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Small and medium-sized towns: out of the dark agglomeration shadows and into the bright city lights?

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Introduction

It is well known that much urban theory is based on the examples and experiences of a handful of high-profile metropolises in the Western world like New York, Los Angeles, London and Paris. In particular in Europe such a focus on large metropolises is surprising, as large metropolises are the exception to the rule that small and medium-sized cities and towns are actually the dominant form of urbanisation in many European countries. Moreover, trends in the urban system do not suggest that large cities grow faster than smaller cities, certainly not in the first 15 countries to join the European Union (Turok and Mykhnenko, 2007). Europe has actually witnessed shifts from urban to rural areas and from larger to smaller cities and the contribution to national economic growth of large cities has hardly increased (Dijkstra et al., 2013; Meijers et al., 2016), despite the fact that in some more peripheral areas (such as southern Italy) smaller cities are in decline. This all is quite striking, as the ‘urban triumph’ narrative propagated by for instance Ed Glaeser (2011) has been widely embraced by European and national policy-makers without questioning whether this narrative is applicable to the European context. As a consequence, larger metropolitan regions in particular have benefited from their privileged status as perceived national trump cards in the global economy (Crouch and LeGalès, 2012; Cardoso and Meijers, 2016), receiving a far greater share of public investment in recent decades as they are considered key to gaining global competitive advantage at the expense of increasingly neglected smaller cities and regions (Brenner, 2004; Dijkstra, 2013; Parkinson et al., 2015).

Fortunately, the rising awareness of this research and policy bias towards large metropolises has led to a burgeoning academic literature specifically focusing

on small and medium-sized towns (SMSTs). However, these research agendas overwhelmingly ‘seek to debunk theories developed for the metropolis rather than to develop theories about the cities that they are actually focusing on’ (Bell and Jayne, 2009, p. 685). As a result, research on non-metropolitan cities has often been made peripheral: theories and questions designed for the largest metropolises are simply downgraded to test their validity in other contexts, without a critical vision of the fundamental differences between the different types of cities (Cardoso and Meijers, 2016).

In this chapter, we argue that one such fundamental difference that affects development perspectives of SMSTs is in how such cities relate to other cities. When taking the ‘smallness’ of places as a starting point for research, it inevitably requires that the focus shifts away from endogenous local factors encapsulated in the concept of agglomeration externalities, towards what we call ‘relational’ factors captured by the concept of city network externalities (Burger and Meijers, 2016). So, rather than a focus on agglomeration externalities that is more apt for larger cities, the focus needs to be on city network externalities when theorising about SMSTs. After all, a small city or town will by definition be less self-reliant and hence more dependent on other places. This is sustained by the empirical finding that the importance of relationships for smaller cities is relatively much higher than for larger ones (Meijers et al., 2016). Hence, we argue that development perspectives of SMSTs depend on how these cities and towns relate to other cities and towns. That means that we need to consider their position vis-à-vis other cities, whether small or large, but particularly consider how they are related to those cities. In other words, understanding the development prospects of SMSTs requires us to move beyond the dominant agglomeration theory and instead to adopt an urban systems perspective, which makes clear that what happens in one place is highly dependent on what happens in other places.

In the remainder of this chapter, we will first discuss this urban systems perspective and explain the ‘borrowed size’/‘agglomeration shadow’ framework that captures types of relationships that are specifically important for SMSTs. A brief state of the art in research on such relationships then culminates into a proposed research agenda.

Borrowing and shadowing: a state of the art

We are not saying that a perspective on how cities are related to each other is of importance for SMSTs only. Florida (2008), for instance, perceives globally

interconnected cities as the real engines of economic growth, which is also a core outcome of the research on world cities and global production networks (e.g. Jacobs et al., 2010; Taylor and Derudder, 2016). Again, also when it comes to studying relationships between cities, it seems that the main focus in the literature has been on how large metropolitan cities connect and interact. Counter to what this may suggest, we claim that such a relational perspective actually is more apt for SMSTs, although the scale at which those relationships occur is perhaps relatively less global.

