Germany as an Emerging Archipelago Economy: On Some Less Obvious Implications of Corporate Takeovers and Mergers

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Since the mid 1980s, most of Europe and the developed world experienced an unprecedented wave of mergers and acquisitions (M&As) that only faded away during the economic downturn at the beginning of the 21st century. In 2000, the global market for M&As represented USD 3.498 billion[1] (UN 2002). Germany, together with the US and the UK, was one of the three most important markets for M&As (Kang and Johansson 2000). During the 1990s alone, almost 30,000 corporate takeovers involved at least one German firm; the value of corporate transactions here attained a volume of EUR 199 billion in 1999 and EUR 487 billion in 2000, compared to EUR 26 billion in 1990 (M&A 2003).

Besides company restructuring and economic change, M&As have political and socio-institutional effects

This massive number of takeovers[2] has led to important changes not just in the structure of businesses, but also to a thorough reshuffling in the location of economic activity and decision-making. Yet, whereas research on corporate takeovers from a microeconomic perspective is extensive, the number of empirical studies examining their overall effects on the location of economic activity is still relatively small (e.g. Chapman 2003; Markusen 2003). Taking the *M&A Review database* of the German *Handelsblatt* group as the source of data, the present article thus explores the reshuffling in the location of economic activity in Germany over the last decade, with particular attention being paid to the role and increasing interconnection of metropolitan regions as major nodes of economic power and control.

Corporate takeovers in spatial perspective

As today's dominant form of foreign direct investment in developed countries, M&As have become one of the main drivers of industrial restructuring. Firms engage in M&A activity for several reasons. The basic strategic corporate objectives include the search for new markets, increased market power and dominance, greater size and scope, efficiency gains through synergies, and geographic and product line diversification, i.e. the spreading of risk. Corporate takeovers enable firms to quickly access strategic assets, such as skilled labour, patents, brands, licenses, or management skills (Porter 1990; Trautwein 1990; Berkovitch and Narayanan 1993; Dunning 1997). Further central factors motivating firms to undertake M&As are financial enticements – like tax treatment and subsidies, transfer pricing, trade barriers, transportation costs, or monopoly type practices (Ravenscraft and Scherer 1987; Healy et al. 1992; Loughran and Vij 1997; compare also Clark 1993; Wrigley 1999) – and personal or behavioural attributes (Shleifer and Vishny 1989; Avery et al. 1998; Shinn 1999).

The basic rationale behind M&As is thus one of achieving greater efficiency. But corporate takeovers and mergers not only lead to firm restructuring and economic change (see Curry and George 1983; Jensen and Ruback 1983; Davies and Lyons 1996; Nilsson and Schamp 1996). They also have profound political and socio-institutional implications and are by no means an 'aspatial phenomenon': strategic decisions on the transfer of assets and control affect not only the firms involved, but also both the locations and environment with which they are associat-

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[1] After 2000, the volume of transactions quickly waned to USD 1.753 billion in 2001 and to USD 1.230 billion in 2002 (UN 2003; Thomson Financial 2003).

[2] Takeovers (or acquisitions) indicate the purchase of a company by transferring the control of assets and operations from one firm to the other, the former becoming an affiliate of the acquirer. A merger, on the other hand, implies the combination of the assets and operations of two firms to establish a new entity whose control resides in a team from one or both of the two. Despite these differences, M&As are usually bundled together for most purposes.

ed and the organisational and geographical shape of industries as a whole. In brief, M&As have become one of the keys in shaping the location of economic activity and decision-making.

If considered in their totality, the spatial distribution of M&As intensely affects the overall organisation of an economy through modifications in regional and urban structures: The changing ownership configuration and the resulting transfer of the corporate locus of control as well as the shifting of assets and personnel across geographic areas and industries adversely affects the localities involved. M&As thus cause fundamental change in corporate space and increase the risk of external domination of segments of a local economy. Companies and establishments at peripheral regions, for instance, have become increasingly owned und ultimately controlled by firms headquartered in core regions (Chapman and Edmond 2000). The possibility to exercise ultimate control from headquarters located in a different region than the other parts of the business accordingly facilitated the expansion of contemporary corporations' power networks.

