Erasmus (S)coreboard of Core Companies

Rotterdam School of Management / Faculteit Bedrijfskunde

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Erasmus (S)coreboard of Core Companies: The World's Largest Firms and Internationalization

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The SCOPE database and expert center were set up in 1997 under the overall supervision of Prof. dr. Rob van Tulder, with daily management by Douglas van den Berghe. Parts of the SCOPE database have been constructed in close collaboration with the United Nations Conference on Trade and Development (UNCTAD) – Division on Investment, Technology and Enterprise Development – and as such have been published in consequent UNCTAD, World Investment Reports since 1997 (cf. UNCTAD, 1997; 1998; 1999 and 2000). Wilfried Engelke (Economic Affairs Officer) coordinated the cooperation process on behalf of UNCTAD, and Karl Sauvant (Director of the Division on Investment, Technology and Enterprise Development) and Anne Miroux (Chief, Trends and Data Analysis) were the overall supervisors.

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A team of student assistants at Erasmus University provided input for the SCOPE database. The team was led by Douglas van den Berghe and, since September 1999, also by Alan Muller and included Carlijn Lahaye, Fabienne Fortanier, Robin Bakker, Xavier van Leeuwe and Ronald Wormgoor (1998-1999 period), Pim Schuitemaker, Thomas Lovisa, Ramon Sahtoe and Leon Noorlander (1999-2001 period).

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ACRONYMS AND ABBREVIATIONS

ASEAN	Association of Southeast Asian Nations
BIT	Bilateral Investment Treaties
DOI	Degree of Internationalization
DVI	Degree of Vertical Integration
EC	European Commission
EFTA	European Free Trade Area
EMU	European Monetary Union
ERM	Exchange Rate Mechanism
EU	European Union
FDI	Foreign Direct Investment
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
IMF	International Monetary Fund
M&As	Mergers and Acquisitions
Mercosur	Mercado Común del Sur
MAI	Multilateral Agreement on Investment
MNE	Multinational Enterprise
NAFTA	North American Free Trade Agreement
NATO	North Atlantic Treaty Organization
NGO	Nongovernmental Organization
OECD	Organization for Economic Co-Operation and Development
R&D	Research and Development
RCI	Regional Concentration Indicator
RIA	Regional Integration Agreement
SADC	South African Development Community (previously SADCC: South African Development Coordination Conference)
SEM	Single European Market
TNC	Transnational Corporation
TNI	Transnationality Index
TWM	Third-World Multinational
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
WTO	World Trade Organization

KEY POINTS

Core companies

⇨ Despite the rhetoric of increased (global) competition, Core company activity is increasing relative to overall economic activity, suggesting an increased concentration of economic power.

⇨ Core companies show a remarkable historical continuity; the origins of today's leading companies in many sectors date back as far as a century.

⇨ Despite claims of 'downsizing', *employment* for the average core company increased steadily over the 1990s; the degree of vertical integration for many companies increased as well.

⇨ Despite the 'vogue' of the New Economy, the largest core companies – measured in terms of R&D – remain dominant players in the innovation arena.

⇨ Core companies have been the drivers behind the recent boom in (primarily horizontal) M&As, yet the overall degree of internationalization for Core companies rose, on average, very little in the course of the 1990s.

Internationalization

⇨ Internationalization is not always the optimal strategy for Core companies, who in some cases remained *purely domestic* throughout the 1990s.

⇨ *Privatization and deregulation* was the key driver behind the internationalization strategies of a second group of core companies, the "late internationalizers", which began to expand across borders significantly only in the second half of the 1990s.

⇨ The exposure of late internationalizing firms to increased international competition means that these firms are caught in a *competitive internationalization trap*: internationalization has become a prerequisite for economic survival.

⇨ Well-established MNEs, which were already internationally active before the 1990s, showed very divergent behavior in their internationalization strategies during the decade, with many becoming *more* international but a substantial number also becoming *less* international

⇨ In 1998 the Transnationality index (TNi) of the 100 largest Core companies was around 35 percent, while the world's most international firms have a foreign component of 50-55 percent. *Thus even the established MNE Core companies tend to be primarily domestic*.

⇨ *Fluctuations* in degree of internationalization began to diminish in the second half of the 1990s as the *pace* of internationalization slowed down in the same period.

⇨ The most *internationalized* core companies are also the companies with the *highest R&D expenditures*.

⇨ The 'globalization wedge' – the difference between the ideology and reality of globalization – decreased slightly during the 1995-98 period.

Regionalization

- ⇨ The European Union has been a focus of expansion for non-European Core companies in the years following the formalization of the Single Market.
- ⇨ The Single Market has given European Core companies the impetus to expand outside the region.
- ⇨ Intra- and extra-regional patterns of activity are still very much influenced by country of origin.
- ⇨ In larger European countries, larger Core companies are not only less *international* than smaller core companies, they are also relatively less *extra-regional*.
- ⇨ In smaller European countries, *larger* Core companies are not only more *international* than smaller Core companies, they are also relatively more active *outside* their home region.
- ⇨ Firm activity may be *dyadic* instead of 'Triadic', given that for every Core company at least 75 percent of its economic activity is concentrated in only two regions of the world. It may, therefore, be better to speak of *dyadization* instead of *triadization* when describing internationalization trends at the firm level.

PART I

INTRODUCTION: A DECADE OF UNCERTAINTY

1.1 Setting the institutional stage

The last decade of the second millennium brought about brisk changes in the institutional setting for core corporations. The fall of the Berlin Wall in November 1989 provided a metaphoric prelude to a number of major events which characterized the 1990s.

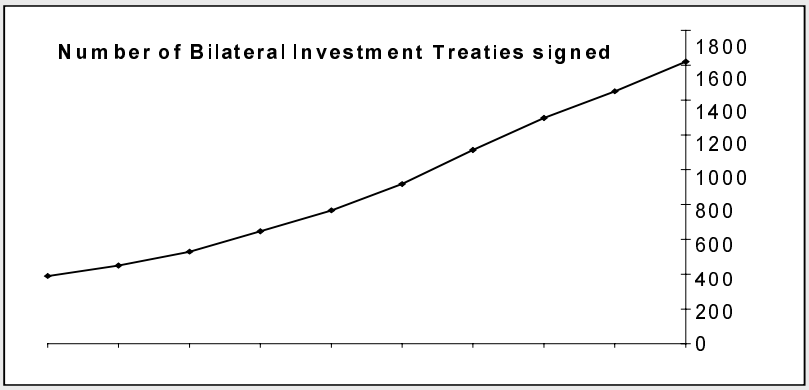
Integration in the world system

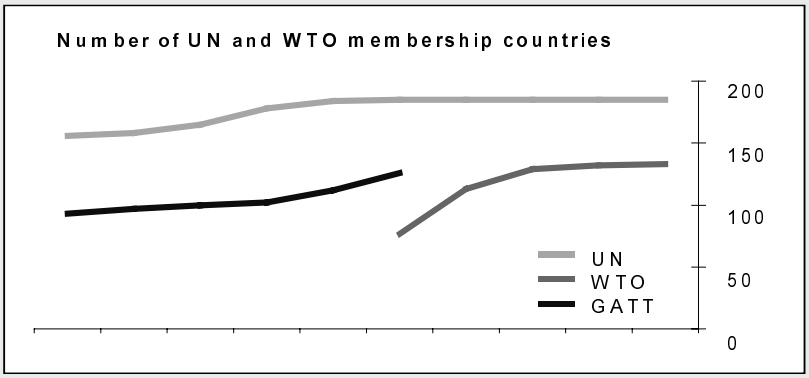
A large number of countries opened up their economies to international trade and investment during the 1990s. Trade and investment liberalization programs far outnumbered more restrictive measures. During the 1991-1998 period, 94 percent of an approximate 900 Foreign Direct Investment (FDI) related regulatory changes were in the direction of creating a more favorable environment for FDI, in both developed and developing countries (UNCTAD 1999:115). In particular South Africa, Central and Eastern Europe, the Russian Federation and China – mostly 'transition economies' – tried to integrate into the world economy. The multilateral Uruguay Round was finalized successfully in 1993, after which a more autonomous and stronger World Trade Organization (WTO) was founded in 1995, intended to give further impetus to worldwide trade regime. WTO membership, at 97 countries by the end of the 1980s, jumped to 135 countries. Under the new WTO regime, the autonomy of countries to decide upon their (official) trade policy diminished. A growing number of topics were included in the expanded mandate for the WTO. Intellectual Property regulation was initiated on a worldwide scale, and the WTO regulatory regime was extended to include service sector industries. By the end of 1997 an agreement was reached within the WTO to open banking, insurance and securities markets to foreign competition. The entry of China remained an issue of debate. With successful settlements with the United States and the European Union in the course of 2000, it is likely that China will become member of the WTO, bringing the overwhelming majority of the world's population under the WTO's (free) trade regime.

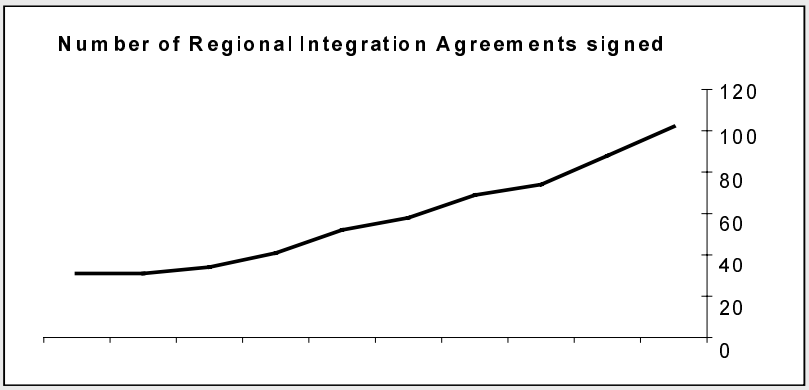
Larger number of countries

The number of independent countries increased, due in particular to the disintegration of the Soviet Union (1991), the Yugoslav Federation (1992) and Czechoslovakia (1993). United Nations' membership was augmented at a pace faster than in previous decades. In only four years time in the early 1990s, 29 states that in most cases had only recently obtained independence applied for membership of the United Nations. Before that time it had taken twenty years to increase UN membership with a comparable number of countries. At the same time, a few countries merged as well: East and West Germany in October 1991, Hong Kong and China in June 1997.

Box 1: An Era of Transnationality and Uncertainty

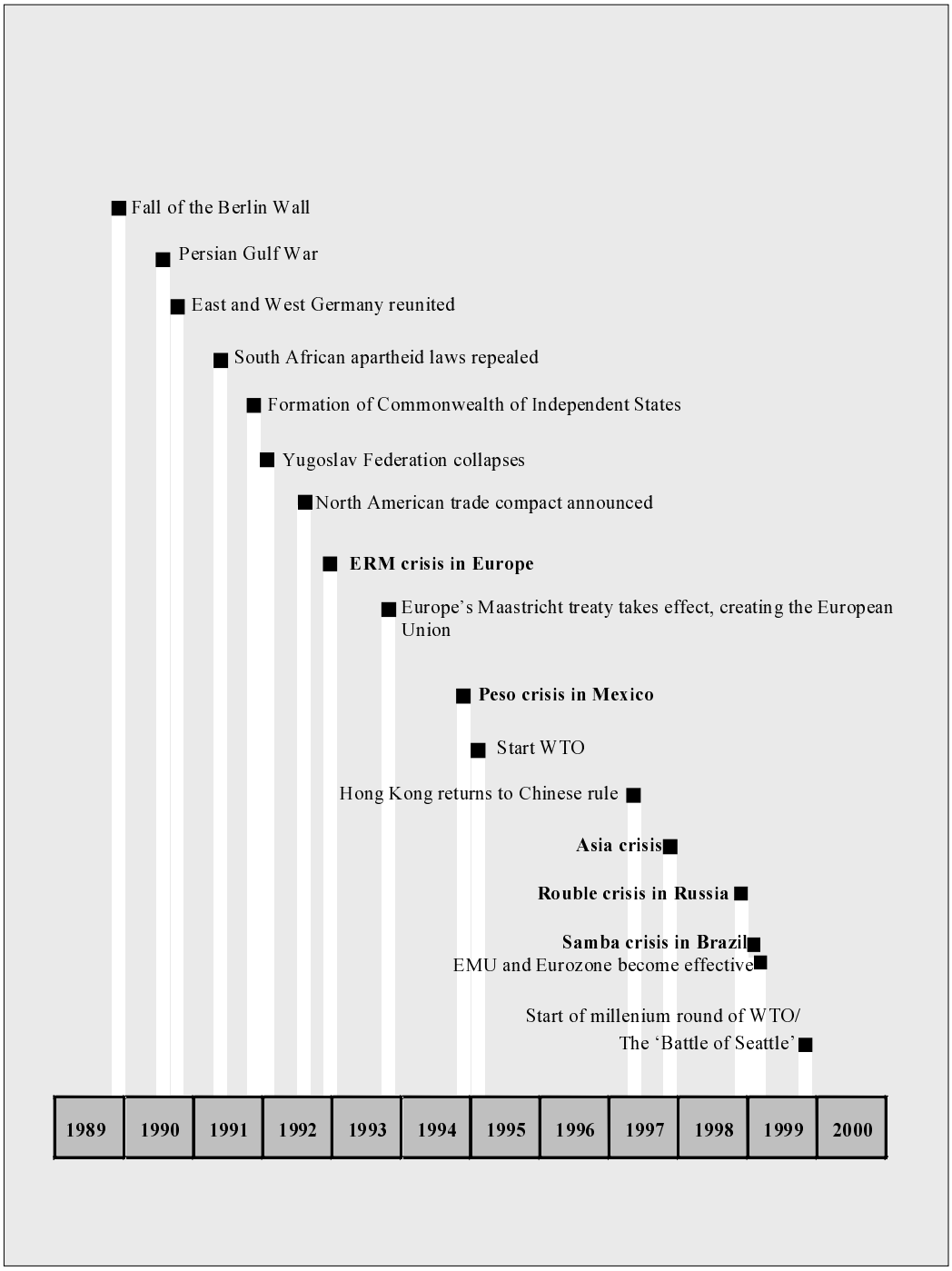






1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000

Box 1: Continued



Regionalism

The institutional setting has begun to shift from a national to a regional level. The 1990s saw a boost in the number of Regional Integration Agreements (RIAs) such as the North American Free Trade Agreement (NAFTA) and the European Union, limiting the policy autonomy of a considerable number of states. The number of RIAs notified to GATT over the whole 1948-1990 period amounted to around 30, whereas the number more than tripled during the 1990s. The "second wave" of regionalism of the 1990s was triggered by the consecutive advancement of the European Community into an integrated common market (1992) and a monetary union (1999). Parallel to the European integration process, NAFTA, Mercosur in South America, ASEAN in South-East Asia, SADC in Southern Africa and other regional integration agreements either materialized or received a major boost. With the integration of other countries into existing RIAs in the coming decade(s), the regional dynamism is likely to draw considerable attention of policy makers and business strategist alike. The expansion of the European Union with around ten to twenty Central- and Eastern European countries, the expansion of Mercosur with other South American countries such as Chile – or even the formation of a Free Trade Area of the Americas including North America as well as Latin America – and the discussion on expanding ASEAN with Japan and China at the end of the 1990s, are illustrations of the increasing number of regional institutions under construction. In the 1990s 32 out of 77 regional trade agreements already included a specific agreement of one country with a region – in particular the EU and EFTA (WTO secretariat, 1999). Consequently, in the 1990s the dynamism in international trade was largely within macro-regions, such as the EU, Mercosur and NAFTA. In many of these regions, intra-regional trade volumes surged faster than extra-regional trade volumes and were also paralleled by expanded intra-regional volumes in investment as well.

Stalling multilateralism

Whether this has been influenced by growing regionalism is still open for debate, but the move towards a more multilateral arena for investment and trade issues, reached its – temporary – limits during the 1990s. The initiative in favor of a Multilateral Agreement on Investments (MAI) was terminated in the course of 1998. Partly as a cause and partly as a consequence of the failure of the MAI, the number of bilateral investment treaties (BITs) boomed throughout the 1990s: from around five hundred in 1990 to an accumulated number of treaties of 1,726 by the end of 1998 (UNCTAD 1999:117). The November 1999 millennium Round of the WTO was initiated to include more sectors and topics than ever. But at the Seattle talks, member countries failed to reach agreement even on a common agenda. Part of the explanation for this was that the developing countries felt that they had gotten the 'wrong' deal in the Uruguay Round in particular regarding the surrender to demands of developed countries in the area of intellectual property rights and the liberalization of services industries. The experience of the 1990s shows that when a particular round of negotiations is only beneficial for one party, this could backfire on the success of consecutive rounds. Success may thus also breed failure.

From Cold to hot wars?

The end of the Cold War was the highlight of the early 1990s. In 1990, the Western alliance announced that it considered the Cold War over and proposed joint action with the Soviet Union and eastern Europe. In 1992, US president George Bush Sr. and

Russian president Boris Yeltsin proclaimed a formal end to the Cold War. A regrouping of military alliances has been the result, leading for instance to the 1999 inclusion of the Czech Republic, Poland and Hungary into NATO. Despite hopes for stability, uncertainty as to the exact outcome of military spheres of influence continues to exist. Contrary to what the more optimistic might have hoped, violent conflicts have not ceased to exist as well between and within countries. When country boundaries are redrawn the legitimacy of governments is likewise disputed. Civil wars have decreased the internal stability of many countries and have drawn renewed attention to ethnicity as a dividing line within nations. Many of these conflicts have not only had influence on the operation of business, but were invoked by economic stakes and the interest of transnational corporations. In 1990/91 the Persian Gulf War and the involvement of Western countries was clearly influenced by oil interests, whereas the war in Congo/Zaire (1998 and onwards) and the involvement of the neighbor countries can not be understood outside the context of its mineral affluence.

New social movements

The end of the Cold War in 1989 also gave articulation to the voices of civil society in the form of new social movements. Whereas in the Cold War era almost every protest movement was automatically linked to the issue of East-West ideological polarity, by the mid-1990s the ideological vacuum was filled by a broad spectrum of national and international political and socioeconomic concerns. In particular the increasingly international character of Non-Governmental Organizations (NGOs) has been a factor. The number of international NGOs has boomed from 5,000 in 1989 to more than 25,000 by the end of the millennium (The Economist, 11-17-1999). The 1999 Seattle trade talks highlight the growing strength of these international NGOs. While the World Trade Organization (WTO) indoors tried to start up a new millennium round of trade talks, loud protesters outside from all over the world made it difficult for the diplomats to even enter the building. Police measures were taken and the instead of a millennium round of trade talks, the "battle of Seattle" was born.

The reasons for the genesis of new social movements can be found in the Internet revolution and the widening reach of the media, which have triggered responses from international social movements against growing injustice and inequality in a number of areas. The fact that the three richest men in the world (all business tycoons) have accumulated capital as large as the combined Gross Domestic Product of the 48 least developed countries in the world has not gone unnoticed. Neither has the fact that the inequality between the richest and the poorest people in the world has substantially increased over the decade. As never before, firms are faced with assertive consumers heavily influenced by an increasingly international social awareness. The very reputation of firms is at stake, a new strategic reality which is difficult to handle for most core firms. More than ever the opinion of consumers, politicians, employees and even shareholders is shaped by new opinion leaders in the form of international NGOs like Amnesty International and Greenpeace.

New Economy?

The prolonged growth of the American economy throughout most of the 1990s drew attention to the possible positive role played by the availability of venture (risk) capital in creating a large number of start-ups in biotechnology, information technology and

ultimately in the second half of the 1990s, a whole new universe of companies laying the foundation for the internet revolution. Big became 'out', small and 'networked' became in. The American economy and its model of 'shareholder' capitalism proved able to combine high levels of growth and productivity with low levels of unemployment and inflation. Market capitalization was deemed to be the most important indicator for a firm's strength, even when some of the so called 'dot-com' companies did not show any profit at all. Future profits (on the basis of expectations) became more important than present profits (on the basis of past performance). At the same time, the Japanese model and Japanese firms – the success story of big conglomerates and of lean production at the beginning of the 1990s – were in a continuous state of crisis. Since 1989 the Nikkei index has lost seventy percent of its value. In Europe countries and firms – role models of stakeholder capitalism – were somewhere in between. By the end of the year 2000, however, many dot-com companies had suffered major set-backs in their market capitalization, whereas the profits as well as the market capitalization of leading representatives of the old economy rebounded.

Financial crises

Instability is inherent to periods of flux. In financial markets, where 'globalization' is arguably most far-reaching, the 1990s have been characterized by crisis. The 1991 European financial crisis, for instance, led to the withdrawal of the British Pound from the Exchange Rate Mechanism (ERM). Subsequent crises shook the very foundations of the global economy: the Peso Crisis in Mexico (1994) with the consecutive efforts of the US government to rescue Mexico's economy with a $20 billion aid program (1995), a world wide stock market crash: partly caused by problems in Asia (1997), the start of the Asian crisis (oct. 23 1997), the Roubel crisis (end of 1998), and the Samba Crisis in Brazil (early 1999). These crises are due in part to the increasing amount of so-called 'speculative' capital at the heart of the process of financial globalization: the booming volume of financial transactions that has no relationship with 'real' transactions in goods. The regulation of national financial markets which are increasingly operating on portfolios of derivatives, speculation on the future profits of dot-com companies and the like is an arduous, if not impossible, task. The innate risks are compounded at the international level. Each of the international financial crises of the 1990s, put the investments of firms and banks under pressure and created growing concern over the question whether the international financial system was adequately regulated.

Change, uncertainty and consequences for companies

The last decade of the second millennium thus presents a far from stable transition period of growing internationalization and integration. Companies were confronted with increased uncertainty due to a number of complementary and sometimes contradictory developments: regionalism; globalization; market integration and financial crises; multilateral and bilateral agreements; the reduction of tariff barriers and the continuation of non-tariff barriers; disintegration and (re)integration of countries; growing ethnic conflicts and increasingly multi-cultural societies; assertive consumers and upcoming international social movements. Within this rather volatile setting, companies have taken decisions to internationalize, to regionalize or sometimes even to retreat (or de-invest) from particular countries/regions. In the 1990s, this has lead to various decisions to move into particular technological, sectoral and geographical territories. Some of these moves can be understood as risk-averse strategic behavior clearly inspired by uncertainty. These

contextual changes and strategic responses have not only injected new life into existing scientific and popular debates, but created entirely new debates as well. By studying the most strategic moves of core companies – their positioning in value chains, their R&D profiles and the spread of their activities over countries – it should be possible to address a number of the key debates that figured prominently in the 1990s, most of which are 'spin-offs' of the central debate on 'globalization'.

1.2 Prominent debates

As the business environment changes, business science can not be left unaffected. Witnessing the volatile setting of the 1990s, intense debates materialized around a large number of issues relevant for international company strategies: whether companies should go global; to what extent they should outsource (lean manufacturing) and/or focus on a limited number of activities (core competencies); whether internationalization is also accompanied by higher performance; whether a company's home country is a determining factor in its internationalization strategy; the role of multinational enterprises in development or underdevelopment; what levels of regulation are required for companies; do all companies represent uniform strategies and go through comparable stages or do strategies differ from each other? Many of these debates materialized in relative isolation, but in practice they are strongly intertwined and boil down to four central issues: an assessment of the true face of globalization, the relationship between internationalization and performance, the importance of the country of origin for firm strategies and the analytical choice for a particular level of analysis.

The 'central debate': the true face of globalization

Many decades have past since the first researchers attempted to unravel the nature of international involvement of multinational enterprises. The Harvard Multinational Enterprise Project, led by the late Raymond Vernon in the 1960s, was the first substantive effort in this direction. Since then a lot has changed. Not only has the MNE changed its 'face'; the environment, or 'competitive space' in which the MNE operates has also changed dramatically. The rapid growth in international trade, investment and financial capital over the last decades of the twentieth century has led to an increased (alleged) interdependence of the world economy. Increased interdependence has triggered a debate on globalization stretching far beyond the academic community alone. Scope (or stretching), intensity and interconnectedness are some of the more common words used to describe the quantitative and qualitative transformation of the world economy over the 1990s. A dominant line of reasoning has been that globalization of markets leads to more competition between an increasing number of players in a particular market. This in turn is supposed to lead to higher efficiency and more investments in innovation, followed by higher profitability of companies and ultimately an increase in welfare at a world-wide scale.

Most of the issues are thus clustered under the broader umbrella of 'globalization'. Yet 'globalization' as such is at best a poorly defined, poorly understood phenomenon. For some, globalization is not new but is simply a process of 'bringing things back to an earlier stage at the beginning of the 20th century' (Hirst and Thompson 1999). Others have gone so far as to deem nation states superfluous (Reich 1991) in a 'borderless world' (Ohmae 1990). To these 'globalists' (Held *et al*. 1999), the liberalization of world trade and investment through the multilateral system of the WTO is an irreversible trend

that will result in optimal welfare benefits for all. Eden (1999), on the other hand, argues that dominant internalization paradigms overemphasize the 'sunny' side of the MNE and globalization, ignoring welfare-reducing motivations such as opportunism and the creation of endogenous market imperfections. Some point to evidence of more defensive and 'suboptimal' strategies of bloc-formation through Triadization or regionalization (Rugman 2000, Ruigrok and Van Tulder 1995). At the center of the debate is the degree to which such economic blocs are 'open' or 'closed' to trade and investment from outside the region (trade and investment 'creating' or 'diverting'; cf. Kindleberger 1969) and whether economic activity within these blocs is intra-regional or extra-regional in orientation. Still others analyze globalization as a phenomenon of trickle-down to the sub-national level, suggesting that the global economy consists of a 'mosaic of sub-national regions' (Scott 1998) or micro-regions. While the debate on globalization centers on the scope and intensity of the process, there is general agreement that cross-border economic activity is driven by the international behavior of multinational enterprises (MNEs). Through exports, intra-firm trade and international investment MNEs define the intensity, scope and impact of globalization.

The nature of globalization is a central theme in policy debates as well. International political economists have long since questioned the consequences of increased internationalization of MNEs for the erosion of state power and sovereignty (Vernon 1971; Stopford and Strange 1991). In this context 'footloose' or globally operating MNEs are challenging the limits of national policymaking. While the decisions of MNEs affect many countries, the question is to what extent an individual country's policies affect the operations of MNEs. The creation of supra-national policy domains, either at the regional level (e.g., the European Union) or at the global level (e.g. the WTO) can be seen from this perspective as an attempt from the policy side to pace the internationalization of the firm. This is in fact a debate on the nature of 'competitive space', which refers to the institutional design of the competitive environment in which companies try to obtain competitive advantage, or in which governments try to create the preconditions for the competitiveness of individual firms (Van Tulder 1996).