Urban systems have been generally defined as a set of regionally, nationally or globally linked and interdependent urban areas (Bourne and Simmons, 1978). Studying urban systems broadly takes place in five different and not necessarily well-integrated schools of thought (Peris et al., 2018). For SMSTs, the one predominantly focusing on the regional or intra-metropolitan scale and centred on concepts of polycentricity (e.g. Kloosterman and Musterd, 2001; Parr, 2004) seems most relevant as such regional relations probably dominate over global linkages, despite this literature being scattered (Van Meeteren et al., 2016). Moreover, completely isolated cities that have no other cities or towns nearby are hard to find in Europe; while historically and politically distinct, the far majority of cities nowadays have other cities and towns within their sphere of influence. Currently, one-quarter of the European population, and one-third of Europe's urban population, lives in a polycentric urban region (Meijers et al., 2018). To this we can add those living in a multicentric urban region, which is composed of multiple cities and towns, but unlike polycentric regions that contain cities of more or less equal size, the population sizes in multicentric regions are more unbalanced. Actually, for small and medium-sized cities, it makes quite a difference whether they have one or more larger neighbour city/cities or whether these neighbouring cities are of similar size.

The importance of relations between cities

The basic idea that stronger relationships between cities yield important benefits is both old (see historical accounts of European urbanisation, e.g. De Vries, 1984; Hohenberg and Lees, 1985) and widespread (McCann and Acs, 2011). It would lead to what Capello (2000) has termed 'urban network externalities'. This concept refers to the benefits originating from relationships between places (see also Camagni, 1993; Meijers, 2005; Boix and Trullén, 2007; Van Oort et al., 2010; Burger and Meijers, 2016) and can be described as external economies from which firms and households can benefit by being located in cities that at an aggregate level are well embedded or positioned in networks that connect with other cities. For 117 polycentric urban regions in Europe, Meijers et al. (2018) show that the stronger the cities in such regions

are functionally integrated the better they perform in the sense of organising a higher level of urban functions in the regional system of cities. Also, institutional integration, or metropolitan governance, has a positive effect on this performance, although the effect is smaller than for functional integration and seems to increase with the duration of co-operation. The exact shape of that co-operation is of secondary importance, as long as there is some form of co-operation. They conclude that the main challenge is to 'move from fragmentation to integration'. Other studies have shown the presence of city network externalities in the context of multicentric urban regions (Maly, 2016). However, also negative network externalities can be present, in particular when the nearby cities are not functionally integrated (Meijers and Burger, 2017).

Borrowed 'size' versus agglomeration shadows

We need to make a distinction between the general benefits of stronger relationships between cities at the level of the network of cities as a whole and local outcomes of these relationships, as the generative effect at the network level often hides an intra-regional distributive effect (Meijers and Cardoso, 2021). A conceptual framework that captures the possible local outcomes of stronger relationships between cities or towns brings the distinct literatures on 'borrowed size' and 'agglomeration shadows' together (Meijers and Burger, 2017).

'Borrowed size', in its original conceptualisation by Alonso (1973), describes and explains the situation that especially smaller cities that are located in a larger 'megapolitan complex' do perform better because they have access to agglomeration benefits of larger neighbouring cities. In the words of Alonso (1973, p. 200), borrowed size involves 'a small city or metropolitan area exhibiting some of the characteristics of a larger city if it is near other population concentrations'. Hence, size borrowing occurs when a city exhibits urban functions and/or performance levels normally associated with larger cities that enjoy corresponding agglomeration externalities, and this pattern is a consequence of being integrated with those cities. According to Alonso, such patterns would be particularly visible in Europe, and he mentions the Low Countries and Germany in particular. Several case studies provide empirical evidence of such smaller cities punching above their weight, for instance Phelps' (1998) study of Croydon near London and Hesse's (2016) analysis of how the rather small city of Luxembourg could become prominent in specialist financial and corporate sectors. However, also outside Europe there is now increasing attention for the functioning of SMSTs within the regional urban system, highlighting that this is not only a European phenomenon. The definition of what is small or medium sized, though, is sometimes slightly

different (basically ‘not mega’). For instance, for a majority of countries, small and medium-sized cities of up to 3 million inhabitants are relatively more conducive to economic growth than very large cities (Frick and Rodríguez-Pose, 2018). Johnson’s (2021) study of Geelong near Melbourne (Australia) stresses its struggle over identity and autonomy in the process of borrowing and shadowing that could lead to ‘winning from second’. But also larger cross-sectional studies have found evidence for borrowed size effects. Polèse and Shearmur (2006) found that employment rates in Canada grew substantially faster in the last decades of the previous century in small cities positioned close to large cities than in small peripheral cities. Partridge et al. (2008) find that greater distance from higher-tiered urban areas negatively affects population growth. Likewise, Sohn (2012) identifies a spillover effect from Seoul on growth in nearby smaller South Korean cities.

