



A NEW PERSPECTIVE ON THE REGIONALISATION DEBATE

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ABSTRACT

A NEW PERSPECTIVE ON THE REGIONALISATION DEBATE

Alan Rugman and coauthors' recent empirical finding of home regionalisation among the world's largest firms has made IB researchers take note. The fact that sales of these firms are overwhelmingly concentrated in their home region ostensibly reveals globalisation, and with it global strategy, as a myth. In this paper we scrutinise the arguments underpinning Rugman's classification thresholds, and retest his data to check the sensitivity of the results obtained. Our analysis suggests that Rugman's findings are far from robust. With relatively minor, and justifiable, adjustments in classification thresholds, findings can be produced that show there to be considerable numbers of companies that have attained bi-regional and, to a lesser extent, global status. We also conduct longitudinal analysis and find that firms are increasingly extending their sales beyond the home region. The evidence presented casts doubt on Rugman's contention that the difference between home regionalisation and globalisation represent a difference in kind as opposed to a difference in degree. We argue for greater exploration of global and especially bi-regional phenomena.

Introduction

Alan Rugman and co-authors' recent empirical research has drawn attention to an important issue: many large firms' sales are concentrated in their home region. Their findings show that a global presence and global strategies are more elusive than a glance at the business press would suggest. Rugman has rightfully scolded researchers for their breathless commentary on "globalisation" and indiscriminate use of the prefix "global".

The finding of *home-regionality* has given rise to a new and ambitious research program. A significant number of IB scholars are dedicating their theoretical efforts to explaining the empirical results of Rugman et al. (e.g. MIR 2005). Given the contentious nature of their thresholds (see below), it is concerning that the results have not been tested for robustness. Our own research would seem to suggest that the call to abandon global research questions and models is unwarranted.

When researchers initially explore an issue, the adoption of *first stab* benchmarks to delineate and segment a phenomenon is inevitable and perfectly legitimate. But as we deepen our commitment to a particular research program we must revisit those initial benchmarks to see how sensitive our findings are to the cut-offs imposed. To that effect, in this paper we replicate Rugman's research by scrutinising the arguments underpinning the existing benchmarks, and modifying them to check the sensitivity of the results obtained. We show that with relatively simple, and justifiable, adjustments in classification criteria, findings can be produced that show there to be considerable numbers of companies that have attained bi-regional or global status. This calls into question the persistent calls to abandon global models and research questions and to focus on intraregional MNE activity instead.

The existing literature

Rugman's empirical research focuses on the world's largest firms, as listed in *Fortune* magazine's Global 500 edition (2002). He argues that these firms are the major players in the international business world, as collectively they account for over 90 percent of the world's stock of foreign direct investment (FDI) and about half the world's trade (Rugman, 2000). Regional sales data for these companies is collected from Annual Reports, SEC filings and direct communications. Sales data is utilised because it "constitutes a true performance measure at the output level" (Rugman & Verbeke, 2004, 7). Subsequent replication using company assets as the relevant variable (Rugman & Collinson, 2005) produces virtually identical results.

Utilising a three-region perspective of the global business scene – North America, Europe and Asia – Rugman seeks to classify the world's largest firms into as home-regional, host-regional, bi-regional or global. Rugman's classification defines the following cut-off parameters:

- home-regional firms have greater than 50 percent of sales in the home region;
- bi-regional firms have less than 50 percent of sales in the home region and greater than 20 percent in another region of the triad;
- host-regional firms, which according to Rugman (2005, 11) are a special form of bi-regional firm, have greater than 50 percent of sales in a triad region other than the home region;
- global firms have less than 50 percent of sales in the home region and greater than 20 percent in each of the other two triad regions.

This classification springs from Ohmae's Triad Power (1985). Ohmae viewed a global presence (in terms of distribution) as imperative for firm success. His arguments were founded on the need to recover the costs of innovation. As such, it was primarily an economies of scale and scope argument, although he also articulated the need for a global presence to avoid competitive *blind spots*. Only a balanced presence across the triad, then defined as the US, Europe and Japan, would render the MNE a *triad power*. Rugman adopts this need for balance in his definition of the global firm category.

Rugman justifies the imposition of a minimum 20 percent host region threshold on the roughly equal size of the three (broad) triad regions in terms of GDP:

"The 20% figure is less than the one-third required for an equal triad distribution and so is biased downwards in favour of finding global MNEs. Conceptually it implies the successful deployment of customer-end FSAs [firm-specific assets] in three distinct markets." (2005, 64)ⁱ

The 50 percent home region threshold is predicated on assumptions about the impact of sales distributions on both the loci of organisational decision-making, and the nature of competitive advantage:

"we assume that a region representing more than 50% of total sales will systematically both shape and constrain most important decisions and actions taken by the MNE. It also implies a concentration of the MNE's customer-end related FSAs in that region." (Rugman, 2005, 64)

Utilising data on the regional distribution of company sales, he finds an overwhelming preponderance of home-regional firms, a result that is largely invariant to the firms' industry or region of origin (see Table 1). Of the 380 Fortune Global 500 firms for which data was available,ⁱⁱ a staggering 87.7 percent are home-regional, providing strong support for Rugman's claim that "globalisation is a myth" (Rugman, 2000, 163). We note in passing that of the home-regional firms, 54 firms should more accurately be labelled as *solely domestic*. Of these companies, 44 were based in North America, 7 in Asia, and 3 in Europe. The remaining categories contain negligible numbers of bi-regional, host-regional and global firms.