From a more popular perspective, stances in the globalization debate are strongly colored by societal perceptions and attitudes towards MNEs. These perceptions are subject to continuous change. This is clearly expressed in perceptions of the relationship between MNEs and socio-economic development. While in the past it was common to view the MNE as part of the 'underdevelopment problem', in recent years MNEs have been seen increasingly as part of the solution. Active promotion and liberalization policies are the principal tools through which many developing countries attract MNEs. On the other hand the last two years have seen a revived suspicion even in developed countries towards the international operations of MNEs. Much of this suspicion has been directed towards the WTO, with the "battle of Seattle" and later the turmoil in Prague are the clearest manifestations of a wider popular movement against the 'unbridled' international activities of large companies (dubbed 'the forces of globalization'). Many of the issues center on different assumptions as to the gains and losses from cross-border economic activity, and the appropriate degree of supra-national regulation necessary to ensure protection of the multitude of often divergent stakeholder interests.

International strategy and performance

In light of the 'fuss' about globalization, it is worthwhile remembering that one of the key debates in international management and international business is concerned with a

very simple and basic, but nevertheless still very relevant question: why do firms internationalize at all? In the classic International Business (IB) literature many theories co-exist explaining the determinants of multinational enterprise activity. These 'static theories' or so-called 'FDI theories' (Forsgren 1989) originated in the 1960s with the PhD work of Stephen Hymer (published in 1976).

These theories emerged from dissatisfaction with the limited explanatory power of conventional orthodox economic theories on international trade and capital movements (such as Ricardo's theory of comparative advantages and the Heckscher-Ohlin-Samuelson theory of international trade) in analyzing and explaining the growth in post-war international production. The theories may be classified in three complementary categories. The first category focuses on the imperfect nature of product markets (Hymer 1976; Caves 1971; Kindleberger 1969; Vernon 1966; Buckley and Casson 1976). The next category takes a transaction cost approach, strongly influenced by the work of Coase (1937) and Williamson (1975), in which the internalization of international markets within the firm is more cost-effective than letting cross-border transactions be governed by markets external to the firm (cf. Rugman 1980; Buckley and Casson 1976). The third category of theories adds ownership and locational advantages to the motive of internalization advantages – most prominent in this line of thinking being John Dunning's eclectic paradigm (Dunning 1988; Dunning 1991). More process-oriented and less static theories on internationalization focus on *how* rather than *why* FDI takes place. The most well-known contribution is the Uppsala model of internationalization, in which internationalization is approached as a sequential learning process moving from exports towards a growing commitment in foreign markets (cf. Johanson and Wiedersheim-Paul 1975 and Johanson and Vahlne 1977). These process-oriented models are more applicable in explaining the early stages of a firm's internationalization process (Forsgren 1989), whereas static theories seem to better explain the internationalization behavior of better-established MNEs.

In International Management theory it is often hypothesized that a higher degree of internationalization (DOI) leads to a better firm performance or (further) enhances the competitiveness of MNEs. In testing this relationship most researchers have focused on financial performance (e.g. return on assets) rather than on operational performance (e.g. costs of goods sold), with a few noteworthy exceptions (Gomes and Ramaswamy 1999; Ruigrok and Wagner 2000). In both cases, the results are of a diverse nature. While some have found a positive linear relationship (Daniels 1989; Kim 1989), others found a negative linear relationship (Chang 1989) while some did not reach any conclusions; (Dunning 1985; Rugman 1985). More recently the discussion on corporate internationalization and performance has focused on non-linear relationships between corporate internationalization and performance. Initial research found a so-called inverted U relationship (Geringer 1989; Hitt 1997), while the latest results show a normal U relationship (Lu and Beamish, 2000; Ruigrok and Wagner, 2000) or a 'diminishing returns' relationship between corporate multinationality and performance.

Performance and internationalization of firm activity are directly related to debates on firm size and competitiveness as well. In the 1970s and 80s, growth by internalization of markets was the primary strategy, while by the late 1980s and early 1990s, downsizing and the retreat to "core competencies" was the dogma of the day (Prahalad and Hamel 1990). Large industrial companies shed thousands of workers in the beginning of the 1990s, while new jobs were primarily created in the service sector and in start-up companies representing the new (flexible) economy. By outsourcing more, companies

tried to externalize markets again and make use of efficiencies created in the process. International reach, however, does not necessarily require internalization of cross-border markets within the firm. More recent perspectives on 'networked firms' (Kogut and Kulatilaka 1994), however, question the relationship between firm size and trans-national activity. Now, in light of the current M&A wave (see Part III), "big" seems once again "beautiful" to many firms. Scaling down production through outsourcing externalizes risk but is also a source of vulnerability. Ultimately, strategies may be divergent as some companies opt for size to keep from being squeezed out or taken over, and others choose a streamlined, flexible approach to minimize cost and maintain higher levels of shareholder value.

The role of the national context

Even for companies with long-term, established international operations the internationalization process started on their home ground. Consequently, 'traditional' FDI theory starts from the basic premises that firms posses specific competitive advantages built up in the country of origin of the firm (home country). Accordingly, one of the main motives for firms to internationalize is to exploit that competitive advantage in a host country or region (Knickerbocker 1973; Graham 1974; Hymer 1976).

Whether the country of origin continues to play a significant role even when MNEs have reached a certain level of internationalization (or is instead only confined to the early stages of a firm's internationalization process) remains an issue of lively academic debate. Logically, the propensity for a given firm to internationalize is larger if it is based in a small economy. The scope for (domestic) growth for such firms is limited and reached at a much earlier stage. Historical international business research has accentuated that firms from small countries have a long tradition and experience in internationalization (Wilkins 1991; Jones 1992; Jones 1996). Similar results have been obtained by UNCTAD in its annually published World Investment Reports (cf. UNCTAD 1998, 1999).

Many researchers argue that the way in which firms exploit their competitive advantages depends on the national context from which they originate as well as the national context of the host country. Much of the literature on national contexts considers the impact of these contexts on patterns of internationalization, such as 'national systems of innovation' (Lundvall 1993; Nelson 1993; Porter 1990), 'production regimes' (Wilkinson 1983; Rubery 1994), 'concepts of control' (Ruigrok and Van Tulder 1995) and 'national business systems' (Whitley 1992; Whitley 1999). Some have considered the impact of the internationalization of economic activity on these national systems and their respective firms (Hollingsworth and Boyer 1997 cite Lazonick and O'Sullivan 1996; Soskice 1991; Whitley and Kristensen 1996, 1997), but this literature often considers the process of internationalization itself as exogenous to the national system. A comprehensive approach to the interplay between national contexts and firm internationalization strategies has yet to be defined.

Levels of analysis

Many of the aforementioned debates hinge on a "level-of-analysis problem", meaning the degree of aggregation (macro, meso, micro) used in approaching a phenomenon or problem. Traditional approaches, including policy models, tend to use higher levels of aggregation (in particular macro) to understand overall economic shifts and changes in

industrial structure, without necessarily taking into account the impact on firm structures (Davies *et al*. 1999; Gatz 1997). Aggregate data are by their very nature wider-reaching in scope than firm-level data; thus, the overemphasis on macro-level proxies for firm behavior creates a bias in the globalization debate towards a pro-globalism stance. It is therefore important to realize that the level of analysis used for analyzing phenomena is itself a factor in shaping the understanding of those phenomena. The macro focus on trade and investment flows, while revealing much at the level of broad economic shifts, still lacks a true firm-level perspective. On the other hand, alternate strands of academic literature look at internationalization of the firm solely in the micro context without integrating it into a broader contextual framework. Analysis in both cases is further complicated by a lack of solid empirical evidence with which to substantiate theory. The ambition of this study is to take a micro-level (firm) approach to internationalization, and at the same time to understand the wider, macro-level context. To this effect the concept of 'core firms' is chosen, which will be explained in Part II.

PART II

CORE COMPANIES: SELECTION AND POSITIONING

Uncertainty as characterized in Part I is a matter of perspective. The level of analysis problem implies that one of the greatest analytical challenges is to link micro-level developments with macro-level trends. This chapter explains how to approach that problem by specifying the concept of 'core companies': what is meant by core companies (2.1), what kind of positioning decisions this implies (2.2) and what the consequences are for the selection of a list of representative core companies (2.3). The SCOPE Database, which covers the (internationalization) strategies of the most important core companies, will be introduced. This leads to an initial list of Core200 companies that are relevant at a worldwide level, and additionally to a list of core companies for a number of relevant and leading home-countries. Combined, these two groupings bring the number of core companies covered in the SCOPE project to a total of 348. The Appendix gives further specifications.

Box 2: Core Company Characteristics

Key Characteristics

- The first characteristic of a core company is its **sheer size**. A core company is amongst the firms with the largest sales volumes in its branch. In practice this condition implies that the sales volume of core companies measured on a global scale is more than $5 billion. For more nationally oriented core companies sales volumes of more than $1 billion can be expected
- A core company has **direct access** to domestic and foreign end markets and/or customers, either through subsidiary sales and service offices, or through third parties importing/distributing the core firm's product and offering service. A core firm will at all times be able to **license** and **control** the use of its own **trade mark** (except for criminal abuse);
- The management of a core company has an **explicit vision** of (1) the organization and management of the value chain, including the internal labor process; and (2) the **role of external actors** (such as banks and governments) in facilitating the creation of added value and the (re)structuring of the network;
- The vision of the management of a core company on the organization of its **external network** serves as an orientation point which it strives to accomplish. The logic of industrial restructuring within and between **networks** should be studied as an interplay between this vision and the core firm's ability to determine the rules of the game within the network;
- A core company has *by nature* a **high degree of relative independence** from other actors in the supply chain(s) it operates in. A core firm is generally one of the principal actors and more often the director of the play covering the interactions in the network. In some networks, a core firm may give up its role as the sole director, yet will always remain a leading actor, and, if given the opportunity, it will try to regain control;
- A core company owes its relative independence (1) to its control over a series of **core technologies** and other strategic competencies, particular to an industry or industrial activity; and/or (2) to its **financial muscle**;
- A core company will often be a **user-producer**, meaning that it not only produces new products or product technologies, but it is also among the leading users of these technologies.

2.1 The concept of core companies

The adoption of the concept of 'core companies' relates to the intention of the database project to come to a strategic assessment of company behavior. The strategic dimension of firms largely depends on the network configuration (with)in which they operate. A core company can be characterized by its large production and technological activities and its ability to position itself in the core of networks of supply and distribution, thus playing a leading role in the creation of added value and in restructuring. Core companies are spiders in an industrial web (cf. Ruigrok and Van Tulder, 1995).

Thinking of large and multinational firms in terms of core companies is becoming increasingly popular in the International Business literature. John Dunning, for example, in his seminal overview work on Multinational Enterprises and the Global Economy (1993: 445ff), confirms the importance of linkages and spill-over effects and multinationals considered in their network configuration. Other definitions of "leading firms" in combination with network configurations exist such as *flagship firms* (Rugman and D'Cruz, 2000) in which multinational firms are characterized by global competitiveness and international benchmarks. A comparable discussion is triggered by the introduction of the idea of *meta-national companies*.

2.2 Core companies: positioning matters

Becoming (and staying) a core company requires smart positioning decisions in at least two strategic directions:

- **Vertical:** what part of the value chain does a firm control directly through in-house production or distribution? This refers to the degree of vertical integration (DVI) of a firm, the amount of outsourcing or the share of the total value-added which a given core company supplies. All three aspects refer to the same strategic choice.
- **Horizontal:** how many branches does a firm operate in? This refers to the degree of diversification over a small or a large number of branches or sectors. Within sectors, the aim could be more or less differentiation in particular product ranges.

Vertical integration, diversification and differentiation basically represent the strategic dimensions already identified by Michael Porter in 1985. Figure 1 illustrates some of the strategic choices available in a stylized abstract model. The model represents a closed economy with four complete value chains, each with a nominal value of 100, giving a total Domestic Product equal to 400.

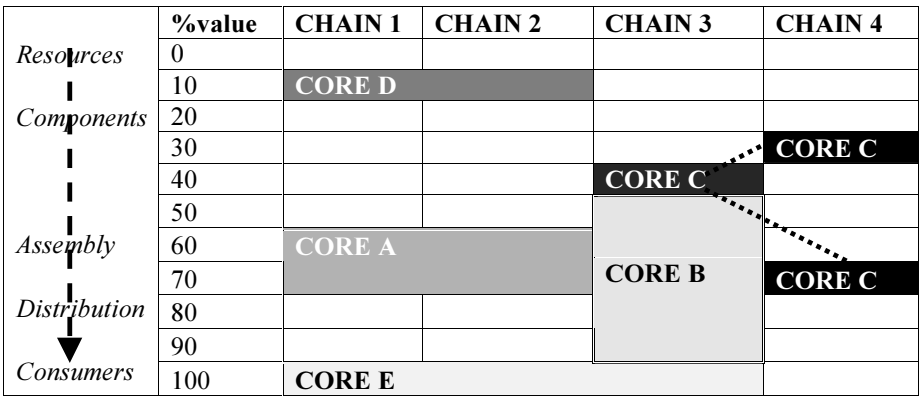
Core companies can exert distinct influence over chains and sectors by virtue of their positioning. The combination possibilities are endless, but in practice generally only a limited number of alternatives materialize. Figure 1 presents five 'archetypal' positioning strategies which core companies can adopt:

- **Core Company A**: *Horizontal core companies* focused on assembly and/or manufacturing and active in for instance two branches/value chains. A car maker that has diversified into adjacent branches like trucks or trains might be a good example. The competitive advantage of these core firms is primarily related functional excellence, either in manufacturing or distribution.
- **Core Company B**: *Vertically integrated core companies* focused on direct control of a strategic part of the value chain, such as in the chemical and food-processing

industries. These core firms exploit competitive advantage in their control over the supply chain, the internalization of markets and product/process innovation excellence.

- **Core Company C**: *Diagonally diversified companies* positioned in various stages of multiple supply/value chains. Traditional company conglomerates like the Japanese *Keiretsu* are often organized in this way. The competitive advantage for the core firms arises from the coordination of various activities that might also relate to different product cycles.
- **Core Company D**: *Horizontal resource-based core companies* situated at the beginning of the value chain. Positioning in multiple value chains is probably required to attain core status, since the risk of substitution effects for firms operating in only one value chain is high. This risk can be mitigated if the resource is strategic and the market oligopolistic, as is the case in e.g. the diamond and gold industry, and in some specialty seeds. The competitive advantage for the core firm comes from the monopoly on a particular strategic input.
- **Core Company E**: *Horizontal retailers* positioned at the very end of the supply chain. Although sometimes considered a relatively weak position in the past, a number of changes in market structure and competition behavior have reinforced this as a core strategy. The increasing concentration of a small number of companies in this part of the chain, increased horizontal diversification and the change from a sellers' market to a buyers' market due to more assertive consumers (see Part I) have allowed in particular wholesale traders and retailers to reinforce their position. They derive their competitive advantage from their ownership of shops with extensive market reach or as a trading house (such as traditional Japanese *sogo shoshas*) which handle all the exports of a whole cluster of companies.

Figure 1: Horizontal/Vertical Positioning decisions of Core Companies



The more a company moves upstream the value chain, the more its position as a core company can be jeopardized. Other guarantees are required in that case. Either a dominant position in the provision of strategic components or very strong brand value can reinforce the position of the supplier. Intel microprocessors provides a textbook case at hand. It not only develops key components, but has also succeeded in convincing

consumers (based on a huge advertisement budget) to search for the "Intel Inside" logo. This strategy has changed Intel from a dependent component supplier (of IBM) into a leading core company in the Information Technology business. Computer manufacturers have to a certain degree lost some of their core company status, with the vertically integrated IBM as a prime example.

Documenting these two dimensions of firm strategies quantitatively is not easy. The Appendix specifies the methodology used for this study to measure the Degree of Vertical Integration/Value-Added (DVI/VA) and the caveats that should be taken into account when measuring across companies of different nationalities. One of the major problems is for instance differences in accounting practices.

The economic and political position of a core company additionally depends on its absolute and relative impact on the national economy or economies in which it is active. The impact of a company can be measured along two dimensions:

- **"Value impact"**: The value added by the company is the absolute impact the company has on the economy of the home or host country. The value impact measures the minimum and direct impact core firms have on the national economy and thus can be related directly to the Gross Domestic Product of a country, which is itself calculated as the sum of all value added by individual companies in a given economy;

- **"Flow impact"**: The position of a core company and thus its influence on a national economy, however, can be much more significant than the value-added figures alone represent. This can be considered the (potential) *relative* impact of a company on a country and relates to the turnover of the company realized in the home country compared to the GDP. The domestic turnover or sales of a company gives an indication of the part of the economy that one way or another flows through the core company. So a retailing company that can add only a limited value to the product nevertheless can have an immense impact on the whole supply chain far surpassing its direct importance, because it orchestrates entire value chains. Comparing turnover (instead of value added) with GDP thus gives an indication of what can be dubbed the "flow impact" of core companies on national economies.

Taking the five different types of companies in Figure 1 into account, the value and flow impact of these firms on the hypothetical national economy can be calculated as follows (Table 1)

Table 1: Flow and Value impact of core companies on national economies

Core Company Type	Flow impact (measured in turnover/sales); % of GDP	Value impact; % of GDP
A	140 = 35%	40 = 10%
B	90 = 22,5%	50 = 12,5%
C	130 = 32,5%	30 = 7,5%
D	30 = 7,5%	30 = 7,5%
E	300 = 75%	30 = 7,5%

Core company A is represented in two value chains where it – in this hypothetical example – accumulates a turnover of 2x70, or 140. This figure represents a flow impact of 35 percent on the national economy (140/400 = 35%). In other words, 35 percent of

the national economy flows one way or another through this particular company. The latter is due to the specific position chosen by company A focusing on manufacturing and assembly. But this position is also coupled with a substantial degree of outsourcing. Company A outsources around seventy percent of its turnover. Its Degree of Vertical Integration (DVI) is 71% (50/70). As a consequence, the value impact of the company is lower. Company A adds a value of 20 to products in two value chains, adding up to a value added of 40, relating to ten percent of the national economy. The difference between value impact and flow impact of the same company in this case is a factor 1.8. Both figures nevertheless are relevant – they represent different positioning measures of the same company. For the other examples in Figure 2 comparable calculations can be made representing different degrees of flow and value impact of core companies on the national economy.

The biggest flow impact on national economies in general is exerted by companies that have spread activities over more value chains, while at the same time positioning themselves at the end of the value chain. In particular big horizontal retailers have the biggest flow impact. The smallest flow impact is with resource-based companies at the start of the value chain. The biggest value impact on a national economy is exerted by companies that are more vertically integrated (Core A and B). The biggest discrepancies between flow and value impact appear with type E core companies (retailers), whereas no discrepancies appear with type D (resource-based) companies. Both measures, however, seem important to take into account. When assessing the practical position of core companies in the 1990s in Part III of this study, both measures will be used.

2.3 Selecting the Core200 and national Top50 core companies

The SCOPE database covers financial and strategic information of the 200 world's largest enterprises (the Core200) and the 50 largest enterprises (national Top50) based each of the following countries: United States of America, Japan, Germany, France, United Kingdom, and the Netherlands.[1] This study will focuses in particular on the internationalization of the Core200 over the 1990s. The SCOPE database as such monitors a predetermined sample of large firms over a longer period of time, instead of selecting a sample each year.

One of the most important characteristics of core companies relates to their sales/revenue volume. Taking the Fortune 500 listing as point of departure therefore is a logical step. Fortune ranks companies on the basis of the volume of their revenues. The list mentions not only revenues and profits, but also assets, stockholders equity and the number of employees. Fortune also ranks companies by industry group and by country. Complementary firm rankings are available, but not as renowned as the Fortune list or based on other characteristics such as market capitalization (e.g. Financial Times: FT 1000 and Business Week).

Market capitalization as a ranking criterion reflects a different theoretical basis than the concept of 'core' companies. It relates to ownership issues such as the relationship between internal and external stakeholders, the perceived profitability and growth potential of an enterprise, and the power relationships between companies in related sectors. The 'core' concept, on the other hand, relates to a firm's bargaining power inside and outside the value chain and attempts to capture a firm's true (productive) economic significance at the local, national, regional and/or global level. Given, for instance, the

[1] Most of the Top50 are already included in the Core200, depending on the country in question.

size and economic power (as well as political power) of companies like General Motors and Mitsubishi, it can be safely asserted that market capitalization does not adequately reflect a company's significance. Market capitalization is also a much more volatile selection criterion than revenues, fluctuating on a basis which, again, fails to capture the long-term stability with which these companies play their role as major actors in the global economy (see Table 2).

Table 2: Comparison between the FT 1000 (mkt. capitalization) and Fortune (turnover)

FT Rank 2000	Company	Country	Market capital $Billion	Turnover $Billion	Fortune Rank 2000
1	Microsoft	US	586	20	98
2	General Electric	US	475	110	7
3	NTT Mobile Comm	Japan	366	30	56
4	Cisco Systems	US	349	12	161
5	Wal-Mart Stores	US	286	165	2
6	Intel	US	277	26	69
7	NTT	Japan	274	94	9
8	Exxon Mobil	US	265	101	8
9	Lucent Technologies	USA	237	38	37
10	Deutsche Telecom	Germany	210	37	42
12	Royal Dutch Shell	NL/UK	206	94	10
15	Toyota	Japan	180	123	6
61	DaimlerChrysler	Germany	76	150	3
89	Ford Motors	US	58	144	4
126	General Motors	US	44	173	1
457	Mitsubishi	Japan	12	133	5

Selection of Fortune benchmark year and listed companies

In the first 38 years of its ranking up until 1993, Fortune kept a rather rigid definition of "industrial corporations". It *excluded* the listing of some of the world's largest combined industrial/services conglomerates, such as American Telegraph and Telephone (AT&T), Nippon Telegraph and Telephone (NTT) or British Telecom (BT). Since 1993 the basis of selection has changed, including combined conglomerates as well as specialized services companies. The more recent Fortune lists therefore includes a larger number of the largest core companies in the world. The year 1995 was chosen as basic benchmark for comparison to enable longitudinal overviews over a longer period of time. The intention is to come up with five year time-series of the degree of internationalization.

Exclusion of financial services companies

The more recent Fortune listings also include a number of financial services companies that would not apply for "core firm" status. For the basic ranking of core companies these sectors/firms had to be excluded. The following sectors from the 1995 Fortune 500 listing were excluded from the Core200 and national Top50s: brokerages, commercial banks, diversified financials, hotels/casinos/resorts, insurance companies (life & health; prop. & casualty), savings institutions. These firms are primarily supportive, do not "add

value" in the traditional sense, do not perform any major R&D functions and therefore function relatively parallel to the supply chain. This research project does not state that financial services firms are unimportant, but they designate an analytically separate category. In a parallel project to the Core200 companies, the internationalization strategies of the largest financial services companies is separately taken into consideration. Trading houses and retailers, on the other hand, have been included in the Core200 and national Top50s. Although these companies do not 'produce' in the traditional sense, they operate within the supply chain and thus influence the flow of commodities directly, while financial services companies only do so in an indirect fashion.

2.4 Selection results

The SCOPE Core200 Companies ranking is a selection from the 279 largest firms listed on the Fortune Global 500, 1995 ranking (Fortune Magazine 5th August, 1996). Of the first 279 firms listed 200 received the core company status, while the remaining 79 were financial services firms. In table 14 in the Appendix the SCOPE Core200 are listed in order of their appearance in the Fortune Global 500, 1995. Most of the Core200 companies are based in the Triad regions of Europe (69 firms), US/NAFTA (62 firms) and Japan/ASEAN (60 firms). The Core200 operate in a diverse group of industries, although a large share is in Electronics (20), Petroleum refining (20), Motor vehicles/automobiles (19) and trading (18). An overview of the sectoral and national origins is given in the Appendix, Tables 15 and 16.

Complementary selection of the National Top50 Core Companies

Restricting the selection of "core companies" to only two hundred worldwide would leave a number of important home bases of large firms excluded from the sample and the 'level of analysis' problem (Part I) untouched. In order to avoid an overt bias in the sample of firms - in particular in favor of American and Japanese core companies - an additional number of European countries was designated for inclusion of their largest core companies: Germany, France and the United Kingdom as examples of the large home-base countries and EU member-states. The Netherlands is included as an important example of a smaller home-base country and, additionally, as part of an adjacent research project with the Dutch central bureau of statistics (the Netherlands' CBS).[2]

The exercise of including the Top50 core companies of a number of countries results in an additional 148 companies in the SCOPE database[3]. The total number of core companies at the heart of the SCOPE database therefore is 348 companies. The national Top50 core company lists were composed on the basis of a number of selection steps and various national sources. For each country, these steps and the list of national Top50 core companies are specified in the Appendix.

[2] With due respect to the principal home-base of the three authors and the research project as well.
[3] 28 for Germany, 30 for France, 43 for the UK and 47 for the Netherlands.

PART III

THE CORE 200: A SMALL(ER) NUMBERS GAME

The principle focus of this study centers on an assessment of the strategies of a group of two hundred central economic actors: the Core200. Documenting their strategies should allow for the assessment of meso- and macro-economic processes as well. This Part documents the basic characteristics of the Core200: their historical background, the composition of the group, their impact on national economies and the world economy and their importance for innovation – highlighted by their relative importance in the Research and Development arena.

The Core200 represents a group with remarkable historical continuity (3.1). Nevertheless, since the benchmark selection year of 1995, the group has undergone changes (3.2). Some firms no longer rank among the Fortune Global 500 firms, while others have restructured, diversified and/or changed names. The Core200 can be seen as a 'moving target', in a continuous state of flux. One of the most important reasons for the selection of the Core200 and the benchmark year of 1995 was to document the very transitions underlying this flux. This part of the study, therefore, discusses the transitions which the Core200 companies have undergone since 1995 as a result of in particular mergers and acquisitions.

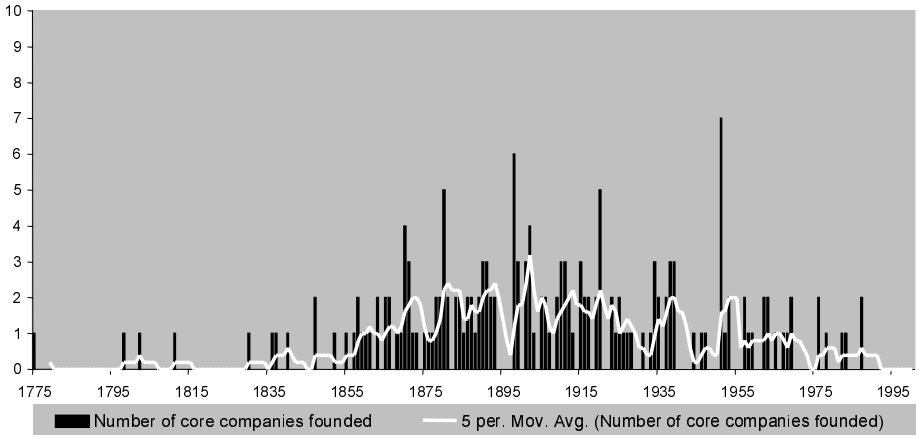
3.1 Historical continuity

Remarkable historical continuity of Core Companies

Market capitalization listings tend to overstate the importance of new companies in the economy (see also section 2.3, Table 2). When looking at the group of the two hundred largest core companies in the mid-1990s, the most striking aspect of these firms in this respect is their remarkable historical continuity. Figure 2 reveals the founding dates of 181 of the Core200 firms (the remainder of the firms are likely to be spread evenly across the period).