Yet, the evidence for borrowed size is not conclusive. Erickcek and McKinney (2006) do not find performance differentials between smaller cities in the metropolitan area of a larger city and isolated smaller cities. Meijers et al. (2016) find that especially larger cities profit from having strong relationships with surrounding cities; they are the ones actually borrowing size, as many of their urban functions build on the support base of surrounding cities. This is confirmed by the study of Sohn et al. (2022).

What these latter studies actually find is that larger cities cast a shadow over their smaller neighbour cities, and as we all know, growth is limited in the shadow. ‘Agglomeration shadows’ are the opposite of borrowed size effects. The term agglomeration shadows originates in the New Economic Geography (e.g. Krugman, 1993; Partridge et al., 2009) but is also rooted in Central Place Theory (Christaller, 1933). Like borrowed size, agglomeration shadows are the result of integration with nearby or more distant cities, and come from a disconnection between size and performance. A place is under an agglomeration shadow when it has fewer functions and lower performance levels than expected given its size, because of competition effects from cities with which it is integrated through networks and relations. Volgmann and Rusche (2020) draw an interesting parallel with the regional concept of spread and backwash effects, conceptualised by Myrdal (1957), meaning that spread effects are synonymous with borrowing and backwash effects with shadowing.

Meijers and Burger (2017) have turned these concepts into an operational framework, which was later slightly adapted in Meijers and Cardoso (2021). This operationalisation rests on detecting disconnections between the size of a place and its urban functions, or the size of a place and its performance in terms of growth, and is provided in Figure 3.1.

Dimensions of borrowed size		Connection size ↔ function		
		Fewer functions than expected given size	As many functions as expected	More functions than expected given size
Connection size ↔ performance	Performs less well than expected given size	<i>Agglomeration shadow</i>	<i>Performance shadow</i>	<i>Borrowed functions</i>
	Performs as expected	<i>Functional shadow</i>	<i>As expected</i>	<i>Borrowed functions</i>
	Performs better than expected given size	<i>Borrowed performance</i>	<i>Borrowed performance</i>	<i>Borrowed size</i>

Source: Adapted from Meijers and Cardoso (2021) and Meijers and Burger (2017).

Figure 3.1 Extended ‘borrowed size’/‘agglomeration shadow’ framework

Empirical studies into borrowing and shadowing

The operational framework in Figure 3.1 has led to various empirical studies aimed at detecting where in the diagram SMSTs and larger cities can be positioned. For instance, Volgmann and Rusche (2020) do so for German urban regions and Meijers and Cardoso (2021) for places in the Randstad metropolitan region. As such, the approach seems to work, but a main challenge remains the explanation of the patterns found: why is one place in a shadow, and why does another benefit from being close to other cities? Meijers and Cardoso (2021) explored a range of characteristics of these places to conclude

that places that have more functions than expected given their size tend to be historically important, more populous, but with a population having a lower average social status. They also draw more tourists (a very clear mechanism through which places borrow from elsewhere) and they are more strongly related to other cities than places that have fewer functions than expected given their size. Places that witness stronger than average growth – their measure for performance – are, in comparison to those places having significantly less strong performance, characterised by a greater population size, higher social status, more tourism and also more and stronger relations with other cities. The findings on the importance of relations provides evidence for the idea that networks allow borrowing size, whereas the findings on population size indicate that agglomeration externalities are also important.