Table 1: Rugman's results (using 20 percent host region thresholds and 50 percent home region threshold)

Home-Regional	<i>of which solely domestic</i>	Bi-Regional	Host-Regional	Global	No data available	Insufficient data available
320 (87.7%)	54 (14.8%)	25 (6.8%)	11 (3.0%)	9 (2.5%)	120	15

Source: Rugman (2005, 4)

We question the adopted thresholds and the resulting firm distribution on both empirical and theoretical grounds. Empirically, the 20 percent host region threshold is difficult to justify since overall symmetry across the regions in terms of GDP belies significant inter-industry differences.ⁱⁱⁱ In *certain industries*, global demand is clearly not evenly distributed across the regions. For instance, ICON Group reports that the beer market is split 26 percent, 33.5 percent and 10.8 percent among North America, Europe and Asia, respectively. Sales of

canned food for these three regions stand at 11.5 percent, 33.8 percent and 19.8 percent, respectively, while the corresponding sales figures for electrical power systems and equipment are 12.2 percent, 26.3 percent and 49.2 percent and for machine tools 15 percent, 43.2 percent and 24.9 percent (all quoted in Lasserre, 2005, 39). While other industries show a more balanced distribution of demand across the triad, the above indicates that at least in *some* industries we should not expect an equal sales distribution, even if a company's firm specific advantages (FSAs) are of equal strength in each region. In short, the imposed minimum of 20 percent in a particular host region may already exceed that region's proportional share of worldwide demand and in some instances Rugman's minimum standard may simply be too onerous.

Moreover, the 20 percent host region minimum appears difficult to justify in view of the sampled companies' size. Takenaka was the smallest of the firms sampled, with annual sales of \$10b. Consequently, even 10 percent of firms' sales occurring in a given host region may point to a considerable FSA. A business in excess of \$1b cannot be established by catering to a few erratic customers, such as an expatriate community, and requires significant strengths to overcome the liability of foreignness. For instance, General Motors – a home-regional in Rugman's classification because it fails to meet the imposed benchmarks – may only have 14.6 percent of its sales in Europe, but that represents a business in excess of \$25b.

Furthermore, we believe that the *simultaneous* use of the 20 percent host region and 50 percent home region benchmarks is unsatisfactory at an empirical and theoretical level. Empirically, Rugman's *global* category requires the firm to have less than 50 percent of its sales in the home region *and* 20 percent or more in each of the other two triad regions. Assuming that the broad triad represents roughly 90 percent of world GDP, a truly global company would be expected to gain some 90 percent of its revenues from the triad. Consequently, there is virtually no margin for error in a competitor that has close to 50 percent of its business in the home region ($50\% + 20\% + 20\% = 90\%$).^{iv}

More importantly, the imposition of dual thresholds is also hard to justify theoretically since they are, to some extent at least, conflicting in their rationales. The 50 percent threshold is based on the *assumption* that any region "representing more than 50 percent of total sales will systematically both shape and constrain most important decisions and actions taken by the MNE. It also implies a *concentration of the MNE's customer-end related FSAs in that region*" (Rugman, 2005, 64, emphasis added). At the same time, the 20 percent host regional sales threshold (that applies to the bi-regional and global category) was "chosen as we assume that having two regional markets each representing at least one fifth of a '\$10+ billion' firm's sales reflects impressive market success resulting from *extensive 'customer-end' FSAs in those two markets*" (Rugman, 2005, 64, emphasis added). In other words, Rugman is trying to have his cake and eat it too. While extensive sales in a host region is taken as evidence of strong FSAs in that market, having more than 50 percent of sales in the home region is seen to negate the strong sales (and the underlying FSAs) elsewhere. As a result, a company such as Volvo, which has 30.2 percent of its sales in North America, is defined as home-regional by virtue of having 51.6 percent of its sales in Europe.

As for Rugman's pronouncements that home region sales in excess of 50 percent "both shape and constrain most important decisions and actions taken by the MNE", thus warranting the home-regional classification, we believe that the locus of decision-making is not a useful criterion in this instance. It will depend heavily, *inter alia*, on HQ's understanding of the host regional context and the overall disposition of the firm (centralised vs. decentralised), which in

turn may be an outcome of administrative heritage (Bartlett & Ghoshal, 1989), the power balance between HQ and the national/regional operations (Ghoshal & Bartlett, 1990), etc. As such, inferences about decision-making rights based merely on the company's sales profile are troubling. More generally, the introduction of decision-making is spurious in a classification system that is fundamentally about establishing firms' success at the "output level" (Rugman & Verbeke, 2004a, 7) in defined geographical regions.