There are clear periods in which the majority of the present core companies were created. Their foundation accompanied economic booms and the introduction of new technologies. The appearance of economic success thus was linked to the launch of new core companies, while of course many preexisting core companies were unable restructure quickly enough in response to the new economic conditions and disappeared. A sizable number of the present generation of core firms, however, have gone through a series of economic boom and bust periods, illustrating the success of their own particular survival skills.

Figure 2: Foundation years of core200 companies (n=181)



Around eighty percent of the Core200 companies date back to before the Second World War. More than 25 percent were even founded before 1870, while some companies (Deutsche Post/Telekom; Sumitomo, Saint-Gobain, Merck) can even be traced back to the 17th, the 16th and even the 15th century. More than 45 percent of the present generation of core companies were founded in the 1870-1913 period. Nearly seventeen percent were founded in the Interbellum (1919-1939). The Interbellum in many countries – although not all – also included a period of Great Depression (1929-1939). The economic boom of the 1950-1973 period produced another fourteen percent of the present core companies. With each consecutive economic "boom" (1870-1913; part of the Interbellum; 1950s-1973, 1985-2000) the number of core companies founded has thus decreased. This provides further evidence of the importance of historical foundations and the importance of a core position in national economies, leaving less and less room for newcomers. War proves to be the most stabilizing factor for core companies. During World Wars I and II virtually no core companies were founded – except for a few in countries that were neutral (i.e. not directly involved in the war). Since 1973, the number of large core companies is limited and mainly linked to protected markets either in developing countries (Hyundai) or as the consequence of changes in regulation (BellSouth; East Japan Railway). Only Compaq computers (founded in 1982) can be considered a completely new start-up in the last fifteen years that has acceded to the ranks of modern-day large core companies.

Even the core competencies of these companies – although rapidly changing in specific end-products – have not changed as much as many tend to stress. For instance Nokia, the Finish core company (not in the Core200), is considered one of the best and few examples of a radical change in its product-portfolio: although Nokia started as a paper and pulp producer in 1898, by 2000 it had become the world market leader in mobile phones. But in 1912 Nokia already was active in setting telegraph and telephone networks (*Intermediair*, 15 February 2001). Another example of long-lasting loyalty to core competencies is 3M: starting in 1902 as a mining and manufacturing company in Minnesota, its core technologies (glue, silicon) still represent the basic principles for most of its current core products (post-it notes, diskettes, videotapes, palm-computers

and software). Although electricity producers moved into electronics and steel producers into specialty steels and aluminum, the core competencies of core companies remain essentially the same. A core company's networking position creates entry barriers for other companies, but it also creates exit barriers for the core company itself.

3.2 Mergers and acquisitions

The uncertainty of the 1990s has been accompanied by a pervasive wave of Mergers and Acquisitions (M&As). The strategic response of firms to external challenges very often leads to the acquisition of other firms. According to Thomson Financial Securities Data, the value of mergers and acquisitions worldwide boomed from around $200-300 billion in the early 1990s, to $3.5 trillion in 2000 (The Economist, January 27th 2001). The M&A boom is reflected not only in value, but also in absolute number of deals: the total number of all M&As between 1980 and 1999 grew annually at a rate of 42 percent, whereas the value of M&As as a share of world GDP rose from 0.3 percent in 1980 to eight percent in 1999 (UNCTAD, 2000: xix). The wave can thus not only be explained by exaggerated market capitalizations. Most of the M&A wave takes place within the national economies: around 75 percent of al M&As are national, whereas (on average) a stable 25 percent both in value and in number of completed transactions over the 1980-1999 period were cross-border, i.e. international.

Since the mid-1990s cross-border M&As have become the primary mode through which internationally operating companies (especially European and US companies) expand abroad. M&As, as opposed to greenfield investments, are considered a fast way for companies to build up a locational portfolio and gain access to foreign markets – not only for inputs and sales growth, but also for tapping into human capital and other forms of 'created assets'. Cross-border (majority held) mergers and acquisitions in the second half of the 1990s increased in number by almost 74 per cent between 1997 and 1998. In 1997 a rise of more than 45 per cent was noted (UNCTAD, 1999) and in 1999 the increase was 35 per cent, reaching – according to UNCTAD estimates - $720 billion in over 6,000 deals (UNCTAD, 2000: 10). While the term M&A is often applied, only less than 3 per cent are pure mergers (cf. UNCTAD, 2000: 99). Although the distinction is often difficult to identify, acquisitions dominate the scene by far. In fact many announced mergers are *de facto* acquisitions by stronger partners (e.g. the DaimlerBenz takeover of Chrysler was portrayed as a merger between two equal partners, but in practice quickly turned out to be an acquisition after most of the US top managers left the Board – much to the disdain of American shareholders).

While the Core200 are major actors in the current M&A wave, they are also subject to takeovers by other corporations – in all but three cases at the hand of a fellow Core200 company.[4] By 1998, only 195 of the original Core200 selected in 1995 were left. The M&A trend accelerated between 1998 and 2000. Including the most recent M&As, the number of core companies eventually left is reduced to 184. Table 3 gives an overview of the changes within the group of Core200 companies because of M&As. Seventy-five percent of the M&As involving core companies is national and 25 percent is cross-border.

[4] The three exceptions were the takeover of American Stores Co. (SCOPE Core company #126) by Albertson's in 1999, Mannesmann AG (SCOPE Core company #100) by Vodafone AirTouch in 2000, and the takeover of GTE (SCOPE Core company #112) by Bell Atlantic in 1999.

Table 3: The impact of the M&A wave on the Core200, 1990-2000

Scope ID.	Company name	Country	Nature of Deal	Scope ID.	Company name	Date	Name change (where relevant)
9	Exxon Corporation	United States	Acquired	21	Mobil	Nov. 30 1999	Exxon Mobil
16	DaimlerBenz A.G.	Germany	Acquired	28	Chrysler	Nov. 12th 1998	DaimlerChrysler
19	General Electric	United States	Acquired	189	Honeywell International		
25	BP plc.	United Kingdom	Acquired	78; 151	Amoco; ARCO	Dec. 31 1998; April 18 2000	BP Amoco
39	Veba AG	Germany	Acquired	75	Viag	June 19 2000	E.ON
66	Alcatel Alsthom S.A.	France	Deconsoli-dation		Alsthom	June 22 1998	Alcatel
67	Chevron Corporation	United States	Acquired	51	Texaco Corp.	Oct. 2000[5]	
76	Carrefour	France	Acquired	111	Promodes S.A.	Oct 1 1999	
77	Thyssen AG	Germany	Acquired	155	Krupp AG/ Hoesch-Krupp	Oct. 1 1998	Thyssen Krupp
79	Total S.A.	France	Acquired	Petrofina unranked; 43	Petrofina; Elf Aquitaine	June 4 1999 Feb 9 2000	Total Fina Elf
90	BAT Industries plc.	United Kingdom	Divested		Financial services	Sept. 7 1998	British American Tobacco plc.
100	Mannesmann AG	Germany	Acquired by		Vodafone AirTouch	April 12 2000	
106	Lyonnaise des Eaux	France	Acquired		Cie. de Suez	June 19 1997	Suez Lyonnaise des Eaux
112	GTE Corporation	United States	Acquired by		Bell Atlantic	June 30 2000	Verizon Communications
116	The Boeing Company	United States	Acquired	190	McDonnel Douglas	Aug 1 1997	
126	American Stores Company	United States	Acquired by		Albertson's	June 23 1999	
138	Ciba-Geigy	Switzerland	Merged with		Sandoz	Dec. 20 1996	
146	Rhône-Poulenc	France	Acquired	53	Hoechst	Dec. 15 1999	Aventis
173	BTR plc.	United Kingdom	Merged with		Siebe	Feb. 4 1999	Invensys
177	WorldCom, Inc.	United States	Acquired		MCI Communications	Sept. 14 1998	Worldcom
185	Compaq Computer Corporation	United States	Acquired	200	Digital Equipment Corp.	June 11 1998	
189	Allied Signal	United States	Acquired		Honeywell International		Honeywell

Table 3 shows that there were only two true mergers: Ciba-Geigy/Sandoz and BTR/Siebe. There was also one de-merger, as Alcatel-Alstom divested Alstom. The table also reveals that there are many forms of M&As. UNCTAD (2000) classifies three forms of M&As:

- Horizontal M&As: between competing companies in the same industry;
- Vertical M&As: between companies in client-supplier or buyer-seller relationships;
- Conglomerate M&As: between companies in unrelated activities.

[5] At time of printing, the deal was still waiting for approval by US antitrust authorities (March 1 2001).

The balance between these three forms has shifted over time. While the last M&A boom in the 1980s was dominated by conglomerate M&As, most of today's M&As are horizontal in nature (70 percent in 1999 against 59 percent in 1990; cf. UNCTAD, 2000: 101). Indeed, all of the M&As within the Core200 were horizontal.

Large M&As have been especially salient in the so-called old economy industries - the resource-based industries and car manufacturers. As a result, only a limited number of firms in the petroleum and refining industries have survived the 1990s shake-out. While there were thirteen large European and US petroleum firms in the Core200 in 1995, in 2000 there only eight were left. Similarly, the car manufactures have also been active on the takeover market: DaimlerBenz and Chrysler, but also Renault's stake in Nissan of 34 percent, and Mitsubishi which sold part of its share to Daimler-Chrysler and Ford's stake of in Mazda motor. Other sectors dominant on the M&A market are pharmaceuticals and Chemicals (e.g. Rhone-Poulenc and Hoechst). The acceleration in the last M&A wave since the mid-1990s is unique in the sense that it is more cross-border in nature, both inter-regional (between the US and EU) and intra-regional (within the EU).

The consolidation and market concentration as a result of these mega-M&As has given rise to global oligopolies in certain industries. The negative impact of these global oligopolies, especially on consumers, has led to a closer monitoring process of M&As by the European Commission and the Federal Trade Commission in the US. Increasingly the approval of both authorities is necessary. Even for domestic M&As the repercussions can transcend national boundaries. The Competition Directorate of the European Commission for instance ruled against the purely American merger of Boeing and McDonnell Douglas because of its (perceived) negative effects on the competitive environment in Europe.

3.3 The 'Scope' of the Core200

In terms of average total assets, an indication of firm size, the Core200 has grown considerably between 1990 and 1995, but declined again in 1996 and 1997 (Table 4). In 1998 asset growth regained again and is likely to grow further. This reflects the consolidation process of M&As. The combined average of total sales (a rough indicator of firm performance) of the Core200 amounted to $33 billion in 1995, up from almost 26 billion in 1990. After 1995 average sales declined to $32 billion in 1997, before increasing again to reach their highest level in 1998 ($33.2 billion). The 1995-97 drop in average total sales is mainly due to the Asian financial crises of 1997 and the squeeze on Japanese producers (in US dollars).

On average a Core200 firm employed 111,000 employees in 1995. Despite large restructuring processes and mergers and acquisitions, often leading to job losses at individual plants, over the 1990s core companies remain to be large employers. The average firm size, measured by the number of employees, actually appears to have increased over the period to more than 113,000 in 1998[6]. As outsourcing was a very attractive strategy over the 1990s, the amount of indirect employment generated by these core companies would be even larger.

[6] The definition of total number of employees within a firm tends to vary over the years especially among South Korean and Japanese firms.

Table 4: Basic statistics for the Core200 over the 1990-98 period

	Average TA	AverageTS	Average TE
1990	26 977	25 945	107 683
1995	34 251	33 223	110 593
1996	33 899	33 077	111 500
1997	33 242	32 089	111 003
1998	36 623	33 238	113 544

Notes: Figures are millions of US dollars, number of employees and ranking no. Averages are calculated as the sample size (N) is not always equal to 200 for all variables.
1990: Data are not available for Metro Holding, SEPI, UPS, La Poste and Takenaka Corporation (n=195). Total asset (TA) data are not available for Samsung Electronics and Japan Postal (n=193); Total sales (TS) data are not available for Dentsu (n=194). Total employment (TE) data are not available for US Postal Services, Samsung Corporation, Samsung Electronics, Costco Wholesale, Columbia and Idemitsu Kosan (n=188).
1997: N= 199. McDonnell Douglas was acquired by Boeing.
1998: N-= 195. Chrysler, Amoco, Fried Krupp and Digital Equipment departed form the list of Core200 due to acquisitions by other Core200 companies (see Table 3 above).

Since 1995 a number of Core200 companies, excluding firms which have merged or have been acquired by another firm, have exited from the annual Fortune Global 500 classification[7]. In 2000, 192 of the 200 core companies are still listed in the Fortune Global 500 classification. While in 1995 the average Fortune Global 500 ranking performance of the Core200 was 138, it dropped to 166 in the 1999 Fortune Global 500 (Table 5), largely due to the growth of financial services firms, slowed revenues growth of some core companies and exchange rate effects for non-US firms measuring revenues in dollars.

Table 5: Average rank of the Core200 in Fortune, 1990-99

Year	1990	1995	1996	1997	1998	1999
N=	114*	200	199	195	190	186
Average rank no.	75	138	144	152	166	166

Note: Since 1993 the basis of selecting the Fortune Global 500 has changed (see section 2.3), explaining the discrepancy between 1990 and 1995 onwards.

[7] Thomson SA (in 1996), Ssangyong Corporation, SHV Holdings N.V., Compart Spa. (in 1997) and Daewoo Corporation (in 1998). Additionally, BCE Inc., Takenaka Corporation and SEPI were no longer listed in 1999. Daewoo corporation and SHV Holdings re-entered the Fortune Global 500 list in 1999. The remaining were subject to acquisition and are listed in Table 3.

PART IV

CORE COMPANIES AND THEIR NATIONAL IMPACT

In Part II, two dimensions of the impact of core companies on the economy were discussed: the value and the flow impact. The flow impact of core companies on economies is the easiest to illustrate, due to the ready availability of data on turnover/sales of companies. Measurement of the value impact of core companies is more complex primarily due to substantial differences in accounting practices among core companies. This Part will illustrate both dimensions of the impact of the positioning strategies of core companies in vertical and horizontal chains on national economies. Section 4.1 first starts with a sketch of the vertical and horizontal positioning strategies of a sample of major European Core Companies. In section 4.2 the 'big picture' of core companies' flow impact on national economies is assessed by comparing domestic turnover to GDP. Section 4.3 searches for an absolute impact measure by adjusting for the degree of vertical integration of core companies. Finally, section 4.4 looks at the 'new picture' that can be read from the Research and Development strategies of both major R&D players and Core Companies. Both pictures tend to overlap.

4.1 Assessing impact: a firm-level profile

The impact of core companies on national economies can be measured by studying their vertical and horizontal positioning strategies in more detail (see Appendix for methodology). This exercise is easiest for the European Core companies because annual reports allow for international comparisons. Figure 3 shows the position of 25 of the 95 European Core Companies for 1995. The 25 companies were chosen at random. Figure 3 confronts the degree of vertical integration with the degree of horizontal diversification (measured as the number of branches at two digit SIC-codes in which core companies operate).

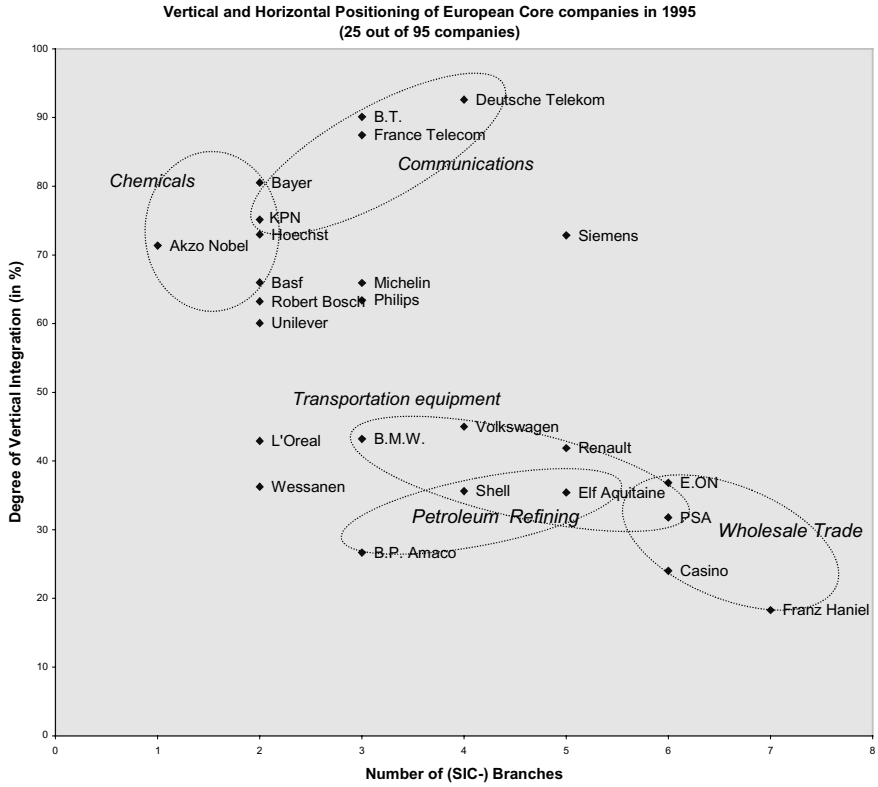
Firstly, the figure shows that there is a statistically significant (negative) relationship between degree of vertical integration and horizontal diversification: the more firms position themselves in a large number of branches, the less value they add.[8] There is a strong convergence in DVI (degree of vertical integration) among core firms in the same industry and from the same country or region. This supports the idea that sectoral and national characteristics create important institutional contingencies for firms to develop their position in markets, technologies as well as (international) supply chains. National characteristics relate for instance to competition policy requirements that could inhibit firms from exercising overt market power, either horizontally (in the market) or vertically (in the supply chain).

From the model presented in Part II, wholesale and trading companies (Type E core companies) could be expected to be positioned as Figure 3 shows. On the other extreme, the most vertically integrated core firms would probably (have to) focus on a limited number of branches or value chains. In the model, these firms were typified as Type B

[8] R^2 for 1995 for these 25 companies is 0.2973 (in 1998: 0.2712)

core companies. In particular the chemical industry in Europe fits that particular profile. Thirdly, Type A core firms were expected to take a middle position in terms of vertical integration and horizontal diversification. The European picture confirms this as well: in particular core companies producing transportation equipment are clustered in this segment. Finally, Communications companies in Europe are centered on an intermediary position of high vertical integration, but nevertheless some diversification over two or more branches. Communications companies have approximately ¾ of their activities in communications, but they also diversified into adjacent branches like publishing, communication equipment and services. Core companies of this type were not modeled separately in part II.

Figure 3: Vertical and Horizontal Positioning



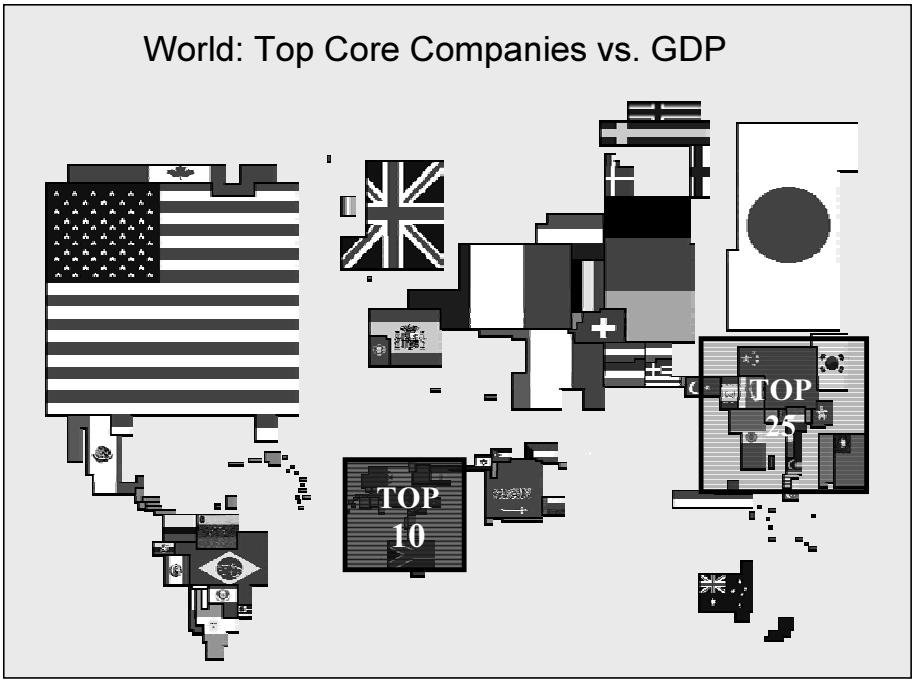
In the 1995-1998 period – following the companies listed in Figure 3 – the horizontal integration of firms, or the number of branches in which they are active, did not change. The average degree of vertical integration for the group of 25 companies increased slightly from 55.5 to 56.3 percent. All branches identified in Figure 3 (measured by the three leading companies) contribute to this trend; only the wholesale sector decreased its degree of vertical integration somewhat over the 1995-98 period (from 26.4 to 25.7 percent).

4.2 Assessing the flow impact of core companies

Global profile

The impact of "Big Business" on the world economy can be illustrated by the relative size of the largest companies compared to the GDP of national economies. In ranking the top players in the world by size of their turnover (either measured as sales or as GDP) governments of most OECD countries still represent the biggest players. However, leading core companies are not far behind and far ahead of most developing countries. Numerous studies have illustrated this by comparing firm sales and GDP – leading to the observation that firms like Mitsui, Mitsubishi, Shell or General Motors would rank around 13th on these lists. This study uses basically the same technique, but applies it to the whole of the world economy in a different graphic manner.

Figure 4: A new geography: the relative size of countries by the size of their GDP*



Sources: World Bank, 1996; SCOPE databank
*Excludes Central Europe and Russia due to lack of reliable data

Figure 4 illustrates the relative (flow) importance of core companies as compared to national economies for the year 1996. The geography of the world is sketched in terms of the relative size of the GDP. As such the graph illustrates the relative (economic) power of countries. The American economy is by far the biggest economy/player, followed by Japan and Germany. The economic size of Japan in this "new geography" is considerably bigger than its territorial size would justify. The relative economic size of smaller OECD countries with small territories – the Netherlands, Denmark or Switzerland – far out-spans their territorial size. It is part of the mixed identity of these

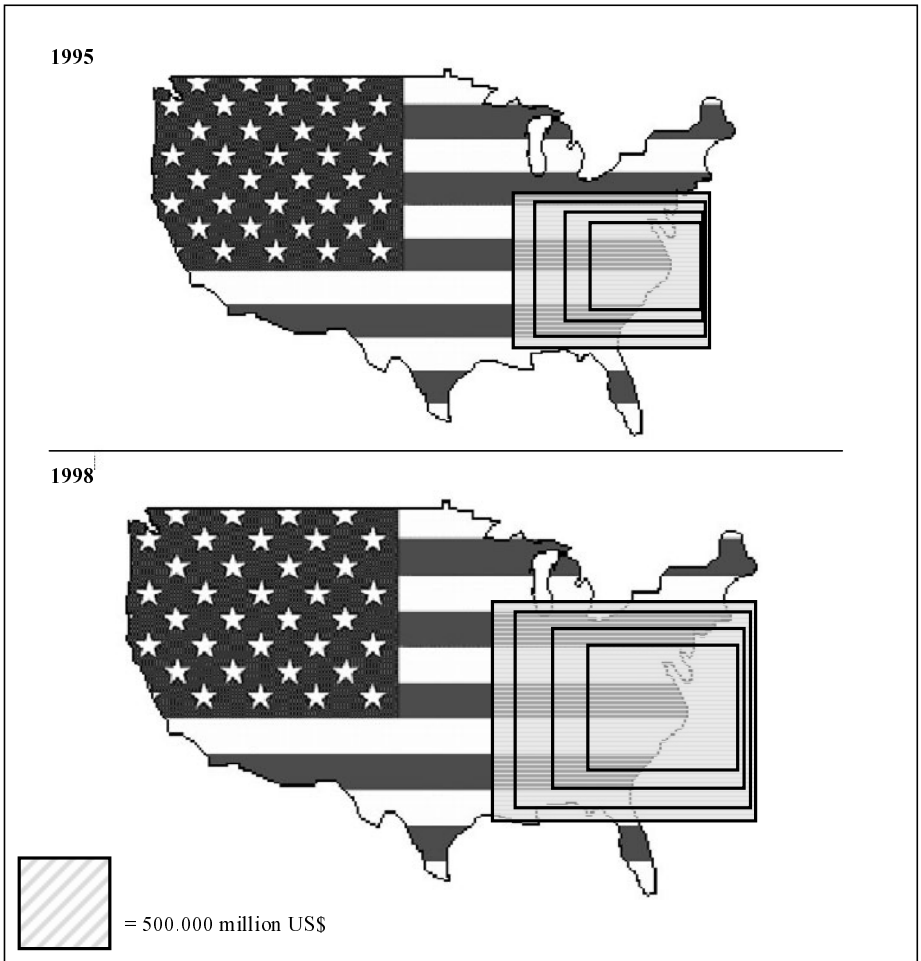
smaller countries – economically large, politically small – leading to sometimes unpredictable moves in international gremia. Around 85 percent of the World's Gross Product is produced in countries that contain approximately fifteen per cent of the world's population. As such the global distribution of economic impact between countries compares to the distribution of economic influence and impact between companies: actors with relatively small numbers of employees can have immense impact on actors containing large numbers of people.

Figure 4 also illustrates what happens if the Core10 and the Core25 groupings are superimposed on the world economy. The ten largest core companies cover the whole of the African continent. Each individual core company handles a larger volume of economic activity (measured in turnover) than any individual African country (in GDP). Following 1996, the turnover of the leading core companies has increased at a higher pace than that of most African countries, so their relative size has increased even further. Perhaps more spectacular is superimposing the largest 25 core companies on the Asian continent. Figure 1 shows that in 1996 this grouping almost completely covers the Asian continent – including China, India and Indonesia as most populous countries in the region. The gross domestic product produced by 1/3 of the world's population is comparable in value to the total sales of the world's largest 25 firms. If the turnover were corrected for value added and thus a more adequate measure of the absolute size of these companies used, the picture would have to be adjusted roughly by a factor of 0.3-0.4 (see below).