The findings on the importance of population in borrowing size (along with other factors just mentioned) are in line with the finding by Burger et al. (2015) that on average, larger cities cast a shadow over smaller neighbouring cities rather than these smaller cities borrowing size from their larger neighbour. This was also found in the recent study of Sohn et al. (2022) and is what they consider the normal regularity of urban systems. So in contrast to what Alonso suggested, larger cities actually borrow more often from their neighbouring smaller cities than vice versa. However, things change when there is a national border between neighbouring cities. Sohn et al. (2022, p. 431) find that:

larger cities do not cast their shadow across the border: borders protect smaller cities from this competition effect and as a result they are not 'emptied' of their functions as we see so often in domestic settings. The opposite is true, as those smaller cities are even able to profit from having a larger city across the border as this allows to borrow size in the sense of expanding the market base for their urban functions.

To explain this pattern, they point at greater market access in combination with a protective role of borders relating to cultural and institutional differences. Moreover, the persistence of national decision frameworks on the location of metropolitan functions rather than a rationalising process at the scale of cross-border regions is of relevance here.

One word of caution is needed as patterns vary according to the indicators used for some urban functions. For instance, a place may be punching above its weight, whereas for other functions it may be overshadowed by nearby cities. This is also observed in the study by Maly (2016), who finds evidence for the co-occurrence of processes of borrowing and shadowing. It all depends on the lens through which it is assessed.

Finally, it makes quite a difference whether neighbouring cities are of similar size or larger or smaller – it's the difference between a polycentric or multicentric region we alluded to before. The general pattern seems to be that agglomeration shadows are hardly cast between neighbouring cities of similar size (unless not strongly integrated), and that in contrast, they seem to be able to profit from borrowed size effects (Meijers and Burger, 2017; Sohn et al., 2022). Numerous case studies of polycentric urban regions explain this effect in detail (Meijers et al., 2014; Danielzyk et al., 2016), although most empirical evidence focuses on Western economies and it is likely that the degree to which firms and people are able to profit from borrowed size effects is dependent on accessibility. In this regard, it would be interesting to see whether similar borrowed size effects can be found. Results for China (e.g. Wang et al., 2019; Gong and Zhong, 2021) show some mixed evidence, while urban mobility is typically worse in low-income countries, which would limit borrowed size effects (see also Burger et al., 2022).

Borrowing and shadowing: towards a research agenda

We propose three main strands for further research on borrowing and shadowing in connection to SMSTs. Of course, there are the important, but perhaps also rather obvious recommendations, such as trying different indicators when operationalising the framework, adding geographical detail, performing an analysis over time and expanding the scope beyond the Global North and Europe in particular. Likewise, we have no doubt that the COVID-19 pandemic has temporarily or more permanently changed patterns of borrowing and shadowing in a regional urban system, and we need to understand this better. But when taking a step back and looking at the matter from some distance, we particularly would like to recommend an extension of research in three directions.

Exploring types of borrowing and shadowing

Despite its intuitional appeal, the term 'size' in borrowed size is problematic (Meijers and Burger, 2017) in that 'size' is a rather non-descript umbrella term, a proxy for a wide variety of agglomeration externalities, both positive and negative, and as such a simplification of the complex relation patterns that can be found in reality. We already felt the need to discern more precise categories, like 'borrowed functions', 'borrowed performance' and, in a similar vein, discerned a 'performance shadow' and 'functional shadow'. This certainly is not yet an exhaustive and conclusive list. Perhaps it is best to stick to the

terminology that captures the general processes at play – that is ‘borrowing’ and ‘shadowing’ – as these represent positive and negative spillovers between cities more generally.

For future research it is recommended to explore the many varieties of how borrowing and shadowing can manifest themselves. Inspiration can come from the traditional mechanisms underlying agglomeration benefits, namely ‘sharing’ (i.e. making use of a common pool of resources that requires a minimum community size for support), ‘matching’ (i.e. a large labour pool and a variety of suppliers enhances quality of factor inputs) and ‘learning’ (i.e. co-location facilitates diffusion of knowledge and spurs innovation) (Duranton and Puga, 2004), which in turn may translate into particular borrowing and shadowing effects. This need for more precision also addresses a concern of Phelps (2004), who criticises the concept of borrowed size for its indifference to the various types of agglomeration externalities.