As decisions made at the highest level of corporate control directly influence the growth and development of city systems, the performance of major corporations has great impact on interrelationships in a nation's urban structure (Green 1990). M&A activity has thus to be conceived as a paramount driver of the particular role of cities as increasingly concentrated locations of power and control (Friedman 1986, Sassen 1991, 2000, Castells 1996, Taylor 2000, Duranton and Puga 2003 and others on the theory of globalised urban networks). Extending this theory, Veltz (1996) argues that the functional links between cities with similar roles in the world economy are strengthened beyond physical contiguity; in his 'archipelago economy' approach, he proposes that the connections between cities are greatly enhanced, whereas they become increasingly detached from their regional contexts and hinterlands (Veltz 2000, 33–38). Representing important stationary relocation processes that permit the transfer or corporate power from one metropolitan complex to another, corporate takeovers therefore strengthen the increased interconnectivity between large urban areas.

In sum, M&As reinforce the spatial concentration of economic activity, the resulting disparities in regional development, and the changes and linkages in an economy's metropolitan hierarchy. Hence, the concentration of power and control resulting from M&A activity has implications for regional development and indicates the importance of corporate strategy and the spatial organisation of production to metropolitan systems.

Data and methodology

The source of the data, on which our empirical analysis is based, is the *M&A Review Database,* the most comprehensive record of recent M&A activity in Germany. It offers information on more than 29,000 M&As that took place in the 1990s, in which at least one German firm was involved, and classifies – whenever possible – each acquisition by location, industry and type.[3] As with all data sources on M&As (see e.g. Green and Mayer 1997; Chapman and Edmond 2000), there is unfortunately little information on the value of the transactions, i.e. the economic significance of an acquisition. Nevertheless, frequency counts represent a good indicator of the overall level of M&A activity and its wide-ranging trends.[4]

M&As reinforce the spatial concentration of economic activity

From a methodological point of view, the analysis builds, in essence, on the application of a location quotient. Via standardisation by regional GDP, the index $MApR\text{-}I_{(gdp)}$[5] identifies the relative, i.e. the weighted burden of M&As in each of the 40 German counties (Regierungsbezirke, the primary administrative divisions of the Länder). The entire number of close to 24,600 corporate takeovers contained in the database, in which the acquiring firm was a German one, were used for the calculation of the quotient, after having discarded those cases

[3] The database is maintained by the University of St. Gallen and can be accessed via the platform Genios *Wirtschaftsdatenbanken*. Due to missing entries (see below), the present study does not cover all 29,385 transactions contained in the dataset, of which 7,765 are transnational.

[4] No distinction is made between mergers and acquisitions in this paper. Given international trends – 97 percent of all cross-border M&As included in the World Development Report were defined as acquisitions (UN 2000) – it can be assumed, however, that the great majority of transactions are in fact acquisitions or corporate takeovers.

[5] $MApR_{(gdp)}\text{-}I$ is calculated according to the following formula:

$$MApR_{(gdp)} - I = \frac{\sum_{t0}^{t1} MA_i \;/\; \sum_{t0}^{t1} GDP_i}{\sum_{t0}^{t1} MA_{Ger} \;/\; \sum_{t0}^{t1} GDP_{Ger}}$$

where *MA* depicts the absolute number of M&A transactions, *GDP* denotes the regional GDP (in EUR million), t_0 and t_1 denote the period of analysis, *i* stands for the regional unit of analysis (Regierungsbezirk) and *Ger*, finally, corresponds to the whole of Germany. The German average equals one.

included in the database for which no exact geographical information was given. Before turning to the series of maps that visually demonstrate the location quotient and highlight the main changes in the German geography of M&As during the period under investigation, some more general characteristics of the economy's takeover landscape are outlined.