The problematic outcomes resulting from the interplay of the two thresholds can also be illustrated in the case of Nokia, one of the handful of global companies in Rugman's nomenclature. Nokia presented a *global* distribution of sales in 2001, with 49 percent in the European home region, followed by 26 percent in Asia and 25 percent in North America. According to the latest Annual Report, Nokia's European sales have since nudged slightly upward and accounted for 55 percent of total revenue in 2004.^v As a result, Nokia would have been categorised as a home-regional in 2004. We believe that any classification system that reassigns an erstwhile global company to the opposite end of the spectrum following a minor rebalancing of its sales portfolio is flawed.

As is evident in the Nokia example, the 50 percent home region threshold has the power to render the 20 percent host region threshold moot. This can further be illustrated through sensitivity testing designed to ascertain the robustness of Rugman's results. For that purpose we reclassified Rugman's original sample in accordance with a variety of thresholds. For the following section, data concerning the 380 companies in the sample were obtained from Rugman's (2005) book.

Sensitivity analysis of the data

Based on our arguments concerning the uneven division of demand across regions in some industries, we initially decided to lower the 20 percent host region threshold to 15 percent and 10 percent, respectively, whilst retaining the 50 percent home region threshold.^{vi} As Table 2 shows, the bi-regional category weakens somewhat as 6 to 14 bi-regional firms shift to global, but, overall, the classification is largely unchanged from Rugman's (Table 1).

Table 2: Results using 15 and 10 percent host region thresholds and 50 percent home region threshold

	Home-Regional	Bi-Regional	Host-Regional	Global
15 percent threshold	320 (87.7%)	19 (5.2%)	11 (3.0%)	15 (4.1%)
10 percent threshold	320 (87.7%)	11 (3.0%)	11 (3.0%)	24 (6.6%)

To take account of our concerns regarding the conflicting nature of the 20 percent and 50 percent thresholds, we retained the original 20 percent host region threshold while dropping the 50 percent home region threshold. As a result, a company such as abovementioned Volvo, with some 51.6 percent of its sales in Europe and 30.2 percent in North America, would now be considered bi-regional rather than home-regional. Similarly, Nokia would still be considered global in 2004 despite its European sales having nudged beyond the 50 percent threshold.

Using this new system of classification, results vary markedly from Rugman's (Table 1). As can be seen in Table 3, 53 firms shift from home-regional to bi-regional. A further eight firms shift from host-regional to bi-regional while the global category remains unchanged. This would seem to cast some doubts about the robustness of Rugman's finding. In particular, the bi-regional category can no longer be dismissed by virtue of containing too few exemplars.

Table 3: Results using 20 percent host region threshold, no 50 percent home region threshold

Home-Regional	Bi-Regional	Host-Regional	Global
267 (73.2%)	87 (23.9%)	2 (0.5%)	9 (2.5%)

As a final step in our sensitivity analysis, we again drop the 50 percent home-region threshold and utilise the, in our view, more credible 15 and 10 percent host region thresholds based on arguments advanced earlier. As is shown in Table 4, a markedly different picture emerges once more. Global companies remain relatively few in number although their numbers shoot up 100-400 percent compared to Rugman's (Table 1).^{vii} More importantly, a very considerable share – around one third in both instances – of Fortune Global 500 companies now show up as bi-regionals. We reiterate in this context that the home-regional category contains some 54 solely domestic firms. If these were removed to focus solely on MNEs, the home-regional and bi-regional category would be comparable in size when utilising 10percent host region thresholds.

Table 4: Results using 15 and 10 percent host region thresholds and no home region thresholds

	Home-Regional	Bi-Regional	Host-regional	Global
15 percent threshold	232 (63.6%)	114 (31.2%)	1 (0.3%)	19 (5.2%)
10 percent threshold	200 (54.8%)	122 (33.4%)	1 (0.3%)	42 (11.5%)

To sum up, results of our sensitivity analysis would seem to suggest that Rugman's findings are strongly driven by the particular thresholds adopted. To restate, by initially retaining the 50 percent home region benchmark but lowering the host region threshold from 20 to 10 percent, we obtain a shift of 14 companies from bi-regional to global, *but not a single additional bi-regional firm*. By contrast, a subsequent classification that abolishes the 50 percent threshold but retains the original 20 percent cut-off produces a significant migration of companies into the bi-regional category. That would suggest, that, overwhelmingly, it is the 50 percent home region threshold which drives Rugman's classification. Earlier we presented empirical and theoretical arguments against the adoption of a 50 percent home region benchmark. A final analysis based on what we deem more credible criteria for classification – abolishing the 50 percent home region benchmark and adopting 15 or 10 percent host region thresholds as the relevant criteria for the bi-regional and global categories – produces findings in stark contrast to Rugman's. We tentatively conclude that Rugman's classification is less robust than is desirable.