Country profiles

The SCOPE databank allows for a comparison of the relative flow impact of core companies on their home economies, by correcting the sales' volumes of the leading core companies for the share sold 'at home' and 'abroad'. It should thus also be possible to check to what extent one of the most casual claims in the 'globalization' debate is true: that of intensified competition due to the internationalization of markets (see Part I). Figures 5 through 10 use the same method as Figure 3; the relative size of an economy and of firms can be read from the relative size of the territories covered by the country maps. In addition, the boxes superimposed onto the country maps reflect the value of sales of the top core companies based in that country relative to the value of the country's GDP. The share of the boxes projected outside of the country's territory ('offshore') reflects the foreign component of the core companies' sales.

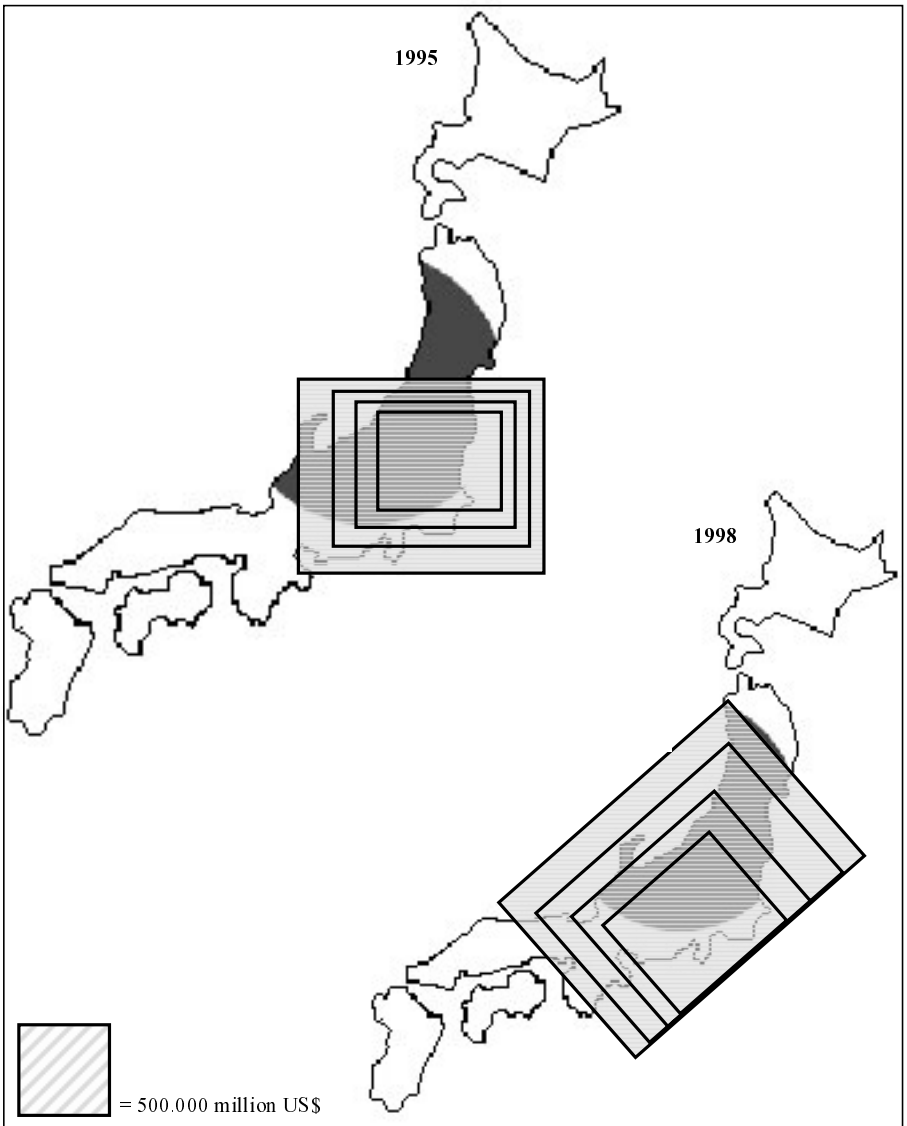
Figure 5: The value of sales of the Top 5, 10, 25 and 50 largest American Core Companies compared to the value of total American GDP, 1995 and 1998



Ratio of Domestic sales to GDP:

1995		**1998**	
Top 5	: 4,9%	Top 5	: 5,1%
Top 10	: 8,1%	Top 10	: 7,2%
Top 25	: 13,0%	Top 25	: 11,9%
Top 50	: 17,6%	Top 50	: 16,8%

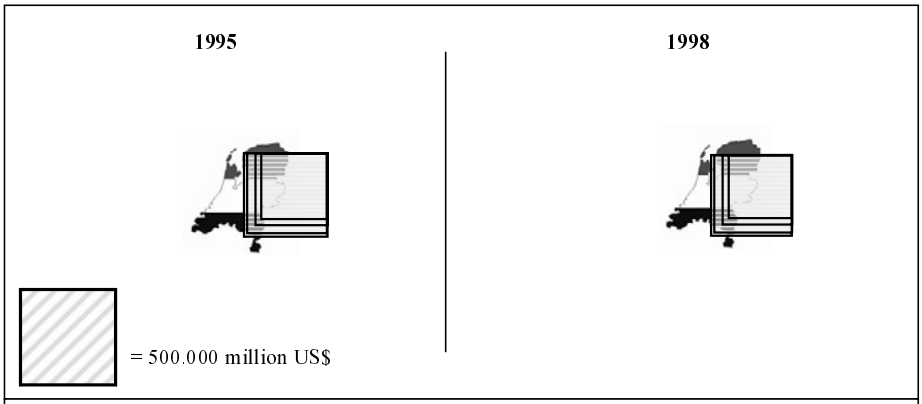
Figure 6: The value of sales of the Top 5, 10, 25 and 50 largest Japanese Core Companies in relation to the value of total Japanese GDP, 1995 and 1998



Ratio of Domestic sales to GDP:

1995		**1998**	
Top 5	: 10,4%	Top 5	: 9,3%
Top 10	: 16,4%	Top 10	: 17,1%
Top 25	: 24,7%	Top 25	: 26,9%
Top 50	: 32,3%	Top 50	: 36,0%

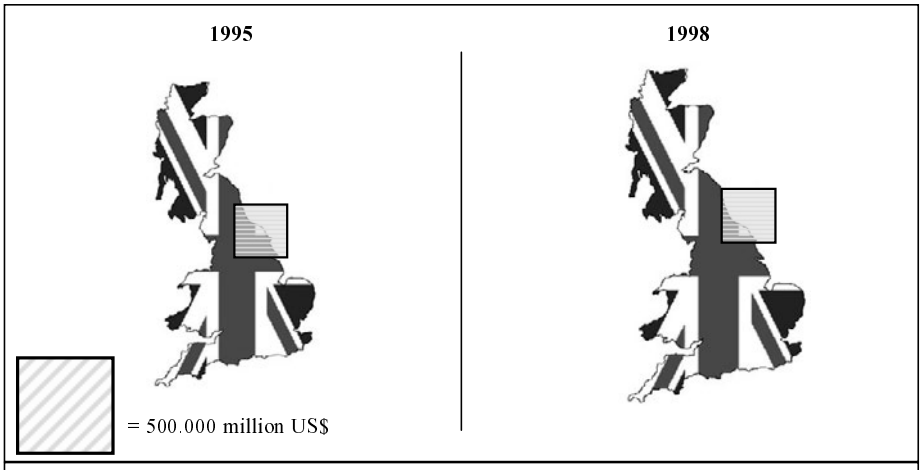
Figure 7: The value of sales of the Top 5, 10, 25 and 50 largest Dutch Core Companies in relation to the value of Dutch GDP, 1995 and 1998



Ratio of Domestic sales to GDP:

1995	**1998**
Top 5: 13,8%	Top 5: 16,2%
Top 10: 20,1%	Top 10: 22,5%
Top 25: 27,6%	Top 25: 31,5%
Top 50: 34,9%	Top 50: 36,2%

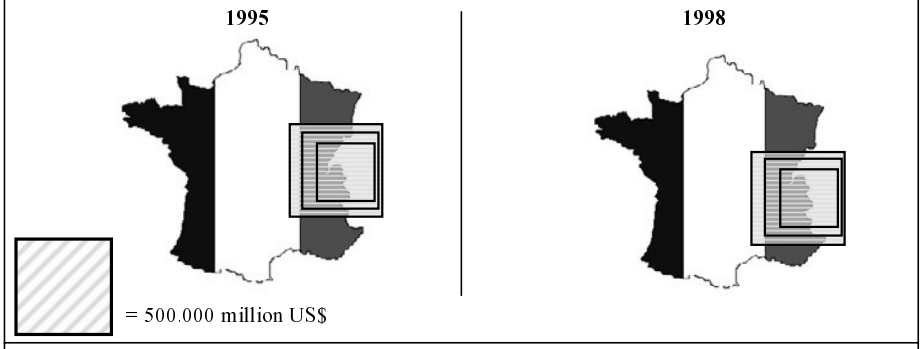
Figure 8: The value of sales of the Top 5 largest UK Core Companies in relation to the total value of UK GDP, 1995 and 1998



Ratio of Domestic sales to GDP:

1995	**1998**
Top 5 : 6,9%	Top 5 : 7,8%

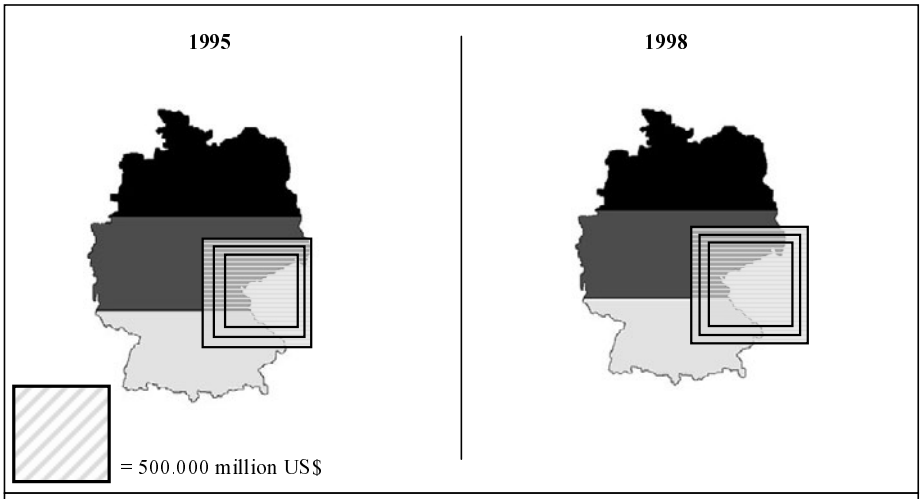
Figure 9: The value of sales of the Top 5, 10 and 20 largest French Core Companies in relation to the value of total French GDP, 1995 and 1998



Ratio of Domestic sales to GDP:

1995		**1998**	
Top 5	: 7,1%	Top 5	: 6,2%
Top 10	: 11,9%	Top 10	: 12,4%
Top 20	: 17,4%	Top 20	: 18,5%

Figure 10: The value of sales of the Top 5, 10 and 20 largest German Core Companies in relation to the value of total German GDP, 1995 and 1998



Ratio of Domestic sales to GDP:

1995		**1998**	
Top 5	: 6,7%	Top 5	: 7,0%
Top 10	: 10,3%	Top 10	: 10,4%
Top 20	: 16,0%	Top 20	: 15,2%

Key observations on the flow impact of core companies:

- In all large economies the total domestic sales of the Top5 companies combined is equal in value to five to ten per cent of GDP. In the smaller economies, their impact is considerably greater.

- The flow impact of the Top50 core companies in most countries is substantial. In the American economy one-sixth of the domestic product flows through these fifty core players. In France and Germany, the Top20 core companies already account for such a share. The concept of the Japanese economy as 'Japan, Inc.' is further supported by SCOPE research since more than 1/3 of the Japanese GDP flowed through the Top50 Japanese core companies in 1998. Even in a small country like the Netherlands the Top50 companies have a (slightly) smaller impact of in the domestic economy. Both the Japanese economy and Japanese core players experienced shrinking sales/GDP volumes (in $US) for the 1995-98 period. But the Top50 core companies managed to control this decrease better: whereas the Japanese GDP decreased by 30 percent, the total sales of the Top50 Japanese core companies only decreased by 16 percent in the 1995-98 period.

- With the exception of France and Japan the ratio of Top5 companies' domestic sales to GDP increased in the 1995-1998 period. The slight decrease in importance of the Top5 companies has been compensated by an increase in importance of follower core companies – thus leading to an increase in the share of the national economy handled by (flowing through) core companies in these countries. The impact of "second tier" (smaller) core companies in the USA and Germany on domestic sales volumes slightly decreased in the 1995-1998 period.

- Changes in the relative importance of core companies in the domestic economy can be due to their internationalization strategies. Sweeping claims of "globalization" are nuanced by the data documenting the internationalization strategies of the national core companies. In the United States the home/host share of sales for the Top50 core companies in the 1995-1998 period slightly increased from 68 to 69 per cent. In Japan the home/host share slightly decreased from 73 to 72 percent. For both countries, the overwhelming bulk of sales by the largest core companies still take place in the home market. The shares do not differ much between the Top5/10/25/50 groupings.

- Core companies from smaller home markets already have high internationalization degrees (see Part IV). This is particularly true for the leading national core companies. The Top5 Dutch and Swiss core companies in 1995 had only 24 and 41 percent of their sales at home, respectively. Interestingly the two countries have converged in terms of the degree of internationalization of their Top5 companies. For the Swiss, the home/host share in total sales declined spectacularly to 27 percent, whereas for the Dutch core companies, the domestic market – because of the continued above average growth of the Dutch economy in the same period – slightly increased in importance to 29 percent. The lower ranked core companies are generally much less international. For smaller economies the relationship between firm size and degree of internationalization thus is more direct: in order to gain market share firms have to internationalize.

- The internationalization degree of the Top5/10/20 core companies from medium-sized (European) economies (France, UK, Germany) is higher than that of the US and Japan, but lower than the top core players of the smaller countries. British Top5 core players are the most international with 50 percent of their sales abroad. Italian core players are least international with 38 percent of their sales abroad. French and German core players are somewhere in between. For the British and Italian core companies, the degree of internationalization (measured by home/host sales) over the 1995-98 period substantially declined, whereas the French and German core companies clearly stepped-up their internationalization. In the case of France, the internationalization of the core players paralleled a slight decline in the relative domestic importance of the Top5 core players (see Figure 9). In the case of Germany, the Top5 core players not only started to internationalize rapidly, but at the same time (slightly) increased their impact on the domestic economy.

4.3 Assessing the value impact of core companies

By correcting the 'flow' impact for degree of vertical integration, a calculation can be given for a core company's added value. If core companies are then clustered by home country and this added value is compared to GDP, the economic significance of these firms relative to their national (home) economies can be estimated.

Country profiles

Table 6 reveals the outcome of the correction exercise for the same clusters of firms as revealed in Figures 5-10. For the top 5 core companies (excepting France) the absolute impact on the national economy increased in the 1995-1998 period. For the top 20/25/50 core companies the picture is more mixed. In Germany and the Netherlands the degree of vertical integration of the whole group of core firms for instance slightly decreased, but because these companies on average increased their domestic content, their value impact on the home economy increased. Table 6 also reveals a first estimate for the United States, but these data should be interpreted with the utmost caution in light of measurement problems encountered in the analysis. Table 6 confirms the impression that core companies have more value impact on the national economy in smaller countries than in larger countries. The Dutch data show that the top 5 companies have a bigger (and increasing) impact on the national economy than the whole group of forty smallest core companies (numbers 10-50). The relative size of companies (and thus their impact) in the larger economies is more evenly spread.

Table 6: Ratio of Added value to GDP for core companies in five countries

	Netherlands		UK		France		Germany		USA*	
	'95	'98	'95	'98	'95	'98	'95	'98	'95	'98
Top 5	6.4	7.5	3.2	3.7	3.2	2.9	3.5	3.6	1.6	1.7
Top10	9.5	10.6			5.2	5.5	5.7	5.6	2.9	2.7
Top20/25	12.9	14.5			8.1	8.9	8.7	8.2	4.3	4.2
Top 50	16.2	16.5							6.3	6.1

* rough *minimum* estimate, excluding for staff costs

In conclusion, the popular business literature stresses two trends: increasing outsourcing (lean manufacturing leading to vertical de-integration) and growing focus on core competencies (leading to a limitation of branches). These issues were addressed in more detail in Part I. The data on the 25 European Core Companies illustrate that these trends might represent 'best-practice' reasoning and perhaps also strategic intent of companies, but that the strategic reality of companies is at best mixed. The number of companies opting for increasing degrees of vertical integration over the 1990s remained substantial, whereas nearly every company increased its sectoral involvement (the number of branches at the two-digit SIC code level). Further research is needed as this says little about specialization strategies at a higher, more detailed SIC code level.

The data also demonstrate the relative (flow) and absolute (value) significance of core companies in national economies. The relative and absolute importance of the biggest core companies in most domestic economies was on the rise in the 1990s. As a result, the argument that competition in domestic markets is increasing and intensifying seems in any case to be open for debate. At the same time the degree of vertical integration – as far as the preliminary data show – are likely moving more in the direction of stepped-up integration than increased outsourcing (de-integration), which implies that both the horizontal and vertical impact of core companies on domestic economies is either stabilizing or increasing.

Internationalization/Globalization is supposed to lead to an increasing number of players in specific geographical markets. The present research however, shows that at least in the short run this has not materialized, making any additional claims on increased efficiency and innovation (the intensified-competition effects of 'globalization', see Part I) rather difficult to substantiate. Finally, the American economy remains the most open market due to the smaller – albeit still sizable – impact of leading core companies on the flows of goods and services in the domestic economy, whilst the Japanese economy seems to be the least open.[9]

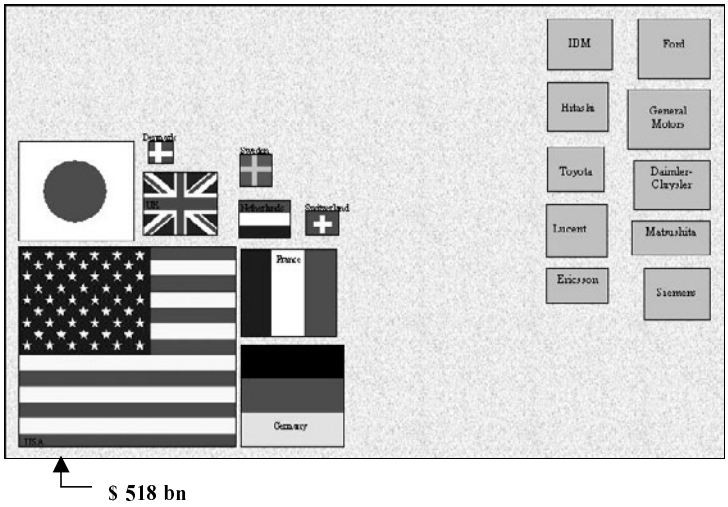
4.4 A small numbers, large budgets game: Core companies and R&D

The "world of innovation" would at first glance seem to be composed of a large number of players, necessitating a macro-economic and paradigmatic treatment of important trends. In textbooks often small, innovative start-up ('garage') companies are used to illustrate the dynamism of particular innovation systems. The growing literature on the "New Economy" attaches great value to networks of smaller and medium-sized firms, whereas the typical New Economy entrepreneur worries about the relationship between the degree of innovativeness and the firm's market capitalization. Under such circumstances a (S)coreboard of large companies may seem anathema. Upon closer scrutiny, however, the number of leading players in the R&D arena – where the New Economy is essentially developed – is surprisingly small, while the number of core companies involved – directly or indirectly – is substantial. Figures 11 and 12 illustrate the R&D arena of the OECD countries, specified according to the Research and Development budgets of the largest actors.[10]

[9] Initial results indicate that this argument holds also if controlled for the relative size of the economy.
[10] The boxes in Figures 11 and 12 are scaled to their relative size in terms of R&D expenditure.

The OECD countries account for 86 percent of R&D expenditures in the world. With some minor modifications, the OECD R&D arena can be considered a proxy for the global R&D arena. Total expenditures on R&D in 1998 amounted to over $518 billion (OECD databank). The US economy alone makes up 43 percent of this figure. The US government itself is a big player with big R&D budgets, but as a player in its national system it is a relatively smaller player than for instance the French government in France, which funds 40 percent of Gross Expenditures on Research and Development (as compared to 28 percent for the United States). In positioning the most important R&D actors in the arena, their absolute expenditures on R&D are used to compile Figures 11 and 12.[11]

Figure 11: The largest R&D players, 1998



The sequence of biggest players in the global R&D arena is as follows:

- Actor no. 1: The American government; by far the biggest player, with a budget of around $70 billion, representing around 13 % of all the R&D expenditures in the OECD region.
- Actors no. 2 – 5 are governments as well, from respectively Japan, Germany, France and the UK.
- Actor no. 6: immediately after the British government, however, comes Ford Motor Company, with an R&D budget (in 1999) almost as big as the size of the UK budget (around $7 billion), while spending considerably more on R&D than the combined budgets of the governments of Switzerland, the Netherlands and Denmark.
- The majority of actors 7 – 22 are big core corporations, with in particular car manufacturers (General Motors, Daimler-Chrysler, Toyota, Volkswagen) and electronics/telecommunications firms (Siemens, IBM, Matsushita, Hitachi, Lucent

[11] For comparative reasons the $ values are used. The usual caveats should be kept in mind: in the course of the 1990s the dollar appreciated relative to the Yen, implying that Japanese R&D expenditures in nominal terms might underestimate their true significance.

Technologies, Ericsson, Fujitsu, NTT, Sony, Motorola) spending between $3.5 and 7 billion on R&D in 1999.

- The government of the Netherlands is ranked only 23rd, following Nortel from Canada, with funding on R&D of around $2.9 billion in 1998 dollars at PPP.
- The smallest of the Top50 company R&D spenders in the world (PSA registered at annual R&D expenses of $1.5 billion in 1999) still outspends the Swiss and the Danish governments, which contributed $1.3 billion and $0.8 billion to global R&D respectively in 1998.

Sectoral R&D Arenas

The international R&D arena also represents a sectoral dynamism. The R&D scoreboard as composed for the British Department of Trade and Industry (cf. www.innovation.gov.uk/finance) consists of 300 international companies that jointly spent $252 billion on R&D in 1999. Five sectors contribute most to the total R&D volume: the car industry (18%), IT hardware (26%), pharmaceuticals (15%), electronics and electrical engineering (11%), and chemicals (6%). Combined these four sectors make up 3/4 of all R&D investments by big core companies. Within these sectors the degree of concentration is substantial. The five leading investors in each sector (measured as a percentage of the combined R&D expenditures of the sector represented by between 26 and 55 of the leading R&D investors) have at least one third of the sectoral R&D concentrated in their hands. For the Car and the Electronics industry this share is almost two-thirds. The concentration ratio for the ten biggest R&D spenders in each sector amounts to sixty percent. Cars and electronics distribute approximately eighty percent of the whole R&D volume amongst only ten firms. The pharmaceutical and chemical sector show the biggest spread of R&D expenditures over more equal partners, whereas the biggest firms in the car industry spend more than forty times as much on R&D as the smaller players.

Table 7: Concentration ratios in R&D spending in leading sectors

Sector	C-5 Concen-tration ratio	C-10 Concen-tration ratio	Biggest: Smallest R&D spender ratio	Number of R&D spenders in the sector considered
IT hardware	33.7%	58.0%	31:1	55
Car industry	60.6%	82.0%	44:1	26
Pharmaceuticals	36.2%	62.0%	19:1	39
Electronics	56.7%	77.7%	28:1	27
Chemicals	48.5%	68.7%	14:1	30

Source: based on *R&D Scoreboard* 2000, SCOPE

The most R&D-intensive sectors in 1999 (measured in R&D as % of sales) are pharmaceuticals (12.8%), software and IT services (12.4%), whereas chemicals, cars and electronics have substantially lower R&D intensities of 4-5.5%. So although some sectors, such as software, might be considered more innovative due to higher R&D expenditures, their importance for the total R&D landscape remains relatively limited. Besides, in other sectors, software and supporting services are also developed. The distinction is often rather artificial. The importance of core companies in each of the five

leading R&D sectors is enormous, but not all R&D-intensive sectors reveal the same dynamism in which a very limited number of companies dominate. The biggest spenders in all five sectors come from all three relevant countries/regions (USA, Japan and Europe). In Electronics no American firm belongs to the Top5 R&D spenders, whereas in pharmaceuticals and chemicals, Japanese firms are not represented in the top league.

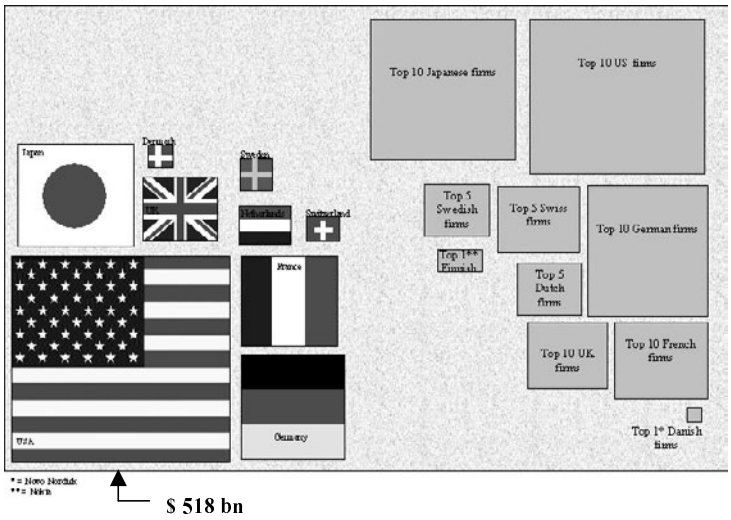
Core200 companies and big R&D Spenders

The biggest fifty R&D spenders in the world in 1999 individually each spent more than $1.5 billion on R&D. Jointly they spent a total of $211 billion on R&D, which amounts to around one half of Gross Expenditures on R&D in the OECD area as recorded by the OECD. Since the mid-1990s, industrial corporations have tremendously increased their R&D budgets. The top three hundred R&D spenders in the world decided upon a compound annual growth rate of 9.1 percent in R&D spending in the 1995-1999 period (Financial Times 15/9/2000). The average R&D/Sales ratio consequently increased from 4.4 percent in 1996 to 4.9 percent in 1999.

