data.

[3] The firms were first approached in June 1998, with a second mailing in November 1998, and subsequent telephone contact in the first half of 1999. As the number of firms with an environmental or HSE report is increasing rapidly, we did a final check on the non-reporters by internet/telephone in May 2000. The oldest reports that were included originated from 1995, the newest from 1999.

[4] The strategic relevance for the national (industrial) policy and autonomy of firms like Total probably makes them less sensitive to the pressure of consumers in general. A

comparable example from the oil industry relates to investing in dubious regimes. Whereas Texaco and Amoco of the United States withdrew from Birma (Myanmar) in the 1992-1998 period following actions of NGOs, Total decided to stay, which was followed by only modest protests in France (cf. Van Tulder, 1999: 17).

[5] The R-square is 0.17, which might appear not very high but nevertheless acceptable, also because the one- as well as the two-tailed T-value is 0.00, implying a very significant association.

REFERENCES

Adams, Carol A., Wan-Ying Hill & Clare B. Roberts. 1998. Corporate social reporting practices in Western Europe: legitimating corporate behaviour? *British Accounting Review*, 30(1): 1-21.

Benchmark Environmental Consulting. 1999. The state of global environmental reporting: the 1999 Benchmark report. Hartsdale, NY.

Boyer, Robert, Bayard Hollingsworth. 1998.

Carillo, Jorge, Yannick Lung, Rob van Tulder (eds). forthcoming. *Cars… carriers of regionalism? The creation of a car space in different world regions*, London: McMillan

Christmann, Petra & Glen Taylor. 1999. Globalization and the environment: evidence from China. Paper presented at the 8th Greening of Industry Network Conference, Chapel Hill, N.C.

---. 2000. Globalization and the Environment: The Role of ISO 14000. Paper presented at the Academy of Management Meetings, Toronto, August 7, 2000

Delmas, Magali. 2000. Globalization of environmental management standards: Barrers and incentives in Europe and the United States. Working Paper 2.70 Center for German and European Studies, University of California at Berkeley.

Deloitte Touche Tohmatsu. 1997. Corporate environmental report score card. A benchmarking tool for continuous improvement. Report. <http://www.teri.tohmatsu.co.jp/services/Scorecard _E.html>.

Gentry, Bradford. 1999. Foreign direct investment and the environment: boon or bane? In OECD. *Foreign direct investment and the environment*. Paris: OECD Proceedings, pp. 21-46.

GRI. 1999. Sustainability reporting guidelines. Exposure draft. Boston: Global Reporting Initiative <http://www.globalreporting.org>.

Iansen-Rogers, Jennifer, 1994, Countdown to EMAS: An Asssessment, *Environment Watch, Western Europe*, vol.3, no.16: 1-11

Kahn, Matthew E. 2000. United States pollution intensive trade trends from 1972 to 1992. Paper, Columbia University <http://www.columbia.edu/~mk214/trade22.pdf>

Katzenstein, Peter, 1985, *Small States in World Markets: Industrial policy in Europe*, Ithaca, NY/London: Cornell University Press

Kolk, Ans. 1999. Evaluating corporate environmental reporting. *Business Strategy and the Environment*, 8 (4): 225-237.

Kolk, Ans, Rob van Tulder & Carlijn Welters. 1999. International codes of conduct and corporate social responsibility: can transnational corporations regulate themselves? *Transnational Corporations*, 8 (1): 143-180.

Kolk, Ans, Seb Walhain & Susanne van de Wateringen. Forthcoming. Environmental reporting by the Fortune global 250: exploring the influence of nationality and sector. *Business Strategy and the Environment*.

KPMG/WIMM. 1999. KPMG International survey of environmental reporting. The Hague/Amsterdam.

Levy, David L. 1995. The environmental practices and performance of transnational corporations. *Transnational Corporations*, 4(1): 44-67.

Low, Patrick, editor. 1982. International trade and the environment. Washington: World Bank, discussion paper No. 159.

Mani, Muthukumara & David Wheeler. 1999. In search of pollution havens? Dirty industry in the world economy, 1960-1995. The Hague, room document presented to the OECD conference on FDI and the environment.

OECD. 1997. Foreign Direct Investment and the environment: an overview of the literature (Dec 1997). Paris <http://www.oecd.org/daf/cmis/fdi/fdienv.htm>.

Rugman, Alan & Joseph D'Cruz. 1997. The theory of the flagship firm. *European Management Journal*, 15(4): 403-412.