Further sensitivity testing using a different sampling frame

Rugman and co-authors provide some preliminary testing for robustness by using a different sampling frame. Specifically, they use the Top 20 of the *most international* MNEs as ranked by UNCTAD (Rugman & Verbeke, 2004b). As part of its annual *World Investment Report* (WIR), UNCTAD ranks the top 100 companies based on the absolute size of firms' foreign assets. Rugman then "identifies the 20 transnational corporations with the highest foreign-to-total sales ratios from UNCTAD's list of the world's largest TNCs that are also *Fortune Global 500* firms" (Rugman & Verbeke, 2004b, 1).^{viii} Based on his usual system of sales-based category cut-offs (see above), Rugman finds that of these 20 companies, 9 are home-regional, 2 are host regional, 6 bi-regional and only 3 are global (as shown in Table 5). For the remaining 80 companies listed in the World Investment Report, Rugman merely reports that they "are even less global and are either domestic [*sic*]^{ix} or home-region based TNCs." (Rugman & Verbeke, 2004, 15)

Since these are the most international firms in the world, the dominance of home-regionals would seem to lend support to Rugman's original classification and his claims concerning the pre-eminence of home-regional firms. But again we can show the sensitivity of this classification to the particular thresholds adopted by Rugman. By dropping the 50 percent home region standard and lowering the host regional thresholds from 20 percent to 15 and 10 percent (in line with the last sensitivity analyses presented above), we end up with a markedly different classification.^x Table 5 shows that the number of home-regional companies drops to 5 and 2, with the remaining 15/18 companies divided among the bi-regional, host regional and global categories.

Table 5: Classifying twenty WIR firms

	Home- Regional	Bi- Regional	Host- Regional	Global
Rugman's schema (20% host region thresholds plus 50% home region thresholds)	9 (45%)	6 (30%)	2 (10%)	3 (15%)
Our schema I (15% host region thresholds and no 50% home region threshold)	5 (25%)	11 (55%)	1 (5%)	3 (15%)
Our schema II (10% host region thresholds and no 50% home region threshold)	2 (10%)	9 (45%)	1 (5%)	8 (40%)

These results lend strength to our preliminary conclusion that Rugman's classification is overly sensitive to the system of cut-offs imposed by the author. As one would expect from a censored sample of the "most international" firms, bi-regional (including host-regional) and global firms dominate in our preferred classification schemes. Consequently, Rugman's claim that "globalisation is a myth" (2000, 163) must be treated with caution.

Longitudinal Analysis

Rugman has bolstered his claims by arguing that home-regionals have dominated rankings of the world's largest firms for the past two decades. He further maintains that this is unlikely to change in the near future, with most MNEs expected to "continue to earn 80% or more of their income in their home triad region. There will only be a limited number of purely 'global' MNEs in

the top 500.” (Rugman, 2005, 63) To Rugman’s chagrin, “some colleagues still seem to question these data. There must be a trend towards globalization over time they say. Well no – actually the aggregate [trade and FDI] data of chapter 11 strongly suggests the opposite; ... Naturally these aggregate data trends are likely to be mirrored in the firm-level data.” (2005, pp.239-240) Scant longitudinal firm data is offered in support of these statements.^{xi}

Using company reports available via Datastream we tested Rugman’s claims for the 500 firms in his original (2001) sample. We sampled only those firms for which regional sales data was available for both 1991 and 2001. Not surprisingly, for a significant number of companies this was not the case, reflecting less stringent reporting requirements in the early 1990s and the impact of mergers and acquisitions. In total we identified complete data sets for 198 firms.^{xii}

As shown in Table 6, we identify an unambiguous trend towards greater internationalisation. Using Rugman’s thresholds, the (small) numbers of bi-regional and global firms in 2001 represent an almost three-fold increase on their numbers a decade earlier. Utilising our revised thresholds, the growth is not quite so stark, but still impressive off an already significant base. The strongly declining trend among the solely domestic firms further highlights the growing internationalisation.^{xiii}

Table 6: Longitudinal Classification (1991 and 2001)

	Year	Home- Regional	Bi- Regional	Host- Regional	Global
Rugman’s schema (20% host region thresholds plus 50% home region thresholds)	1991	185 (93.4%)	8 (4.0%)	3 (1.5%)	2 (1.0%)
	2001	166 (83.8%)	20 (10.1%)	6 (3.0%)	6 (3.0%)
Our schema I (15% host region thresholds and no 50% home region threshold)	1991	146 (73.8%)	45 (22.7%)	0 (0.0%)	7 (3.5%)
	2001	115 (58.1%)	68 (34.3%)	1 (0.5%)	13 (6.6%)
Our schema II (10% host region thresholds and no 50% home region threshold)	1991	135 (68.2%)	43 (21.7%)	0 (0.0%)	20 (10.1%)
	2001	92 (46.5%)	74 (37.4%)	1 (0.5%)	31 (15.7%)

Note: 53 firms (26.8%) were solely domestic in 1991 but only 22 (11.1%) in 2001.