The number of firms with R&D budgets of over $1.5 billion in 1999 that are at the same time *not* major core companies in their national economies (as measured by their sales) is small. In the group of fifty largest R&D spenders only eleven companies do not belong to the Core200 group and vice versa. None of these eleven companies, however, really falls far behind the Core200in terms of sales. Size in terms of sales and R&D expenditures are thus related. Core companies in national economies often are also core companies in national innovation systems. Their strategic considerations (deciding upon the interaction with the innovation system, whether local, national or international) can be supposed to influence the nature of the innovation system.

The extent to which the group of home-based core companies – measured by sales – and key R&D players – measures by R&D expenditures – overlaps, varies from country to country. As a result the dynamism of national R&D arenas varies per country (Figure 12).

Figure 12: National concentrations of R&D expenditure, 1998



Leader: The United States

In the United States, the top R&D spenders are mostly members of the Core200. Leading R&D spenders in the United States focus on the development and production of cars, computers, pharmaceuticals, food and chemicals.[12] The United States is the only country in the OECD R&D Arena in which the size of government spending is still bigger than that of the ten largest company spenders combined.[13] The largest ten R&D spenders in 1996 accounted for around 25% of all industry based R&D expenditures of the USA, whereas the top 100 accounted for almost 2/3 of all industrial R&D expenditures (UNCTAD, 1999: 199; NSB, 1998).

Runner-up countries: Japan, Germany, France

The three runner-up countries (Japan, Germany and France) show comparable, albeit less dynamic, characteristics as the American system – witnessed by the extremely limited entrance of newcomers in the national R&D arena.

In Japan *all* big R&D players are core companies as well – although the biggest core players are trading houses that hardly engage in R&D. The Japanese innovation system is primarily based upon an interaction between a rather limited number of big core companies that not only have a sizable impact on the national economy in general (sales of the Top50 Japanese core companies in Japan, amount to more than 1/3 of the whole Japanese GNP), but also in the innovation system. If we use these macro-economic figures to calculate the degree of R&D concentration in the Japanese economy the ten largest R&D spenders in Japan account for approximately forty percent of national expenditures in R&D. The Japanese core players focus on car, consumer electronics, telecommunications and opto-electronics (Canon).

In Germany, the third largest National System of Innovation (NSI), most of the biggest R&D spenders are core companies as well, with one exception: software producer SAP. The biggest R&D powerhouses, however are all core companies. This makes the German system comparable to the Japanese. The focus of the core companies in Germany is cars, electronics (Siemens), pharmaceuticals and engineering. The biggest R&D spenders in Germany account for at least 30 percent of Business Expenditures in R&D in the country in 1998.

In France, the biggest R&D spenders are equally important national core companies. Their focus is primarily on telecommunications and cars, with in addition some attention for pharmaceuticals, oil, computers, avionics and space technology. The French Top10 R&D companies' expenditure combined equals the size of the government R&D budget. In Germany, the government budget is substantially smaller than that of the Top10 companies combined,[14] whereas the Japanese government has a budget that is only slightly bigger than that of the four largest company R&D budgets combined.[15]

[12] Only core players of the 'new network economy' like Microsoft and Cisco are additionally represented.
[13] Top 10 US R&D spenders in 1999: Ford Motor, General Motors, IBM, Lucent Technologies, Motorola, Intel, Microsoft, Pfizer, Johnson & Johnson, Hewlett-Packard
[14] Top 10 French R&D spenders in 1999: Alcatel, Renault, PSA, Rhone-Poulenc, Groupe Lagardere/Matra, STM/SGS-Thomson, Elf, France Telecom, Aerospatiale, Alstom
[15] Top 10 Japanese R&D spenders in 1999: Matsushita, Hitachi, Toyota, Fujitsu, NTT, Sony, NEC, Toshiba, Honda Motor, Mitsubishi Electric

Home/Host dynamics: the United Kingdom

The United Kingdom is the fifth largest innovation system (comparable to France, but substantially lagging behind Germany). It has different characteristics than any of the larger countries. The biggest R&D spenders firstly do not all belong to the core companies group. Secondly, the number of companies of foreign origin (Ford, Pfizer) or of dual nationality (Royal Dutch Shell, Unilever) represented is substantial. In the beginning of the 1990s ICI, Shell and Unilever were the top spenders, but changing company strategies and priorities within the UK NSI changed this pattern substantially. The British arena is currently dominated by the pharmaceutical industry, with the three British core companies AstraZeneca (former ICI), Glaxo Wellcome and SmithKline Beecham (all three among the national Core Top50) leading the British pack by a substantial margin, and 40 percent of all UK R&D spent in this sector.[16]

Smaller European systems

In the smaller European innovation systems, the dominance of core companies can hardly be underestimated. Most of the five largest R&D spenders are also Core200 players. The innovation systems of these countries thus is not only influenced by R&D, but also by international marketing considerations.

In Switzerland the three biggest private R&D investors are each bigger than the government.[17] But all five leading Swiss firms are of Swiss (or Swiss/Swedish) origin. In Sweden only Ericsson is outspending the central government, whilst it holds joint laboratories with that same government, making the interaction between the two actors and thus the Swedish NSI-orientation towards telecommunications and consumer electronics particularly pervasive. Until the take-over of Volvo by Ford, the top of the Swedish innovation system consisted of home-based companies only.[18]

In the Netherlands the biggest investor is Philips Electronics, making the relationship between the Dutch government and this firm the most interesting in terms of the interactive dynamics leading to innovation. The top of the Dutch system consist of two (or three if Akzo-Nobel is counted as Dutch-Swedish) dual-nationality firms. Unlike the UK system, the top of the Dutch NSI does not contain subsidiaries of host multinationals.[19] The mixed ownership of core companies in the Netherlands is bound to affect the innovative dynamism in the country. The decrease in spending by a firm like Shell (see the British example) has lowered the concentration ratio of R&D with the top 5 spenders from more than 2/3 in the 1980s to around 50 percent by 1996. In Switzerland the concentration of industrial R&D with around three firms has been at a constant high level of around eighty percent (Cf. Kumar, 1998; UNCTAD, 1999; Van Tulder, 1989).

Having considered the role of core companies in the R&D arena, it is safe to conclude that - in game theoretical terms - the R&D arena, both at the international and the national level, is a "small-numbers" game. A relatively small number of very sizable actors interact and contribute to the effects that in other studies are often described in

[16] Top 10 UK R&D spenders in 1999: AstraZeneca, Glaxo Welcome, SmithKline Beecham, British Aerospace, Unilever (dual nationality), Invensys, BT, Shell (dual nationality), Rolls-Royce, Reuters
[17] Top 5 Swiss R&D spenders in 1999: Novartis, Roche, ABB, Nestle, Ares-Serono
[18] Top 5 Swedish R&D spenders in 1999: Ericsson, Volvo, Telia, Autoliv, Electrolux.
[19] Top 5 Dutch R&D spenders in 1999: Philips Electronics, Unilever, Royal Dutch/Shell, Akzo Nobel, DSM.

relatively broad, anonymous (even neutral) and macro-economic terms, or in terms of (meta-) paradigm changes and technology paths. The two groups of actors that seem most influential because of their financial capabilities are governments and firms, with firms arguably playing the major role.

PART V

GLOBALIZATION VERSUS INTERNATIONALIZATION

The 1990s has been labeled by some as the decade of *globalization*, referring to the behavior of 'footloose firms' in a 'borderless world' (Ohmae 1990) without nations states (Reich 1991). Part I outlined the broad characteristics of this debate. For some, globalization is not new but rather a throwback to 'an earlier stage at the beginning of the 20th century' (Hirst and Thompson, 1999). Others have emphasized that it is better to refer to *internationalization*, *Triadization* (Ruigrok and van Tulder, 1995) or *regionalization* (Rugman, 2000) to stress the uneven and regional dimension of increasingly trans-national economic activity. Some go further and state that globalization increasingly trickles down to a sub-national level, suggesting that the global economy consists of a 'mosaic of sub-national regions' (Scott 1998). While the debate on globalization centers around the scope and intensity of the process, there is general agreement that the phenomenon, whatever its definition, is driven by the international activity of large firms. Traditionally these have been well-established multinational enterprises (MNEs), but formerly state-owned and privatized firms are increasingly joining the league of MNEs.

This Part addresses the extent to which globalization really exists by discussing the internationalization strategies of the Core200 over the 1990-1998 period (5.2). The evolution of these firms' internationalization over the 1990s will be analyzed (5.3). What are the true drivers behind internationalization, and has this changed over the last ten years? Traditionally, internationalization strategies of firms are analyzed through a national and sectoral approach. In contrast we apply a more alternative approach by categorizing firms through their degree of internationalization over the 1990-1998 period. This approach creates the opportunity to not only compare firms on the basis of their degree of internationalization, but also to distinguish *when* (in the 1990-1998 period) some firms first internationalized.

5.1 Firm level indicators of internationalization

One of the prime aims of the SCOPE project is to measure the level of internationalization of the core companies at the industry, country or regional level. There are many ways to measure a company's degree of internationalization (DOI). The SCOPE database applies three single-item indicators, which could be combined in a composite index to analyze the DOI of a firm. The indicators used are: (1) foreign assets/total assets (FA/TA), (2) foreign sales/total sales (FS/TS, (3) foreign employment/total employment (FE/TE). A rough indication of internationalization can be given in the form of the Transnationality index (TNi), calculated as the average of the three ratios. The TNi has become one of the most quoted measures of firm internationalization, in particular through the publication of the TNi in UNCTAD's World Investment Reports. This study analyzes the DOI of core companies through their TNi or one of its components.

5.2 Internationalization and the Core200

Both the media and companies themselves are quick to focus on internationalization as a competitive issue. Companies strive to position themselves as a 'global player' in the hopes of securing greater market confidence in competitiveness and growth prospects as well as the general health of the firm. What it means to be 'global', however, is not always clear. Table 8 provides an overview of the average values of each key internationalization ratio for the SCOPE benchmark year of 1995.

Table 8: Key internationalization indicators for the Core200, 1995 (in %)

	FA/TA	FS/TS	FE/TE	TNi
Average	27.3	33.8	28.3	**29.7**
Weighted average	27.4	35.7	28.9	**30.6**
Median	21.3	28.8	23.4	**25.6**

Note: For 7 firms no data were available (n = 193)

The average Core200 firm has one-third of its activities abroad, as measured by the Transnationality index (TNi). On average 36 percent of the sales are generated by foreign subsidiaries, while 28 percent of the direct workforce is employed abroad. The average Core200 firm has just over one quarter of its assets located abroad. In a time when internationalization has gained momentum, these figures may seem somewhat strange and quite modest. The heterogeneity of the core200 as a group is reflected in the difference between the *mean* and *median* of the indicators of internationalization and TNi. While some firms may have a long history of internationalization or have located almost all of their activities abroad, some have only recently internationalized, while others have remained nationally oriented.

5.3 The Core200: a typology of internationalization

The heterogeneity in internationalization levels can be traced to numerous factors, but much of it is related to issues underlying the concept of the 'core' company. Core companies are characterized by their interaction with the stakeholders in their bargaining environment. One class of stakeholders with the most centripetal pull has traditionally been the state. Government intervention, particularly in controlled industries, has been a major factor in inhibiting internationalization. Privatization, therefore, of formerly state-owned firms and liberalization of formerly controlled sectors must be seen as key factors in internationalization trends in the mid- to late 1990s. Consequently, the Core200 were categorized by using the Transnationality index or one of its components as an indication of a firm's degree of internationalization (DOI). Three clusters of core companies emerged: *domestic companies, late internationalizers, and well-established multinationals.*

Domestic companies

Twenty-three companies remained purely domestic over the 1990-1998 period. Among them are utility firms, which are either government owned or have recently been privatized (e.g. The Kansai Electric Power Corporation and Chubu Electric Power Corporation). This group shows that for some core companies internationalization is not (yet) a prerequisite for survival. The mere existence of domestic companies among the world's largest firms proves, that, even in a period of rapid internationalization, national

firms play a key role as engines of economic growth for national economies. It also means that *larg*e does not necessarily imply more *international*.

In terms of internationalization trends, there is little to say on the domestic group. On the other hand the late internationalizers and well-established MNEs, despite the appearance of rather erratic behavior during the decade, show a trend very much towards increased internationalization over time. This approach is in line with the models of internationalization as a gradual process and the (organizational) learning approach towards internationalization (cf. Ruigrok and Wagner, 2000). However, as policies are often directed towards liberalization and openness of the world economy, most of the firms operating in formerly national protected sectors are increasingly subjected to more intense competition. This competition may initiate a more rapid and chaotic internationalization process to defend market shares.

Late internationalizers

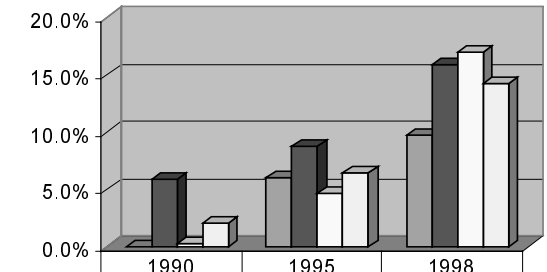
Twenty-seven of the Core200 companies qualify as 'late internationalizers', meaning they had little or no international activities in the early 1990s. The group consists largely of European, formerly state-owned, utilities firms (e.g. British Telecommunications, France Télécom, Deutsche Telekom and Telefónica from Spain, Electricité de France). The combination of privatization and liberalization policies has put pressure on these firms to gradually internationalize. For the Telecom sector this has led to a highly competitive European market. For this sector internationalization is seen as a survival strategy. Other firms belonging to this group are Wal-Mart Stores and MCI Worldcom.

Some late internationalizers' primary mode of expansion was through foreign acquisitions. Wal-Mart Stores and Spanish Telefónica are clear examples of formerly domestic companies pursuing such a strategy. Telefónica pursued a very aggressive acquisition strategy in Latin America – countries closely related to the Spanish culture and economic institutions. This strategy increased Telefónica's TNi within a few years' time from around five percent in 1995 to thirty percent in 1998. While Telefónica was already present in Latin America before 1995, this was mainly through minority participations (e.g. in Chile and Argentina). By late 1998 Telefónica had become one of the world's largest telecom firms and was striving to be the key telecom player in the Spanish-speaking world.

Although Wal-Mart was operating internationally (in Canada and less so in Mexico) for a number of years, its internationalization surge in the form of major acquisitions has only recently been realized. One of its first steps was to take over the Mexican Cifra conglomerate in 1997. Wal-mart's greatest expansion took place in 1998 in Europe, when it acquired the British ASDA group, thereby adding 232 stores to its stores in the UK. In 1999 this strategy was repeated in Germany when Wal-Mart acquired 74 Interspar stores. A similar strategy was pursued from the other side of the Atlantic by the Dutch retailer Ahold – already a large international player – through its major acquisitions in the US of Giant Food in 1998 and Pathmark in 1999.

Some late internationalizers are caught up in what can be qualified as a 'competitive internationalization trap' in which they face a choice between 'buying or being bought', which in practical terms means expansion or retreat. For these firms internationalization has simply become a means of survival.

Figure 13: The late internationalizers, 1990-1998



	1990	1995	1998
FA/TA	0.0%	6.0%	9.8%
FS/TS	6.0%	8.8%	15.9%
FE/TE	0.2%	4.7%	17.0%
TNI	2.1%	6.5%	14.2%

Figure 13 shows that the main thrust of internationalization for this group took place after 1995. Internationalization was also more than simple export strategy, as the foreign component of assets and employment increased sharply as well. The foreign share of employment experienced the greatest gain over the period, moving from close to zero to 17 percent on average.

The group of late internationalizers thus consists of two groups of companies which both feel the pressure to internationalize. This pressure is on the one hand deliberately shaped by governmental policies – through privatization and liberalization e.g. in the telecom sector – and on the other hand it is shaped by competitive pressures from rivals operating in the same industry. With the privatization and liberalization of the utility sector in many countries (see Part I), most of the companies now classified in the domestic group will experience greater pressure to internationalize.

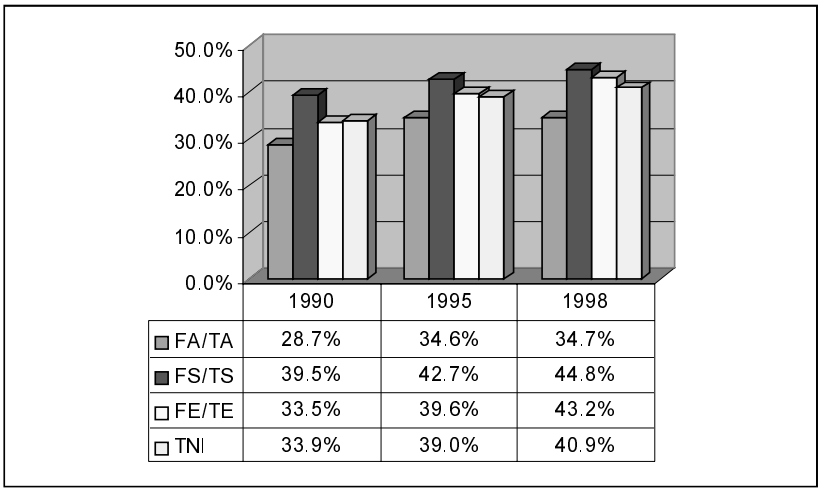
Well-established Multinationals

The third group of companies identified, consisting of the remaining 145 firms, is the largest group of core companies. These firms have been international, although at different levels, throughout the 1990-1998 period and before. The analysis of the late internationalizers could lead to conclusions that internationalization is a linear and deterministic process. The dynamism among the three groups, however, is not only upward. Interchangeability between the three groups could also take place if companies decrease their foreign operations and adopt a retreat strategy. Well-established MNEs continue to shape current internationalization, responsible for a large part of the world's FDI and trade flows, although with more moderate steps than in the early 1990s.

The core companies represented in Figure 14 are those most commonly associated with transnational activity and are responsible for the lion's share of 'global' FDI flows and (intra-firm) trade. It is apparent from the data, however, that the extent of foreign operations, even among this most international cluster, is modest. The pace of internationalization for the group of well-established MNEs has slowed-down over the second period of the 1990s. Moreover, the change over the 'decade of

internationalization', while clearly positive, has not been explosive. Although the Transnationality index rise from 34 percent to 41 percent reflects in itself a 25 percent gain in internationality, it does not appear to suggest a larger-scale trend towards 'globalization' at the firm level, or even the notion of 'the global firm'. A closer look at the group of well-established MNEs may shed light on the *nature of internationalization* among well-established multinationals.

Figure 14: The well-established multinationals, 1990-1998



	1990	1995	1998
FA/TA	28.7%	34.6%	34.7%
FS/TS	39.5%	42.7%	44.8%
FE/TE	33.5%	39.6%	43.2%
TNI	33.9%	39.0%	40.9%

5.4 International relocation and well-established multinational core companies

In the course of the 1990s, the phenomenon of international relocation received considerable public and academic attention (cf. Buckley and Mucchielli 1997). Internationalization seemed an inevitable linear development, necessary to secure market share and growth. Large MNEs were 'accused' of exporting jobs through the relocation of production to low wage countries (especially in Asia). Logically, it was assumed that there was a strong relationship between rising unemployment levels in developed market economies (especially in the EU) and the internationalization of production. 'Exports of jobs' and 'restructuring at home and growth abroad' were oft-heard phrases. As often, reality appeared to be more complex and sound 'academic proof' of the exports of jobs remained absent.

Internationalization and de-internationalization are two sides of the same coin

In the second half of the 1990s, the internationalization boom attributable largely to privatization and liberalization slowly began to subside. As more 'natural' market conditions returned, in particular the well-established multinational companies adapted their patterns of internationalization. It is difficult to speak of 'trends' in this regard, as internationalization appears much more volatile than in the first half of the 1990s. Part I sketched the increased uncertainty in the international arena in which in particular well-established multinationals have to operate. As a consequence it seems that internationalization is not a deterministic process at all. Once a firm has

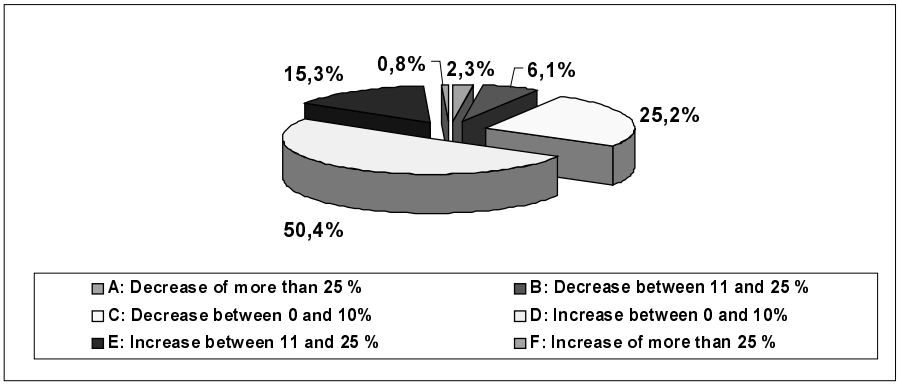
embarked on the internationalization process there is no inevitability about its continuance. Internationalization patterns of well-established multinationals after 1995 can be categorized in two major and six sub- groups:

- **Decreasing internationalization**
  - A. Companies with a decrease in TNi of more than 25 percent;
  - B. Companies with a decrease in TNi between 11 and 25 percent;
  - C. Companies with a decrease in TNi between 0 and 10 percent;

- **Increasing internationalization**
  - D. Companies with an increase in TNi between 0 and 10 percent;
  - E. Companies with an increase in TNi between 11 and 25 percent;
  - F. Companies with an increase in TNi of more than 25 percent.

Figure 15 is a graphical representation of this categorization. By far most of the international group of well established MNEs fall in category D (increases in TNi between 0 and 10 percent): 50.4 percent (or 66 companies). More than 25 percent (33 companies) experienced a decline of their foreign operation between 0 and 10 percent. So more than three quarters of the group of well-established MNEs of the group falls either in category C or D. The balance in this case is in favor of greater levels of internationalization. Extreme cases are rare: there are only 3 companies with a decline in TNi of more than 25 percent, while there is only one firm which effected extensive internationalization of more than 25 percent. In contrast to the group of late internationalizers, large jumps in TNi did not occur among the group of well-established MNEs. Most of the companies in this group already have a considerable amount of activity abroad and thus internationalization takes place in relatively smaller steps.

Figure 15: Distribution of growth in TNi between 1995-1998



In general two-thirds of the established multinational core companies experienced a rise in TNi between 1995 and 1998. As most of the firms in Figure 15 originate in the Triad, it is possible to identify a regional pattern. Although not substantial, most of the US firms experienced a decline in their foreign activities between 1995 and 1998. Half of the firms represented in category C originate in the US. Reasons for this are numerous. Firstly, the US market experienced sharper growth than most other countries. Secondly, NAFTA was implemented, which further stimulated local

production. Thirdly, the Asian currency crisis particularly affected US companies more than their European counterparts due to the relatively higher level of exposure US companies have in Asia. Finally, US firms participated less intensely in cross-border mergers and acquisitions (M&As), focusing primarily on *national* M&As. The representation of US firms in each category declines as the growth in TNi increases. The share of both Japanese and European MNEs in category D and E is salient. In category D the share of both European and Japanese MNEs is evenly distributed (both 40 percent each), adding up to 80 percent. In category E this share rises to 90 percent, of which European MNEs take the largest share (55 percent). The remaining shares of 20 percent (in category D) and 10 percent (in category E) are attributable to US MNEs.

Thus it would seem that of the companies which appear to be de-internationalizing, American firms are well-represented, while internationalizing firms are predominantly European and Japanese. The reasons for this can vary:[20] perhaps NAFTA has induced a consolidation of activity at home for US firms, allowing them to externalize production (particularly in Mexico) and manage sourcing and intermediate production at arm's length. European firms are exploiting scale economies and agglomerating under the auspices of the Single Market (both *in*side and *out*side the region), while Japanese companies seem to have strengthened their position in Europe and North America to secure markets in the face of anticipated or existing barriers to trade (see also Part VI).

Even for well-established MNEs the internationalization process started on their home ground. Whether the country of origin matters even when firms have reached a certain degree of internationalization (e.g. the well-established MNEs) or whether this is confined to the early stages of a firm's internationalization process (e.g. the group of late internationalizing firms) remains the topic of a lively academic debate. In Table 9 the number and relative share of domestic, late internationalizing firms and well-established MNEs are categorized by their country of origin. Four conclusions can be drawn:

1. Many core firms from both the United States (16%) and Japan (18%) are still domestic. In contrast, in our sample, smaller European countries have no domestic core firms at all, while only 5 percent of the larger European countries' core firms are domestic. Of the 57 Japanese firms in our sample 18 percent are domestic.

2. All countries and regions have core firms belonging to the group of late internationalizers. Of the 61 US firms 12 percent are late internationalizing firms, for Japan this share is 14 and for the larger European countries this share is 18 percent. The smaller European countries only have one late internationalizing firm (8 percent).

3. The United States, Japan and the larger European countries approximately have a similar share of well-established MNEs. Respectively 72 per cent for the United States, 68 percent for Japan and 77 percent for the larger European countries. Smaller European countries have the largest share of well-established MNEs. On the other hand the larger European countries have not stayed behind and have an equal number of well-established MNEs;

[20] To what extent this trend is nominal remains to be researched. The overall appreciation of the dollar against many currencies, in particular the Yen, over the second half of the 1990s may have diminished the real dollar value of overseas activities without necessarily implying a reduction in volume.

4. The remaining group of firms, almost all originating in emerging markets, are primarily well-established MNEs.

Table 9: Country of origin and internationalization

	USA		Japan		Europe				Rest of World	
					Small		Large			
	Abs.	Rel.	Abs.	Rel.	Abs.	Rel.	Abs.	Rel	Abs.	Rel.
Domestic	10	16%	10	18%			3	5%		
Late Internation-alizers	7	12%	8	14%	1	8%	10	18%	1	12%
Well-Established MNEs	44	72%	39	68%	11	92%	44	77%	7	88%
Total	61	100%	57	100%	12	100%	57	100%	8	100%

N= 195, thus excluding the five companies for which no data were available.
Small European countries (as measured by GDP) are: the Netherlands, Sweden and Switzerland
Large European countries (as measured by GDP) are: France, Germany, Italy, Spain and the United Kingdom.
'Rest of World': Brazil, Canada, Venezuela and South-Korea.