One important research avenue is to move away from the economic connotation of borrowed size and explore different frameworks based on for instance forms of borrowed happiness or life satisfaction (i.e. experienced quality of life that is derived from conditions in neighbouring places; Lenzi and Perucca, 2020; Hoogerbrugge et al., 2022), borrowed need satisfaction (i.e. experienced satisfaction of basic needs that is derived from neighbouring places; Cardoso et al., 2021) or more generally new measures of prosperity that go beyond economic and growth-oriented paradigms. Hytrek (2021) provides an excellent example of exploring ‘borrowing social performance’ in Long Beach near Los Angeles. He questions how social movements (e.g. for social justice and labour organisation) in Long Beach managed to ‘leverage proximity to larger movements in movement-rich neighbouring cities to create an organizational infrastructure beyond their independent capacity to sustain emancipatory social justice projects’ (Hytrek, 2021, p. 159).

Seeing local outcomes of city network integration in light of regional opportunities

Our operational framework (Figure 3.1) essentially presents a typology of local outcomes, at the scale of places, further integration and strengthened relationships with neighbouring cities. It is hard to deny that classes like ‘borrowed performance’, ‘borrowed functions’ and ‘borrowed size’ all have a positive connotation and, in contrast, ‘performance shadow’, ‘functional shadow’ and ‘agglomeration shadow’ a negative one. Being in the shadow of a larger nearby city is certainly not a desirable future for many SMSTs and they try to avoid becoming bedroom communities, as Mayer et al. (2021) show in their dis-

cussion of how Swiss SMSTs try to keep or develop knowledge-intensive jobs in specific niches where they exhibit a path-dependent advantage. However, positive or negative interpretations only make sense when put into a regional perspective. Being in an agglomeration shadow is perhaps much less negative considering that people and firms from such a place can tap into the opportunities offered by a nearby city. The combination of a local residential economy with a more broadly focused regional economy still offers plenty of opportunities. At least, that holds true for those groups that are able to access these regional opportunities which are not organised in the vicinity, and assuring this access should be an important concern for policy-making. Being in an agglomeration shadow might be better than being in an isolated place (see e.g. Lenzi and Perucca, 2020). Similarly, perhaps a city is able to build on the critical mass present in places nearby to sustain a higher level of for instance urban functions, hence, borrowing size, but probably not that well off if the other places have little extra to offer that complements the opportunities in that city. What matters in the end is that a regional urban system is able to cater for the varied needs of its population of households and firms, and hence, having diverse local outcomes is important. Places in an agglomeration shadow may not grow that fast or have a deficit in urban functions, but they may offer opportunities like cheaper land and more spacious housing, a closer connection with nature, a strong community feeling, etc. It may be quite comfortable in the shade when trying to escape the heat. Perhaps the important question then is not in what class of the typology a particular place falls, but whether the regional urban system contains all the necessary types of places, herewith taking also into account whether the smaller places are able to establish functional linkages with other places within the regional urban system. In other words, future research needs a multiscalar perspective of borrowing and shadowing.

Understanding the drivers of borrowing and shadowing

While borrowing and shadowing are made possible through accessibility (Bohman and Nilsson, 2021) and (limited) distance, we previously concluded that it is mostly a product of true interaction (Meijers and Burger, 2017). Further integration definitely is a driver of borrowing and shadowing patterns. But households and firms have a different need for and capacity to exploit integration and connectivity. Future research could focus more on the local characteristics that determine this capacity. Some of the more empirical work on borrowing and shadowing, referenced above, has been generically looking at how cities are positioned vis-à-vis other cities, or how strongly they are related. However, to detect general patterns of borrowing and shadowing, we assume that in particular case studies of SMSTs could shed more light on

this particular question about why they are in a shadow or why they borrow size, also to document how changes in their accessibility, connectivity and interaction patterns have affected specific groups of households and firms in those places. In this regard, it is also interesting to examine inequalities in benefiting from borrowed size and suffering from agglomeration shadows or heterogeneous city network externalities. Looking at such heterogeneity of effects has already been done in the agglomeration economies literature (e.g. Faggio et al., 2017; Stavropoulos et al., 2020; Burger et al., 2022). This could lead to evidence-based policy recommendations that also take account of historical development pathways and unique local contexts that go beyond the ‘one-size-fits-all’ type of recommendations.