Discussion

When researchers initially explore an issue, the adoption of *first stab* threshold to delineate and segment a phenomenon is inevitable and perfectly legitimate. But as we deepen our commitment to a particular research program we must revisit those initial thresholds to see how sensitive our findings are to the cut-offs we imposed. To that effect, in this paper we have scrutinised the arguments underpinning Rugman’s chosen thresholds, and manipulated them to check the robustness of the results obtained.

Naturally, manipulating benchmarks in any (exhaustive and mutually exclusive) categorisation scheme will favour certain categories at the expense of others. While cognisant that

occasionally there is no particular set of thresholds that is *the* right one, we believe we have advanced empirical and theoretical arguments that support our preferred set of thresholds and, more generally, our call to relax Rugman's benchmarks. In our opinion, especially the contentious greater than 50 percent home region sales benchmark must be discarded. In Rugman's system of classification, a company with greater than 50 percent home region sales is labelled a home-regional, irrespective of its remaining sales. Sensitivity analysis would suggest that it is primarily this home-regional threshold which drives Rugman's findings. Under our preferred classification regime, which abandons the home region threshold and also relaxes the host country standards to a less onerous 10 or 15 percent of sales, a significantly different picture from Rugman's emerges. Among the world's largest companies, many are home-regional or even domestic; but a substantial portion of them are bi-regional and a not insignificant number are global competitors.

To restate, we are conscious that in the context of this research endeavour there is no one set of thresholds that can claim to be the 'true' set; an element of arbitrariness pervades all of them, including ours. At any rate, what this paper has shown is that classifications of companies may vary markedly based on the particular thresholds adopted. Our results indicate that Rugman's findings are not particularly robust. With relatively simple, and justifiable, modifications of the thresholds utilised we produce very strong changes in the results. The sensitivity of Rugman's classification scheme is especially grave in view of inevitable data constraints, with company reporting varying significantly across countries and individual firms. The resulting 'noise' – inescapable in a study such as Rugman's and duly acknowledged by him – make the robustness of any system of classification imperative.

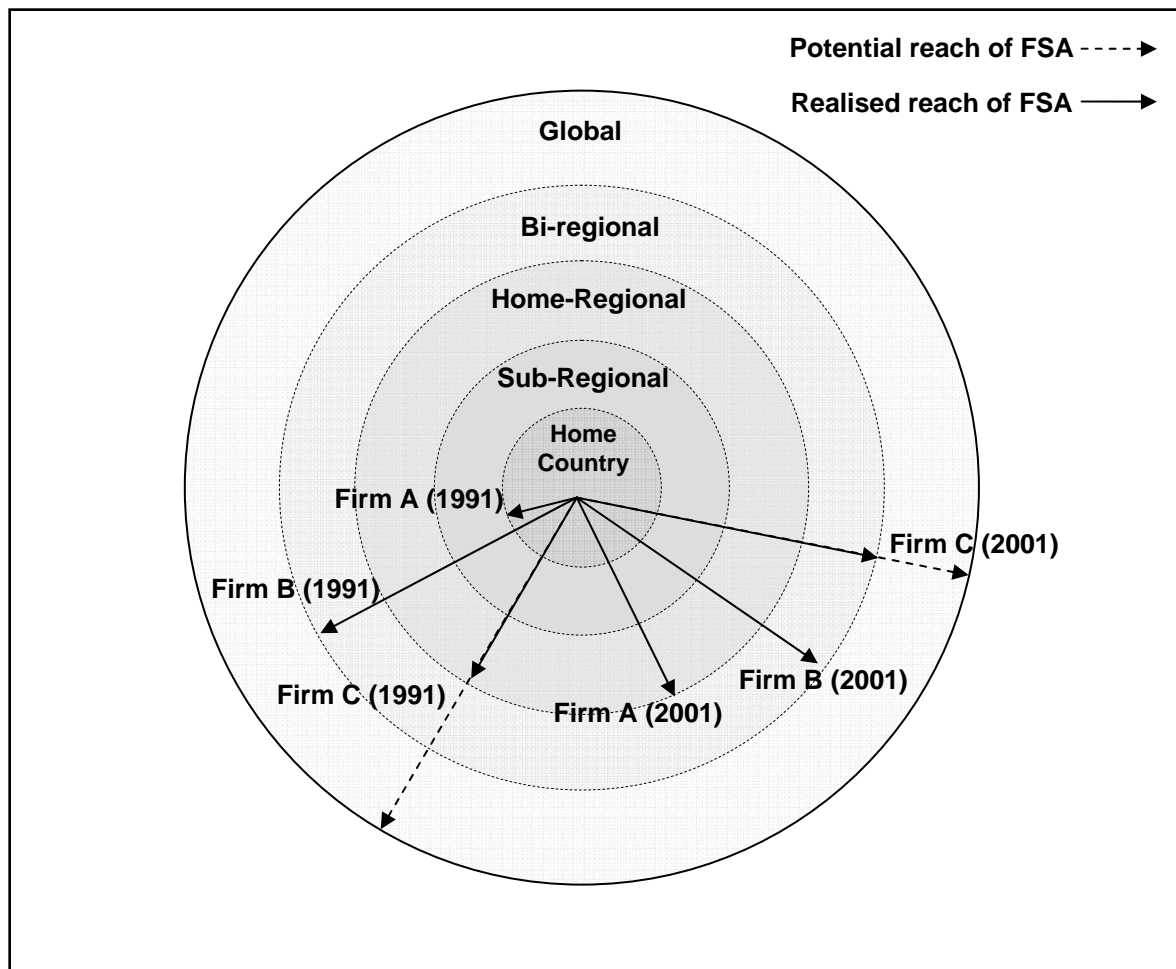
Results of our longitudinal analysis also cast doubt on Rugman's pronouncements concerning changes over time. Contrary to Rugman's conclusions, based on macroeconomic data, our firm data indicates a secular trend toward greater internationalisation for the period 1991 to 2001. Irrespective of which system of classification is used, we find strong growth in the bi-regional and global categories and a marked decline in the home-regional and domestic category.