For governments of large economies this implies that they are still dealing with a considerable amount of large domestic firms (especially Japan). These firms are still subject to national policies. Already we have noted that privatization and deregulation are major driving forces behind current internationalization. For Japan this may imply that the restructuring of its economy will trigger internationalization. Many of its domestically oriented *kereitsu* may become well-established MNEs. For smaller European countries the rule of thumb applies that large firms are also multinational. Although the multinational enterprise is said to be an American 'product' (cf. Jones, 1996), smaller (European) countries have a long tradition and experience of internationalization. For these governments dealing with MNEs has become a part of life. Despite the fact that only eight of the world's 200 largest firms originate in emerging markets, seven are well-established MNEs. The presence of these 'Third-world MNEs' (TWMs) among the world's largest 200 firms is to some degree testimony to the strength of some emerging economies. At the same time, however, it also reflects the limited room for domestic growth firms from emerging economies have: to be large means to be international. Although firms from smaller industrialized countries and emerging markets originate in countries with different levels of development and have subsequently followed a different internationalization trajectory, there are some similarities. For both sets of firms internationalization has for a large part been 'pushed' and become a survival strategy. The small size of their domestic markets has been an important factor in their internationalization strategy. The disadvantage which many emerging market firms have is that the institutional setting of cross-border economic

activity (see Part I) has changed dramatically, making their internationalization trajectory more fragile. The recent demise of most South-Korean MNEs exemplifies this fragility.

5.5 Challenges ahead…

As core companies on the whole exhibit markedly different behavior and trends than do purely multinational firms, it makes sense to consider core companies as a set in its own right. Given their overall economic power and significance (be it domestic or international), this illustrates the value of studying core companies as a basis for understanding global economic transformations instead of overemphasizing the internationalization effect by focusing solely on established multinational enterprises. The evidence presented thus far demonstrates that internationalization is a complex issue. The distinction made here between the three clusters may become obsolete, as for instance fewer and fewer companies of the Core200 remain purely domestic, and the late internationalizers will have become part of the international group, explaining the dynamism between the three groups. The driving forces behind this process are liberalization and privatization policies of national governments, but also the possibilities of firms to adopt cross-border M&As as a means of foreign expansion. From a policy perspective the challenge for governments is to find a balance between liberalization on the one hand and privatization and competition on the other.

Firm internationalization, when considered at the micro level, has been more modest than is often readily assumed. Even the 'established multinational' core companies are predominantly domestic in their activities. What is then the true nature of 'globalization' at the firm level? The second cluster of late internationalizing firms seems to be responsible for the upheaval surrounding globalization (see also Box 2: the 'globalization wedge'). Some of these firms operate in sectors such as retailing, while others operate in sectors which have only recently been liberalized and privatized. For the group of late internationalizing firms industry seems to matter to a considerable extent. Especially in Europe deregulation and privatization policies in the utility, telecommunication and public transport have been implemented at a reasonable pace, triggering firm internationalization responses.

The recent wave of privatization, for a large part, explains the presence of late internationalizing firms originating in large European countries. Most of these firms have only recently been suddenly exposed to foreign competition, which can explain their sometimes chaotic and competitive international expansion strategies. For these firms internationalization is more a means of survival than exploitation of a competitive advantage. As opposed to a few decades ago when most of the well-established MNEs took their first *gradual* 'steps' abroad, the environment of internationalization has thus changed dramatically. This environment is for a large part shaped by national governments, through liberalization and privatization. The claim that 'globalization' is irreversible thus seems to be underestimating the power of governments in this process. This does, however, not imply that the internationalization strategies of well-established MNEs have not changed. In contrast, most are engaged in wide-scale restructuring processes having international repercussions. For most of these MNEs international or regional diversification has gradually replaced product diversification as a viable strategy. Some of these well-established MNEs have reached a so-called 'second stage of internationalization', in which their organizational structure has increasingly become much more complex than the traditional multi-domestic model. In many cases

subsidiaries of well-established MNEs increasingly operate as single entities with considerable independence from their headquarters. To what extent have core companies, and in particular MNEs, (re)focused their international diversification strategy more in the direction of a regional strategy? Or is regionalization simply a stepping-stone towards further globalization? Are we witnessing the first foundations of a regional future or is regionalism simply a 'chapter' in the process of globalization? Part VI will try to answer some of these questions.

Box 2: The globalization wedge

The 'fashionable' ideology of globalization may not accurately reflect the realities of patterns of internationalization. This disparity is largely a result of the bias towards samples of well-established multinationals in most firm-level attempts to measure the extent of globalization. Established multinationals, however, are not necessarily representative of general patterns of economic activity, as many large, dominant core companies exhibit relatively low levels of internationalization compared to MNEs. The contrast between the ideology of globalization and reality becomes evident when the degree of internationalization (DOI) of a sample of the most *international* core companies is compared with the DOI of a sample of the *largest* core companies. The former is best represented by the list of Top100 Transnational Corporations as annually published in UNCTAD's World Investment Report. The latter, which more accurately reflects the reality of globalization, can be represented by a list of the Top100 Core Companies (as a subset of the Core200 discussed in this S(c)oreboard). The difference between the respective DOIs provides a quantifiable measure of the difference between ideology and reality and can be termed 'the globalization wedge'. Figure 16 shows the development of the globalization wedge by comparing the two aforementioned groups for the 1995-1998 period.

Ideology: Top100 TNCs

The list of Top100 transnational corporations consists of firms selected and ranked on the basis of the absolute value of their foreign assets. The result is a sample biased towards well-established MNEs. Throughout the 1990s the average DOI of the largest transnational corporations, as measured by their Transnationality Index (TNi), hovered in the 50-55 percent range, with the internationalization of sales (55-60 percent) at a substantially higher level than the internationalization of assets (45-50 percent). Foreign and domestic activities are therefore more or less in balance, even for the world's most international companies.
Over the four-year period, TNI for the Top100 TNCs showed a modest increase, with high growth early on compensating for a slight dip in from 1997 to 1998. Declining growth in TNI was due to a reduction in the foreign share of assets from 1996 on, and a reduction in the foreign share of sales from 1997. Only the internationalization of employment remained positive over the period, although only slightly. Strong growth in the Top100 TNCs home countries (in Europe and North America) will probably continue to drive relative growth in domestic activities and fuel a downward trend in the overall DOI of the Top100 TNCs.

Reality: The Core100

The group of Core100 companies is more homogenous in terms of firm country of origin (OECD countries), but more heterogeneous as regards the degree of internationalization. The listing is on the basis of size and overall economic significance, regardless of how international they are. The Core100 in general show increasing DOI over the second half of the 1990s, with TNi rising from 34 percent in 1995 to 38 percent in 1998. The difference between asset and sales internationalization is less pronounced than in the group of Top100 TNCs, which may suggest a different internationalization trajectory or simply reflect the distinct charac-

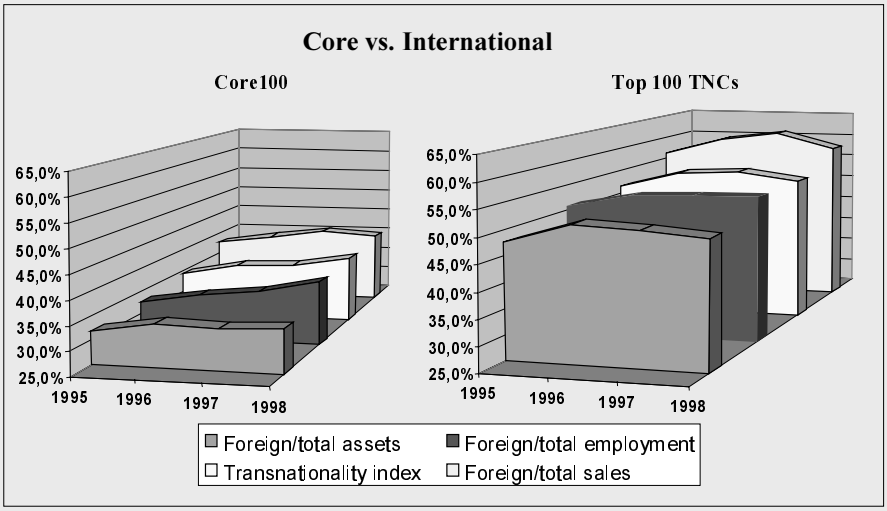
Box 2: Continued

teristics of the industries represented in the respective samples. In contrast to the Top100 TNCs, the Core100 did not experience a decline in TNi after 1997, which may imply that the Core100 is less vulnerable to international crises (e.g., the Asia crisis) by virtue of its lower international exposure.

Conclusion: the globalization wedge

Over the period, the difference between ideology and reality decreased only marginally, from 17.5 percent in 1995 to 16.3 percent in 1998. In 1996 and 1997, the globalization wedge (measured as the difference in TNi) even increased, only to drop sharply over 1997 (due largely to institutional factors; see Part I). Employment trends were the major factor in the slight convergence in TNi between the Top100 TNCs and the Core100, as employment for the latter group internationalized relatively rapidly over the period. The internationalization of employment was the least volatile for both groups of firms, hinting at a renewed increase in the international division of labor within multinational companies. The second important factor was the substantial decline in international sales of the Top100 TNCs, whereas the wedge in assets hardly changed at all. So, unless late-comer international firms really start to spread their assets over more countries, the wedge between the reality and the ideology of globalization is bound to remain considerable.

Figure 16: Top100 Core companies versus Top100 TNCs



Note: The ratios represent the (unweighted) averages of the individual ratios of FA/TA, FS/TS, FE/TE for each firm of the Top 100 TNCs and the Erasmus core 100 companies expressed in percentages. The average TNi is the (unweighted) average of the 100 individual company transnationality indices for both groups of firms.

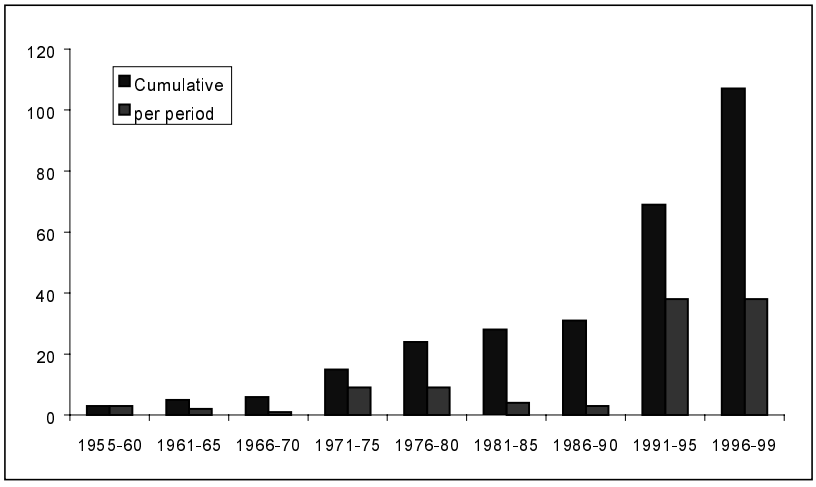
PART VI

IN FOCUS: REGIONALISM AS AN INTERNATIONALIZATION STRATEGY

In the 'globalization' debate, it is often argued that investment behavior and economic activity in general are increasingly international, i.e. cross-border (UNCTAD, various years). Part V showed that the 'well-established MNEs' can be seen as the drivers behind the transnational character of global economic activity. Given that we have established a wide range of trends and patterns in internationalization, the question arises as to what extent these well-established MNEs truly are global in scope?

At a general level the globalization thesis is countered by a newer paradigm known as 'regionalism', evidenced by macro-level trends of 'triadization' (Rugman 2000), emphasizing the three-way flow of particularly FDI *between* (geographic) regions defined as Europe, North America and Japan/Asia. Bergsten in this context speaks of a 'Tripartite World' (The Economist, July 15th, 2000: 19-21). As yet, 'regionalism' continues to elude concise and concrete definition. Dent (1996) defines it as a strategy at the policy level, referring to the growing number of integrational links of varying intensity between individual nation-states, whereas others refer more strictly to the proliferation of Regional Integration Agreements (RIAs) worldwide (Ethier 1998, Atkinson 1999). This includes not only the more prominent RIAs such as the European Union and NAFTA, but also e.g. Mercosur in Latin America and the CEFTA in Central and Eastern Europe.

Figure 17: Number of RIAs notified to GATT/WTO (as of April 1999)



Source: WTO

In terms of the latter definition, regionalism is attested to by the rapid rise in new RIAs around the world in the 1990s. In the period from 1948-1994, contracting parties to the GATT (General Agreement on Tariffs and Trade) reported a total of 108 RIAs relating to trade in goods, of which 38 in the five years ending in 1994. Since the transformation of the GATT into the World Trade Organization in 1995 (WTO), 67 additional RIAs have been notified. Now nearly all of the WTO's 134 members have concluded some form of RIA with other countries, and well over half of world trade is intra-RIA, with nearly all of the remainder inter-RIA (Ethier 1998). This 'second wave' of regional integration (Dent 1996, De Melo *et al*. 1993, Bhagwati 1993) differs from earlier, import-substitution based strategies in three important ways: firstly, current RIAs are often formed between unequal partners (e.g. US and Mexico in NAFTA; Brazil and Paraguay in Mercosur; Luxembourg and Germany in the EU); secondly, they are in many cases a formalization of existing unilateral liberalization; and thirdly, they are much more dynamic and complex, proceeding far beyond the issue of trade.

In practice regional integration can always be considered the result of market-led as well as policy-led processes (OECD 1995: 26). The prime trigger for the sweeping second wave of RIAs (cf. Figure 17) has been probably more political and engrained in the bandwagon dynamism of the phenomenon than economic factors per sé; otherwise it would be unclear why this particular wave appeared in the 1990s and not earlier. In upgrading the GATT regime to that of the WTO, the provisions on RIAs were continued, whereas other rules on tariff and non-tariff barriers were considerably tightened. This in particular spurred countries to join pre-existing RIAs.

6.1 Perspectives on Regional Integration

The second wave of integration has inevitably drawn considerable interest not only in policy- and business circles, but in academia as well. Does regionalism as a policy approach lead to *regionalization* in the spatial organization of firm activity? 'Regionalization' is used in this sense to describe the dynamic process of economic change that occurs when regionalism as a paradigm or political strategy is institutionalized at the policy level. To what extent, therefore, is regionalism a more appropriate paradigm than globalization, in particular at the firm level? The impact of regional integration even at the macro-level remains unclear (Pelkmans 1997, Blomström and Kokko 1997, Lipsey 1992). Trade and investment behavior in particular is the goal of research in this direction, focusing on inter- and intra-regional shares of trade and investment (in particular FDI, or Foreign Direct Investment), as well as more subtle changes in production strategies, such as the share of intra-firm trade in total trade. Does regionalism represent a step closer towards global economic liberalization or is it a form of protectionism at a supra-national level? Welfare effects in this regard focus on the creation or diversion of trade and investment resulting from an RIA (Bhagwati 1993, Kindleberger 1969). As yet there are no clear answers. Some say RIAs are an intermediate stage in overall multilateral liberalization (Dent 1996, Atkinson 1999), whereas others argue that many regions, in particular the EU and NAFTA, are increasingly 'closed' or inward oriented (Van Tulder 2000, Pelkmans 1997).

The confusion surrounding the impact of regional integration on economic activity is even more pronounced at the micro-level. According to Davies *et al*. (1999) even in the case of an advanced, well-researched integration project like the European Union, "the implications … for the structure of individual firms were rather ignored both in the ex-ante predictions and the ex-post evaluations – including that of the European

Commission (1996) itself." Given SCOPE's emphasis on European business, the intermediary research output presented here focuses in particular on the consolidation of the European Union in the 1990s as a case-study for considering firm-level responses in terms of restructuring the spatial organization of economic activity. The ambition is to consider aggregated firm-level data as a complement to macro-data, thereby making use of quantitative analysis as a step beyond much of the qualitative (albeit extensive) survey data published by the European Commission (*Panorama of EU Industry*) or the Single Market Review (*Business Survey 1997*). In particular, changes in terms of the spatial organization of economic activity are relevant.

6.2 Predicting regional trends: European versus Non-European firms

Theoretical predictions of changes in the spatial organization of firm activity must be seen in the context of the motivations behind the RIA. For the Single European Market (SEM), for example, the Cecchini Report is regarded by many as the 'official EC view' of the integration process. Its contents have been summarized in terms of the following expectations: direct cost savings due to elimination of (non) tariff barriers; cost savings derived from increased volumes and more efficient location of production (scale and learning economies, and better exploitation of comparative advantage; tightening of competitive pressures, leading to reduced prices and increased efficiency as more firms from different member states compete directly in the bigger market place; and increased competitive pressures leading to speedier innovation (Davies *et al.* 1999, Padoa-Schioppa 1987).

The anticipated intra- and extra-regional consequences for firms differ. Increased competition in Europe means European firms will need to improve their own competitiveness levels while searching for opportunities for growth in order to sustain the efficiency and competitiveness gains. Growth inside Europe can be realized by scale opportunities and efficiency benefits which, when passed on to consumers, lead to virtuous cycles of increased demand and renewed potential for scale. At the same time increased competition on European markets means the main sources of growth would have to be sought outside the region. European Core companies (in particular those with an established pan-European presence) would by virtue of their size be in the best position to capitalize on the benefits of scale and efficiency. Non-European firms, concerned about the possibility of closed regionalism ("Fortress Europe"), could be expected to increase their European presence to secure market position (tariff-jumping FDI). This would afford them the possibility to benefit from scale opportunities inside Europe as well and thus facilitate competitiveness and growth in other global markets.

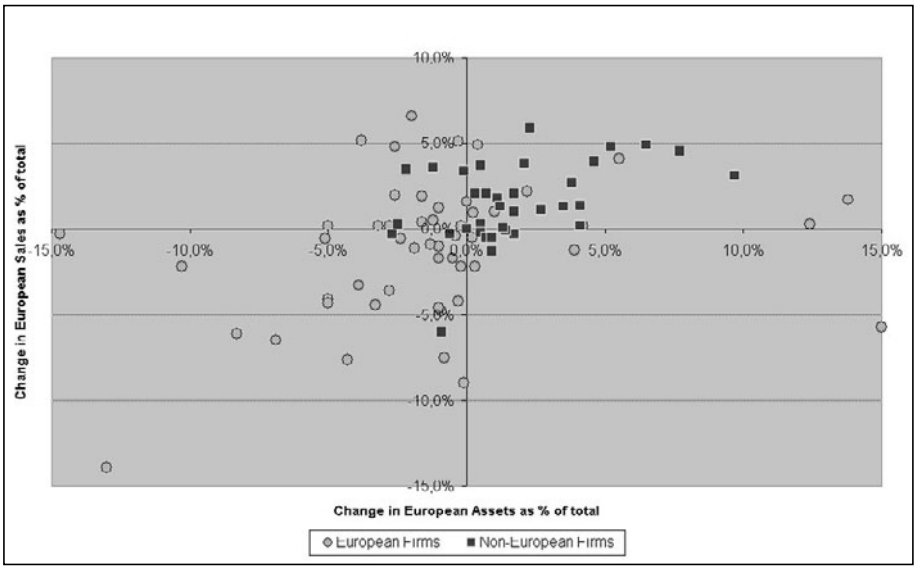
In other words, the consequences in the short term differ from the consequences in the mid-term. In the short term, the SEM would force European firms to restructure and rationalize their European activities in order to optimize production strategies, while drawing non-European firms into Europe in a strategic defensive maneuver. In the mid-term, European firms would expand outside the region in pursuit of growth, and non-European firms would consolidate and streamline their European operations to prepare for longer-term competition both in- and outside of European markets.

6.3 Europeanization: a non-European affair

European Core companies de-Europeanize; non-European Core companies 'go Europe'

The data support these hypotheses, albeit somewhat nuanced (see Appendix A for an account of the methodology). The European share of Core company activity was analyzed for three years (1993, 1995, 1997), where the focus was the change over both periods (1993-95; 1995-97). When considering the initial period following the formalization of the SEM (1993-1995, Figure 18), it appears that non-European firms expanded the European share of their activities terms, while European firms were already in the full throes of an extra-regional strategy. This supports the prediction of investment across regional borders, and suggests that the SEM, at least from an investment point of view, could be characterized as *open regionalism*. The SEM may, however, still be 'closed' from a trade perspective, especially if trade and investment are considered substitutes.

Figure 18: Change in European share of assets and sales as % of total (1993-1995)



It should be noted that in most cases the changes are relative. Only in very few cases does a drop in European share of sales or assets signify divestment behavior in terms of an absolute decline in the value of sales or assets in a given region. Rather, the value of sales and/or assets rose across the board, but grew in other regions more quickly than the value of European sales and/or assets.

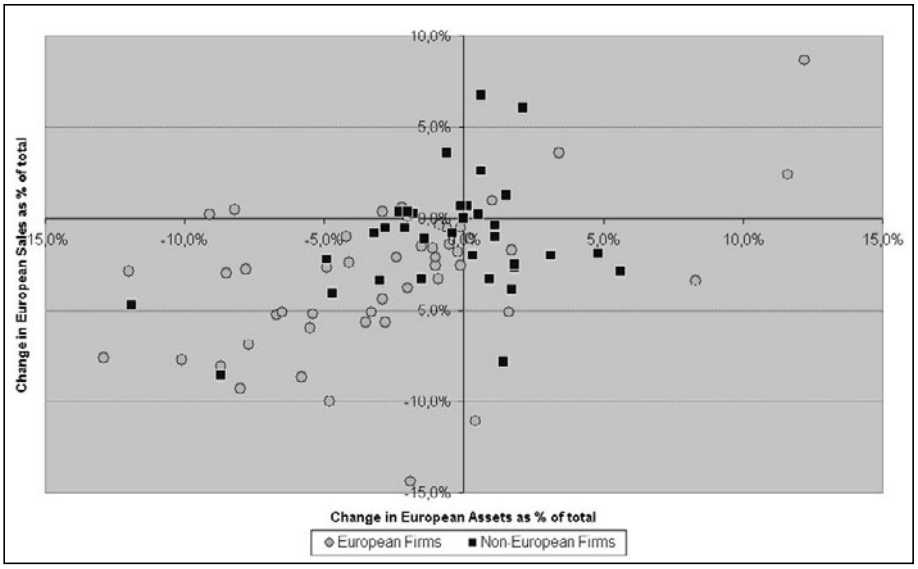
Table 10: Average European share of assets and sales as % of total (1993-1995)

	1993	1995	Change	
Non-Eur Firms	18,3%	19,7%	**1,4%**	**Assets**
	19,5%	20,8%	**1,3%**	**Sales**
Eur Firms	74,6%	73,0%	**-1,6%**	**Assets**
	72,3%	71,3%	**-1,1%**	**Sales**

The scatter plot above only presents relative *shifts* in the importance of Europe as a location of firm activity. Table 10 illustrates the importance of Europe relative to the whole, and the shift in that relative importance averaged across all firms. Table 10 contains a number of revealing insights. First of all, it shows the tremendous disparity between European and non-European firms in the share of their European activities. While it is not surprising that European companies are *more* European than firms from outside the region, it is remarkable that European firms are *still so European* in this so-called era of globalization. Secondly, the table shows that, when averaged over the two sub-sets of 37 and 55 firms respectively, the difference between sales and assets shares is very slight, and that change in the one is very closely mirrored by change in the other. This observation underscores the notion that assets and sales by country of origin are in principle measurements of the same phenomenon (Sullivan 1994, Anavarula 2000).

In the mid-term, the data indicate that non-European firms' asset and sales change in the pre-1995 period were markedly greater than shifts in the post-1995 period (Figure 19). In fact, no real trend is apparent in the scatter plot for non-European firms. For European firms, on the other hand, the trend set out in the pre-1995 period was accentuated in the post-1995 period. A small number of European firms, however, expanded in Europe in relative terms, suggesting that not all firms adopted an extra-regional strategy. Some companies, in particular those with a relatively extra-regional orientation at the outset, may have opted to improve their market position in the home region as a defensive strategy or an attempt to capitalize on potential scale advantages.

Figure 19: Change in European share of assets and sales as % of total (1995-1997)



The data in aggregate form substantiate these initial conclusions (Table 11). The average decline in the relative share of European activity for European firms doubled compared to the 1993-95 period, from about 1.5 percent to 3 percent. For non-European firms, however, the relative reduction in European activity is surprising, but appears to some extent to be due to a few outliers (the median values for assets and sales change respectively are +1,1% and –1,0%). The remaining negative component for non-

European firms in the 1995-97 period could be due to exchange rate effects. In contrast to the pre-95 period, the latter period was characterized by a general appreciation of the dollar relative to key European currencies (IMF *International Financial Statistics*, various years), except for the British Pound, which appreciated relative to the dollar.

Table 11: Average European share of assets and sales as % of total (1995-1997)

	1995	1997	Change	
Non-Eur Firms	19,7%	18,9%	**-0,8%**	**Assets**
	20,8%	19,3%	**-1,5%**	**Sales**
Eur Firms	73,0%	69,9%	**-3,1%**	**Assets**
	71,3%	68,2%	**-3,0%**	**Sales**

Dollar appreciation may have caused an implicit 'devaluation' of European activities by US firms measured in local currency and then translated to dollars for the consolidated annual report accounts. Such an effect would also have implications for European firms' activities measured in US dollars, but the general trends as outlined here are preserved by the fact that, given the relatively small extra-European share of activity for European firms (of which only a percentage is in the US), European currencies would have had to depreciate considerably (as much as 20%) to account for such an implicit 'appreciation' of non-European activities. In addition, the exchange rate effects would be reversed for UK firms, yet these exhibit the same trend towards de-Europeanization as their Continental counterparts. A possible explanation more in line with the hypotheses presented here is that the initial expansion into Europe by non-European firms (likely in the form of M&As) was followed by consolidation and rationalization of the new assets to facilitate integration into the company's existing production structures.

6.4 The 'Country of Origin' effect

Although the evidence presented above indicates that home region is a determining factor in regionalization strategies, differences at the national level are also significant. Several studies have illustrated the importance of country of origin in the degree of internationalization (DOI) of firms (Davies 1999, Ruigrok and Van Tulder 1995), but the *extra-regional* extent of this internationalization has not yet been a topic of study. Table 12 offers an overview of trends in European sales and assets shares for companies in the sample based on nationality. Each national subset contains the largest core companies (by total sales 1995) for which data is available; in particular for the European countries this has generated a quasi-'National Top10'.

National differences, even for countries in Europe, are considerable. Japanese firms show the lowest concentrations of activity in Europe, while Germany shows the highest inward orientation. Core companies from France also exhibit relatively high concentrations of activity in Europe, whereas the figures from the UK and Netherlands are considerably lower. As is the case with DOI, the 'degree of regionality' is also a factor of the bargaining environments and 'competitive space' in which Core companies operate.