Rugman, Alan. 2000. *The end of globalization*. Random House Business Books.

Ruigrok, Winfried & Rob van Tulder. 1995. *The logic of international restructuring*. London and New York: Routledge.

Ruigrok, Winfried & Hardy Wagner. 2000. 'Degree of Internationalization and Performance- An Organizational Learning Perspective', Paper presented at Academy of Management, Toronto, August 2000

Sullivan, D., 1996, Measuring the degree of internationalization: a reply, *Journal of International Business Studies*, 27, 1:179-192

Sustainability/UNEP. 1999. The oil sector report. A review of environmental disclosure in the oil industry. London.

Tsai, S-H Terence & John Child. 1997. Strategic responses of multinational corporations to environmental demands. *Journal of General Management*, 23(1): 1-22.

UNCTAD. 1998. *World Investment Report 1998. Trends and determinants*. New York and Geneva: United Nations.

UNCTAD. 1999. *World Investment Report 1999. Foreign direct investment and the challenge of development*. New York and Geneva: United Nations.

UNCTAD, forthcoming, *World Investment Report 2000, Mergers and Acquisitions*, New York and Geneva: United Nations

UNEP. 1994. Company environmental reporting. A measure of the progress of business and industry towards sustainable development. Paris, Technical report No. 24.

USAEP. 1997. Candid views of Fortune 500 companies, US-Asia Environmental Partnership.

Van Tulder, Rob. 1999. Rival internationalisation trajectories. The national and regional embeddedness of core firms' internationalisation strategies. In: A. Eckardt, H. Köhler & L. Pries, editors, *Global Players in lokalen Bindungen. Unternehmensglobalisierung in soziologischer Perspektive*. Berlin: Sigma, pp. 53-79.

Van Tulder, Rob, Douglas van den Berghe, Alan Muller. 2000. *Erasmus (S)core board of Core Companies. Internationalization and Regionalisation*, Rotterdam: Erasmus University Rotterdam/Rotterdam School of Management, Research Briefing

Vernon, Raymond. 1994. Research on transnational corporations: shedding old paradigms. *Transnational Corporations*, 3(1):137-156.

Vernon, Raymond. 1998. *In the hurricane's eye. The troubled prospects of multinational enterprises*. Cambridge, M.A.: Harvard University Press.

Whitley, Richard (1999). *Divergent capitalisms: the social structuring and change of business systems.* Oxford: Oxford University Press.

Zarsky, Lyuba. 1999. Havens, halos and spaghetti: untangling the evidence about foreign direct investment and the environment. In OECD. *Foreign direct investment and the environment*. Paris: OECD Proceedings, pp. 47-74.

Table 1 Degree of internationalization of the largest 100 industrial ('core') multinational enterprises in 1995 (%)

Degree of internationalization	*Total*	*Countries' distribution over categories (in % of country)*						*Sectors' distribution over categories (in % of sector)*											
		US (n=28)	Japan (n=33)	Germany (n=15)	France (n=10)	small EU* (n=6)	Italy (n=4)	cars (n=15)	oil (n=12)	chemical (n=4)	trade (n=11)	gen. merch (n=6)	food st. (n=5)	food (n=3)	comp. (n=4)	electron. (n=12)	telecomm (n=6)	energy utilities (n=6)	water utilities (n=2)	mail (n=3)
negligible (0-5%)	19	29	18	13	10	0	25	0	0	0	0	67	40	33	0	0	50	67	0	100
low (5-15%)	12	11	18	13	10	0	0	7	8	0	9	33	20	0	0	33	0	33	0	0
medium (15-45%)	43	39	58	27	40	0	75	60	33	0	81	0	20	0	50	42	50	0	100	0
high (>= 45%)	26	21	6	47	40	100	0	33	58	100	9	0	20	67	50	25	0	0	0	0

* this includes Swiss, Swedish, Dutch, and Anglo-Dutch firms

Table 2 Environmental reporting strategies of the largest 100 industrial ('core') multinational enterprises (%)

Environmental reporting strategy	*Total*	*Countries' distribution over categories (in % of country)*						*Sectors' distribution over categories (in % of sector)*											
		US (n=28)	Japan (n=33)	Germany (n=15)	France (n=10)	small EU* (n=6)	Italy (n=4)	cars (n=15)	oil (n=12)	chemical (n=4)	trade (n=11)	gen. merch (n=6)	food st. (n=5)	food (n=3)	comp. (n=4)	electron. (n=12)	telecomm (n=6)	energy utilities (n=6)	water utilities (n=2)	mail (n=3)
None	5	11	0	7	0	0	25	0	0	0	9	33	20	0	0	0	17	0	0	0
Tentative	25	32	24	13	50	0	0	7	8	0	64	50	40	33	25	17	17	0	50	100
Active	51	50	70	47	40	17	25	60	58	75	27	17	40	0	50	58	50	83	50	0
Pro-active	19	7	6	33	10	83	50	33	33	25	0	0	0	67	25	25	17	17	0	0

* this includes Swiss, Swedish, Dutch, and Anglo-Dutch firms

FIGURE 3a A EUROPEAN ENVIRONMENTAL SPACE?