Reshaping the economic decision-making in Germany

German economic geography of M&As, as observed in the 1990s, has three important features. First of all, there is the key role played by economies of proximity and agglomeration in corporate takeovers in Germany. By far the greatest share of M&As occurred either within the same county, or among large metropolitan areas. In more than a third of all German M&As during the 1990s, the acquiring firm and its target were located in the same county (see Rodríguez-Pose and Zademach 2003 for more detail). Apart from localisation economies (external to the firm, internal to the industry) and urbanisation economies (external to the industry, internal to the local economy, for example skilled labour pooling, knowledge spillovers and scale economies in infrastructure provision), other factors, such as the role played by institutional investors deserve special attention as potential determinants of this huge geographical concentration of M&As. For financial intermediaries such as banks and insurance companies and the Länder – being particularly relevant in the "German model" of corporate governance as the primary owners of companies on the local and regional level (Gorton and Schmidt 1996; Streeck 1997; Berndt 1998; Franks and Meyer 2001; Wójcik 2002; Clark and Wójcik 2003), – distance would be a significant obstacle in exercising control. Local embeddedness (Granovetter 1985; see also Glückler 2001; Hess 2004), characterised by the presence of locational assets, localised capabilities and, not least, the possibility for frequent personal or "handshake" interaction, face-to-face communication and "emotional closeness" (Leamer and Storper 2001; Storper and Venables 2004), also contributes to the geographical concentration of M&As.

Distinct geographical concentration of German M&As is due to localisation and urbanisation economies

The significance of agglomeration economies for M&As in Germany is even more striking if only the most important German M&A metropolitan areas are taken into consideration. Their intraregional transactions alone (i.e. not the M&As performed *between*, but only *within* them) account for close to a fifth of all intranational M&As. This figure climbs to 22.3 percent, if the top ten German agglomerations are taken into consideration (Stuttgart, Karlsruhe, Hanover and Bremen, in addition to the six key nodes Frankfurt, Dusseldorf, Hamburg, Munich, Berlin and Cologne). Overall, more than 55 percent of all intranational transactions involved at least a firm located in one of the six most important German centres of M&As; and if, again, the top ten German urban regions are taken into account, almost 70 percent of the overall German M&A activity is concentrated in large metropolitan areas.

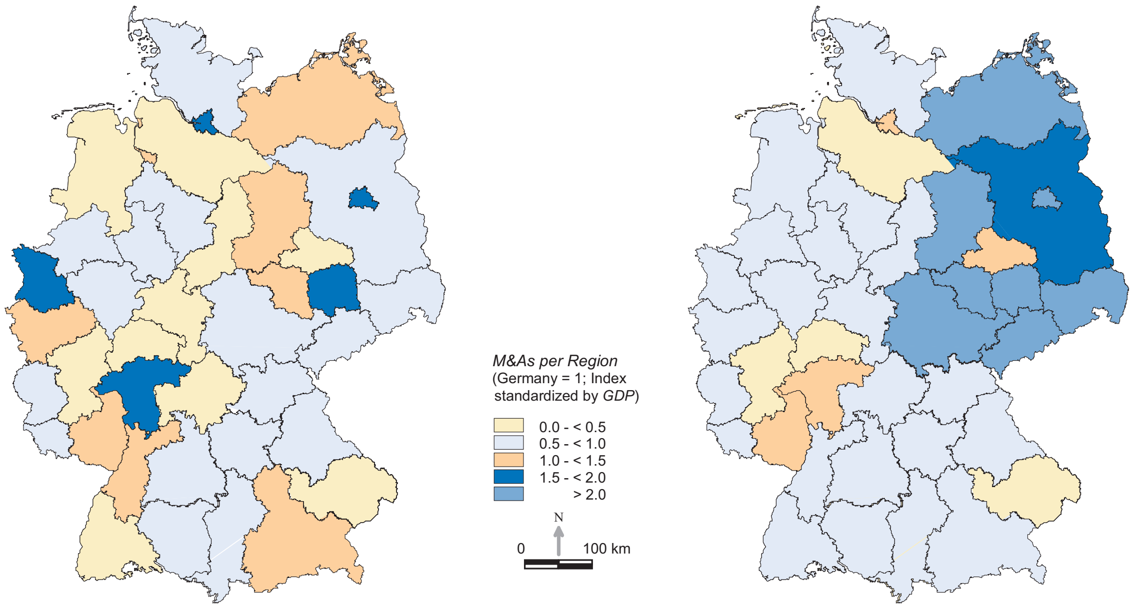
The second key characteristic of the German M&A economic geography is the 'interconnectivity' of the largest metropolitan areas. In line with Veltz's (1996) archipelago economy, 33 percent of all intranational M&As in Germany during the 1990s took place only within and between the six largest German metropolitan areas. Moreover, the share of intrametropolitan transactions kept on growing throughout the decade. If only the M&As conducted from the six key nodes are considered, the percentage rises to more than three fifths of all transactions. This can be taken not only as a strong indication of the increasing concentration of economic decision-making in a small number of agglomerations, but also of the strengthening of the interactions and linkages between these points of control, at the expense of their regional contexts.