Conclusion: doing justice to the fundamental differences between smaller and larger cities

When studying concepts like borrowed size and agglomeration shadows, attention is inevitably directed to the question as to how smaller cities and towns can enjoy agglomeration benefits and avoid agglomeration costs. However, this runs the risk of doing exactly what we warned against in the introduction: not judging SMSTs on their own merits, but judging them on the basis of a framework that fits larger metropolitan areas better, namely agglomeration externalities. While we suggested broadening the scope of what can be borrowed and shaded (research strand 1) and making a plea for considering city network externalities, we will also have to consider the role of SMSTs in the regional urban system by precisely focusing on their typical strengths and unique character, as these provide a more fitting framework if we want to study borrowing and shadowing from an SMST perspective. Knox and Mayer (2012) consider heritage, liveability, sustainability and the possibility of an ‘affective’ dimension of feelings and emotions evoked by their scale and character to be comparative advantages of SMSTs. Perhaps the question should not primarily be how SMSTs can gain from larger neighbour cities, but instead, what those larger cities can borrow from nearby SMSTs in this regard.

Suggestions for further reading

Dijkstra, L. 2013. Why investing more in the capital can lead to less growth. *Cambridge Journal of Regions, Economy and Society*. 6(2), 251–268.

The title of this article by Lewis Dijkstra (European Commission) clearly communicates its message, namely ‘that over-investment in the capital city is a genuine risk and that having a wide range of cities can enhance a country’s efficiency, performance and attractiveness’ (p. 251). As such it challenges the ‘urban triumph’ narrative and ‘invest more in large cities’ mantra that unfortunately has been uncritically embraced by many governments and the organisations and consultancy firms that advise them. What is particularly relevant about this paper is that it draws attention to the often overlooked political dimension to the development of small and medium-sized cities. It is quite evident that SMSTs have a hard time making themselves heard in national politics where important decisions are made about public investments that often have a spatial dimension. In practice, most European countries have been privileging and prioritising their largest cities; ‘state spatial selectivity’ is what Jones (1997) calls this. However, Dijkstra argues that investing in a wide range of city sizes, or a portfolio of places, can be more conducive to growth than primarily investing in the largest city. A similar message can be found in Parkinson et al. (2015).

Lenzi, C. and Perucca, G. 2020. Not too close, not too far: Urbanisation and life satisfaction along the urban hierarchy. *Urban Studies*. 58(13), 2742–2757.

This article moves beyond economic paradigms when studying the process of borrowing and shadowing. Cities not only affect the subjective well-being of the citizens residing within their administrative borders, but also the subjective well-being of citizens that live in close proximity of that city in smaller towns and villages. Hence, urban networks are important to understand the geography of subjective well-being, also known as happiness or life satisfaction. Lenzi and Perucca examined how the proximity to large cities, and therefore the accessibility to their agglomeration benefits, is related to the subjective well-being of inhabitants of smaller places. The authors found that residents of smaller places that are located in close proximity of a larger city have higher levels of subjective well-being. Residents in smaller places that are located near large cities are able to ‘borrow’ the positive effects of much larger localities, while being relatively insulated from their negative effects. The research by Hoogerbrugge et al. (2022) builds on the findings by Lenzi and Perucca by examining the relationship between polycentricity and subjective well-being.

Pendras, M. and Williams, C. eds. 2021. *Secondary cities: Exploring uneven development in dynamic urban regions of the Global North*. Bristol: Bristol University Press.

Many SMSTs that have a larger neighbour city fit the description of what is called a ‘secondary’ city in this recent book edited by Mark Pendras and Charles Williams, who are affiliated with the University of Washington in

Tacoma. They define secondary cities as ‘cities that fuel, compete with and are otherwise relationally connected to larger and putatively more “successful” neighbouring cities, but which simultaneously maintain a degree of independent history and identity that mitigates against uncritically collapsing them into the mass of the “city-region”’ (p. 2).

This edited volume contains contributions by scholars from Europe, Australia and the United States that delve into the political and economic dynamics of such secondary cities. What is particularly useful for the study of SMSTs is that it (1) considers alternative development strategies for such cities which are rooted in the unique characteristics of such secondary cities and hence not copied and pasted from strategies for large cities, and (2) explicitly adopts a relational perspective advocated also in this chapter: ‘What matters ... are the relational connections that shape the experiences, choices and possibilities for secondary cities and their inhabitants’ (p. 3).

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