As a 'strong state', the French government is a powerful stakeholder in the activity of French firms (Van Iterson and Olie 1992). This tripartite, corporatist system (Schmitter 1974, Cox 1989) means firm activity and decisions are much more at the mercy of the 'national interest', and hence less free to pursue a global scope. Germany's corporatist,

tripartite system of codetermination has been termed 'Modell Deutschland' by Nigel Reeves (1997). Ulrich (1997) refers to the system as a 'social market economy', a "synthesis of market forces and social order", implying the constraint of markets through social forces. As in the French case, the state is strong, but contrary to the French, it cannot be considered interventionist. Rather it creates a stable environment without trying to centralize control (Lane, in Whitley 1992). The national strategy is one of 'production excellence' and hence emphasis is placed on local skills and monitoring ability as a guarantee of that excellence (Davies *et al*. 1999; Harzing *et al.* 2000). Industry is characterized by close ties with buyer and supplier firms as well as government and other stakeholders, which exert a centralizing, gravitational pull on firms. "A major feature of the Federal Republic of Germany has been the amount of policy attention the giants pay to their national trade association", with the consequence that domestic interests weigh extremely heavily (Grant and Paterson 1994: 141, quoted in Lane 1998: 467). As in the French case, the tightly-woven nature of stakeholder relationships and domestic interests results in a fairly low level of geographic dispersion of firm activity, even at the regional level.

Table 12: Average firm degree of Europeanization by country, in percent (1993-1997)

	1993	1995	1997	Avg. bi-annual Δ	
Japan	8,8%	10,2%	10,7%	1,0%	Assets
	13,4%	13,9%	12,5%	-0,4%	Sales
US	20,9%	22,4%	21,3%	0,2%	Assets
	21,5%	23,2%	21,6%	0,1%	Sales
France	84,5%	83,9%	80,1%	-2,2%	Assets
	82,7%	81,7%	78,2%	-2,3%	Sales
Germany	89,4%	86,0%	81,7%	-3,9%	Assets
	84,6%	84,8%	80,2%	-2,2%	Sales
NL	69,0%	65,8%	62,1%	-3,4%	Assets
	70,5%	67,5%	63,4%	-3,6%	Sales
UK	57,2%	56,8%	55,5%	-0,8%	Assets
	57,8%	56,6%	56,1%	-0,9%	Sales

UK Core companies, despite their shared European geographical space, are relatively much more globally dispersed than their Continental counterparts (defined in terms of extra-regionality). The UK has traditionally been more open to non-European influences than most continental countries (Casson and McCann 1999), hence its internationalization pattern is less "European" than that of the France and Germany. In a historical perspective, this relates directly to the tendency of post-hegemonic nations to adopt a stance of open international commerce (Ruigrok and Van Tulder 1995). Other smaller nations like the Netherlands (and even for example Switzerland, despite its landlocked position), show similar home region concentrations. Firms from smaller countries do not have a large home market and thus have been internationalizing since even before the very earliest phases of European integration. Their internal restructuring thus has been completely different from other companies that only recently started to internationalize. Such observations lend credence to traditional 'incremental' approaches to internationalization (Hymer 1960, Johanson and Vahlne 1977).

In terms of changes in regional concentrations, the data once again underscore the European/non-European dichotomy. European asset and sales shares of US Core companies increased slightly when averaged across both bi-annual periods, while Japanese firms showed mixed trends (possibly due in part to the relatively small sample of 6 firms). On average, core companies from all European countries exhibited a relative decrease in European activity between 1993 and 1997. Dutch Core companies were the most active 'de-Europeanizers', whereas for UK firms, the increase in outward orientation was minimal, perhaps tempered by investments on the Continent as a defensive measure given the UK's decision to remain outside the EMU. In addition the table shows that, even at a national level, the figures for regional concentration of sales and asset correspond closely.

6.5 The 'Firm Size' effect

Averages as shown in Table 12 do not reveal anything about the effect of firm *size* in the relative degree of extra-regional orientation. Weighting the figures for firm size is relevant in that it can not only give a better indication of the European orientation of a national economy as a whole (by reflecting aggregated figures, much as FDI data do), but also whether or not large core companies are more or less European in orientation than smaller core companies. Weighting the sample reflects a key underpinning of the 'core firm' concept, namely that size is related to the influence a firm has in its bargaining environment (Ruigrok and Van Tulder 1995). Table 13 compares the weighted and unweighted figures per country sub-set. The unweighted figure reflects the average European share per *firm*, whereas the weighted figure is 'biased' for firm size by dividing the value of all European assets and sales for all the firms in each sub-set (per country) by the value of all firms' *total* assets and sales (aggregated). The weighted and unweighted averages by country can be compared by expressing the two as a ratio (W_A:U_A). A *higher* weighted than unweighted average (ratio is greater than 1) indicates that the larger firms in a given national sample have a relatively higher European share of activity than smaller[21] firms in the sample. A ratio *below* 1 indicates that smaller firms in each sub-set are relatively more 'European' in orientation.

Table 13: Firm size effect: Weighted/unweighted ratio of European activity by country

	1993	1995	1997	
Japan	0,91	0,93	0,95	A
	0,78	0,85	0,81	S
US	0,81	0,85	0,88	A
	0,94	0,93	0,88	S
France	1,06	1,06	1,06	A
	1,03	1,03	1,01	S
Germany	0,94	0,95	0,95	A
	0,93	0,93	0,93	S
NL	0,84	0,86	0,83	A
	0,88	0,88	0,86	S
UK	0,90	1,01	1,00	A
	1,01	1,03	1,08	S

[21] 'Small' in the relative sense: all the companies analyzed here are the largest in their respective home countries and among the largest in the world.

The national samples differ in their outcomes. Large US companies, for instance, have a relatively smaller share of activity in Europe than smaller US firms. Japanese firms show similar tendencies, although the European share of activity for Japanese firms is only half that of the US firms. The difference between weighted and unweighted figures suggests the existence of a 'size wedge', referring to the divergent internationalization patterns between larger and smaller core companies. However, the *change* over the period for both the US and Japanese firms has been greater in the weighted figure (i.e., the ratio approaches 1 over time), suggesting that although larger firms are less active in Europe than smaller firms, larger firms have taken *greater* steps towards expansion in Europe than smaller firms. The 'size wedge' in internationalization levels which has traditionally existed between larger and smaller companies thus appears to be on the decline in several countries. For the French and German samples, however, the weighted/unweighted dichotomies are opposite one another: large French companies seem more focused on Europe than small French companies, whereas large German firms exhibit a relative extra-regional orientation.

The UK and the Netherlands figures show an even more pronounced difference when weighted figures are considered, despite their similar average (unweighted) firm degree of European focus. The figures for the Netherlands support earlier research that firm size is positively correlated with the degree of extra-regional activity (Goedegebuure 2000), yet in the UK the opposite is true, despite the fact that the two sub-sets share assets and sales figures (prorated by ownership) from Shell and Unilever as dual-nationality firms. The remaining top core companies in each national sample therefore exhibit extremely divergent regional concentrations. Large UK Core companies are expanding more rapidly onto the European continent than smaller UK firms, which are expanding away (weighted European share on the rise; unweighted on the decline). This seemingly paradoxical relationship underlines the different perspective UK companies have towards the Continent than firms from other European countries. It is possible that the larger firms are consolidating their positions on the Continent in the face of stiffer competition and that relatively smaller firms, fearing a squeeze in Europe, are diversifying globally to remain competitive. For the UK, Continental Europe is arguably not the 'home region' – a fact emphasized at the political level by the UK's 'limited' participation in the next phase of integration, monetary union. For the UK, the 'home region' might be better defined as the Anglo-Saxon competitive space, and as such is perhaps more culturally than geographically determined.

6.6 Globalization in a regional perspective: dyadization?

If European companies are expanding their activities outside Europe, the question arises as to the location of this expansion. At the macro-level, 'triadization' has been put forth as an alternative to 'globalization' (Rugman 2000). This three-way division of global activity belies the true nature of firm strategies. Research of the global spread (by geographic region) of firm activity indicates that the global dispersion of Core company activity is increasing, but the emphasis remains by far confined to only one or two regions.

A Regional Concentration Indicator (RCI)

As has been demonstrated, sales and asset percentages at both the national and the firm level lie very close together. Taking the average of the two may provide a more transparent view of the trends at issue here without compromising their validity. The

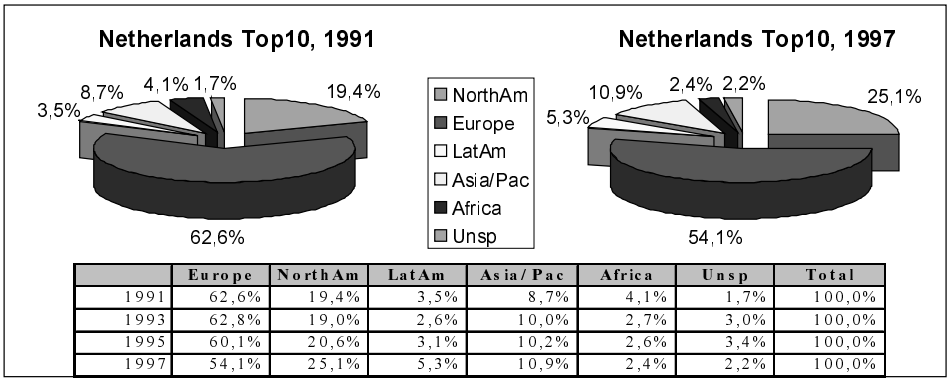
average can serve as a 'Regional Concentration Indicator' (RCI), which provides general insight into the importance of given regions for Core companies' economic activity. The RCI can be developed for a single region, such as the home region (e.g. Europe, North America, Asia/Pacific) or can be extended to other regions of the world to offer a perspective on a firm's or country's global spread of activity, beyond that of macro-level data.

For the purposes of current analysis, the RCI is used to provide insight into the global spread of activity of the National Top10 of two countries, one European (the Netherlands) and the other non-European (the US). Given that firms vary in their definition of regions and specification level of regional data, a certain margin of error must be incorporated into the RCI. Regions also Figures given are the minimum shares per region per year (to be read as "at least … percent"), with the 'Unsp.' ('unspecified') column representing sales and assets which were not designated and could theoretically be allocated to any region. This margin of error varies depending on the reporting specificity of the firms in the sample.[22] Shares are weighted for firm size (absolute values totaled and presented as percentage of the whole).

A globalized economy? The case of the Netherlands

The relative levels of Europeanization for Dutch companies illustrated above underscores the country's reputation as an open economy with a long-standing tradition of globally dispersed activity. The RCI data for the Top Ten companies from the Netherlands (Figure 20) reveals that even an open trading nation like the Netherlands is relatively limited in its global scope. More than three-quarters of its activity is confined to two regions (Europe and North America). The European share (as demonstrated above) has been reduced in the course of the 1990s, with expansion taking place primarily in North America and also Latin America and Asia-Pacific.

Figure 20: Geographic spread of firm activity, the Netherlands Top10



	Europe	NorthAm	LatAm	Asia/Pac	Africa	Unsp	Total
1991	62,6%	19,4%	3,5%	8,7%	4,1%	1,7%	100,0%
1993	62,8%	19,0%	2,6%	10,0%	2,7%	3,0%	100,0%
1995	60,1%	20,6%	3,1%	10,2%	2,6%	3,4%	100,0%
1997	54,1%	25,1%	5,3%	10,9%	2,4%	2,2%	100,0%

The Netherlands economy from a firm perspective is dichotomous in the sense that the limited number of truly large-sized firms (Shell, Unilever, Akzo, Ahold etc.) shows a very different pattern of internationalization than the vast number of smaller firms in the economy. The Top 10 is more global than the Top 50 in this sense (Goedegebuure

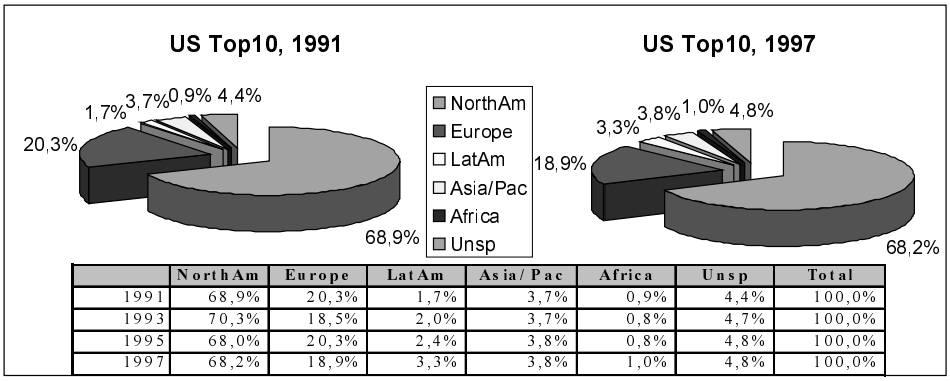
[22] For US firms, for instance, 'Unspecified' comprises more than ten percent of the total, whereas Dutch firms' specifications are more detailed, leaving a margin of error of less than four percent.

2000). The trend is precisely the opposite of the UK large/small firm dichotomy touched on above, where the larger Core companies are expanding relatively into Europe.

A NAFTA powerhouse? The case of the United States

The global spread of the Top10 US Core companies in the sample is markedly different than that of a small European nation as the Netherlands. 'North America' in Figure 21 includes Mexico and Canada and is intended to represent NAFTA. Relative to North America, Europe represents only a fraction of US Core firm activity, with other regions making a very modest showing. These figures stand in stark contrast to common conceptions of the largest US firms as being 'global' in the scope of their activities. Furthermore, no real trends are immediately evident over the 1991-1997 period. Most regions remain more or less constant, with the exception of Latin America, which nearly doubled in relative importance (1.7% to 3.3%). This may reflect the conflicting agendas of US Core companies: the continued strength of the NAFTA component for the Top10 is likely related to their traditionally strong positions in Mexico (the US Top10 forms, with a few exceptions, the list of Top10 foreign companies in Mexico as well) and the relative growth in Latin America could signal that these particular firms have opted to concentrate their operations in the Western Hemisphere instead of emphasizing Europe. As argued in section 6.4, the largest US Core companies show the lowest levels of relative Europeanization in the 1990s. As a result, at this level of aggregation, shifting patterns as clear as those of the Netherlands are not apparent.

Figure 21: Geographic spread of firm activity, the US Top10



	NorthAm	Europe	LatAm	Asia/Pac	Africa	Unsp	Total
1991	68,9%	20,3%	1,7%	3,7%	0,9%	4,4%	100,0%
1993	70,3%	18,5%	2,0%	3,7%	0,8%	4,7%	100,0%
1995	68,0%	20,3%	2,4%	3,8%	0,8%	4,8%	100,0%
1997	68,2%	18,9%	3,3%	3,8%	1,0%	4,8%	100,0%

For both Top10 samples, the home region component of Core company activity remains striking regardless of changes in the overall global spread of activity. Other countries currently under study (Japan, Germany, France and the UK) show an even less 'global' pattern of activity, with close to 90 percent of activity confined to two regions. For the Germany, France and the UK, these regions are Europe and North America. For Japanese companies, it appears that North America is the dominant secondary location of activity outside of Japan itself, accounting (together with Japan) for 80-85% of Japanese Core company activity. This would seem contrary to the assumption that Asian countries such as Taiwan, Malaysia and Singapore are the foreign activity hubs of Japanese MNEs.[23] Whatever the national differences, it may, therefore, be more

[23] The large-scale Japanese production presence in North America dates from the mid-1980s when VERs forced Japanese firms to produce locally (Westney 2000). This could reflect a bias in the

appropriate to talk about *dyadization* instead of *triadization* when considering the spatial organization of activity at the firm level.

'Globalization' therefore must be seen in perspective. The case of Europe, however, suggests that regionalism is facilitating extra-regional expansion, and therefore may be a stepping stone towards globalization in the sense of a greater geographic dispersion of activity. It remains unclear, however, whether regions can be classified as 'open' in ways that would suggest higher world efficiency levels from the perspective of international trade. Regional blocs may still be strategic, defensive measures designed to facilitate the competitiveness of regional firms and their expansion *outside* the region, while remaining sub-optimal from a global welfare point of view.

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methodology towards Fordist production strategies, given that the primary Japanese strategy in Asia (Toyotism) entails exploiting relationships in a network instead of internalizing markets through ownership. Hence the true value of Japanese productive activity in Asia may not be captured by sales and assets data.

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APPENDIX A: SCOPE indicators and data gathering

PART IV

Vertical Integration/Value-Added and Outsourcing data

Adjusting for the degree of vertical integration of firms is not an easy task, in the first place because of differences in accounting between American, European and American firms. Next, annual reports only reveal consolidated data, whereas considerable differences can exist between the value added in the home base and abroad. In order to check for these inconsistencies, a sample of the TOP50 Dutch firms was assessed in detail for differences between consolidated and more specific data on value added. The biggest dispersions appeared in companies like Philips and Shell, but the maximum difference was approximately 25%. With companies from the larger countries the difference will probably be smaller, making it easier to come to an assessment on the basis of consolidated data. The degree of vertical integration can range from 10% with Japanese trading companies, to 90% with telecommunications companies. In the case of American companies, rough estimates were used that excluded staff costs: the resulting assessments of value impact of top5/10/50 companies (Part III) should be read as the *mininum* impact of these companies on the US economy. In reality the figure will on average be at least 30-40 percent higher. Further research is necessary.

The calculations for the Added Value (AV) and the Degree of Vertical Integration (DVI) are based on the following formula:

- *AV = (Net sales – Cost of Sales) + Depreciation and amortization + Personnel Costs*
- *DVI = Added Value/Net Sales*

Further information on the methodology used and a first application on a large set of firms can be found in Tecson (1998). This study was also based on in-depth interviews with around ten core companies to check for the consistency of the methodology.

R&D data

The Company data on Research and Development expenditures were collected through three sources: firstly, data collected by the UK Department of Trade and Industry (R&D Scoreboard); secondly, annual reports and other databases were used; thirdly, information was gathered directly from the firms themselves. This process has resulted in a coverage of approximately 80% of all the core firms. Research and Development expenditures are an input variable.

Further information on this part of the research project can be obtained from Van Tulder et al (2000).

PART V

The three key indicators of internationalization

A. The foreign sales to total sales (FS/TS) ratio. Sales are defined as net sales to exclude value added taxes (VAT). The FS/TS ratio can be viewed as a proxy for a firm's dependence on its foreign markets for sales and revenues. Most companies report foreign sales data. This availability of data on foreign sales, makes the FS/Ts indicator very attractive as a single-item indicator of corporate internationalization (Cf. Sullivan, 1994; Ruigrok and Wagner, 2000). However, foreign sales is an arbitrary concept. There are two means of calculation; namely, sales by country of origin and sales by destination markets. The former includes the sum of net sales (gross sales minus value-added taxes and similar levies) generated from subsidiaries in foreign countries, excluding exports from affiliates of the parent's home country of incorporation. In this case foreign sales are merely the sales of the foreign subsidiaries (incl. exports form these subsidiaries to third markets). The latter equals export sales and the sum of net sales (gross sales minus value-added taxes and similar levies) generated from subsidiaries in foreign countries, including exports from the parent company.[24]

B. The ratio of foreign assets to total assets (FA/TA). Foreign assets are total fixed and current assets outside the home country. Total assets are the sum of fixed and current assets. The FA/TA ratio measures the value of foreign assets, held by foreign subsidiaries as percentage of total assets. Increasingly more and more firms report foreign assets in their annual accounts. Therefore more recent studies apply the ratio of FA/TA, sometimes in combination with the former FS/TS ratio (Cf. Gomes Ramaswamy, 1999 Gestrin, 2000). "The ratio of foreign assets to total assets provides a measure of a firm's dependence on overseas production." (Gomes and Ramaswamy, 1999: 180-181).

C. The ratio of foreign to total employment (FE/TE). Total and foreign employment relates to direct employment and is expressed in FTEs. As firms are not obliged to report data on foreign employment, they are scarce and least well documented in annual reports as well as publicly accessible sources. The ratio of FE/TE is a measurement to which extent the firm is engaged in creating international direct employment, and to what extent a firm is dependent on foreign labor markets.

Data collection

The hierarchy in data availability in favor of the FS/TS ratio puts constraints on the collection of data on the six variables. Initial data were collected from annual reports and other (publicly) accessible sources (e.g. K-10 forms). Data were generally converted into dollar value using the IMF Financial Statistical Yearbooks and applying average flow

[24] Most US- and UK-based MNEs specify sales by origin, and often also mention exports form the home country. Worldwide the rule of thumb applies: the closer the country and/or company is linked up with US or UK standards and accounting principles, or listed on US/UK stock exchanges, the more likely the company reports sales by origin. It is most likely that in the future there is a convergence towards international accounting principles along the US/UK standards, hence the SCOPE database contains sales by origin unless otherwise indicated.

rates for sales and fixed year-end rates for assets. In addition surveys were sent out to each individual core firm with the request to complement the data or confirm the data. The surveys were sent directly to contact persons at the respective firms, thereby circumventing the public relations and investor relations department. If no data were available we were in some cases able to benefit from the network of researchers on MNEs throughout the academic world. Despite the efforts five companies did not respond to any questionnaires, surveys nor did they provide an annual report or website with current information.[25]

PART VI

In order to test the hypotheses, data on the geographical spread of activity was gathered for 92 companies from the SCOPE database (see Appendix), 79 of which are members of the SCOPE Core200. The additional 13 companies are drawn from the National Top10 lists in their respective countries of origin (France, Germany, UK and the Netherlands). The breakdown by country is as follows: 30 US, 15 French, 12 German, 11 British, 9 Dutch, 6 Japanese, 2 Italian, 2 Swedish, 1 Swiss, 1 Canadian and 3 companies of dual nationality[26].

The indicators chosen for analysis are two of the three used in the preceding section on 'internationalization': sales by country of origin and total assets. Geographic specification of employment data was too scarce to allow for comparison of all three indicators. Data was extracted primarily from annual reports, complemented by various additional public sources. The figures were collected directly in the local currency of the firm's home country in order to control for exchange rate effects. In some cases, firms provided sales and employment specifications but none for assets. In these cases, regional employment shares were used as proxies for asset shares.[27] Some companies only publish geographic distribution of 'tangible assets' or 'net-operating assets' as opposed to 'total assets'; in these cases the relative figure (percentage) is adopted from the published type of asset and the absolute figure is the tangible- or net-operating asset figure prorated to the total asset value. Since sales by origin and asset value can in theory be seen as proxies for a firm's productive activity, a change in the relative importance of a geographic location should be reflected in a change in relative asset and sales. Therefore, the analysis emphasizes *investment* effects of regionalization on firms at a very general level; work on *trade* effects is still in its early stages.

It should be noted that the geographic regions as defined in most firms' annual reports do not correspond directly with politico-economic regions such as the EU and NAFTA. However, at this level of detail, considering broader geographic regions like 'Europe' instead of the EU is justified since these more narrowly defined regions have agglomerating forces and spill-overs into surrounding areas: in other words, regionalization in Europe involves more than just the EU-15. The years chosen for the purpose of the briefing are 1993, 1995 and 1997; this time-span is considered important for the world's major RIAs and global restructuring in general. In the future, the analysis will be extended to the 1990s in their entirety.

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[25] Pemex, Takenaka, Idemitsu-Kosan, Dentsu and Ssangyong.

[26] Shell, Unilever and ABB.

[27] The value of employment as a proxy for assets was successfully demonstrated in Ietto-Gilles (1998). If assets were only unavailable for a single period, employment was used for all periods to maintain consistency.