The third important aspect of the spatial distribution of M&As in Germany is related to distance. Once agglomeration factors are controlled for, corporate transactions are more likely to happen between nearby, rather than distant cities (Rodríguez-Pose and Zademach 2003, 1912). This insight corresponds to the findings of Wójcik (2003, 1455), who also demonstrates that geography must be regarded as a crucial dimension in the German model of corporate governance: "... proximity breeds corporate ownership and control links, and corporate governance, even at the subnational level, is by no means spatially uniform." That is, considered at the aggregate level, companies tend to be financed and/or controlled by entities with nearby headquarters.

Figure 1
Acquiring firms and M&A targets in Germany

a.) Acquiring firms 1990–94

b.) M&A targets 1990–94



Territorial dynamics in the German M&A economy

These agglomerating and centralising trends are confirmed by the mapping of the location quotient MApR-I(gdp). In the years around and immediately after reunification (1990–94), the overall German geography of M&As was characterised by marked differences between the spatial distribution of acquiring and target firms (Figure 1). The restructuring and the reorganisation of production in the former German Democratic Republic triggered a significant number of intranational M&As between western and eastern firms, with western firms as the main acquirers. Relative to the GDP of the region, firms in eastern Germany became the primary target of western firms. All east German counties had more transactions per region than the German average. Leipzig (with a location quotient of 3.60), Dresden (3.05) and Chemnitz (2.64), the three regions of Saxony, Magdeburg (3.44) and Halle (3.05), both in Saxony-Anhalt, as well as Thuringia (3.09) and Mecklenburg-Western Pomerania (2.88) were the main target regions during this period.

Acquiring firms, on the other hand, were primarily located in the large west German metropolitan areas. Berlin[6], with a location quotient of 1.79 was top, followed closely by Frankfurt (1.71), Düsseldorf (1.70) and Hamburg (1.70). Yet some eastern counties, such as Mecklenburg-Western Pomerania (1.10), Magdeburg (1.24), Halle (1.28) and Leipzig (1.52) also had above average ratios. In spite of the performance of these four eastern regions, the post-unification period was characterised by a significant overall loss of corporate control in the whole of east Germany.

In 1990–1994, after German reunification, firms in east Germany were the main targets of west German acquirers