Rugman argues that the home-regionalisation observed in the data springs from the location-boundedness of FSAs, strictly speaking the *home region-boundedness of FSAs*. The reason for that is that "cultural and political differences among members of a single Triad region may remain, but these differences will mostly be less significant than those across regions" (2005, 63). Our data suggests the empirical support for this view is not as strong as previously thought. More importantly, over time a shift towards greater bi-regionalism and, to a lesser extent, globalisation, has taken place.

To our minds, the appropriate way to conceptualise *FSA reach*^{xiv} – be it in the form of exports, licensing or FDI – would be as a series of concentric circles, as indicated in Figure 1. This reflects our view that, to paraphrase Westney (2006, 447), differences between home-regionalisation (and bi-regionalisation) and globalisation are "merely" quantitative rather than qualitative.

At any one point in time, certain FSAs may be inherently national, i.e. they are either irrelevant beyond the domestic context or the cost of adaptation would outweigh the benefits obtainable. Other FSAs may be home regional in reach, whilst still others may be bi-regional or even global. In addition to these established levels of analysis we would add the "sub-regional" level, as introduced by Enright (2005, 87).

Figure 1: Conceptualising the reach of firm specific advantages



This view of FSAs as concentric circles can be further refined to accommodate the findings of our longitudinal analysis. One explanation why firms are increasingly spreading beyond the home region is predicated on demand side arguments. Differences across countries and across regions – as conceived in terms of cultural, economic, institutional and geographic “distance” (Ghemawat, 2001) – may be diminishing over time. While it is clear that the world will remain in a state of “semi-globalisation” (Ghemawat, 2003) into the foreseeable future, it appears that at least along certain dimensions “distance” has shrunk, through factors such as technology, (bilateral and multilateral) trade and FDI agreements, global mass media etc. (Economist, 1997). In short, national or regional economies may have become more interdependent and, in the process, more compatible. Consequently, certain FSAs previously restricted to, say, the home country (Firm A in 1991) may be applicable to the entire home region ten years later (Firm A in 2001). Other FSAs may have retained their reach as the relevant dimensions failed to converge over time (Firm B in 1991 and 2001).

A complementary explanation for the findings of our longitudinal analysis relies on supply side arguments. These highlight that effective FSA reach may also be determined by firm-specific aspects. To that end we draw a distinction between FSAs’ *potential* and *realised* reach. For a variety of reasons – such as Penrosian constraints,^{xv} ample opportunities for growth within the home region,^{xvi} or simple delays in assembling the required co-specialised assets – FSA deployment may not match their potential reach, especially since potential FSA reach may be a

moving target, as indicated above. To wit, firm C in Figure 1 possessed FSAs with global reach in 1991, but had failed to capitalise on their full potential. Even by 2001 the realised deployment of its FSAs was below the potential, although by “going bi-regional” it had advanced beyond the situation a decade earlier. Such lag effects may explain why, in 2001, we (still) find a high portion of home-regional firms. At the same time, the significant numbers of firms that migrated into the biregional and global categories in the course of the 1990s suggest that firms do eventually close the gap to the potential reach of their FSAs.