APPENDIX B: SCOPE Core Company lists

Table 14: The SCOPE Core200

Scope #	Company name	Country	Revenues	Assets	Empl.
1	Mitsubishi Corporation	Japan	184,365	91,921	36000
2	Mitsui & Co., Ltd.	Japan	181,519	68,771	80000
3	Itochu Corporation	Japan	169,165	65,709	7182
4	General Motors Corporation	United States	168,829	217,123	709000
5	Sumitomo Corporation	Japan	167,531	50,269	6193
6	Marubeni Corporation	Japan	161,057	71,439	6702
7	Ford Motor Company	United States	137,137	243,3	346990
8	Toyota Motor Corporation	Japan	111,052	106,004	146855
9	Exxon Corporation	United States	110,009	91,296	82000
10	Royal Dutch/Shell Group**	Netherlands	109,834	118,012	104000
11	Nissho Iwai Corporation	Japan	97,886	46,754	17005
12	Wal-Mart Stores, Inc.	United States	93,627	37,871	675000
13	Hitachi, Ltd.	Japan	84,167	91,621	331852
14	Nippon Telegraph & Telephone Corporation (NTT)	Japan	81,937	127,077	231400
15	AT&T Corp.	United States	79,609	88,884	299300
16	DaimlerChrysler A.G.	Germany	72,256	63,813	310993
17	International Business Machines Corporation (IBM)	United States	71,940	80,292	252215
18	Matsushita Electric Industrial Co., Ltd.	Japan	70,398	74,877	265538
19	General Electric Company (GE)	United States	70,028	228,035	222000
20	Tomen Corporation	Japan	67,756	22,366	2943
21	Mobil Corporation*	United States	66,724	42,138	50400
22	Nissan Motor Co., Ltd.	Japan	62,569	66,277	139856
23	Volkswagen AG	Germany	61,489	58,611	242420
24	Siemens AG	Germany	60,674	57,347	373000
25	BP Amoco p.l.c.	United Kingdom	56,982	50,259	56650
26	Metro AG	Switzerland/ Germany	56,459	25,061	178594
27	United States Postal Service (USPS)	United States	54,294	48,921	870160
28	Chrysler Corporation*	United States	53,195	53,756	126000
29	Philip Morris Companies Inc.	United States	53,139	53,811	151000
30	Toshiba Corporation	Japan	53,047	51,967	186000
31	The Tokyo Electric Power Co., Inc.	Japan	52,362	131,485	43448
32	Daewoo Corporation	South Korea	51,215	63,598	196000
33	Nichimen Corporation	Japan	50,842	19,766	2443

The SCOPE Core200 (continued)

Scope #	Company name	Country	Revenues	Assets	Empl.
34	Kanematsu Corporation	Japan	49,838	16,232	11759
35	Unilever N.V./ Unilever PLC**	Netherlands	49,738	30,077	308000
36	Nestlé S.A.	Switzerland	47,780	38,354	220172
37	Sony Corporation	Japan	47,582	47,156	151000
38	Fiat S.p.A.	Italy	46,468	64,300	237426
39	Veba AG	Germany	46,28	47,230	125158
40	Deutsche Telekom AG	Germany	46,149	11,709	220000
41	NEC Corporation	Japan	45,557	43,768	152719
42	Honda Motor Co., Ltd.	Japan	44,056	32,861	96800
43	Elf Aquitaine*	France	43,618	49,454	85500
44	Electricite De France (EDF)	France	43,508	139,841	116909
45	Istituto Por La Ricostruzione Industriale SPA	Italy	41,903	115,041	263063
46	Royal Philips Electronics	Netherlands	40,148	32,580	265113
47	Fujitsu Limited	Japan	38,976	40,416	165056
48	E.I. du Pont de Nemours and Company, Inc.	United States	37,607	37,312	105000
49	RWE Group	Germany	37,233	52,948	137331
50	Renault	France	36,895	45,535	139950
51	Texaco Inc.*	United States	36,787	24,937	28247
52	Mitsubishi Motors Corporation	Japan	36,645	28,110	28383
53	Hoechst Aktiengesellschaft	Germany	36,409	36,729	161618
54	ENI S.p.A.	Italy	36,393	56,016	86422
55	Mitsubishi Electric Corporation	Japan	36,380	34,985	11585
56	Sears, Roebuck and Co.	United States	35,181	33,130	275000
57	Samsung Corporation	South Korea	35,060	11,340	18257
58	Kmart Corporation	United States	34,654	15,397	250000
59	ABB Asea Brown Boveri Ltd	Switzerland	33,738	32,076	209637
60	The Procter & Gamble Company	United States	33,434	28,125	99200
61	The Daiei, Inc.	Japan	33,149	20,342	40723
62	Peugeot S. A.	France	33,074	29,586	139300
63	Vivendi	France	32,665	47,333	221157
64	BASF A.G.	Germany	32,259	29,303	106565
65	Bayerische Motoren Werke Aktiengesellschaft (BMW)	Germany	32,199	28,475	115763
66	Alcatel S.A.*	France	32,154	52,205	191800
67	Chevron Corporation	United States	32,094	34,330	43019

The SCOPE Core200 (continued)

Scope #	Company name	Country	Revenues	Assets	Empl.
68	Hewlett-Packard Company	United States	31,519	24,427	102300
69	Mitsubishi Heavy Industries, Ltd.	Japan	31,249	38,999	67372
70	Bayer AG	Germany	31,108	30,879	142900
71	Nippon Steel Corporation	Japan	30,614	42,311	93900
72	PepsiCo, Inc.	United States	30,421	25,432	480000
73	Ito-Yokado Co., Ltd.	Japan	30,368	16,361	101050
74	France Télécom SA	France	30,060	57,921	167661
75	VIAG Aktiengesellschaft*	Germany	29,260	30,046	83770
76	Carrefour	France	28,987	13,199	102900
77	Thyssen Krupp AG	Germany	28,032	17,537	126444
78	Amoco Corporation*	United States	27,665	29,845	42689
79	Total Fina S.A.	France	27,226	28,374	53536
80	Motorola, Inc.	United States	27,037	22,801	142000
81	The Kansai Electric Power Co., Inc.	Japan	26,736	63,748	27141
82	Petroleos de Venezuela, S.A.	Venezuela	26,041	40,502	53457
83	East Japan Railway Company	Japan	25,624	68,652	79298
84	Ssangyong Corporation	South Korea	25,392	22,511	35000
85	Nippon Mitsubishi Oil Corporation	Japan	25,043	25,856	11921
86	Robert Bosch GmbH	Germany	25,012	19,870	156771
87	SK (Sunkyong)	South Korea	24,218	23,463	24600
88	Samsung Electronics Co., Ltd.	South Korea	24,151	21,878	75000
89	ConAgra, Inc.	United States	24,109	10,801	90871
90	British American Tobacco p.l.c.	United Kingdom	24,033	70,254	170412
91	AB Volvo	Sweden	24,022	20,923	79050
92	The Kroger Company	United States	23,938	5,045	200000
93	Dayton Hudson Corporation	United States	23,516	12,570	214000
94	Hyundai Corp.	South Korea	23,221	1,387	690
95	Canon Inc.	Japan	23,012	23,831	72280
96	Lockheed Martin Corporation	United States	22,853	17,648	160000
97	United Technologies Corporation	United States	22,802	15,958	170600
98	British Telecommunications PLC	United Kingdom	22,612	35,921	130700
99	Japan Postal Service	Japan	22,498	92,332	142712
100	Mannesmann AG*	Germany	22,395	15,826	122684
101	Pemex (Petróleos Mexicanos)	Mexico	22,330	31,581	124703
102	Enel SPA	Italy	22,225	59,493	97937

The SCOPE Core200 (continued)

Scope #	Company name	Country	Revenues	Assets	Empl.
103	Jusco Co., Ltd.	Japan	21,998	13,167	34161
104	Chubu Electric Power Co., Inc.	Japan	21,850	56,990	21068
105	J.C. Penney Company, Inc.	United States	21,419	17,102	205000
106	Suez Lyonnaise des Eaux	France	21,117	32,035	118770
107	United Parcel Service of America, Inc (UPS).	United States	21,045	12,645	337000
108	The Dow Chemical Company	United States	20,957	23,582	39500
109	Deutsche Bahn AG	Germany	20,811	36,294	312579
110	Japan Tobacco Inc.	Japan	20,538	20,535	22625
111	Promodès S.A.*	France	20,160	8,828	46889
112	GTE Corporation	United States	19,957	37,019	106000
113	International Paper Company	United States	19,797	23,977	81500
114	J. Sainsbury plc	United Kingdom	19,765	10,308	95519
115	Taisei Corporation	Japan	19,762	29,557	22134
116	The Boeing Company	United States	19,515	22,098	105000
117	Mazda Motor Corporation	Japan	19,093	12,787	33705
118	Tesco PLC	United Kingdom	19,004	9,523	84895
119	Xerox Corporation	United States	18,963	25,969	85200
120	Shimizu Corporation	Japan	18,923	24,016	12026
121	Johnson & Johnson	United States	18,842	17,873	82300
122	Preussag AG	Germany	18,759	10,532	65227
123	NKK Corporation	Japan	18,711	25,166	39933
124	Sanyo Electric Co., Ltd.	Japan	18,541	23,689	57120
125	Koninklijke Ahold	Netherlands	18,446	5,766	127000
126	American Stores Company (Albertson's)*	United States	18,309	7,363	121000
127	Kajima Corporation	Japan	18,271	26,934	14157
128	Costco Companies, Inc.	United States	18,247	4,437	52000
129	USX Corporation	United States	18,214	16,743	42774
130	The Coca-Cola Company	United States	18,018	15,041	31000
131	BCE Inc.	Canada	17,939	28,339	121000
132	Bridgestone Corporation	Japan	17,922	16,171	89418
133	BellSouth Corporation	United States	17,886	31,880	87571
134	Nippon Express Co., Ltd.	Japan	17,767	10,129	62008
135	Mycal Corporation (Nichii)	Japan	17,738	16,206	20277
136	Sara Lee Corporation	United States	17,719	12,431	149100
137	Columbia/HCA Healthcare Corp.	United States	17,695	19,892	240000

The SCOPE Core200 (continued)

Scope #	Company name	Country	Revenues	Assets	Empl.
138	Novartis Group*	Switzerland	17,510	26,404	84077
139	Fleming Companies, Inc.	United States	17,502	4,297	44000
140	Deutsche Post AG	Germany	17,486	14,117	342413
141	Isuzu Motors Limited	Japan	17,425	14,397	14317
142	RAG Aktiengesellschaft	Germany	17,233	20,414	102086
143	Sociedad Estatal De Participaciones Industriales (SEPI)	Spain	17,163	33,030	76998
144	Sharp Corporation	Japan	17,102	18,758	44789
145	Mitsubishi Chemical Corporation	Japan	17,074	18,553	30162
146	Rhône-Poulenc	France	16,996	27,648	82556
147	Toyota Tsusho Corporation	Japan	16,928	6,935	3928
148	AMR Corporation	United States	16,910	19,556	110000
149	Franz Haniel & Cie. GmbH	Germany	16,883	6,589	24485
150	Karstadt Group	Germany	16,811	7,985	105129
151	Atlantic Richfield Company (ARCO)*	United States	16,739	23,999	22000
152	Merck & Co., Inc.	United States	16,681	23,832	45200
153	La Poste	France	16,642	15,807	290839
154	Supervalu Inc.	United States	16,486	4,184	44800
155	Fried Krupp AG*	Germany	16,423	12,162	66352
156	Safeway Inc.	United States	16,398	5,194	113000
157	Petrõleo Brasiliero S.A.	Brazil	16,387	31,822	50675
158	Electrolux AB	Sweden	16,219	12,544	112300
159	Imperial Chemical Industries Plc (ICI)	United Kingdom	16,206	14,715	63800
160	Intel Corporation	United States	16,202	17,504	41600
161	SHV Holdings N.V.	Netherlands	16,170	8,481	56400
162	Minnesota Mining and Manufacturing Company (3M)	United States	16,105	14,183	70687
163	Compart Spa.	Italy	16,086	24,833	36088
164	Caterpillar, Inc.	United States	16,072	16,830	54352
165	Nabisco Group Holdings	United States	16,008	31,518	76000
166	Groupe Danone	France	15,925	19,037	73823
167	Tohoku Electric Power Co., Inc.	Japan	15,848	34,873	14581
168	Japan Energy Corporation	Japan	15,827	15,531	15623
169	Usinor	France	15,719	14,746	58335
170	Pechiney	France	15,596	11,435	43714
171	Pinault-Printemps-Redoute	France	15,594	11,163	59299

The SCOPE Core200 (continued)

Scope #	Company name	Country	Revenues	Assets	Empl.
172	The Home Depot, Inc.	United States	15,470	7,354	80000
173	Btr Plc.*	United Kingdom	15,432	15,356	125065
174	Takenaka Corporation	Japan	15,368	16,647	10518
175	Kobe Steel Ltd.	Japan	15,302	22,162	31203
176	Eastman Kodak Company	United States	15,269	14,477	96600
177	MCI WorldCom, Inc.	United States	15,265	19,301	50367
178	Repsol,S.A.	Spain	15,125	13,744	18878
179	Federated Department Stores, Inc.	United States	15,049	14,295	119000
180	Japan Airlines Company, Ltd.	Japan	15,013	19,730	20030
181	UAL Corporation	United States	14,943	11,641	79410
182	Sumitomo Metal Industries, Ltd.	Japan	14,830	22,915	51682
183	Kyushu Electric Power Co., Inc.	Japan	14,829	38,594	14473
184	Bouygues	France	14,801	15,096	91894
185	Compaq Computer Corporation	United States	14,755	7,818	20470
186	Idemitsu Kosan Co., Ltd.	Japan	14,755	18,785	5268
187	Denso Corporation	Japan	14,739	14,738	56385
188	Thomson SA	France	14,396	17,864	96000
189	AlliedSignal Inc. (Honeywell)*	United States	14,346	12,465	88500
190	McDonnel Douglas*	United States	14,332	10,466	63612
191	Suzuki Motor Corporation	Japan	14,303	8,903	13693
192	Georgia-Pacific Corporation	United States	14,292	12,335	47500
193	Saint-Gobain	France	14,093	19,702	89852
194	Kawasho Corporation	Japan	14,063	7,564	3386
195	Telefonaktiebolaget LM Ericsson	Sweden	13,961	13,702	85513
196	Telefónica , S.A.	Spain	13,960	39,689	99203
197	Deutsche Lufthansa AG	Germany	13,886	12,840	57586
198	Sekisui House, Ltd.	Japan	13,841	16,021	14676
199	Dentsu Inc.	Japan	13,825	6,312	5722
200	Digital Equipment Corporation*	United States	13,813	9,947	61700

Notes:

Data on sales, assets and employment are from Fortune Magazine, August 5th, 1996

*** both firms are British Dutch*

** company has been subject to acquisition, merger or demerger since 1995*

Table 15: National origins of the SCOPE Core200

Country	# of Core Companies	Country	# of Core Companies
Brazil	1	Netherlands	3
Brit./Neth.	2	South Korea	6
Canada	1	Spain	3
France	20	Sweden	3
Germany	22	Switzerland	4
Italy	5	United Kingdom	7
Japan	60	United States	61
Mexico	1	Venezuela	1

Table 16: Sectoral origins of SCOPE Core200

	FORTUNE Code 1995	Nr. of firms in Core200
Aerospace	1	5
Airlines	2	4
Beverages	3	1
Building Materials	5	1
Chemicals	6	9
Computers & Office Equipment	8	5
Electric & Gas Utilities	10	8
Electronics, Electrical Equipment	11	20
Energy	12	1
Engineering, Construction	13	8
Entertainment	14	0
Food	15	7
Food and Drug Stores	16	11
Forest and Paper Products	18	2
General Merchandisers	19	10
Industrial & Farm Equipment	21	4
Mail, Package, Freight Delivery	26	6
Metal Products	27	1
Metals	28	7
Mining Crude Oil Production	29	2
Motor Vehicles and Parts	30	19
Petroleum Refining	31	20
Pharmaceuticals	32	2
Publishing and printing	33	0
Railroads	34	2
Rubber and Plastic Products	35	1
Scientific, Photo, Control Equipment	37	3
Shipping	38	0
Soaps, Cosmetics	39	1
Specialist Retailers	40	2
Telecommunications	41	11
Tobacco	42	3
Trading	43	18
Wholesalers	44	3
Miscellaneous	45	2
TOTALS		**200**

Note: this division is applied by using the Fortune Global 500, 1995 Industry specification (Fortune Magazine August 5th, 1996).

Table 17: The US Top50 Core Companies and SCOPE Core ID no./ranking

General Motors Corporation	4
Ford Motor Company	7
Exxon Corporation	9
Wal-Mart Stores, Inc.	12
AT&T Corp.	15
International Business Machines Corporation (IBM)	17
General Electric Company (GE)	19
Mobil Corporation*	21
United States Postal Service (USPS)	27
Chrysler Corporation*	28
Philip Morris Companies Inc.	29
E.I. du Pont de Nemours and Company, Inc.	48
Texaco Inc.*	51
Sears, Roebuck and Co.	56
Kmart Corporation	58
The Procter & Gamble Company	60
Chevron Corporation	67
Hewlett-Packard Company	68
PepsiCo, Inc.	72
Amoco Corporation*	78
Motorola, Inc.	80
ConAgra, Inc.	89
The Kroger Company	92
Dayton Hudson Corporation	93
Lockheed Martin Corporation	96
United Technologies Corporation	97
J.C. Penney Company, Inc.	105
United Parcel Service of America, Inc (UPS).	107
The Dow Chemical Company	108
GTE Corporation	112
International Paper Company	113
The Boeing Company	116
Xerox Corporation	119
Johnson & Johnson	121
American Stores Company (Albertson's)*	126
Costco Companies, Inc.	128
USX Corporation	129
The Coca-Cola Company	130
BellSouth Corporation	133
Sara Lee Corporation	136
Columbia/HCA Healthcare Corp.	137
Fleming Companies, Inc.	139
AMR Corporation	148
Atlantic Richfield Company (ARCO)*	151
Merck & Co., Inc.	152
Supervalu Inc.	154
Safeway Inc.	156
Intel Corporation	160
Minnesota Mining and Manufacturing Company (3M)	162
Caterpillar, Inc.	164

** company has been subject to acquisition, merger or demerger since 1995*

Table 18: The Japanese Top50 Core Companies and SCOPE Core ID no./ranking

Mitsubishi Corporation	1
Mitsui & Co., Ltd.	2
Itochu Corporation	3
Sumitomo Corporation	5
Marubeni Corporation	6
Toyota Motor Corporation	8
Nissho Iwai Corporation	11
Hitachi, Ltd.	13
Nippon Telegraph & Telephone Corporation (NTT)	14
Matsushita Electric Industrial Co., Ltd.	18
Tomen Corporation	20
Nissan Motor Co., Ltd.	22
Toshiba Corporation	30
The Tokyo Electric Power Co., Inc.	31
Nichimen Corporation	33
Kanematsu Corporation	34
Sony Corporation	37
NEC Corporation	41
Honda Motor Co., Ltd.	42
Fujitsu Limited	47
Mitsubishi Motors Corporation	52
Mitsubishi Electric Corporation	55
The Daiei, Inc.	61
Mitsubishi Heavy Industries, Ltd.	69
Nippon Steel Corporation	71
Ito-Yokado Co., Ltd.	73
The Kansai Electric Power Co., Inc.	81
East Japan Railway Company	83
Nippon Mitsubishi Oil Corporation	85
Canon Inc.	95
Japan Postal Service	99
Jusco Co., Ltd.	103
Chubu Electric Power Co., Inc.	104
Japan Tobacco Inc.	110
Taisei Corporation	115
Mazda Motor Corporation	117
Shimizu Corporation	120
NKK Corporation	123
Sanyo Electric Co., Ltd.	124
Kajima Corporation	127
Bridgestone Corporation	132
Nippon Express Co., Ltd.	134
Mycal Corporation (Nichii)	135
Isuzu Motors Limited	141
Sharp Corporation	144
Mitsubishi Chemical Corporation	145
Toyota Tsusho Corporation	147
Tohoku Electric Power Co., Inc.	167
Japan Energy Corporation	168
Takenaka Corporation	174

** company has been subject to acquisition, merger or demerger since 1995*

Table 19: The German Top50 Core Companies and SCOPE Core ID no./ranking

DaimlerChrysler A.G.	16
Volkswagen AG	23
Siemens AG	24
Veba AG	39
Deutsche Telekom AG	40
RWE Group	49
Hoechst Aktiengesellschaft	53
BASF A.G.	64
Bayerische Motoren Werke Aktiengesellschaft (BMW)	65
Bayer AG	70
VIAG Aktiengesellschaft*	75
Thyssen Krupp AG	77
Robert Bosch GmbH	86
Mannesmann AG*	100
Deutsche Bahn AG	109
Preussag AG	122
Deutsche Post AG	140
RAG Aktiengesellschaft	142
Franz Haniel & Cie. GmbH	149
Karstadt Group	150
Fried Krupp AG*	155
Deutsche Lufthansa AG	197
Bertelsmann AG	202
MAN Aktiengesellschaft	212
Metallgesellschaft AG	214
Otto Versand (GmbH & Co.)	222
Edeka Zentrale AG	224
Schickedanz	229
Henkel KGaA	233
Degussa Huls AG*	237
Ruhrgas AG	238
Tschibo Holding	244
Walter Holding	246
Spar Handels AG	247
Philipp Holzmann AG	253
Hochtief AG	256
Continental AG	262
Agiv	269
Reemtsma GMBH	272
Phoenix Pharmahandel AG	290
VEW AG	297
Linde AG	299
Deutsche Babcock AG	302
AVA AG	308
Suedzucker AG	310
Schering AG	328
Gehe AG	390
Aldi	391
Lidl & Schwarz Holding	393
Tengelmann	396

** company has been subject to acquisition, merger or demerger since 1995*

Table 20: The French Top50 Core Companies and SCOPE Core ID no./ranking

Elf Aquitaine*	43
Electricite De France (EDF)	44
Renault	50
Peugeot S. A.	62
Vivendi	63
Alcatel S.A.*	66
France Télécom SA	74
Carrefour	76
Total Fina S.A.	79
Suez Lyonnaise des Eaux	106
Promodès S.A.*	111
Rhône-Poulenc	146
La Poste	153
Groupe Danone	166
Usinor	169
Pechiney	170
Pinault-Printemps-Redoute	171
Bouygues	184
Thomson SA	188
Saint-Gobain	193
Societe Nationale des Chemins de Fer Francais (SNCF)	201
Compagnie Générale des Établissments Michelin	207
Groupe Casino	209
Schneider SA	217
CEA-Industrie	220
L'Oréal	225
Lagardère Groupe	227
Aérospatiale Matra	230
Docks de France*	231
Gaz de France	234
Havas SA	245
Compagnie Nationale Air France	249
Groupe GTM Entrepose SA	260
Saint Louis SA	264
Societe Au Bon Marche SA	267
Montaigne Participations et Gestion SA	268
Lafarge S.A.	271
Eiffage SA	273
L'Aire Liquide Group	277
Accor S.A.	284
Christian Dior SA	287
Cogema	288
LVMH	293
Galeries Lafayette	301
Comptoirs Modernes	307
Groupe Bull	309
Valeo SA	311
Laitire Besnier	313
Carnaudmetalbox SA	314
Esso SA	

** company has been subject to acquisition, merger or demerger since 1995*

Table 21: The UK Top50 Core Companies and SCOPE Core ID no./ranking

Royal Dutch/Shell Group**	10
Unilever N.V./ Unilever PLC**	35
BP Amoco p.l.c.	25
British American Tobacco p.l.c.	90
British Telecommunications PLC	98
J. Sainsbury plc	114
Tesco PLC	118
Imperial Chemical Industries Plc (ICI)	159
Btr Plc.*	173
British Gas (BG)	203
Hanson PLC	205
British Airways PLC	213
Glaxo Wellcome PLC	215
Grand Metropolitan PLC* (Diageo)	218
Marks & Spencer PLC	219
Smithkline Beecham PLC	221
British Steel* (Corus Group)	223
P&O Steam Navigation	228
Inchcape PLC	232
General Electric PLC	235
British Post Office	236
Argyll Group	239
Safeway PLC*	242
British (Aero)space PLC	243
Cable and Wireless PLC	248
Kingfisher PLC	250
ASDA Group	251
Thorn EMI Group	252
Astra Zeneca	254
Associated British Foods PLC	254
Rio Tinto PLC	257
Dalgety (PIC International Group PLC)	258
Cadbury-Schweppes PLC	259
Tate & Lyle Group	263
British Railway Board	266
Booker PLC	270
RMC Group PLC	275
Bicc PLC	279
Bass PLC	280
Boots Company PLC (The)	282
National Power PLC	285
Wolseley PLC	292
Ladbroke Group PLC	294
Trafalgar House PLC	296
Tomkins PLC	298
Reed Elsevier	300
Rolls-Royce PLC	303
Boc Group PLC (The)	304
Guiness PLC* (Diageo)	305
Arjo Wiggins Appleton PLC	306
Pilkington PLC	319
Lonrho PLC	332

*** both firms are British Dutch*
** company has been subject to acquisition, merger or demerger since 1995*

Table 22: The Netherlands' Top50 Core Companies and SCOPE Core ID no./ranking

Royal Dutch/Shell Group**	10
Unilever N.V./ Unilever PLC**	35
Royal Philips Electronics	46
Koninklijke Ahold N.V.	125
SHV Holdings N.V.	161
Akzo Nobel N.V.	206
Royal KPN N.V.	216
Nederlandse Gasunie N.V.	226
Koninklijke KNP BT N.V.	241
Heineken N.V.	274
Vendex N.V.	276
DSM N.V.	289
Hoogovens N.V.* (Corus Group)	312
KLM	315
Campina Melkunie BV	322
SEP N.V.	323
Hagemeyer N.V.	324
HBG N.V.	327
Randstad Holding N.V.	333
NS N.V.	334
Koninklijke Bols Wessanen N.V.	335
Cebeco-Handelsraad	336
KBB N.V.	337
Laurus N.V.	338
Friesland Coberco Dairy Foods	339
Stork N.V.	340
Royal Packaging van Leer N.V.	343
Coberco*	346
Pon Holdings B.V.	351
Cehave N.V.	353
Schuitema N.V.	355
Ballast Nedam N.V.	357
Internatio-Mueller N.V.	358
Wolters Kluwer N.V.	359
Daf Trucks N.V.	362
Oce-van Grinten N.V.	363
Blokker BV	364
CSM N.V.	366
Koninklijke Volker Stevin Wessels N.V.	370
Nuon N.V.	375
PNEM-Mega Groep N.V.	378
NBM-Amstelland N.V.	380
Verenigd Streekvervoer Nederland N.V.	382
Hoogwegt Groep B.V.	383
Cooperatie Cosun	384
Ned Car Born B.V.	385
OPG	386
Koninklijke Pakhoed N.V.	387
TBI Holdings B.V.	388
Port of Rotterdam	389
Schiphol Airport	394

*** both firms are British Dutch*
** company has been subject to acquisition, merger or demerger since 1995*

Notes to National Top50 Core Company lists

United States and Japan (TABLES 17 AND 18):

- The Top50 lists of the United States and Japan were taken directly from the Scope Core200 classification, in which 61 US and 60 Japanese core firms are included.

Germany (TABLE 19):

- Step 1: Selection of German core companies from the 1995 "Fortune Global 500". Resulting in 29 core companies, of which 24 were already on the Scope Core200 list.
- Step 2: Selection of an additional 12 core companies in "Forbes Foreign 500", which were not on the Fortune or Scope list.
- Step 3: Additional core companies were taken from the "German TOP 500" (published yearly by Die Welt: "Deutschlands Grosse 500"), which were not on the Fortune, Scope or Forbes lists.

France (TABLE 20):

- Step1: Selection of French core companies from 1995 "Fortune Global 500". Resulting in 31 core companies, of which 20 were already listed in the Scope Core200 list.
- Step 2: Selection of an additional 12 core companies from "Forbes Foreign 500" (published yearly in Forbes magazine), which were not on the Fortune or the Scope Core200 list.
- Step 3: Additional core companies have been taken from "Les 1000" (published yearly by *L'Expansion*), which were not on the Fortune, Scope or Forbes lists.

UK (TABLE 21):

- Step 1: Selection of British core companies from the 1995 "Fortune Global 500" Resulting in 21 core companies, of which 7 were already on the Scope Core200 list.
- Step 2: Selection of an additional 26 core companies from "Forbes Foreign 500", which were not on the Fortune or Scope list.
- Step 3: Additional core companies were taken from UNCTAD classification which were not on the Fortune, Scope or Forbes lists.

The Netherlands (TABLE 22):

- Step 1: Selection of Dutch core companies from the 1995 "Fortune Global 500". Resulting in 4 core companies, of which 3 were already included in the SCOPE Core200 list. Three companies of mixed nationality (Royal Dutch Shell, Unilever and SHV Holding) were counted as Core Dutch players in this ranking.
- Step 2: The Dutch list was completed with the Top50 classification according to Dunn & Bradstreet. The Harbor of Rotterdam and Schiphol Airport as some of the most important economic actors in the country have been included in the TOP50 Dutch core company list.

The Erasmus (S)coreboard of Core Companies documents the restructuring and internationalization strategies of a representative sample of the world's largest companies. The present (S)coreboard assesses the 'true face of globalization', exposing in particular the reality behind several major debates of the 1990s, including the myth of globalization, the fallacy of lean production/increased outsourcing, and the alleged diminished significance of 'Old Economy' players. The study shows that for some companies internationalization is not a prerequisite for economic survival, whereas for others it seems imperative. National origins, long dismissed by many, still matter. In addition, the (S)coreboard illustrates the continued importance of core companies for national economies, countering claims of increasing competition, down-sizing and the 'vogue' of newcomer companies in the innovation arena. Finally, the present study makes a first attempt at revealing the mechanisms behind regionalism: the European Union in the 1990s for instance has become the locus of non-European Core Company expansion, while at the same time a platform for extra-regional expansion by European Core Companies. By focusing on 'core companies' the firm-specific trends covered in this (S)coreboard can be linked to macro-economic trends as well. This study illustrates the usefulness of such an approach in an age of growing uncertainty.

This (S)coreboard covers the strategies of 348 core companies and introduces a number of concepts to understand their strategies: late-internationalizers, well-established multinationals, flow and value impact of core companies, the globalization wedge and dyadization.

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