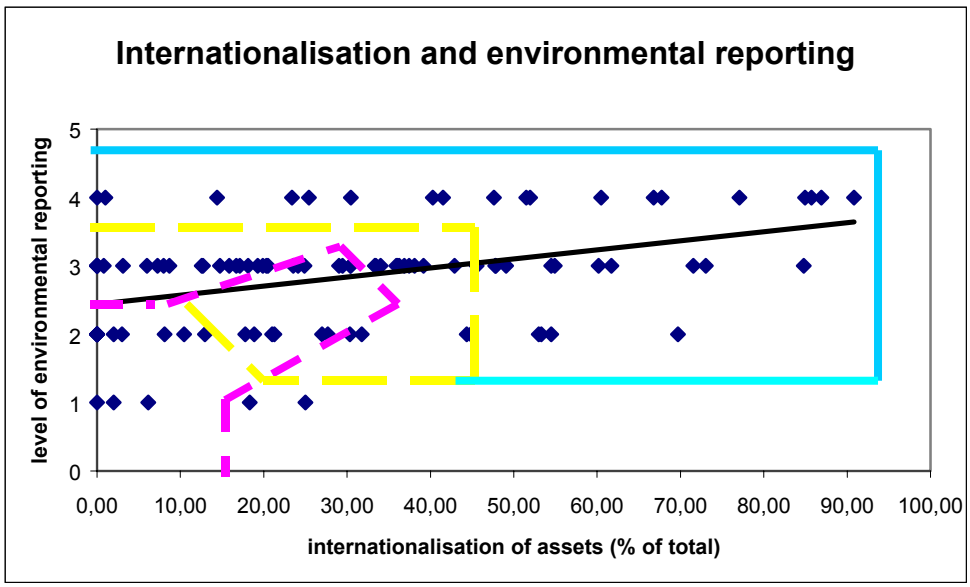
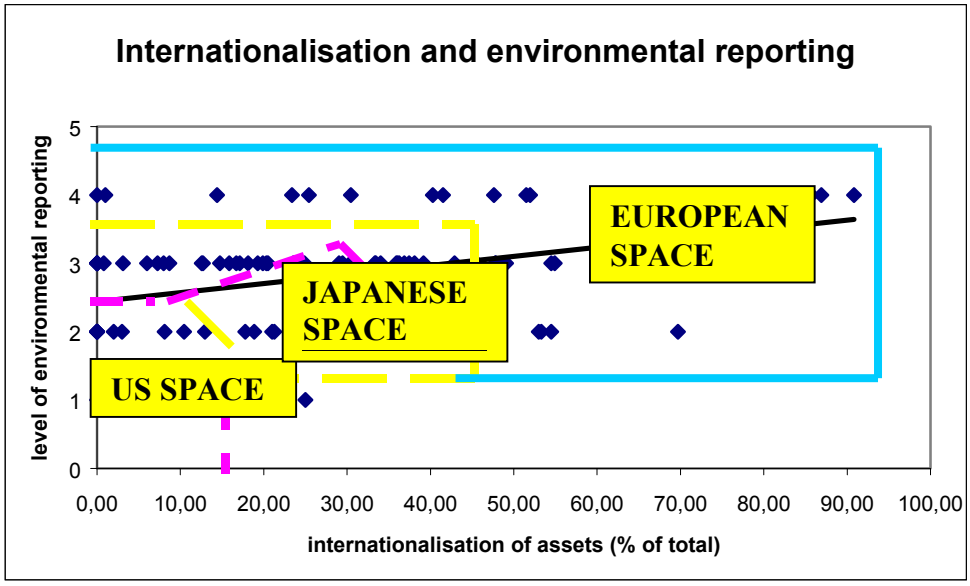


FIGURE 3b A EUROPEAN ENVIRONMENTAL SPACE?



***Characteristics**:*

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