Conclusion

Rugman’s empirical research has drawn attention to an important fact: sales of many of the world’s largest corporations companies continue to be home region-based. His research was timely in that it helped pour cold water on the globalisation hyperbole. But it is time to do the same with “home-regionalisation”. At present, Rugman virtually dismisses the global perspective (see Rugman & Verbeke, 2004a). His arguments rest squarely on his evidence that global and bi-regional firms are the exception in the world of big business. Our revision of Rugman’s data dilutes his case considerably. With significant numbers of bi-regional and global firms, up by 50 percent or more from a decade earlier, our classification points to the need for greater exploration of global and especially bi-regional phenomena. Home-regionality must be recognised for what it is, one point along a continuum between the domestic and global company. Correspondingly, a regional perspective should play a *complementary* role to the (extant) national and global levels of analysis. No more, no less.

REFERENCES

Bartlett, C.A., and Ghoshal, S. (1989) *Managing Across Borders: The Transnational Solution*, Boston: Harvard Business School Press.

Economist (1997) 'One World?' October 18, pp.79-81.

Enright, M. (2005) 'Regional Management Centers in the Asia-Pacific', *Management International Review*, 45, pp.59-82.

Ghemawat, P. (2001) 'Distance Still Matters', *Harvard Business Review*, September, pp.1-10.

Ghemawat, P. (2003) 'Semiglobalization and international business strategy', *Journal of International Business Studies* 34, 138–152.

Ghoshal, S., and Bartlett, C.A. (1990) 'The multinational corporation as an interorganizational network', *Academy of Management Review*, 15(4), pp.603-625.

Lasserre, P. (2002) *Global Strategic Management*, New York: Palgrave Macmillan.

Makhija, M.V. Kim, K and Williamson, S.D. (1997) 'Measuring globalization of industries using a national industry approach: empirical evidence across five countries and over time', *Journal of International Business Studies*, 28(4), pp.679-710.

Nokia (2005) 'Annual Report 2004', [www document] <http://www.nokia.com/> (accessed 5 January 2005).

Nortel (2005) 'Annual Report 2004', [www document] <http://www.nortel.com/> (accessed 8 January 2005).

Ohmae, K. (1985) *Triad Power: The Coming Shape of Global Competition*, New York: The Free Press.

Rugman, A.M (2000) *The End of Globalization*, London: Random House.

Rugman, A.M. (2005) *The Regional Multinationals: MNEs and "Global" Strategic Management*, Cambridge: Cambridge University Press.

Rugman, A.M. and Collinson, S.C. (2005) 'Multinational enterprises in the new Europe: are they really global?', *Organizational Dynamics*, 34(3), pp. 258–272.

Rugman, A.M. and Verbeke A. (2004a), 'A perspective on regional and global strategies of multinational enterprises', *Journal of International Business Studies*, 35(1), pp.3-18.

Rugman, A.M. and Verbeke, A. (2004b) 'Regional transnationals and Triad strategy', *Transnational Corporations*, 13(3), pp.1-19.

Rugman, A.M. and Verbeke, A. (2005) 'Towards a Theory of Regional Multinationals: A Transaction Cost Economics Approach', *Management International Review*, 45, pp.5-17.

Tan, D. and Mahoney, J.T. (2005) 'Examining the Penrose effect in an international business context: the dynamics of Japanese firm growth in US industries', *Managerial and Decision Economics*, 26, pp.113-127.

Westney, E. (2006) "Book Review: The Regional Multinationals: MNC and 'Global' Strategic Management", *Journal of International Business Studies*, 37(3), pp.445-449.

ENDNOTES

ⁱ We note in passing that accepting Rugman's argument that the broad triad accounts for roughly 90 percent of world output, a perfectly balanced global presence would require 30 percent in each triad market rather than 33.33 percent.

ⁱⁱ These 380 firms account for 79.2 percent of the total revenues of all the 500 firms. The average sales volume of a firm in the set of 380 is \$29.2 billion. (Rugman & Verbeke 2004a: 5)

ⁱⁱⁱ At a more general level, Rugman (2005, 11) acknowledges that 'Europe's GDP is relatively at par with North America's. In Asia, however, GDP is much lower. If we weighted the regional sales, according to GDP, percentages in Asia-Pacific would become more significant.' Elsewhere he maintains that weighing each of the three triad regions by GDP and even correcting for regions' PPP will not materially impact on the results obtained (Rugman & Verbeke, 2004a, 7).

^{iv} We note in this context that the imposition of the 50 percent home region threshold also has the potential to introduce sampling bias by including certain companies despite data constraints. E.g. for Nortel, the sole information provided is that the company has 54 percent of its sales in North America (actually, in Canada and the US). For the remaining regions, sales data are "not available". On the strength of the 54 percent North American sales alone, the company is labelled a home-regional company in Rugman's original classification. The same holds for Groupe Danone, which is labelled home-regional solely on account of 60 percent European sales only.