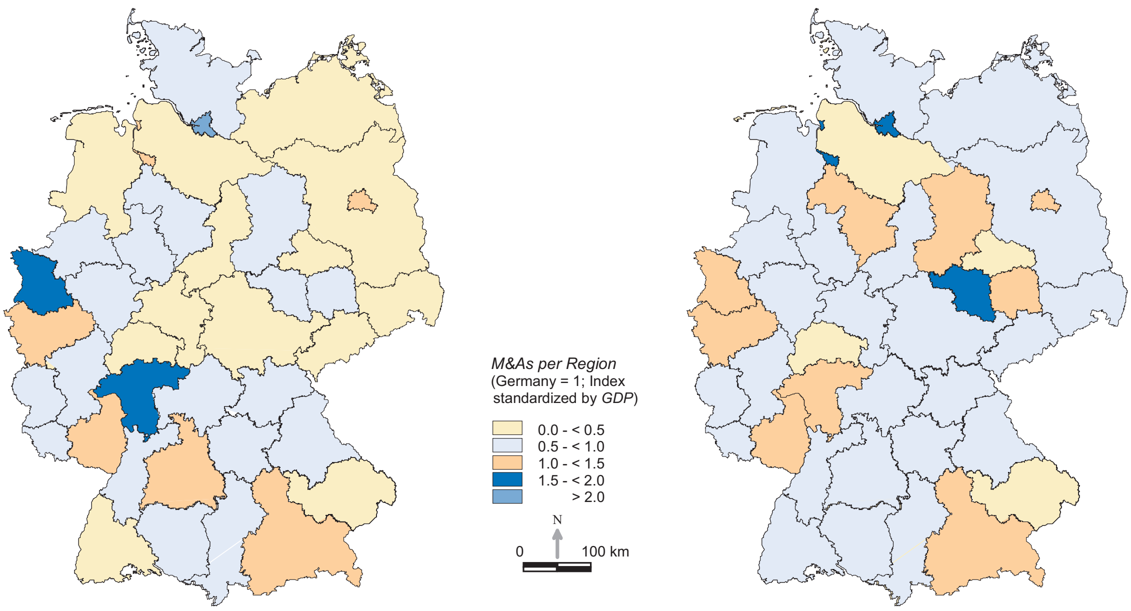
The second half of the 1990s saw a sharp turnaround in this process. The east-west dimension of the M&A market during the first half of the decade lost all relevance and was substituted by a complete dominance of large urban areas (Figure 2).

From the acquisition point of view, the panorama is one of continuity. Hamburg (2.02), Düsseldorf (1.80) and Frankfurt (1.73) represent the three most important acquiring centres, while Munich, Cologne, Berlin, Bremen, Stuttgart and Rhinehesse-Palatinate also punch above their economic weight. The only significant change is the increase in the relative share of the acquiring firms in these regions. The picture changes radically, however, on the target side. With the sole exceptions of Halle, Magdeburg and Leipzig – remnants of the earlier east-west trend – M&A target firms become increasingly concentrated in large metropolitan areas. The greatest relative concentration of targets is found in the two city states of Hamburg (1.84) and Bremen (1.76). Frankfurt (1.41), Düsseldorf (1.34), Berlin and Munich (both

[6] Note that the location quotients for the three German city states Berlin, Bremen, and Hamburg might be slightly overestimated, as within their administrative borders there is no hinterland.

Figure 2
Acquiring firms and M&A targets in Germany

a.) Acquiring firms 1995–99 b.) M&A targets 1995–99



1.24) as well as Cologne (1.13) also score above the national average. During the second half of the decade, the largest German metropolitan areas had thus become the most dominant locations both for acquiring headquarters and target firms, stressing the increasing emergence of an archipelago economy scenario.

After 1995, the large urban areas came to dominate the M&A market again

Conclusion

Corporate takeovers and mergers are a key characteristic of the information-based and globalised economy of the late 20th and early 21st centuries. They also reflect the ongoing restructuring of production processes in an increasingly competitive environment. Taking the German economy as a case study, this paper has analysed the dynamics of M&As and the extent to which the most recent wave of corporate consolidation has led to a profound relocation of economic activity and to an increasing concentration of corporate power and control in large urban areas. Agglomeration economies and, to a lesser extent, geographical distance seem to have been the main factors shaping the restructuring of the territorial distribution of economic power and activity in Germany. From this perspective, M&As represent both a symptom and a cause of the increasing concentration of economic decision-making in large urban areas and of the rise of the economic power of metropolitan areas.

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