^v This figure admittedly includes sales to the Middle East and Africa; unfortunately, the company's Annual Report does not provide a further breakdown of that figure. (Nokia, 2005, 4)

^{vi} Once the 50 percent threshold for *home-region* membership is removed, it becomes difficult to manage and rationalise the 50 percent benchmark for the special *host-region* category. While it is a far from ideal categorisation, *host-region* status now belongs only to those firms that achieve a market share greater than 20 percent in a host region and less than 20 percent at home. Most of the firms in the *host-region* category tend to collapse into the bi-regional (and occasionally the global) category in subsequent tables.

^{vii} We note in this context that data insufficiencies heavily bias this classification against finding global competitors since Rugman's data contains numerous firms with no available information for a particular region (mostly Asia) and reported sales that make up significantly less than the 90 percent of total sales expected for the entire Triad. For instance, in 2001 pharmaceutical giant Glaxo reported European sales and US sales at 28.6 percent and 49.2 percent of total sales, respectively, rendering it a bi-regional in Rugman's nomenclature. Where the remaining 22.2 percent of company sales took place is not disclosed. It is likely that Glaxo's Asian sales during that year exceeded the 10 or even 15 percent thresholds, which would actually make the firm a global competitor according to our classification regime.

^{viii} The companies are: ABB, AstraZeneca, BHP Billiton, BP, Groupe Danone, Diageo, Ericsson, GlaxoSmithKline, Lafarge, LVMH, News Corp, Nokia, Nortel, Philips, Roche, Stora Enso, Suez, TotalFinaElf, Vodafone and Volvo.

^{ix} Since the UNCTAD ranking is based on the absolute size of firms' foreign assets, all of the ranked firms are multinationals and none of them are domestic.

^x In some instances we had to harness additional information to conclusively allocate a company. For instance, in Rugman's database, Nortel is shown to have 54 percent of its sales in North America (actually, in Canada and the US); for the remaining regions, sales data is "not available". On the strength of the 54 percent North American sales alone, the company is labelled a home-regional by Rugman. According to the latest available Annual Report (Nortel 2005: p.39), the US and Canada accounted for some 58 percent of the group's 2002 revenues while EMEA (Europe, Middle East and Africa) represented 22.7 percent and Asia Pacific 13.5 percent. Based on these supplementary data, the company is reclassified as *bi-regional* under the 15 percent classification (Schema I) and *global* under the 10 percent classification (Schema II).

^{xi} Rugman (2005) does provide rudimentary temporal sensitivity analysis for his nomenclature. For that purpose, he utilises updated 2002 figures for sixty firms in his original 2001 sample. A *single* year after the original analysis, "only two of these sixty firms were re-categorised" (2005: 32), but that hardly constitutes a strong test of robustness over time.

^{xii} While acknowledging that this subset may not be representative of the larger 2001 dataset in terms of industry, age, size etc, it is not significantly different in terms of the distribution of the firms from across the triad regions. The 1991-2001 comparison sample has 108 firms from North America (54.6 percent), 48 from Europe (24.2 percent), and 42 from the Asia-Pacific (21.2 percent). A χ^2 test against

the distribution of workable firms in Rugman's 2001 sample (North America - 48.7 percent; Europe - 31.3 percent; Asia-Pacific - 19.7 percent) was not significant at the 5 percent level.

^{xiii} The validity of these findings crucially depends on the representativeness of the 198 firms. The question is whether the results generated from the sample of firms for which data was available can be extrapolated to the larger 380 firm sample used by Rugman. The answer would seem to be a cautious 'Yes' since the percentages allocated across the various categories in 2001 (Table 6) mirror Rugman's original results, although the portion of biregionals is somewhat elevated in the restricted sample.

^{xiv} The notion of FSA *country* or *region boundedness* implies an exogenous phenomenon, determined entirely by environmental forces. As we make clear below, we view the boundaries of effective FSA leverage as also governed by firm-specific aspects and as partly controlled by management. As a result we prefer the term *FSA reach*.

^{xv} The "Penrose effect" simply suggests that there are strict limits to a firm's growth rate due to dynamic adjustment costs that are incurred by firms trying to adjust their productive resources. Penrose focussed on one major source of dynamic adjustment costs – those attributable to the expansion of management resources. She insists that a firm's expansion requires the services of experienced internal managers. Hiring new managers is an inadequate solution since only seasoned internal managers can undertake the coordination task inherent in firm expansion. As a result, the rate of growth is limited by the rate at which the firm can develop internal managers. Not only domestic expansion but also international expansion is subject to the Penrose effect (Tan & Mahoney, 2005).

^{xvi} Notwithstanding exceptional cases such as Australia, firms typically *begin* their internationalisation in the home region. The home region is likely to contain some of the most similar countries. FSA deployment in these initial destinations is facilitated by institutional similarities, cultural affiliations, lower transportation costs etc.